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SU-AFBE 2018

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Preface

The Sampoerna University-AFBE International Conference (SU-AFBE) will be an annual event hosted by Faculty of Business, Sampoerna University. This year (2018), will be the first SU-AFBE will be held on 6 December 2018 at Aryaduta Hotel, Jakarta, Indonesia.

“Business Innovation, Sustainability, and the disruption Technology: Challenges and Opportunities” has been chosen at the main theme for the conference, with a focus on the latest research and trends, as well as future outlook of the field. The fields included in this conference are management and business innovation, sustainability, entrepreneurship and business development, social engagement and corporate social responsibility, corporate governance, logistic and supply chain management, general management, accounting, finance, human resource management, economics, organizational change, and business education.

The conference invites delegates from around the globe and attended by more than 150 listeners and 56 presenters from university academics, researchers, practitioners, and professionals across a wide range of industries.

Andriati Ftriningrum, Ph.D
Contents

Sustainable Supply Chain Management: Exploring the Role of Supply Chain Dynamic Capabilities in Determining Firm Performance
Elok Savitri Pusparini, Ratih Dyah Kusumastuti 1

The Impact Of Fun at Work on Creative Performance and Organizational Citizenship Behaviour
Herkin Prabowo, Nayunda Andhika Sari, Ayu Aprilianti, Aryana Satrya 17

Wedding-Planning Industry in Indonesia: The Influence of Technology Orientation and Trust as Mediating Factors on the Relationship between Entrepreneurial Orientation and e-Commerce Adoption
Didi Supardi, Yosef Dedy Pradipto, Erland Barlian, Adi Teguh Suprapto, Christian Haposan Pangaribuan 26

Prospective Structural Method Application to Identify Strategic Variable of Developing Ecotourism Region in Reservoir Area: Case Study in Kedung Ombo Dam
Nafiah Ariyani, Tanjung Prasetya, Kurniawan Gilang 31

Building Small-Medium Industry Institution Towards Sustainable Dynamic Small Industry
Oesman Raliby, Effendi Bin Mohamad 44

The Impact of Training Program and Work Experiences on Career Development
Ni Putu Sri Sukmawati, Agoes Ganesha Rahyuda, Wayan Gede Supartha 52

Analysis Inner-Outer Model Analysis of Emotional Intelligence and Performance of Staff from the Ministry of Religion in Kota Batam, Indonesia
Mukhlishotul Jannah, Hazriyanto Hazriyanto 57

Change Communication and Organizational Trust on Employee’s Commitment to Change
Wustari L. Mangundjaya, Enno R. Farahzehan 70

Finding the Gap: Student Stress and Student Engagement of First-Year Undergraduate Student from Overseas
Anissa Lestari Kadiyono, Annisa Nanda Liyani 80

Creating Purchase Intention Throughs Positive Electronic Wom, Brand Attitude, Satisfaction, and Brand Awareness. Case of Wardah Exclusive Lip Cream on Instagram
Vita Briliana, Nathasya Esterita Juli Silaen 92

The Effect of Religiousity in Choice of Saving in Sharia Banks Using Multinominal Logistic Approach
Aglis Andhita Hatmawan 101

Strategic Agility in Environmental Turbulence A case of Banking Sector in Indonesia
Winda Anggraini, Lily Sudhartio 109
Does Diversification Strategy Reduce The Level of Financial Distress?  
(Evidence from Indonesia)  
Yeterina Widi Nugrahanti, Sutrisno T, Aulia Fuad Rahman, Endang Mardiati

Intercandidate Agenda-Setting and Social Media in Indonesia  
Suryo Prabandono, Eriyanto Eriyanto

Design of Standard Operatonal Procedures for Commercialization of BPPT's Food Technology Products in Incubation Programs  
Intan Satwika Putri, Adithya Sudiarso, Sri Gunani Partiwi

Can Tempeh be Greenly Marketed by the Indonesian Tempeh Movement (ITM)?  
Amadeus Driando Ahnan, Wida Winarno, Marthin Nanere

Blockchain Technology: Revenue Streams of Long Tail Business Model  
Fidiana Fidiana, Irwan Alnarus Kautsar, M. Ruslianor Maika

The Relationship of Work Stress, Emotional Intelligence, and The Performance of Staff in the Office of the Ministry of Religion Batam City Indonesia  
Hazriyanto Hazriyanto, Indra Firdiyansyah, Syed Sofian Syed Salim

Talent Retention Model for Millennials Based on Engagement Drivers Case study: LQ45 Company  
Lindawati Kartika, Muh Panji Sukarno, Fransiskus Suryopranoto, Hendry Hendry, Fany Rachmaditya

Transformational Leadership, Dynamic Capabilities and Non-govermental Organizations Performance: Strategy, Structure, and Environment  
Diyah Candrawati, Yasmine Nasution

Organizational Resilience: As Mediating Effect of Organizational Culture and Organizational Performance  
Dianawati Suryaningtyas, Achmad Sudiro, Eka A. Troena, Dodi W. Irawanto

Minimizing Resistance to Change: The Role of Communication and Perceived Organizational Justice  
Ayu Aprilianti Lizar, Febri Nila Chrisanty, Putu Ayu Novita, Silvia Susanti Dewi Teguh Endaryono

Impact of Communication in Organization to Readiness for Change: Case of Research Organization X  
Mia Rahma Romadona, Sigit Setiawan

Exploring High-Performance Work Systems for Sustainability in the Hotel Industry  
Dianawati Suryaningtyas, Dodi W. Irawanto

Agile Approach to Minimize Risk Product Innovation in Functional Food Creative Industry  
Deasy Kartika Rahayu Kuncoro, Wara Widyarini Endah Saptaningtyas

The Effects of Ownership Types, Concentration, and Foreign Banks’ Modes of Entry Risk-Taking Behaviour and Capital Ratio  
Karinna Karinna, Viverita Viverita
Game Learning to Optimize Learning and Trauma Healing in Children After Disaster in Banyumas
Rafika Bayu Kusumandari, Basuki Wibawa, Hartati Muchtar

The Strategic Entrepreneurship Impact of Performance on Indonesian E-Commerce
Rian Ristyanti, Anton Wachidin Widjaja

Sex Appeal Ad and Materialism: A Comparison of Young Consumer Attitude and Purchase Intention in France and Indonesia
M. Gunawan Alif, Yuniar Vigari

Relationship Between Brand Jealousy And Conspicuous Consumption
Chairy Chairy, Jhanghiz Syahrivar

How to Build Word of Mouth: The Role Brand Personality, Brand Love and Brand Loyalty
Meiske Meiske, Tengku Ezni Balqiah

Effectiveness of Strategic Learning to Improve Learning Outcomes
Wahyu Kirana, Hartati Muchtar, Moch. Sukardjo

The Impact of ASEAN’s Rice Trade Barriers on Indonesian Food (Rice) Security
Iwan Hermawan

Population, Unemployment and Poverty: A Population Analysis in East Java Indonesia
Sayekti Suindyah Dwiningwarni, Aslichah Aslichah, Anto Ariyanto, Titin Titin, Muhammad Yusuf

The Impact of IFRS Adoption on Relationship between Analyst Coverage and Earnings Management in ASEAN 5
Yudhistira Dharma Putra, Aria Farah Mita

The Effect of Modified Audit Opinion on Debt Contracts
Naufal Zaky, Sylvia Veronica Siregar

The Effect of Managerial Ability on Financial Reporting Quality: An Empirical Analysis of the Banking Industry
Sinta Juliani, Sylvia Veronica Siregar

Do Tax Audit Increase Post-Audit Reported Income? Evidence from Indonesia
Andreas Prasetyo Nugroho, Chaikal Nuryakin

The Influence of the Social Media Recommendation System Against Polarization in the Views of User Politics: Experiments on Social Media Newsfeed on Social Media Users
Muhammad Shofi Rosyadi, Eriyanto Eriyanto

Spiral of Silence on Social Media: Study on Political Posting in Indonesia
Narendra Ghaniy Putra, Eriyanto Eriyanto
Sustainable Supply Chain Management: Exploring the Role of Supply Chain Dynamic Capabilities in Determining Firm Performance

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Abstract. Over the last decades, there is a growing body of research upon the theory and practice of sustainable supply chain management (SSCM). Although supply chain have long been viewed as a mean to enhance performance, strategic management scholars focusing more in marketing, logistics, and operations management, while relatively limited research has been conducted on the extent to which firms have integrate sustainability principles into the management of their supply chain. In the effort to posits new insights on why some firms outperform others, this study build on strategy theory, operations management theory, business ethics theory, and resource-dependence theory to examine the concept of stakeholder pressure, supply chain orientation, sustainable supply chain management, and supply chain dynamic capabilities upon their impact on firm performance. Four propositions has drawn from the literature review, opening further research venue to empirically test the research propositions. This study contributes to the emerging body of research by addressing the relationship between sustainable supply chain management and supply chain dynamic capabilities and through that the impact on firm performance. It is also attempt to contribute insights from the context of the developing countries which have some underlining differences with the developed countries especially in the context of sustainability efforts. Finally, we present the conceptual model that illustrates the possible relationship among the variables.

Keywords: Sustainable supply chain management, stakeholder pressure, supply chain orientation, supply chain dynamic capabilities, firm performance.

1. Introduction
Over the last decades, a part of strategic management research has begun to examine the strategic supply chain management as the elaboration of a supply chain, not only merely as a means to get products where they need to be, but also as a tool to enhance key outcomes [1]; [2]; [3]. Supply Chain Management (SCM) has been defined as "the management of upstream and
downstream relationships with suppliers and customers to deliver superior value at less cost to the supply chain as a whole” [4]. It is the answer of dynamic external condition that caused any industrial players take all kind of strategic actions in order to preserve their ability to cope with the changes.

Furthermore, the emerging issues such as environmental protection, corporate transparency, responsible innovation, social responsibility, employee benefits and security concern, and green business strategy, have force operating corporations to swift their practices into environmentally friendly supply chains to reach harmony, not only with the society but with the nature as well. Integration of the sustainability concept into the core business functions in such away fall within the domain of supply chain management, such as procurement, supplier, logistics, operations, and knowledge management, has led to a critical-interdisciplinary area, that is sustainable supply chain management (SCM) [5].

The elaboration of ethics principles into strategic management body of knowledge can be found earlier in the Hosmer [6] seminal article which titled “strategic planning as if ethics mattered”. Hosmer’s profound thinking on the inclusion of more ethics research in the field of strategy as the moral obligations of management become part of several other components in the strategic planning process during the early development of Corporate Strategy as a field of Study [7].

However, research on the collaboration between strategic management theories and the sustainable supply chain management theories [8] are inconclusive, especially in determining how these combination may answer the challenge to provide sustainable performance as well as economic performance and social performance in a highly competitive, complex, and globalized context. As we all know, globalization of the market, sourcing, manufacturing, and distribution is growing, and customer are becoming more demanding, with the expectation upon customized products, and better customer service. Companies are urged with high competitive pressure, shorten product life cycles, high product variety, and high technological changes. As the result, supply chain have become highly complex and dynamic [9]. However, the exploration of dynamic capabilities in the supply chain level up until now is remain underexplored. Research stream in dynamic capabilities still focusing more on building dynamic capabilities over the corporate level. While the competition currently is no longer lies between one single company to another, instead it already shifting into competition among one supply chain toward other supply chain. Academic reasearch lagging the current dynamics as well, especially in the context of emerging economy where the exploration regarding supply chain competition remain silent. Therefore, this conceptual study aimed to break this silence and bring the concept of supply chain dynamic capabilities into open discussion. This study contributes in overing hypothetical model that elaborates supply chain dynamic capabilities construct in determining firm overall performance, including economic, social, and environmental performances. Discussed also the role of stakeholder pressure upon sustainability and the extent of supply chain orientation as antecedent factors that urge focal firms to develop their strategic capabilities.

2. Theoretical Foundation
a. Revisiting The Strategic Management Theory Literature
   Main stream research in strategic [10]; [11]; [12]; [13];[14]; [15] has focused on developing tools capable of prescribing a particular course of action for practitioners, deploying inductive
logic to infer principles, theoretical claims, and other empirical evidence. As Porter [14] stated that “the fundamental basis of above-average performance in the long run is sustainable competitive advantage; even though a firm can have a myriad of strengths and weaknesses vis-a-vis its competitors, there are two basic types of competitive advantage a firm can possess: low cost or differentiation. The significance of any strength or weakness a firm possesses is ultimately a function of its impact on relative cost or differentiation” [14].

Porter’s conceptualization on the low cost and differentiation as sources of above-average performance opening the debates on the nature of competitive advantage that appears to be deductive in nature and is clearly not the whole picture. As an alternative to Porter’s framing on the competitive advantage, strategic scholars focusing more on internal organizational resources suggested the fundamental concept of resource-based view (RBV), with the attempt to replace Porter’s generic strategies with generalized VRIN (valuable, rare, inimitable, and non-sustitutable) advantages [10]. Hence, the premise VRIN advantages are sources of sustained competitive advantage makes the RBV a virtual tautology as well. RBV scholars hypothesize that (1) if a firm possesses and exploits resources and capabilities that are both valuable and rare, it will attain a competitive advantage, (2) if these resources and capabilities are also both inimitable and non-sustitutable, the firm will sustain this advantage, and (3) the attainment of such advantages will enable the firm to improve its short-term and long-term performance [16]; [10], [10], [17]; [18].

Powell [19] challenge the RBV by proposing the counterfactual condition of competitive disadvantage, and suggests that the competitive advantage and competitive disadvantage are quite independent. In the condition where competitive advantage stems from inimitable, idiosyncratic resources, competitive disadvantage is not only non-existence of such resources, but failed to satisfy the minimum success requirements of strategic industry factors as well. In order to put the RBV’s hypotheses to the test, most scholars have employed a ‘resource heterogeneity approach’, where a specific resource or capability is argued to be valuable, rare, inimitable, and non-sustitutable, then the amount of that resource or capability possessed by a firm is correlated with its competitive advantage or performance [20].

The results show that although a specific resource or capability may be found to exhibit a strong correlation with competitive advantage and/or performance in a particular context, that resource or capability may simply not fit with the enterprise-level strategies of all firms operating in that context. It might be more useful to the industries if the academic research may suggest on how to predetermine the resources and capabilities ought to be closely correlated with competitive advantage and/or performance, and identify which characteristics of resources and capabilities are related to these ends [21].

The capabilities refer to a firm’s capacity to deploy resources, usually in combination, using organizational processes, to effect the desired end; they are information-based, tangible or intangible process that are firm specific and are developed over time through complex interactions among the firm’s resources; they can be abstractly be thought of as ‘intermediate goods’ generated by the firm to provide enhanced productivity of its resources, as well as strategic flexibility and protection for its final product or service [16]. Based on the definition, Teece et al. [18] have argued that capabilities cannot easily be bought, instead, they must be built. Likewise, Amit and Schoemaker [16] contend that some of the firm’s resources, but especially its capabilities, may be subject to market failure. If capabilities must be built, not bought, then the manager’s role may be more nearly analogous to an architect than to a stock-picker trying to beat the market [22].
Capabilities are developed in the context of organizational resource allocation which is embedded in idiosyncratic social structures, also can be seen as distinct behavioral patterns, which are complex in nature, involving both formal and informal processes [23]. Capabilities represent a repository of historical experiences and organizational learning [24]. In case of superior performance and unique historical development, capabilities are assumed to build the foundation for sustainable competitive advantage. Accordingly, organizational capabilities can be built in different fields and on different levels of organizational activity, for instance at departmental, divisional, or corporate level, and it also addressed complex processes across the organization such as product development, customer relationship, and supply chain management [25].

b. Strategic Supply Chain Management

The nature of competition has increasingly moved toward ‘supply chain versus supply chain’ struggles, since it serves as one way that firms manage recurring purchases, also referred as supply chain management (SCM), which covers the integration and management of supply chain organizations and activities through cooperative interorganizational relationships, effective business process, and high level of information sharing [26]. Supply chains are value-adding relations of partially discrete, yet inter-reliant, units that cooperatively transform raw materials into finished products through sequential, parallel, and/or network structures [27]. Supply chains are also defined as groups of organizations that collectively process raw materials into finished goods [3] where such collaborative relationships are garnered increased attention in management research over the last several years [28]. Overall, the implementation of supply chain management can increase communication and cooperation among firms, and both parties may gain benefits such as decreased costs through reduced inventory and shorter order times, improved quality through better product design, and enhanced innovation through more diverse design process inputs [26]. These current states are relatively new. Historically, the strategic management field has not devoted much empirical attention to supply chains, while related disciplines such as marketing and operations management have long emphasized the performance implications of operational activities.

In these era, organizational capabilities are highly valued attributes of firms; organizations want to be perceived as possessing salient capabilities. The competent and capable organization has become new ideal. Organization invests in their current capability set and build their strategies upon those capabilities [3]. Supply chain capability is thus crucial, as Morash [29] stated that supply chain capability is the building block for supply chain strategy and a source of competitive advantage for firm success. Morash also indicated that different capabilities support different value disciplines, which are value discipline is demand-oriented logistics capability and value discipline is supply-oriented logistics capabilities.

The concept also explained by Lynch et al. [30] that devided supply chain capability into supply-driven process capabilities and demand-driven value-added capabilities. Supply-driven process capability involves a streamline and standardized supply chain business process for analyzing extensive or intensive distribution to create methods for delivering products and services efficiently and for reducing total distribution cost. While demand-driven value-added capabilities meet customer demand for special products or customized services, which are designed to create added customer value and to maximize customer satisfaction and continuous improvement.
c. Sustainable Supply Chain Management

World Commission on Environment and Development [31] define sustainable development as the development that meets the needs of the present without compromising the ability of future generations to meet their needs. It is at the center of the sustainability conceptualization to interrelated the relationship among the economic, environmental, and social dimensions [5]. Over the last decade, as van Marrewijk [32] explains, the three pillars of sustainability have been translated into a corporate context by many authors, leading to different definitions regarding corporate sustainability. Van Marrewijk [32] also points to the application of the concept of corporate sustainability to supply chain issues as particularly complex and challenging.

Increasing concern over the environmental impacts of firms’ activities opened the extension of supply chains to include by-products and to consider the entire lifecycle of a product, increase the environmental decision making tools and green supply chain practices positively affect corporate and environmental performance [33]. On the other side, focusing significantly only on environmental parameters may be counterproductive to improving the triple bottom line of the corporate performance [34].

While in the micro-economic, sustainable supply chain management has grown, resulting the elaboration of the three pillars (economic, sustainable, and social performance) of sustainability with core business practices, such as procurement, logistics, knowledge management, marketing, and operations. Sustainable supply chain management is the strategic and transparent integration and achievement of an organization’s social, environmental, and economic objectives in the systemic coordination of key interorganizational business processes for improving the long-term economic, social, and environmental performance of the individual organization and its supply chains [35]. As Parmigiani et al. [36] suggest that the objective can be achieved by developing specific relational capabilities that enable the focal organization to design incentive mechanisms, improving upstream social and environmental conditions. While Wolf [37] has tried to relate the sustainable supply chain management with stakeholder pressure and corporate environmental performance, and be able to present the reliability of the relationship among those particular aspects. Corporate tends to listen to the voice of their stakeholders to adopt and implement the sustainable supply chain management, and gained positive environmental performance as the results.

Almost an era before, Banerjee [38] suggests that a proactive sustainable supply chain management strategies as an important objective to an organization. In the proactive approach, an organization understands its dependence upon the long-term sustainability of its resource supply. It also recognizes the importance of promoting social welfare and environmental protection in the supply chain, to ensure long-term access to those resources. As Wolf [37] explains that an organization may seek to maintain the sustainability supply chain management in order to resolve some elements of a resource dependence problem. An organization may put extra efforts to increase the sustainability of its suppliers to ensure that the suppliers will be capable of delivering products over a long period of time. It also known as a proactive approach to sustainable supply chain management.

d. Extent of A Supply Chain Orientation

Taking the RBV insights toward intangibility, this current study focus on the supply chain orientation that involves internal firm members to understand what is it do their supply chain
partners’ needs, wants, and expectations. In order to measure the intangibility conceptualization, Hult, Ketchen, Nichols, [1] examined the role of an intangible “positional advantage” in shaping performance among multinational firms. Following Hult et al. [39] this study examines six potential first-order indicators of Supply Chain Orientation, which are: customer orientation, competitor orientation, value-chain coordination, supplier orientation, logistics orientation, and operations orientations.

Customer Orientation, competitor orientation, and Value-Chain Coordination are drawn from the research on Market Orientation [40] in the field of strategic marketing and management literatures. A customer orientation is viewed as the sufficient understanding of a firm’s target customers to be able to create superior value for them continuously. A competitor orientation refers to understanding the short-term strengths and weaknesses of current rivals as well as the long-term capabilities of key current rivals and potential future new entrants. Value-chain coordination refers to the integrated use of resources at each sequential step of the chain as well as between functional areas, and facilitates the effectiveness of product and process flows within and across firms [13].

The next three indicators are taken from the operations management literature and supply management, including purchasing, procurement, and sourcing. A supplier orientation refers to the processes that enable the progress of value from raw material to final disposition. [41] Logistics management is the foundation of logistics orientation that involves planning, implementation, and controlling the efficient and effective flow and storage of goods, services, and informations from the point of origin to consumption in order to meet customers’. [41] And finally, operations orientation, refers to the design, operation, and desire for improvement of the production system that creates the firm’s primary products, services, and accompanying information [41].

e. Stakeholder Pressures

Stakeholder theory is concerned with the nature of the relationship between the firm and its stakeholders. Following Freeman’s [42] stakeholders are defined as “any group or individual who can affect or is affected by the achievement of the organization’s objectives”. Firms are posited to pay attention to stakeholder influence for normative, instrumental, and descriptive reasons. [43] Normative explications of stakeholder theory move firm-stakeholder relations into an ethical realm, proposing that managers should consider the interests of those who have stakes in the organization. In this view, stakeholders have a legitimate interest in the firm’s processes or products and these interests have intrinsic value [44].

Therefore, this stream of literature prescribes that managers have a moral obligation with) [42], [44] Instrumental stakeholder theories predict firm behavior on means-ends reasoning, whereby the firm pursues its interests through managing relationships with stakeholders [45]. The instrumental orientation sees firms as addressing the interests of stakeholders who are perceived to have influence. For example, Frooman [46] suggests the existence of four types of stakeholder influence and four types of resource relationship. The overall conclusion of this body of work is that managing stakeholders’ interests will maximize the firm’s performance [47]. Finally, the descriptive tradition has focused on characterizing the actual actions of firms and stakeholder groups as they interact.

Managing pressures from stakeholders, potentially, increase firms’ good relations with its various stakeholders, and thus, can be a valuable resource that may lead to performance advantages for the firm [48]. Employees will work harder to enhance the firm’s effectiveness [49]; customers will increase their demand or pay premium prices for the firm’s products [50]; suppliers
will be more willing to engage in knowledge sharing with the firm [51]; and local communities may provide favorable terms for the use of local infrastructure [52] Wolf (2014) explains that at the level of the supply chain, the role of impact external stakeholder could give to the firm is more complex, as previously explain by Zhu and Sakis [53] that coercive pressures from customers, competitors, and governments force the focal firm to the develop higher innovative solutions that generated from a stronger sustainable supply chain management. Empirical support also given by Sarkis et al. [53] that find a direct and positive relationship among stakeholder pressure and sustainable supply chain management. However, although the development of relationship pattern between stakeholder pressures and sustainable supply chain management have been increased over the last years, it is much still can be done toward better understanding upon the role of stakeholder pressure.

f. Supply Chain Dynamic Capabilities

A sustainable supply chain management is based on the combination of sustainable theory and supply chain management [8] At the same time, globalization and digitization attach more challenges to modern supply chain management in terms of complexity and dynamicity, and that requires higher level of dynamic capabilities in supply chain. The capabilities in creating new abilities is essentially the dynamic ability of the enterprise. This study follows Teece et al. [18] in defining dynamic capabilities as the ability to integrate, build, and reconfigure internal and external competencies to address rapidly-changing environments. Dynamic capabilities is undoubtedly an extension of the resource-based view of the firm that emphasize more on resource development and renewal [54] While Sirmon [55] explain that resources both tangible and intangible are bundled to create capabilities. Dynamic capabilities then focusing on how to achieve a competitive advantage within the supply chain [56].

As a basic thinking, Helfat and Peteraf [57] stated that heterogeneity of capabilities and resources in a population of firms is one of the cornerstones of the RBV. According to RBV conceptualization, competitive heterogeneity itself shall give the organization to experience an enduring and systematic performance differences among its closer rivals [58]. In the industry where every player particularly have unique bundles of resources and capabilities and only some of these resources and capabilities may lead to sustained competitive advantages as they may have differential effects on actual performance [47], [57], [59].

To be the source of competitive advantage, a resource or capability must be valuable as in it can enable the firm to improve its relative market position, rare as in short supply or in terms of resource functionality, and isolated from imitation or substitution or it is too costly to replicate [57], [57], [58]. Since supply chain is a potential source of those characteristics, firms will differ in terms of their possession of resources and capabilities that may lead to sustained competitive advantage, as well as their differential utilization and effectiveness, firms will experience long-term performances that is different from their competing rivals as well [60].

In this context, Supply chain dynamic capability, building on dynamic capabilities theory, is the ability of adjusting supply chain, and is an emerging also popular concept in recent years and yet its essence is difficult to grasp [61]. The adoption of dynamic capabilities in the supply chain field can be traced from the work of Beske [62] which proposed that supply chain dynamic capability was the desired ability of this complex system to deal with environmental change as well as internal complex relationships. Compares to supply chain capabilities, supply chain dynamic capabilities make organizations more flexible, and therefore can more easily and swiftly
adapt to market trend and effectively tackle market volatility, and eventually enable the firm to achieve sustainable competitive advantage in its industry. Beske et al. [63] breaks supply chain dynamic capabilities into supply chain reconstruction, knowledge evaluation, co-evolvement, flexible supply chain control, and supply chain partner relationship development. While Cheng et al. [64] divided supply chain dynamic capabilities into integration one and cooperation one. The competitive advantage of a firm is not from one particular sub-capability, but from the combination of all sub-capabilities [63].

g. Firm Performance

A firm’s success may not depend on a single set of factors and resources [57] and organizational performance measurement should not rely on a single method or approach. As Barney and Arikan [59] and Crook et al., [27] determine that the performance effects of strategic resources highlight the need to understand how managers effectively utilize these resources [65]. As for most of the management initiatives, one of the inquiry that always attract the attention is to know whether there are competitive advantage and opportunities associated with environmental management [66].

Consider also Donaldson and Preston [43] critics on the lack of reliable indicators on the stakeholder management side of the relationship, how does the organization formulate its organizational purposes, why and for whose benefit does the company exist, what role do stakeholders play in achieving its purposes, and what does the impact of strategic response upon stakeholders pressures on firms’ performance In the words of Freeman [42]“if organizations want to be effective, they will pay attention to all and only those relationship that can affect or be affected by the achievement of the organization’s purposes.”

Sustainable supply chain management become critical to organization’s vulnerability upon pressures both from external and internal stakeholder groups. Through sustainable supply chain management, a firm may gain its dynamic capabilities in order to give a profound way to improve firm’s environmental, social, and economic performance and through it upon it’s supply chain. [35], [37] It is also a clear perspectives that this objective can only be achieved by developing specific relational capabilities that enable the focal firm to design incentive mechanisms by improving upstream social and environmental conditions [36].

3. Propositions and Conceptual Model

a. The Direct Effect of Stakeholder Pressure on Sustainable Supply Chain Management

As a central tenet, stakeholder theory posits that a firm's obligations are not only with its shareholders but also with multiple groups or individuals [43]. Specifically, resource dependence theorists argue that "organizations are not self-contained or self-sufficient" and are dependent on their external environment for resources [67]. In fact, "it is dependence of firms on environmental actors (i.e., external stakeholders) for resources that gives those actors leverage over a firm" [46] and allows them to influence organizational outcomes [67]. The more dependent an organization is on a group, the greater the power of that group, and the greater its ability to influence organizational outcomes [68]. According to the cognitive approach, organizations are viewed as interpretive systems involved in scanning the environment for data, assigning meaning to that data, and enacting a response based on its [49], [69]. Managers' interpretations of stakeholders’ pressures have important implications for the level of firm’s competitive advantage [70].

Furthermore, according to the reactive model, the focal firm would only engage in sustainable supply chain management if there is pressure from stakeholders to do so [37]. Thus, the focal firm does not recognize that sustainable supply chain management shall not accordingly affect the
achievement of strategic objectives. On the contrary, the focal firm would infer that the high costs of building up sustainable supply chain management capabilities [71]. Following the resource-dependence theory, a firm would either be threatened by or perceive to be actively in a resource-dependent relationship with one or more of its stakeholder groups [46], [67] and respond to the pressure by engaging the sustainable supply chain management. Thus, the following proposition can be drawn:

**Proposition 1**: Stakeholder pressure determines the extent to which a firm engages in sustainable supply chain management.

b. **The Direct Effect of Extent A Supply Chain Orientation on Sustainable Supply Chain Management**

Literature on sustainable supply chain management (SSCM) has enlarged its focus on social and environmental issues related to purchasing and supply, from diversity sourcing [72] to procurement policies ([72]to the implementation of codes of conduct and other managerial tools. Attempts have been made to generalize the component of sustainable supply chain across industries, creating concepts of logistics and purchasing social responsibility [72] Supply chain orientation based on the findings of Hult et al. [39] are no other serves as an organizational capability, especially in managing good relationships with partners in supply chains, logistics systems, and elevating the opportunities to gain a sustainable competitive advantage as resource-based view suggested. A supply chain orientation will positively affect desired outcomes, and up to now are still open to be explored consider its complexity. It is a fruitful idea to engage it with a concept such as sustainability which brings a greater good for all parties under supply chains commitments.

Sustainability-based policies and practices in specific industries have been analyzed [50] even in comparison with alternative supply chain models. Building on the resource-based view as basic thinking, this study follows Wolf [37] posits that the supply chain orientation which consists of 6 dimensions thus become one of criteria in the effort to implement sustainable supply chain management. Then the following proposition may be drawn:

**Proposition 2**: Supply Chain Orientation determines the extent to which a firm engages in sustainable supply chain management.

c. **The Direct Effect of Sustainable Supply Chain Management on Supply Chain Dynamic Capabilities**

Sustainable supply chain management (SSCM) according to Carter and Rogers ([73]) is the strategic, transparent integration and achievement of an organization’s social, environmental, and economic goals in the systematic coordination of key organizational business processes for improving the long term economic performance of the individual firm and its supply chain. It is also a key to develop further stage of firm’s strategic capabilities, into something that is more dynamic state. As we can see, SSCM assures the ownership of more routine-based organizational capabilities.

In a changing world, firm’s organizations shall prepare them selves to face the challenge of highly dynamic competitions, not only in its solitaire role, but more on supply chain versus supply chain. It is essential for the success of supply chain management to incorporate information exchange along the supply chain as well as fast reactions to changing environment, integrating relevant parties, creating a high level of networking including the whole supply chain, in order to
avoid social and environmental problems and minimize the risks also related efforts for the purchasing companies [74] Sustainable supply chain management (SSCM) shall bring short term competitive advantage, which in turn would boost further development of dynamic capability [34] Research stream which combine SSCM with the dynamic capability might consider as rare, especially in empirical based [75]. Following Gimzauskiene et al. [55] who suggest that the supply chain dynamic capability makes organizations more flexible, and therefore can more easily and swiftly adapt to market trend and effectively tackle market volatility, and eventually enable the firm to achieve sustainable competitive advantage in its industry. Hence, this following proposition can be drawn:  

Proposition 3: Sustainable supply chain management determines the extent to which a firm own the supply chain dynamic capabilities.

d. The Direct Effect of Supply Chain Dynamic Capabilities on Firm Performance  
Over the ever changing environment, the abilities in supply chain need to be adjusted constantly. Supply chain can only fulfill the market demand if new abilities are created to improve long term sustainable efficiency [75] Upon the same industry, close competitors show differences in their competitive behavior. According to the resource-based view, the competitive heterogeneity is determined by the differences in each players’ resources and capabilities that in turn affects their competitive advantage or disadvantage [76] These capabilities according to Day known as organizational or strategic capabilities, spread around different functional areas, actively involve many different personalities whose came from different managerial levels, and serve multiple objectives. It also includes outside-in process that involves marketing capabilities and market sensing capabilities; inside-out processes that involves, and spanning processes new product/service development [16] It is the capabilities by which organizations’ resources are acquired and deployed in ways that match the firm’s market environment that explains interorganizational performance variance over time [17], [18], [22] involve complex coordinated patterns of skills and knowledge that, over time, become embedded as organizational routines [12] [51] found that knowledge sharing among supply chain can improve efficiency, while Chen et al. [64] suggest the importance of flexibility to buffer the negative impact from supply chain breakdown and to enhance firm performance.  
Supply chain dynamic capability is a relatively new conceptualization of normative dynamic capability as Teece [18] noted earlier. Up to now, there is only limited research discussing how the supply chain dynamic capabilities affect firm performance [75]. In a time before, Caniato et al. [77] discuss the luxury industry and manage to find a positive impact of supply chain dynamic capabilities upon firm performance. While Cheng et al. [64] find that in a highly competitive market, dynamic capability become an excellent weapon in improving innovative performance and new product development of firms. Thus, it is strengthen the urgency to give more profound causalities between the role of supply chain dynamic capabilities on elevating firm performance. Thus, the following proposition may drawn:  

Proposition 4: Supply chain dynamic capabilities strongly impact firm performance.

4. Conclusion  
This study define 4 propositions that highly need to be tested in an empirical state. Further research shall explore the possibility to find some other causalities related to the construct that have been discussed above, with the additions of moderation and control variables. Theoretical
state indicated the positive effect of stakeholder pressure, extent of supply chain orientation, toward sustainable supply chain management. The existence of sustainable supply chain management theoretically indicates high supply chain dynamic capabilities and in turn, hypothetically will increased firm performance. This study contributes over the prediction of the relationship patterns between strategic management, business ethics, and supply chain management field of research. The introduction of supply chain dynamic capabilities into the framework also provides more theoretical insights upon the sustainability supply chain management research area. The combination of supply chain management construct and supply chain dynamic capability remain limited in the context of emerging economies where the conceptualization of sustainability attempts as cost-added activities, short-term positive impact, and closely related to higher complexity in its implementation.

<table>
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<tr>
<th>Stakeholder Pressure</th>
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<td>• Social Supply Chain Related Issues and Controversies</td>
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<td>• Operations and Product Related Issues and Controversies</td>
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<td>• Environmental Supply Chain Related Issues and Controversies</td>
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<th>Sustainable Supply Chain Management</th>
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<td>• Social Supply Chain Standards</td>
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<td>• Supply Chain Monitoring Systems</td>
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<td>• Green Procurement</td>
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<th>Extent of a Supply Chain Orientation</th>
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<tr>
<td>• Customer Orientation</td>
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<td>• Competitor Orientation</td>
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<td>• Value-Chain Coordination</td>
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<td>• Supplier Orientation</td>
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<td>• Logistics Orientation</td>
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<td>• Operations Orientation</td>
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<th>Supply Chain Dynamic Capabilities</th>
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<tr>
<td>• Knowledge Acquisition and Absorptive Capacity</td>
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<td>• Market Oriented Perception Ability</td>
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<td>• Innovation Ability</td>
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<td>• Social Network Relationship Ability</td>
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<th>Firm Overall Performance</th>
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<td>• Customer Performance</td>
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<td>• Financial Performance</td>
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<td>• Internal Process Performance</td>
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<td>• Innovation and Learning Performance</td>
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<td>• Environmental Performance</td>
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Fig. 1. Conceptual Model
REFERENCE


The Impact Of Fun at Work on Creative Performance and Organizational Citizenship Behaviour

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Abstract. The growing numbers of millennial generation in the workforce have led to numerous changes in the way organisations work and how the jobs are managed. This includes where the work takes place, how we the work is organised, and how workers communicate. These changes require organisations to take into account millennial’s preferences toward work and therefore adapt to the current development. One of the most popular trends among millennial workers is the implementation of fun at work. Using the SEM method, this study examines the impact of fun at work on organizational citizenship behaviour as well as creative performance, with the role of work engagement as the mediating variable. This study was conducted using quantitative method in which data was collected by distributing questionnaires to 250 employees. Results have shown that fun at work does not influence employees’ work engagement but has direct influence on organizational citizenship behaviour and creative performance. Hence, work engagement does not have role as mediator in the relationship between fun at work and creative performance as well as organizational citizenship behaviour.

Keywords: Fun at Work, Work Engagement, Creative Performance, Organizational Citizenship Behaviour

1. Introduction

The increase of transparency and the growing influence of the millennial generation have led to numerous changes in the way organisations work and how the jobs are managed, where the work takes place, how we the work is organised, and how workers communicate. Over time, the employee composition of an organisation will begin to turnover, which in this case, the baby boomers and generation X is beginning to be replaced by the millennial generation. The millennial generation is known as the generation born between 1984 and 1996. According to Hershatter& Epstein [1] the millennial generation is a generation starting with people born in 1980 who entered the labour market in 2000.

Millennial workers place a greater importance on an engaging job and seek pleasure through their jobs, or commonly known as having fun at work. A survey conducted by PwC found that the millennial generation seeks flexible jobs that provide work-life balance and provide
international assignment opportunities, and these indicators are the key to a higher work satisfaction. This research was conducted on 44,000 employees, in which a quarter of the sample is the millennial generation, across PwC offices around the world. The research found that 64 per cent of the millennial employees want greater flexibility where they can also work from home aside from the office, and 66 per cent of the millennials want the opportunity to modify their work hours to accommodate their personal interest and still be connected to the organisation through technology. Another research conducted by BrightHR on 2,000 millennial workers found that the integration of fun in the workplace can lower employee absence, increase productivity and reduce stress. This research also found that 79 per cent of graduate respondents believe that fun at work is important, 21 per cent believe that fun at work enforces stronger work ethics. The above data and facts indicate that the concept of fun at work needs to be taken into consideration because it directly correlates with the millennial generation that will make up the different lines of organisations.

Another previous research on the fun at work was conducted by Fluegge [2] and found that the concept reflects the incorporation of fun and humour in an individual’s social, interpersonal and work engagements which provides an entertaining, comfortable and fun environment. This concept is in line with Lamm and Meeks [3] that defined workplace fun as a playful, social, interpersonal, recreational work engagement that is intended to provide entertainment, comfort and pleasure. A research conducted by Rockman [4] found that fun, creativity and humour positively affect workers by decreasing absence, retaining competent employees and lower turnover rate. With the provision of fun at work, employees are expected to display positive behaviour, be motivated in their work and provide their best effort.

This expectation is in line with the concept of Organisational Citizenship Behaviour (OCB), Creative performance and work engagement. This concept is defined as a behaviour outside of an employee’s formal job responsibility that contributes to the psychological and social environment of a workplace [5]. Furthermore, according to Fluegge [2], OCB is a voluntary behaviour of an individual that is not included in their job description but is indirectly recognised in the formal reward system and can increase the effectiveness an organisation's operation. OCB correlates with the turnover rate, decreases employee absence, increases productivity and work satisfaction [6]. Fluegge [2] defined that fun positively affect the OCB, Creative Performance and Work engagement.

According to Indonesia Central Bureau of Statistics, there are about 83 million people aged 20-40 years old, categorized as millennial generation, who are in the productive age. This figure shows that millennials accounts for 34% of the total Indonesian population. Considering the number of millennials entering the workforce by 2020, organisations in Indonesia should prepare their working environment to better suit the millennial generation, and one of the ways is to apply the concept of fun at work in the workplace. Researches on the fun at work also found different results. Several studies found that the concept of fun in the workplace is important to create a positive impact on workers and the organisation. Fluegge [2] found that fun affects the performance of working undergraduate students where it positively affects task performance, creative performance and organisational citizenship behaviour. However, several types of research on the fun at work showed opposing results [2]. According to [3] the concept of fun cannot be tolerated by everybody because they do not share the same perception of it as well as the perception on other concepts pertaining to fun in the workplace. An example is a research conducted by Fleming [7] which indicated that several employees find that the application of fun in the workplace as fake and inauthentic.

This research examines the correlation between fun at work and the variable of organisational citizenship behaviour creative performance with a mediating variable of work engagement. This research utilises a quantitative method with data collection through questionnaires. Purposive
sampling technique is used with the target respondents of 250 employees. This research intended to be a reference for companies and relevant parties on the application of fun at work in Indonesian workplace.

2. Literature Review

Fun at work is defined as an experience where an individual is socially or interpersonally involved in the completion of their workload and conducts it in a fun and humorous manner, which as a result provides the individual with an entertaining, comfortable and fun environment [2], [3];[8] also defined fun at work as a behaviour that does not necessarily relate to work but is fun, entertaining and filled with pleasure. Fun at work can be created when the workplace environment is designed to make employees feel comfortable and find a sense of pleasure in their work; with the humorous interaction between employees and having other activities that create a sense of fun. Fun can affect employees’ perception of well being and relieve stress and improve their motivation which will impact the effectiveness of their job performance.

Several articles and studies on the fun at work found that an employee that displays fun behaviour will experience less stress,[9]; [10] lower turnover rate and absenteeism [11], [12] and feel more energised and motivated [7]

a. Fun at work and Work engagement

Schaufeli et al. [13] define work engagement as a positive motivational state and self-fulfillment in work characterized by the existence of vigor, dedication, and absorption. In this study, it was explained that the dimensions of fun at work (socializing with workers, celebrating work, personal motivation and global fun at work) had a significant positive relationship with work engagement. So, the first hypothesis (H1) of this study is: Fun at work influences work engagement.

b. Fun at work and Creative performance

The relationship between fun and creative performance is often illustrated by increasing mental flexibility associated with humor[14]. Based on this explanation, it can be described that fun at work is able to entertain individuals through socialization, celebration, and personal freedom (McDowell, 2005). Entertainment can foster mental flexibility and produce higher level of creative performance because fun at work is conceptually similar to the humor discussed earlier. So, the second hypothesis (H2) from this research is: Fun at work influences creative performance. This section must be in one column.

c. Fun at work and Organizational Citizenship Behavior

According to Fluegge [2] fun at work is defined as individual participation in social, interpersonal or activities with fun and humorous tasks that provide the individual an entertaining, comfortable and pleasant atmosphere. Previous research shows that fun at work has a positive and significant influence on organizational citizenship behavior [2] So, the third hypothesis (H3) in this study is: Fun at work influences work engagement.

d. Work Engagement and Creative Performance

Research conducted by LeFevre [15] has measured the relationship between flow and creative performance by using 1,026 samples of workers from five large companies. The results found a positive relationship between experienced flow and creativity. In this study, it was explained that the more frequent research participants felt the experienced flow, the greater the creative
performance they performed. This study provides preliminary evidence to prove that flow is positively related to creative performance because the absorption of work engagement dimension is considered to be similar to flow. Therefore, work engagement also has a positive relationship with creative performance. So, the fourth hypothesis (H4) from this research is: Work engagement influences creative performance.

e. Work engagement and Organizational Citizenship Behavior

Previous studies have suggested that there is a significant positive relationship between work engagement and organizational citizenship behavior [16]. This is also supported by Ziyad which shows that job satisfaction, work attachment, and personality significantly influence organizational citizenship behavior with job satisfaction has a greater influence. So, the fifth hypothesis (H5) of this research is: Work engagement influences organizational citizenship behavior.

The research model is thus formulated as shown in Figure 1.

![Fig. 1. Fun at work conceptual model](image)

3. Method

a. Research Sample

The usage of 245 respondents in this research adheres to the rule of thumb in the SEM in which data processing requires a minimum of the sample that is 5 times the number of parameters in the research question, which amounts to 247 parameters [17]. The requirement for the research respondents is to have worked in their organisation for at least one year. This is due to the expectation that such employees have experienced fun at work which would then influence their OCB behaviour and creative performance. The number of samples that were successfully processed in this research is 251 samples.

b. Research Instrument

This research utilised four instruments comprising of fun at work to measure the variable of fun at work developed by McDowell [8] which consists of 24 questions, and another instrument developed by Schaufelli and Bakker [13] to measure the engagement variable using 9 indicator questions. Moreover, the questionnaire developed by Georger and Zhou [18] was used to measure creative performance with 6 indicator questions, and lastly, the OCB variable was measured using 8 questions [19]. All the questionnaires have been adapted into the Indonesian language consisting of 47 items with a Likert scale of 1-5.
c. Research Procedure
This research utilised the research model developed from the literature on the fun at work, work engagement, creative performance and OCB, which are the topics that are currently debated in the working environment. The object of research pertaining to the topics has been conducted in multivariate workplace environments from private organisations to national and multinational organisations. In this research, the research object is the employees that have worked in their organisation for at least one year. The research was conducted in three months between late March and early May of 2018.

4. Results
Based on the results from the validity and reliability test of the measurement model below, all variable seems to have a good level of validity which can be seen from the SLF value ≥ 0.50, and has a good level of reliability of the CR ≥ 0, 70 and VE ≥ 0.50. In this study the CR value from all variables is ≥ 0, 70 VE value is ≥ 0.50.. Hatcher (1994) states that in some studies, the value of VE is found to be <0.50 and this does not need to be disputed, as far as the CR value shown is ≥ 0.60, so the reliability of all variable on this model is well.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>∑SLF</th>
<th>CR</th>
<th>VE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fun at Work</td>
<td>3.87</td>
<td>0.819</td>
<td>0.433</td>
</tr>
<tr>
<td>Work Engagement</td>
<td>3.79</td>
<td>0.886</td>
<td>0.469</td>
</tr>
<tr>
<td>Creative Performance</td>
<td>3.01</td>
<td>0.838</td>
<td>0.387</td>
</tr>
<tr>
<td>OCB</td>
<td>2.94</td>
<td>0.823</td>
<td>0.293</td>
</tr>
</tbody>
</table>

Table 1. Summary of reliability and Validity

These variables have dimensions with the highest SLF value, namely the socializing dimension in the fun at work variable with the SLF value 0.70, the dedication dimension in the work engagement variable with the SLF value 0.85. While for the creative performance indicator, CP5 indicator has the highest SLF with SLF value 0.68 and OCB4, OCB5, OCB6 indicators in organizational citizenship behavior with SLF value 0.71.

In the two-tailed hypothesis, if the t-value ≥ 1.96 or ≤-1.96, the relationship is interpreted as significant and therefore answer the hypothesis. While, regarding the direction of its influence, the negative value means the exogenous variable has a negative influence towards endogenous variables, and positive values means the exogenous variable has a positive influence towards endogenous variables [17] The table below shows the results of the hypothesis tested in this study:
### Table 2: Summary of causal relationship analysis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path</th>
<th>T-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fun at work → Work engagement</td>
<td>1.25</td>
<td>Negative</td>
</tr>
<tr>
<td>2</td>
<td>Fun at work → Creative performance</td>
<td>4.79</td>
<td>Positive</td>
</tr>
<tr>
<td>3</td>
<td>Fun at work → OCB</td>
<td>4.22</td>
<td>Positive</td>
</tr>
<tr>
<td>4</td>
<td>Work engagement → Creative performance</td>
<td>4.39</td>
<td>Positive</td>
</tr>
<tr>
<td>5</td>
<td>Work engagement → OCB</td>
<td>3.55</td>
<td>Positive</td>
</tr>
</tbody>
</table>

H1 predicted that Fun at work would be positively related to work engagement. It was found that the proposed hypothesis is rejected. Based on the research analysis, fun at work has no direct effect on work engagement as seen from the insignificant t-value of 1.25. which implies that the work engagement variable does not mediate fun at work.

H2 Predicted that Fun at work would be positively related to creative performance. Fun at work is proven to significantly influence creative performance with the t-value 4.79.

H3 Predicted that Fun at work would be positively related to OCB, fun at work is proven to significantly influence OCB with the t-value 4.22.

H4 predicted that work engagement would be positively related to creative performance, work engagement is proven to significantly influence OCB with the t-value 4.39.

H5 predicted that work engagement would positively relate to OCB work engagement is proven to significantly influence OCB with the t-value 3.55.

### 5. Discussion

There is no apparent two-tailed correlation occurring in the result of this hypothesis. Therefore, when fun at work is taken into consideration in the formulation of a job description, the employees' sense of engagement with their work environment is not affected. This may be a result of different factors that may stronger affect the employees' sense of engagement, namely organisational culture, career development within the organisation and salary level among others. This also shows that the more fun the work environment is, the more parties are being held, and the closer employees are with each other; it does not necessitate a higher engagement of
employees with their work. This variable does not mediate between work engagement and creative performance as well as OCB.

This finding is in accordance with the highest SLF value of the fun at work variable, namely the socializing dimension. It can be explained that the more often individuals socialize in their work environment, it will be directly proportional to the level of fun. On the other hand, the highest SLF value from the work engagement variable is dedication. According to this finding, the more individual socializing within an organization does not necessarily mean that the individual has strong dedication to his/her work. Another finding in this study is that although fun at work has no effect on work engagement, fun at work has a positive effect on creative performance. This study found that in the context of Indonesian culture, the people have different interpretation of the concept of fun at work compared to other context as discussed by previous studies in different culture. This is shown by the highest SLF value of fun at work is socializing, which means the concept of fun at work in Indonesia is more defined as socialization among individuals in an organization compared to celebration or personal freedom.

The second hypothesis can be seen that the Fun at work variable significantly influences creative performance from the employees. Both variables have a significant effect on each other, this can be seen from the relationship between the most dominant dimensions and indicators of the two variables. The socializing dimension as the most dominant dimension in the Fun at work variable which has indicators in it such as socializing with colleagues inside and outside the office, building friendships in the office and sharing food in the office are correlated with the most dominant indicators of creative performance when employees come up with ideas, creative and innovative ideas.

The next hypothesis between the variables of fun at work and ocb has a significant effect on this relationship. It can be seen from the most dominant dimensions of the two variables. The socializing dimension as the most dominant dimension in the Fun at work variable, the indicators in it such as socializing with colleagues inside and outside the office, building friendships in the office and sharing food in the office are correlated with the most dominant dimensions of OCB namely civic virtue and sportmanship which indicators in it such as helping co-workers clearly have correlation with each other.

Furthermore, the hypothesis between work engagement and creative performance variables has a significant effect on this relationship, which can be seen from the most dominant dimensions and indicators of the two variables. variable work engagement the most dominant dimension is dedication which indicators in it such as feeling proud and enthusiastic about work and creative performance variables have the most indicators when employees emerge with new and creative ideas. These two things certainly have a correlation when employees who are enthusiastic and proud of their work according to the employee's researchers tend to be more creative.

The last is the relationship between work engagement variables and OCB. Both variables have a significant effect on this relationship, which can be seen from the most dominant dimensions and indicators of the two variables. The most dominant variable of work engagement dimension is dedication, the indicators of which are like being proud and enthusiastic about work and the most dominant dimension variables of OCB, namely civic virtue and sportmanship, the indicators of which are like helping co-workers clearly have correlation with each other. This can be linked to the more enthusiastic employees, the more proud they will be and defend their work while being criticized and employees will be more proud to represent their work in public.

6. Conclusion

Fun at work has no effect on work engagement. The largest dimension of this concept is not the employees’ social activities. This shows that fun at work is not directly proportional to the
level of engagement felt by the employees. The largest dimension of work engagement is dedication, where even though the employees may be more social, it does not mean that they have a higher level of dedication to the company. Through this research, it was found that the fun at work has a direct impact on creative performance and Organisational Citizenship Behaviour (OCB). Fun at work affects creative performance. It can be seen that the implementation of fun at work will improve employees’ creative performance in their work. The fun at work experienced by employees comprised of social engagement with colleagues, the feeling of attaining success in the workplace and personal freedom, which all improves employees’ creative performance. Fun at work affects OCB. This means that when a company implements fun at work, employees’ OCB level increases. The fun at work experienced by employees comprised of social engagement with colleagues, the feeling of attaining success in the workplace and personal freedom, which all improves employees’ positive attitude towards the company. Work engagement affects creative performance. This explains how a higher engagement level will motivate employees to perform more creatively and then work engagement affects OCB. This proves that with a higher level of engagement, employees will display more OCB behaviour.

Fun at work has no effect on work engagement. This means that work engagement does not mediate between fun at work and creative performance as well as OCB. This can be seen from how the concept of fun at work used in this study pertains to the socialising conducted among colleagues, such as telling each other stories and building a friendship at the office. This is in line with how the level of dedication is the dimension where the work engagement is found to be at the highest level. Therefore, despite the socialising that the employees do among each other, it does not necessarily mean that their dedication to the company is impacted.

7. Limitation

The results obtained through this research still has many flaws and limitations which require improvements in the future. The following are suggestions to be considered in further research:

The research on the fun at work should be done as a case study on the companies that have applied this concept. For example, the companies that have the supporting facilities such as a playground or have implemented flexible working hours and casual dress code. Open-ended questions on the suitable implementation of fun at work may also be asked in the research. So for the further, exploratory research on the perception of Indonesian respondents about fun at work may also be conducted since the concept is still perceived differently in Indonesia.

Indicator questions on the fun at work need to be re-tested. This can be done by way of wording (testing the respondents’ understanding of the indicators in the questionnaire) to reach a deeper understanding of what the research seeks to measure. And then new information on the same topic can also be researched, such as whether the fun at work concept can negatively impact an organisation as it may encourage counterproductive behaviours that would have a detrimental impact to the company or organisation.

References


Wedding-Planning Industry in Indonesia:
The Influence of Technology Orientation and Trust as Mediating Factors on the Relationship between Entrepreneurial Orientation and e-Commerce Adoption

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Abstract. Statistical data has shown that there is a decrease in the number of marriages in Jakarta in the period 2009-2014 with no significant changes in the last 3 years. The millennial generation of brides and grooms are characterized by their adoption of technology and electronic transactions. This research aimed to examine the influence of technology orientation and trust as mediating variables on the correlation between entrepreneurial orientation and intention to adopt the e-commerce platform. The findings suggested that trust factor plays a more important role than technology orientation.

Keywords: Entrepreneurial Orientation, Technology Orientation, Trust, E-Commerce Adoption, Wedding Platform.

1. Introduction
Wedding industry in Jakarta has been growing for the past decade because of the increasing population growth and the strong economic growth in Indonesia. In 2016, the wedding industry yielded USD 7 billion in transactions, while the non-wedding tourism industry was valued at USD 11 Billion [1]. The data shows there is a decline in the number of marriages continuously in the period between 2009 and 2014 in Jakarta and there are no significant developments in the last 3 years[2].

The decline in marriage is steeper for the millennial generation, because the economic shock of the recession put marriage on hold for many young adults and marriage rates are returning only slowly (if at all) to pre-recession levels [3]. The delay in the age of the first marriage is done because brides are more concerned with pursuing careers, the maturity of psychology and economic stability, and extending the search for an adequately resourced spouse [2]. This
condition is very much in line where 67% of young couples now play a large role in financing their own wedding parties, which traditionally, most wedding expenses were borne by the bride’s family [1].

The government has been trying to regulate the maximum number of invitations at a wedding party [4]. For certain echelons, donations for parties are recorded by officers on duty and reported to the state. For certain nominal donations, it will become the property of the state. This phenomenon is increasingly putting a heightened pressure on the marriage industry.

This decline in growth is a threat to the sustainability of the industry. However, this provides a plenty of opportunities to adapt for the growth of event planners and wedding organizers that caters to the millennials [5]. Millennials are described as a generation that is very easy to accept new technology, more sensitive to prices, more individual and freer in making choices [6]. The use of smart phones among millennials, ownership of social media accounts and other smart applications shows a very strong tendency in the use of technology. Electronic transactions among millennials have become commonplace [7].

Small business companies, particularly in the wedding industry, have latent weaknesses. The quality of human resources in small and medium-sized enterprises is low due to the ability of the companies to pay competent professionals, as well as limited access to technology and low levels of competitiveness in the global market[8].

The e-wedding platform is a market place that brings together numerous wedding vendors with prospective customers who need their services. Instead of making it a media for transactions between consumers and service providers, the current platform is more on online promotion media for service providers and shopping windows for potential customers. Transactions through the marketplace are still very low [5], probably due to vendors’ low confidence in platform operators. Also, prospective brides are yet to be convinced to shop online. Therefore, it needs to be researched further to what extent that Trust influences the behavior of entrepreneurs in using an e-wedding platform. Overall, this research will examine the influence of Perceived Technology Orientation as a factor that mediates entrepreneurial orientation and trust in the desire of entrepreneurs to use e-wedding e-commerce platforms.

2. Method

Central Statistics Agency showed the proportion of SMEs have 99.99% of the total businesses in Indonesia or as many as 52.76 million units[9]. There are good reasons of taking the samples in Indonesia’s capital city since it is often used to represent Indonesia as a whole. In this case, the research samples are owners and/or directors of small and medium enterprises. We distributed the questionnaire to 64 small and medium organizations specializing in wedding events, e.g. wedding organizers, wedding decorators, wedding photographers and wedding musicians.

The number of samples is justified by the use of Partial Least Squares Structural Equation Modelling (PLS-SEM) 3.0. The use of this model and its bootstrapping method does not require normality in distribution since it follows a non-parametric rule. First, we tested the loading factor of each indicator and examined its reliability and validity. Second, we conducted an inner model test to analyze the significance between latent variables [10].

3. Result

3.1 Theoretical implications

The findings provided empirical support to the theory on the influence of entrepreneurial orientation on e-commerce adoption and on the moderating effects of trust and technology orientation on e-commerce adoption-entrepreneurial orientation relationship. The investigation
of the trust and technology orientation factors is not new; nevertheless, this paper adds to a better understanding of these strategic orientations in an Asian context, which in turn enhances their generalizability. This study has found relatively high levels of trust and technology orientation at Indonesian small and medium business owners specializing in wedding events, where both orientations are associated with dynamism and competitive hostility and dynamism.

3.2 Managerial implications

The findings of current study suggested that the importance of wedding-planning key attributes may be affected by different factors. Wedding-planning organizers may have to focus on the identified key attributes; i.e. trust and technology orientation, as essential factors in their competitive strategy. Trust plays a crucial role in knowledge flow because it improves access to the sources of knowledge, which in turn will increase the willingness and ability of knowledge transfer. Managers need to emphasize on the importance of trust which further strengthens the network relationships internally and consequently enhance the organizational effectiveness[6].

Technology has become a very relevant factor in the growth of small and medium size businesses[11]. Thus, technology cannot be taken for granted, and instead, they should strive to become technology savvy and focus on adopting better technology to help grow the business. The challenge and opportunity for firms in emerging economies is to adopt technology and act entrepreneurially, which can optimize and maximize developmental efforts. From policy perspective, the government needs to ensure a positive and supportive market conditions for the business owners to operate in while motivating them to become more tech-savvy and more globally competitive.

4. Discussion

The intention to adopt e-commerce platform for the wedding industry can be described as follows. For the validity results, the values above 0.7 for loading factor and Average Variance Extracted were kept (loading factors below 0.7 were removed). We found that some of the outer models from the variable Technology Orientation (facilitating conditions 2, 3, and 4) could not satisfy the loading factor of 0.7. Therefore, the indicator did not reflect the causal effect to its latent variables. This indicator had to be excluded from its latent variable. With this finding, it seems that our respondents did not need any sophisticated facilitating condition in using e-commerce application, thus the considerably high familiarity with the Internet-based applications.

For the reliability test, where Cronbach’s Alpha has to be above 0.7 to be valid [12]. We found out that the values are above 0.7, therefore, we can conclude that this particular research met the Validity and Reliability construct (see Fig. 2).
Next, we tested the questionnaire into the inner model method (see Fig. 3) to check the significance between latent variables (with 5,000 subsamples, t-value of 1.96 and 5% of significance level as the rule of thumb in accepting the significance between variable). We found in hypothesis 1 that Entrepreneurial Orientation does not significantly influence Intention to Adopt e-Commerce ($t=1.179$, $P>0.05$). For hypothesis 2, we found that Entrepreneurial Orientation positively influences Trust ($t=10.435$, $P<0.05$). For Hypothesis 3, it was discovered that Entrepreneurial Orientation positively influences Technology Orientation ($t=2.321$, $P<0.05$). For Hypothesis 4, we found that the factor Trust positively influences Technology Orientation ($t=6.190$, $P<0.05$). For Hypothesis 5, we discovered that Trust does not significantly influence Intention to Adopt e-Commerce ($t=0.77$, $P>0.05$). For Hypothesis 6, it was found that Technology Orientation positively influences Intention to Adopt the e-Commerce platform ($t=5.745$, $P<0.05$).

5. Conclusion
The findings show that small medium enterprises in wedding industry in Indonesia have a high interest in using e-commerce platforms to support their businesses, especially while the Trust factor plays an important role as a mediating variable to Technology Orientation. It clearly
shows that Trust has a more positively significant value in comparison with Entrepreneur Orientation directly connected to Technology Orientation. Therefore, the SMEs in the wedding industry need to find ways of improving consumers’ perception of their trustworthiness in order to fully utilize the prospect of e-commerce platform. Further research can also link the role of social media to see its influence on technology orientation which may provide interesting recommendations.

References
Abstract. Designing ecotourism areas in the reservoir area requires a multidisciplinary approach to identifying strategic variables that will determine its success. This study aims to determine the most influential variables in the development of the Kedung Ombo reservoir ecotourism area. Data analysis uses a prospective structural approach with the help of Micmac software. Data collection uses focus group discussion methods and workshops involving stakeholders in the Kedung Ombo dam. The group discussion agreed that there are 33 variables that must be considered in the development of the Kedung Ombo ecotourism area with typology as follows: Input Variables, consisting of: regulation, integration with surrounding land use local awareness of tourism, infrastructure, local entrepreneurship ability, potential of tourism market, tourism attraction, economic potential of tourism business, and community involvement; Relay Variables, consisting of: policy for special permit for investment, retribution policy, tax policy, allowance policy, tourism promotion, apparatus role, governance, private investment, and coordination; 3) Autonomous Variables, consisting of: climate, security, natural beauty, developer understanding of local norms, potential conflict, and accessibility. 4) Results Variables, consisting of: fund for community, preservation of local wisdom, employment expansion, forest preservation, conservation of reservoir function, improvement of welfare, and reduction of poverty. The results of this study will be a rich source of information for policy makers in the Kedung Ombo reservoir in developing it as a sustainable ecotourism area.

Keywords: Ecotourism, Sustainability, Structural, Prospective, Micmac

1. Introduction
Tourism is a complex system, on the one hand it is a socio-economic phenomenon that is significantly spatially separated and bound to the attractiveness of local conditions, on the other hand is a phenomenon that requires high coordination and cooperation from all stakeholders [1]. From the aspect of development, tourism is considered as a reliable sector that is environmentally friendly with a high level of effectiveness of job creation and income. This
condition requires that tourism development needs proper planning supported by a comprehensive analysis of the future so that sustainable tourism is realized.

Based on this thinking tourism studies closer to a multi-disciplinary approach, in order to characterize the multiple factors that affect social, institutional and economic dynamics as well as their mutual interrelations. The persistence of such multi-disciplinary approach may reflect a common intuition over the existence of pluralities of tourism which cannot be fully captured by mono-disciplinary analysis. At a mono-disciplinary approach, tourism is traditionally assessed as the sum of its constituent parts, this is due to a lack of categories and analytical tools that exceed the mono-disciplinary analysis. This weakness clearly shows the dilemma between comprehensive perceptions of tourism and how to overcome it to produce comprehensive and capable scientific knowledge in the future[2].

If we aims at assessing tourism as a complex, systemic and evolutionary reality, its analysis will require a tools that allow us to take into account its heterogeneous constituent elements, their mutual non-linear interrelations as well as its dynamic nature. As well as y considering the impacts in the whole of any eventual change in any of the constituent elements, non-linear reciprocal relationships and dynamic nature. Beside that, considering the impact on overall system changes as a result of occurs in one of its constituent elements, and is able to describe the future situation of an object. To achieve these goals, a prospective analysis is proposed.

One potential area that can become a tourist attraction is the reservoir area. Utilizing the reservoir area and its resource for tourism was a rational thing. This matter had been quite successful in several cases in China and other countries [3]. Their research recommended that the development of tourism around reservoir could be done as long as it could realize a harmonization between human, nature, social and economic development in a sustainable manner. This is to ensure that the important task of the reservoir must be maintained well, such as: flood storage and disposal, water volume adjustment, electricity generation, water supply for industry and agriculture and life in the city. If tourism arrangement in this area were not appropriate, the serious consequences were not measurable anymore. Therefore, it was necessary to have an appropriate planning supported by a comprehensive analysis of the future in order to make it realize a sustainable tourism.

Kedung Ombo Reservoir is one of the largest reservoirs in Southeast Asia owned by Indonesia, with an inundation area of ± 4,500 Ha and a normal reservoir volume of 723 Million M3. However, since 2003 this reservoir has experienced massive siltation (an average of 0.87 m³ per year) due to significant sedimentation. Sedimentation occurs because of the conversion of land around the river and economic activities of other local residents in the reservoir. It is feared that it will disrupt the sustainability of the main function of the reservoir as a flood controller. Therefore, it is necessary to look for alternative activities that can provide economic benefits but are safe for the sustainability of the reservoir function. The alternative that we offer is developing ecotourism in the reservoir area.

Ecotourism which prioritizes aspects of nature conservation, aspects of socio-economic empowerment of local communities and aspects of learning and education are very appropriate to be developed. To provide input to decision makers about strategic variables that must be the focus in developing the Kedung ombo reservoir ecotourism area, this research was conducted. The results of the study allow the formation of quality long-term policy recommendations, avoiding problems and encourage future thinking in the management of the Kedung Ombo reservoir as an ecotourism area.
2. Method
   a. Desain Research
      The research was designed based on a prospective research paradigm in the context of future thinking.

2.2 Data Collection
   Data collection method was carried out using focus group discussion and workshop. In order to encourage the active involvement of all discussion participants is needed in prospective structural analysis. The structural analysis work process is carried out through participatory workshops and deliberations[4]. This allows comprehensive recommendations to be found before a decision is made. The discussions were held using world café method. This method will to drive the occurrence knowledge sharing and experience transfer processes among participants.

   The participants of the discussion were twenty people representing the stakeholders of the Kedung Ombo Reservoir. The twenty participants consisted of comprising the Head and Operational Director of Balai Besar Wilayah Sungai (BBWS) Pemali Juana as the reservoir operator, Bappeda officials, Head of Sports and Tourism Youth Services Departement from Grobogan, Boyolali and Sragen district, lecturers from tourism college in Solo city, students, tourism service businessmen and community around reservoir. The focus group discussions was aimed at finding strategic variables in the development of the Kedung ombo reservoir ecotourism. Before having discussion, some interviews were held with the Head of Balai Besar Wilayah Sungai (BBWS) Pemali Juana, the Administrator of Perum Perhutani, the Head of Sub-District around reservoir area, the Village Head of the nearest village from the reservoir, community around reservoir area and community who had visited the reservoir to explore the possibility of the idea of Kedung Ombo ecotourism region development.

2.3 Data Analysis
   Data analysis was carried out based on the concept of prospective structural analysis. Prospective structural analysis is a method that is based on the development of future scenarios based on historical trends of a system. Prospective structural analysis is a robust method for identifying key variables (driver domain) and studying the relationship between dependent and independent variables of a system[2]. The main purpose of this method is to reduce future uncertainties, build possible or desired scenarios and encourage the actions needed to achieve them. Prospective analysis will be able to capture the existence of complex strategic factors and their independent relationships, which are needed to realize a long-term quality development strategy, avoiding problems that may arise in the future, encourage future thinking and develop knowledge warehouses for policy maker or decision itself.

   Prospective analysis techniques assume that the future is different from the past and not forced, but can be built. Prospective structural analysis techniques will analyze the complexity of the elements, factors and its relationship and to understand key variables of system in the current and future situations. The relationship between these variables is a rich source of information that will determine thinking about some problems in this future context [5]. Through structural analysis, even many variable functions will be identified so that it makes it easier for decision makers to determine the right policies.

   A prospective structural analysis is carried out by a work committee consisting of actors and experts from the field under study without excluding external advisors[4]. The structural analysis was initially is philosophical and qualitative, but later changed and operationalized into a variety of quantitative methods stated that structural analysis has distinct advantages from
other analyzes such as factor, namely: allowing expert groups to find methods for sharing ideas among group members, giving group members the opportunity to explain views and thoughts about problems certain [5].

The main advantage of structural analysis is that it stimulates thinking and generates ideas among group members, thus encouraging them to think about counter-intuitive aspects of how the system works. However as a method of analysis for the future, prospective structural analysis has several disadvantages, namely: it depends on a small group of participants (maximum 12 people), inefficient in terms of time, costs and human resources, and is based on a single value. These things will hinder the space of imagination and innovation that is very important for long-term views and thinking. In addition, the results are very likely to be biased. The limitations of the subjective nature of structural analysis stem from the fact that this analysis is not reality but a means of seeing reality. This tool allows for the discovery of idea collection methods by reducing bias that is inevitable. Based on these weaknesses, Arcade and Godet built a modern prospective structural analysis was called Micmac (Cross-Impact Matrix Multiplication Applied to Classification) [5]. Finally, structural analysis is a long process that sometimes becomes an end in itself so it should not be done except by the subject itself.

The structural analysis method was very useful as a decision making support, operational planning, impact determining of a strategy and the future evaluation alternative and it was operated in a matrix form. The structural analysis was structured in three stages. The first two stages were carried out during the workshops and the third stage was carried out using Micmac software. Those stages can be seen in Fig. 1 below.

![Fig. 1. Stages of structural analysis [2].](image)

The structural analysis had advantages that were different from another analysis, namely: allowing expert group to find a method for sharing ideas among group members, giving group members an opportunity to explain their views and thoughts about a particular problem[5]. In the Kedung Ombo case, this method can not only describe the current situation but also allows describing the scenario through stimulating and compiling a process of collective reflection to build the future vision of the Kedung Ombo region and to highlight the actions needed to achieve it. However, as an analysis method for the future, the said structural analysis had several weaknesses, namely: relying on a small group of participants (maximum 12 people), it was inefficient in terms of time, cost and human resource and single value-based. In addition, the result was probably refracted. Based on the weaknesses, Arcade and Godet built a modern structural analysis called Micmac (Cross-Impact Matrix Multiplication Applied to Classification) [5].

Micmac is software was arranged to apply prospective structural analysis was developed by Institute d'Innovation Informatique pour l'Entreprise, under the supervision of Laboratory of
Investigation in Prospective Start and Organization (LIPSOR)\cite{5};\cite{4}. This software applied matrix property to determine variable suitable to the number of their path and intensity\cite{6}\cite{5}. Through a presentation equipped by a visually presented report-making format, Micmac assisted policy makers to report a consensus and justification of the participant of group discussion briefly. The explanation presented by Micmac's analysis was created a greater confidence in result, giving a greater confidence in the problems solving and presenting assumptions were needed explicitly\cite{5}.

The Micmac method application was started from defining the problem, identifying internal and external variables and analyzing the variable relationship of system was studied. The next stage was to assess relationship according to the mobility level and variable dependency. At this stage, variables were qualified according to the influence level, range between the following quantitative scales: $0 =$ no influence, $1 =$ weak, $2 =$ moderate, $3 =$ strong and $P =$ potential. Qualification result would identify the key variable relation, yaitu: direct influence variable and indirect influence variable. Direct influence will occurred if $A$ influence $B$, while indirect influence was occurred if $A$ influence $B$ and $B$ influence $C$. By the transitivity process, $C$ was indirectly influenced by $A$. Potential influences occur if the influence should have $A$ on $B$. Comparison between the classification of direct and indirect influences confirms the importance of certain variables and reveals that these variables may have long-term effects.

The next stage was to analyze the mobility and dependency of variables determined by the variable position in Input-Output quadrant (Fig. 2) in accordance with the level of influence and dependence. The result of this analysis will group variables into five typology: (1) Input variable. The variable was very influential and also independent; (2) Stake variable. This variable was very influential and also dependent. This variable was the most unstable variable due to any influence of them could flow to the entire system; (3) Regulator variable. The variable had a dependency and moderate influence; (4) Autonomous variable. This variable had low potential to produce changes. Autonomous variable had no influence or dependent, it was often described an inertial trend or slightly changed over time; (5) Output variable. This variable had a low influence but was strongly influenced by other variables. The output variable described an impact resulted from other variables, especially input and regulator variables.

![Fig. 2. Variable Clusters According to Input-Output](image-url)
3. Result

Focus group discussions held were successfully identified the factors assessed by the participants as variables that would determine the success of Kedung Ombo ecotourism region development. The results of the brainstorming produced 33 variables were grouped into six clusters as follow: (1) Natural Cluster, consisting of variables: natural beauty, climate, environmental carrying capacity, integration with surrounding land use, forest preservation and accessibility; (2) Social Cluster, consisting of: community involvement, developer understanding of local norms, potential conflict, employment, community welfare, poverty, preservation of local wisdom, health and security; (3) Economic Cluster, consisting of: tourist market potential, economic potential of tourism business, local entrepreneurship ability, tax, retribution, fund assistance to the community, private investment in tourism sector, allowance to investor and promotion; (4) Institutional Cluster, consisting of: special permit, regulation, coordination and apparatus role; (5) Tourism Cluster, consisting of: local community awareness of tourism, tourist market potential and tourism attraction; (6) Reservoir Function Cluster, namely: conservation of reservoir function; (7) Infrastructure Cluster, consisting of: availability and readiness of tourism infrastructure.

4. Discussion

The strategic variables had been assessed by workshop participants consensually based on its influence intensity. Assessment is done by filling out Matrix of Direct Influence (MDI). MDI produce variable position map of direct influence and direct influenced as in Fig. 3.

Based on Figure 3, the strategic variable typology of Kedung Ombo ecotourism region can be grouped in the five qualifications as follow:

1. Input variable consist of: regulation, environmental carrying capacity, local awareness of tourism, infrastructure, tourist market potential, tourism attraction, economic potential of tourism business, community involvement, local entrepreneurship ability and integration with surrounding land use;
2. Key variable (Relay Variable) consist of: special permit policy for investment, retribution policy, tax policy, allowance policy, tourism promotion, apparatus role, governance, private investment, coordination;

3. Autonomous variable consist of: climate, security, natural beauty, accessibility, developer understanding of local norms, potential conflict. In this quadrant there was a variable could be distinguished from other factors, due to its disconnection with other variables. The said variable was called as disconnected variable located near the original axis of the quadrant. For policy application, this variable could be removed from the system dynamic. In this research, there was a typology of disconnected variable, namely climate.

4. The output variable consist of: funds for community, preservation of local wisdom, employment expansion, forest preservation, conservation of reservoir function, welfare improvement and poverty reduction.

5. The regulator variable and secondary variable consist of: special permit, retribution policy, tax policy, allowance policy. In addition there was also secondary variable located in the quadrant of the output variable. Briefly, the analysis result of the direct influence based on MDI matrix could be seen in Table 1.

Table 1 Tipology of direct influence based variable

<table>
<thead>
<tr>
<th>Determinant Variable</th>
<th>Relay Variable</th>
<th>Autonomous Variable</th>
<th>Output Variable</th>
<th>Regulator Variable</th>
<th>Secunder Variable</th>
</tr>
</thead>
</table>

Furthermore, we can see the intensity of the variable influence from the strongest to the weakest. The variable intensity influence was indicated by the line color connecting intervariable, namely: 1) the red line indicated that influence was very strong; 2) the thick blue line indicated that influence was relatively strong; 3) the thin blue line indicated that the
influence was moderate; 4) the black line indicated that the influence was weak; and 5) the dashed line indicated that influence was very weak. Information of qualification of direct variable influence are very important for policy makers. The result of this analysis could direct the decision makers to focus on variables having the strongest influence, because these variables will determine directly the behavior of other variables. Namely: red: shows the influence between other variables is very strong; blue thick line: shows the influence between other variables is relatively strong; blue thin line: indicates influence between other variables being; ash line: indicates influence between other variables is weak; intermittent line shows the influence between other variables is very weak (Fig. 4).

Fig. 4. Intensity of direct influence variable

To test the stability of the results of the classification of variables based on direct influence, re-identification is carried out based on indirect influences. The process of analyzing indirect effects is further explained in the matrix MII (Matrix of Indirect Inflations). The results of the analysis of indirect effects will show more satisfying stability in terms of qualifying variables. The output of this indirect classification model will confirm the system stability provided that if there are many changes in the position of the variable from the map of direct influence, then the system has a low stability. The results of the analysis of indirect effects indicate that there is no change in the position of the variable from the direct effect classification. These results indicate that the system and the typology of variables that have been classified in the direct effect are stable. Figure 5 shows a map of indirect influence variables.
However, when viewed from the intensity of its influence, the classification of variables based on indirect influences experienced significant changes. This can be seen from the color change of the line that connects the variable (Fig. 6). From Fig. 6, it can be seen that compared to the direct influence, the analysis of indirect effects is obtained by more variables which have relatively strong influence, while in the direct influence analysis, there are more variables which have a very strong influence.

Fig. 5. Map of indirect influence variable

Fig. 6. Intensity of direct influence variable
Furthermore, the MicMac method provides an analysis of potential direct influences that illustrate the possibility of variable classification changes if certain actions are taken on the system. The results of the analysis of potential influences are explained in the Direct Effect Potential Matrix (MPDI) in Fig. 7. From Fig. 7 it can be seen that there is no change in the position of the direct variable influence (Matrix of Direct Influence-MDI) compared to the analysis of the direct effect of variables. From this analysis it can be said that the grouping of variables based on direct influence is stable.

![Map of potential direct influence variable](image)

**Fig. 7. Map of potential direct influence variable**

As we have found in the classification of direct effects, Micmac analysis also provides a potential analysis of the effects of indirect variables, which are referred to as the Indirect Influence Potential Matrix (MPDI). The results of the MPDI analysis are presented in Figure 8. From Figure 8 it can be seen that there is a change in position on the effect of indirect variables, namely on the variable suitability with the use of surrounding land. This variable is in the analysis of direct influence, the potential direct effect and indirect influence are in the input quadrant, whereas in the analysis of indirect potential influence, this variable is in the autonomous quadrant. This change shows that if a policy change for land use is made, the variable can no longer be controlled by the system. This finding is in accordance with the characteristics of autonomous variables located outside the system. However, because the displacement of a position only occurs in one variable, in general the variable grouping that has been done can be said to be stable.
From the various analyzes that have been carried out, the overall shows that the variable grouping in the development of the ecotourism area of the Kedung Ombo Dam built in this study is stable. This is indicated by the absence of significant changes in the typology of variables from the initial analysis, which is based on direct influence, as well as indirect effects to potential direct effects and potential indirect effects, not significantly changing. Based on these findings, finally we can find out the independent variables and dependent variables in the development system of the Kedung Ombo ecotourism area as shown in Fig. 9 below.
The findings of this study are very helpful for policy makers in determining on what variables the development policy of the Kedung Ombo region should be focused, where up to now the process has been fully controlled by reservoir operators who tend to prioritize reservoir functions, regardless of tourism potential and interest from Grobogan, Boyolali and Sragen to make it a source of economic and social development which is still the top priority of the three regions.

5. Conclusion

The research has succeeded in identifying thirty variables which are considered as the most important variables in the development of the Kedung Ombo reservoir ecotourism area. These variables are spread in various aspects. This finding confirms the initial statement in this study that tourism is a complex system that must be analyzed based on a multidisciplinary approach. After processing using MicMac software, the typology of thirty-three variables was found. This finding is very important for decision makers and will determine the future of Kedung Ombo. The typology is as follows: 9 variables are input variables, 9 variables are relay variables, 6 variables are output variables and 7 variables are autonomous variables (Table 1). Test results on the consistency of these qualifications have been tested and the results are stable.

Among the typologies of variables, variables (relays) must get greater attention from policy makers than other types of variables. Relay variables referred to as betting factors are variables that have high influence and high dependency. This variable will not only provide a boomerang effect but can be an indication of the potential of a system breakpoint. In this study, which included the variable relays were: special permit policies for investment, tax policies, allowance policies, retribution policies, tourism promotion, the role of officials, government, private investment and coordination.

These findings have implications for policy makers developing the Kedung Ombo ecotourism region that they must seriously monitor relay variables and direct all managerial efforts to direct these variables towards the evolutionary path as desired. At the same time, policymakers must also be aware of the relative shortcomings of the current relay variable which is one of the problems that must be resolved to achieve the desired results.

Based on the results of the qualifications of the variables found in this study, especially in relay variables, the potential of ecotourism in the Kedung Ombo Reservoir can still be optimized without having to worry about disturbing the function of the dam. This is because the concept of ecotourism will always maintain a balance between economic, social and natural factors.

Another result of the implementation of prospective structural analysis with the help of the MicMac method on the development of this Kedung Ombo ecotourism area is that institutional aspects are the main aspects that must be emphasized by policy makers. This can be seen in the position of the variables of the role of the government apparatus, governance and coordination variables, which are institutional variables that are at the farthest position from the point of gravity. It can be stated that these variables are the most strategic variables compared to other relay variables.

The development of ecotourism areas based on relay variables will at the same time reduce bureaucratic barriers between reservoir operators, the district government and Perum Perhutani which have become fairly basic institutional problems. The development policy of the Kedung Ombo ecotourism which considers the findings of this study will produce benefits in expanding work, reducing poverty, conserving forests and conserving reservoir functions as the results of research that classify these variables as output variables.
This finding is a very strong foundation for all parties involved in policy making to realize a sustainable Kedung Ombo ecotourism area. By understanding the results of this study, all the main stakeholders of the Kedung Ombo reservoir can be involved in the decision making process through the appropriate governance system by economic policies, social policies, land use policies, reservoir conservation policies and a balanced environment.

Finally, we state that the method used in this study is a new way of building a systematic analysis of the role of variables in determining system stability. The application of prospective structural analysis with the Micmac method in the decision-making process that considers the position and intensity of the influence of variables in the form of direct or indirect influence (and no causal relationship) has clarified the validity and strength of the approach in determining the most desired variable involved development of the Kedung Ombo reservoir ecotourism area as expected in the future.

References


Building Small-Medium Industry Institution
Towards Sustainable Dynamic Small Industry

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Abstract. Putting SME’s as the primary basis in development takes good commitment and coordination amongst stakeholders, government, people in business, and a non-business institution as well as the local community by applying the aggressive institution-based strategy. The research aims to construct an institutional framework model of small and medium-sized enterprises to become a dynamic, sustainable and robust business group. The approach used was FGD with some SME’s businessmen by using Participative Rural Appraisal in exploring the wishes of the institutional business development. The analysis method used was partial least square-structural equation modelling (PLS-SEM) with software smart PLS 3.0. The result showed that both internal and external factors affected the performance of SME’s. The result of this activity showed the frame of competitiveness model of SME’s in Indonesia, which described several factors that support dynamization and competitiveness of SME’s. The Goodness of Fit test showed that the Adjusted R-squared value was 0.365 and 0.667. Several factors gathered were a set of institutional development factors that include actor empowerment and resources connectivity factors. SME’s developers rarely raise the last two elements. The previous two factors moderate external and internal factors as significant as 36.5% and 66.7%. The influence of these two factors can contribute to the institutional resilience of SME’s so that small industries can be more dynamic, competitive, independent and sustainable.

Keywords: SME’s Institution, Dynamic Industry, Sustainable, Structural Equation Modelling.

1. Introduction
SME’s in Indonesia, has quite essential roles, especially in the national economy. It is specifically seen in domestic income growth, the population of business and businessmen, as well as jobs provision. According to the publication of IMF and World Bank, Indonesian economic grows 5.06% Year of a year (YoY). The condition is stable and still above the global
trend. The domestic economy is also supported by the low inflation level and maintained around the target of government and Bank Indonesia[1].

It is admitted that SME’s has a significant role in helping to solve problems of unemployment and imbalance of income distribution as well as the sectoral and regional economic structure. Many SME’s survive and grow on their own although they have limited access to the resources. Meanwhile, dynamic moves of the micro business in free productive economic activities among a group of communities show an opportunity to improve their standard of living. Through the upgrading of microenterprises to Small Dynamic Enterprise namely SME’s group, which can do business by cooperation (taking subcontract job) and export. Many parties have made an effort to become dynamic micro enterprises in carrying out accompaniment, guidance, and training so that SME’s become independent, secure, and sustainable, by the sustainable development goals. Sustainable Development Goals (SDGs) are the master plan, which is oriented to the world’s future and human survival. SDGs have a comprehensive concept to improve human welfare, world peace and nature reservation generally. Therefore, the development encouraged is not only to get high profit but also to be sustainable and environment-friendly as well as concerning social welfare. The idea of SDGs is not apart from the success of MDGs (Millennium Development Goals), which ended in 2015. SDGs, as the development of MDGs, have 17 goals of sustainable development with 196 targets. Therefore, SDGs program has a wider scope and is better prepared with universal necessity, with development principle “No One will be Left Behind” [2].

The embodiment of SDGs in the industrial sector is aligned with SDGs’ goals that always feature sustainable industrial development. Therefore, it takes a development concept of industries which are independent, strong but environment-friendly, and able to give social effect and economically to prosper. Sustainable Development Goals (SDGs) was holistically for realising the global vision to the development order, which is safe, and sustainable for all human beings to develop on this planet[3].

How good the idea of SDGs is, however, in this disruptive era, SME’s in Indonesia face more challenges and obstacles that tend to disturb and even inhibit the business growth. It has to realize that in this era many SME’s are broke or suddenly dead as the result of competitors that the existence is not realised (invisible competitors). No SME’s never faces an obstacle in its growth.

Generally, SME’s have not sufficient capacity to overcome those various problems and challenges. Some parties refer to this condition as one of the indicators that the level of competitiveness of SME’s in Indonesia is still low at this time. Nevertheless, the premise has not had a strong analytical base so that it takes a study to go deep into the structure of SME’s’ competitiveness in Indonesia. In this case, the funding problems are the most frequently concerned in the development of SME’s independence, besides human resources, infrastructure, and market. While in the institutional factors, although some researchers do the studies, the aspects appeared are still partial.

Therefore, although this research activity study on the elements mentioned above, the researcher focuses more on the institutional aspects in building the dynamics and independence and the benefits of UMKM.

2. Method

Based on the empirical studies conducted, several researchers focused on testing on factors affecting the performance of SME’s by involving internal and external factors [4], and characterization of SME’s examined the relationship between the characteristics of SMEs[5],[6],[7]. Meanwhile, the factors of resources connectivity and Innovation Actor
Empowerment have never been touched by previous researchers. Therefore, the researchers reconstruct the model by adding Resources connectivity and Innovation Actor Empowerment as a decisive factor in building a more resilient SME’s institution.

The model is constructed as in Figure 3.1 where four independent variables influence the SME’s Institution, i.e., external factor x1, internal factor X2, Resource connectivity y1, and innovation actor empowerment y3.

Fig. 1. Conceptual Model Constructed Model Source

The primary data collection was done by approaches; 1) FGD - Forum group discussion, to collect groups of small and medium enterprises based on their business group, such as Stone Craft Industry Group, Horn craft business group, salak pondoh business group, sugarcane craftsmen group and coffee business group. 2) Questionnaires to the respondents were given after the FGD activity, so all the participants who were present could fill in the distributed questionnaire. 3) Deep interviews were conducted when necessary to explore more complete information. The population in this research was all businessmen in 5 KUB (Group of joint business). Sample selection was done by using random sampling method with Slovin formula [8].

3. Result
This study used the mix methods design of study by combining qualitative method supported by quantitative methods. This method was chosen to elicit more in-depth answers from the respondents, considering the explorative nature of the research.

With the research approach used, the analysis technique used is Analysis of Movement Structure (AMOS) to test the hypothesis with a quantitative approach. To do this stage, the test of the instrument quality of the research is first carried out by a factor analysis approach. While qualitative testing was done by coding, which aimed to classify the opinions of respondents and find keywords that can be used as a basis of explanation and analysis of the relevance of quantitative results, in this case, AMOS was used to identify the role of moderation of resources connectivity and Innovation Actor Empowerment in influencing the correlation between Internal and External factors in building institutional toughness. The following are the simulation results from the construction of models that have been made through the AMOS program. Two parts can be discussed, namely estimating the value of each parameter and Hypothesis 1. Internal factors have a significant effect on institutional resilience. The contribution of Internal Factors in strengthening institutions shows a strong influence. The results of the analysis show that the estimated value is quite significant (b = 0.273; P <0.05). Thus hypothesis 1 can be proven.

Hypothesis 2. External factors have a significant effect on institutional resilience. Judging from the results of the analysis as shown in the table, external factors did not significantly contribute to the strength of SMEs, even though the estimation value was quite significant (b = 0.375; P> 0.05) so that hypothesis 2 has not been answered.

Hypothesis 3. Resources Connectivity (Moderator 1) moderates the relationship between External Factors and institutional resilience. The contribution of Resources Connectivity in increasing the strength of the Institute will be significant if accompanied by the role of external factors. The results of the analysis.

a. Model Accuracy Index

There are so many types of index accuracy models in SEM. The most popular is CMIN, the goodness of fit index (FIGFI), is a comparison comparison index (ÇCFI) and (RMSEA), about the accuracy of the cutoff index model which can be seen based on the results of the analysis which show the value of kai-squared (CMIN) of 0.583 (p> 0.05). A p-the value of the accuracy of the model. The results are obtained as shown in Table 1.

<table>
<thead>
<tr>
<th>Table 1. Regression Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimate</td>
</tr>
<tr>
<td>IAE ---- If</td>
</tr>
<tr>
<td>IAE ---- Ef</td>
</tr>
<tr>
<td>RC ---- Ef</td>
</tr>
<tr>
<td>RC ---- If</td>
</tr>
<tr>
<td>RC ---- IAE</td>
</tr>
<tr>
<td>IT ---- Ef</td>
</tr>
<tr>
<td>IT ---- If</td>
</tr>
<tr>
<td>IT ---- RC</td>
</tr>
<tr>
<td>IT ---- IAE</td>
</tr>
</tbody>
</table>

Show that the estimated value (b = 0.273; P <0.05). thus the third hypothesis is fulfilled.

Hypothesis 4. Innovation Actor Empowerment (Moderator) moderates the relationship between
Internal Factors and institutional resilience. IAE factor is one of the factors that have the highest contribution in growing the institution's resilience compared to other factors, and IAE has a high gift when it acts as a moderation between internal factors and institutional resilience. The results of the analysis show that the estimated value is quite significant ($b = 0.30; P 0.074$). Although the second hypothesis is not answered, referring to the results of the subsequent analysis shows that Resources connectivity has a substantial contribution to institutional resilience as indicated by the estimated value of 0.344. This suggests that individually Resources connectivity contributes to institutional resilience. value above 0.05 if the t-test does not show a significant difference. Well in SEM also, the p-value above 0.05 indicates a difference between the data used to analyse the model being developed. In other words, our model represents our data.

<table>
<thead>
<tr>
<th>Goodness of Fit Index</th>
<th>Cut off Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>X²-Chi Square</td>
<td>Diharapkan Kecil</td>
<td>219.48</td>
</tr>
<tr>
<td>Significance Probability</td>
<td>≥ 0.05</td>
<td>0.630</td>
</tr>
<tr>
<td>RMSEA</td>
<td>≤ 0.05</td>
<td>1.048</td>
</tr>
<tr>
<td>GFI</td>
<td>≥ 0.90</td>
<td>0.226</td>
</tr>
<tr>
<td>AGFI</td>
<td>≥ 0.90</td>
<td>0.161</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>≤ 3.00</td>
<td>0.763</td>
</tr>
<tr>
<td>TLI</td>
<td>≥ 0.95</td>
<td>0.0</td>
</tr>
<tr>
<td>CFI</td>
<td>≤ 0.05</td>
<td>1.0</td>
</tr>
</tbody>
</table>

The Goodness of Fit index is a statistical measure whose value has a range between 1.0 (perfect fit) to 0 (poor)[9]. In this case, the GFI value above 90% is stated as a measure of good fit. The results of the analysis show that the GFI value achieved is 0.226, which means that the condition is still said to be not good.

b. Evaluation of Measurement Model (Path analysis)

The evaluation of measurement model was done in three stages: convergence validity test, discriminant validity test and composite reliability test. For Convergent Validity Test, Validity Testing for reflective indicator was done by using the correlation between indicator score and construct score. Measurements with reflective indicators indicated a change in an indicator in a construct if another indicator on the same construct changed. Following was calculation results:
**Table 3.** Results of the calculation of the coefficient analysis

<table>
<thead>
<tr>
<th>Standard errors for path coefficients</th>
<th>RC</th>
<th>IAE</th>
<th>Ext</th>
<th>Inf</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IAE</td>
<td>0.197</td>
<td>0.126</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ext</td>
<td>0.090</td>
<td>0.122</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inf</td>
<td>0.088</td>
<td>0.041</td>
<td>0.130</td>
<td>0.107</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Effect sizes for path coefficients</th>
<th>RC</th>
<th>IAE</th>
<th>Ext</th>
<th>Inf</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>RC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IAE</td>
<td>0.197</td>
<td>0.167</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ext</td>
<td>0.516</td>
<td>0.151</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Inf</td>
<td>0.130</td>
<td>0.004</td>
<td>0.278</td>
<td>0.541</td>
<td></td>
</tr>
</tbody>
</table>

The above table shows the standard error and effect size for path coefficients. The standard error values for all variables to the institution sequentially are 0.098 for RC, 0.041 for IAE, 0.130 for External.

**Table 4.** The Results of the Analysis of The R-Squared Values of Each

<table>
<thead>
<tr>
<th>R-squared</th>
<th>RC</th>
<th>IAE</th>
<th>Ext</th>
<th>Inf</th>
<th>IF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite relab.</td>
<td>0.835</td>
<td>0.852</td>
<td>0.820</td>
<td>0.883</td>
<td>0.866</td>
</tr>
<tr>
<td>Cronbach’s alpha</td>
<td>0.689</td>
<td>0.731</td>
<td>0.704</td>
<td>0.823</td>
<td>0.896</td>
</tr>
<tr>
<td>Ave. var. extr.</td>
<td>0.650</td>
<td>0.665</td>
<td>0.547</td>
<td>0.654</td>
<td>0.585</td>
</tr>
<tr>
<td>Full collin. VIF</td>
<td>2.748</td>
<td>1.655</td>
<td>3.968</td>
<td>11.748</td>
<td>16.677</td>
</tr>
<tr>
<td>Q-squared</td>
<td>0.367</td>
<td>0.673</td>
<td>0.544</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The result showed that the value of adjusted R-squared was 0.365 which meant that the external institutional influence of SME’s on its institutional toughness moderated by resources connectivity and Innovation Actor Empowerment was 3.65%. Similarly, the internal institutional factors gave the effect of 66.7%. While the value of AVE for resources connectivity was good enough with an The Path Coefficients and the P-Value test showed that the latent variable of the predictor and the line represented the latent variable criterion. The result of the analysis showed that the variable of Resources Connectivity orientation had an influence on the internal strengthening of the institution of 0.651 and externally of 0.375 as well as for the Innovation Actor Empowerment at a significance level <0.00 with the path coefficient value of 0.332 and 0.243 respectively. With the value of P respectively 0.031 and 0.026.

Meanwhile, the value of effect size for the path was grouped into three categories. They were: weak (0.02), medium (0.15), and big (0.35). The standard error value for the connectivity resources variables was 0.258 and 0.314 for Innovation Actor Empowerment. and 0.107 for Int. As for the generated effect size of all variables to each institute is as big as 0.13 for RC, 0.004 for IAE, in a weak category, and 0.278 for External, and 0.541 for Internal in a solid type. amount> 0.5 that is 0.65 so that it can be concluded that the convergence validity was high.
Similarly, the other AVE variables indicate the convergence validity was in moderate criteria. The composite reliability value for all variables was above 0.7 so that they were included in the category of excellent internal consistency reliability. The full collinearity value of VIF was below 0.33, so it was concluded that there was no collinearity problem in the model. The resulting Q-Squared values for external and internal factor variables were 0.367 and 0.637> 0 which meant that the model had predictive relevanced.

4. Discussion

The research that has been done can give an idea about the condition of micro small and medium enterprises (SME’s) to some groups of micro small and medium enterprises, especially those that spread in Magelang regency. The number of small and medium industries in Magelang Regency reaches 39,580 SME’s in 2016 [1]. Although it is quite large in quantity, the condition of SME’s in Magelang District is still far from the expectations. From year to year, it tends to fluctuate the number. It indicates that SME’s in Indonesia, especially in Magelang have not been tough yet. Various approaches have done by many researchers to analyse multiple problems faced.

Such aid will affect the performance of the institution so that the role of SOE, as one of the agents of development assigned by the government, has a strategic position. Not to mention PT Bank BRI, this sees from the aspect of entrepreneurship orientation owned by SME’s. External factors encountered can include environmental dynamics, price competition and access to capital, and the performance of SME’s.

Seen from the institutional aspect, it can be disclosed that the variation of MSME institution that gets mentoring assistance is quite diverse. It provides a positive element for the development of cross-sector SME’s business. However, the focus of the aid offered to regional-based business groups to empower regional economic potential has not been sharply prioritised. The FGD results mention the need for mentoring and advocacy that are routinely given an evaluation of their performance. Such mentoring includes management, marketing, entrepreneurship, development and innovation and technology adoption. In other words, small business groups require actors to strengthen their businesses and institutions. These actors may be from their group members, but may also come from agencies specifically assigned to assist and empower specific industry businesses group.

Similarly, when FGDs are conducted amongst small business groups, besides difficulties in building business networks in optimising the connectivity between entrepreneurs, raw material problems become problems that require immediate solutions. The limitation of raw materials is a severe constraint to output growth or production sustainability for SME’s in Indonesia. Many entrepreneurs are forced to quit the business and move the profession to other economic activities due to the problem of raw material limitations.

This study internalises the resource connectivity and innovation actor empowerment aspects in internal and external variables of the business group in building a strong institution. Both elements serve as a moderating factor in the construction of institutional strengthening models. The structural model (inner model) can be analysed by taking a closer look at R-Square for the dependent construct. The result shows the value of adjusted R-Square reach 0.365 for external factor and 0.667 for the internal element. The amount of AVE for Resources Connectivity is quite good with a value> 0.5 that is 0.65, and for Innovation Actor Empowerment is almost the same that is 0.665. This shows that the convergence validity is high. For composite values, the overall reliability is above 0.8. This means the reliability of internal consistency is outstanding.
5. Conclusion

Many institutional strengthening towards competing SME’s is done, among others, with the strategy to increase the internal potential that includes the aspects of human resources skills, finance and financing aspects, production process aspects, and market aspects, as well as external potential strategies covering aspects of government support, socio-economic issues, as well as aspects of institutional support. Both approaches have contributed significantly to the improvement of SME’s’ capabilities. To further strengthen the institution to be more resilient, the research includes two new variables of resource connectivity covering aspects of cooperation on the procurement of source of raw materials, more comprehensive market link, and capital utilisation. The next variable is the Innovation Actor Empowerment which includes aspects of technical assistance, availability of mentor/trainer, and issues of technological innovation and transformation.

The result of factor analysis with structural equation modelling partial least square method shows that internal and external factors influence and contribute to the institutional toughness of SMEs of 0.365 which means that the foreign influence of MSME institution to its institutional resilience moderated by resources connectivity and Innovation Actor Empowerment is equal to 36.5%. Similarly, the internal factors of the institute effect 66.7%.

Model test results show that external and internal factors are strongly correlated in institutional strengthening. Similarly, resources connectivity and Innovation Actor Empowerment contribute to the toughness of SME’s institutions through several programs that include, provision and procurement of collectively integrated raw materials, networking with broader markets, especially for larger industrial enterprises with broader market reach and capital utilisation from the outside. The programs of innovation actor empowerment include technical assistance programs either local, OPD and from other institutions regularly mentored by Actor Empowerment include assistance, advocacy, and motivation and innovation, transformation and technology adoption.

References
The Impact of Training Program and Work Experiences on Career Development

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agoesgrahyuda@unud.ac.id2

Abstract. Managers should pay attention to the development of their employees' career if they wish to get a fully committed and satisfied employee to work for them. Unfortunately, the literature could not provide a clear guidance about the factors that might contribute to the development of employee career in the context of developing countries. The purpose of this paper is to explore the effect of training program and work experiences on career development, either directly or via employee skills. This research was conducted at Denpasar Social Affairs Office, with the number of samples was 67 employees. Data was collected through the help of questionnaire, and was analyzed with path analysis. The results show that training program and work experiences influence employees' career development. Furthermore, employee skills also provide an impact to the career development. Finally, it can be found that employee skills play a role as mediating variable in the relationship between training program or work experiences and career development.

Keywords: Career Development, Employee Skills, Training, Work Experience

1. Introduction

One of the important factors that influence the performance of an employee is a good career development system in the organization. Career development is the process of improving the ability of individual work accomplished in order to achieve the desired career [1]. The highly influential career development on performance of employees [2]. In addition, Harlie stated that there was a direct influence on career development and performance among employees [3]. This suggests that the development of career employees in the organization then the higher performance levels of their employees. Although the development of the career is important, but there is still the problem of a career on the city's Social Service. Based on observation, it is known that several employees of the less skilled and less diligent in taking care of the promotion files. Some of the interviews also indicate that they are less confident if it should be moved to another position because they had to learn from scratch or they lack of experience if it should be in the new position. However, this caused the dissatisfaction of employees because it has not been able to reach a certain level or a position that you want. In addition, some employees expect information about promotional opportunities socialized with clear, because sometimes some employees were less aware of the promotional opportunities. Career development is a concept
that is important to individuals and organizations so that the problem popped up need to be addressed by way of understanding the factors which affected it.

2. Method
The location of the study was conducted at the Denpasar City Social Service on Jalan Mulawarman No. 2 Denpasar. The population in this study were permanent employees and contract employees in the Denpasar City Social Service, which amounted to 67 people. The method of determining the sample used in this study is saturated sampling. The sample used in this study is all members of the population, namely as many as 67 permanent employees and contract employees. Data collection in this study uses several methods, interviews and questionnaires. This study uses multiple linear analysis techniques. Calculation of path coefficients requires calculations from correlation and regression analysis which are then poured in software in the form of SPSS for windows.

3. Result
Characteristics of respondents based on demographic variables consisting of gender, age, position, overall work experience and work experience in the last position are presented in Table 1. below.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Classification</th>
<th>Amount</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td>Male</td>
<td>36</td>
<td>53.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>31</td>
<td>46.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>67</td>
<td>100</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
<td>20-30</td>
<td>25</td>
<td>37.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;30-40</td>
<td>3</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;40-50</td>
<td>23</td>
<td>34.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Over 50</td>
<td>16</td>
<td>23.9</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>67</td>
<td>100</td>
</tr>
<tr>
<td>3</td>
<td>Position</td>
<td>Head of Departement</td>
<td>1</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head of Subsection</td>
<td>3</td>
<td>4.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head of Division</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Head of Section</td>
<td>12</td>
<td>17.9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Staff</td>
<td>47</td>
<td>70.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td></td>
<td>67</td>
<td>100</td>
</tr>
<tr>
<td>4</td>
<td>Overall Work Experience</td>
<td>1-5</td>
<td>25</td>
<td>37.3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>&gt;5-10</td>
<td>13</td>
<td>19.4</td>
</tr>
</tbody>
</table>
Based on the data on the respondents' characteristics in table 1, it can be seen that for the gender class respondents tend to be dominated by male, that is equal to 53.7 percent compared to the percentage of respondents who are female only 46.3 percent. This shows that there are more male respondents than women.

Furthermore, when viewed from the age of the respondents, the majority are 20-30 years old, which is 37.23 percent, followed by the age group > 40-50 years, 34.3 percent, the age group above 50 years is 23.9 percent and finally the age group > 30-40 by 4.5 percent.

The next classification is the classification of positions, which in this study were dominated by staff which amounted to 70.1 percent, then classification of cations of 17.9 percent, classification of districts by 6 percent, then classification of head of departments 4.5 percent and the last classification of heads by 1.5 percent.

Classification based on the overall experience of dominant employees 1-5 years worked with a percentage of 37.3 percent, then above 10-20 years with a percentage of 28.3 percent, then above 5-10 years with a percentage of 19.4 percent and the last over 20 years with 15 percent.

The last classification is the experience-based classification in the last position of the dominant employee 1-5 years working with a percentage of 55.2 percent, then over 5-10 years with a percentage of 26.9 percent, then above 10-20 years with a percentage of 13.4 percent and those with last over 20 years with a percentage of 4.5 percent.

Table 2 Results of Multiple Linear Regression Analysis

<table>
<thead>
<tr>
<th>Source: Data Proceed, 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstandardized Coefficients Standardized Coefficients T Sig</td>
</tr>
<tr>
<td>B Std. Beta Error</td>
</tr>
<tr>
<td>1 (Constant) -1,142, 1,075 -1,132, 895</td>
</tr>
<tr>
<td>Training, 235, 082, 220 2,863, 006</td>
</tr>
<tr>
<td>Work Experience, 280, 076, 293 3,681,000</td>
</tr>
<tr>
<td>Working Skills, 706, 129, 488 6,457,000</td>
</tr>
</tbody>
</table>

This study has seven hypotheses which are then compiled into a regression model. The following are the hypotheses and models in Table 2.

Source: Data processed, 2018
The value of $\beta_1$ of 0.488 means that work skills have a positive effect on career development, in other words if the work skill factor increases then career development will increase by 0.488.

$\beta_2$ value of 0.220 means training has a positive effect on career development, in other words if the training factor increases, career development will increase by 0.220.

The value of $\beta_3$ of 0.293 means that work experience has a positive effect on career development, in other words if the work experience factor increases, career development will increase by 0.293.

4. Discussion

4.1 Effects of Training on Career Development

Based on the results of testing the training hypothesis has a positive effect on work skills obtained Beta coefficient value of 0.443 with a significance level of 0.000 ($\leq$0.05) which indicates H0 is rejected and H1 is accepted. This means that effective training allows employees to get the skills and competencies needed in carrying out certain tasks, so that the more employees get training the skills increase. This is in accordance with the theory examined by Donald E. Super which proclaims a view on the development of careers whose scope is very broad and includes many individual and environmental factors. The results of this study who found that training had a positive effect on career development. The research provides strong evidence that training and career development programs have a positive relationship[5]. Research conducted by Olaniyan states that training is needed for staff to enable them to work towards the expected goals of the organization[6]. A significant influence on career development variables[7]. The training has a positive and significant effect on career development[8].

a. Influence of Work Experience on Career Development

Based on the results of testing the work experience hypothesis has a positive effect on career development, the Beta coefficient value is 0.293 with a significance level of 0.000 ($\leq$0.05) which indicates H0 is rejected and H1 is accepted. This means that the high level of work experience will help employees have a good career, so that the higher the work experience of an employee, the greater the opportunity in developing his career. This is in accordance with the theory examined by Donald E. Super which proclaims a view on the development of careers whose scope is very broad and includes many individual and environmental factors. The work experience has a positive and significant influence on the career development of an employee[8]; [9]. The work experience to have a positive and significant influence on career development[10]. The work experience has a significant effect on career development[11]. The work experience has a positive relationship to develop a career[12]. The influence of direct relationships that can be seen between skills and employment variables with the level of career development of part-time workers[13].

b. Effect of Skills on Career Development

Based on the results of hypothesis testing, the analysis of the effect of work skills on career development is obtained by the Sig t value. amounting to 0,000 with a beta coefficient of 0.488. Sig value. $0.000 <0.05$ indicates that H0 is rejected H1 is accepted. This result means that work skills have a significant effect on the career development of Denpasar City Social Service employees. A positive relationship between skills and career development[14]. There is a positive and significant influence between skills towards career development, meaning that the level of career development of employees is also determined by the skills they have[15].
5. Conclusion

Conclusions that can be drawn based on the results of the analysis is the positive effect of training towards the development of a career. Training a positive effect against job skills. Work experience a positive effect towards the development of a career. Work experience a positive effect against job skills. Job skills positive effect towards the development of a career. Job skills acts as a mediation on the influence of training towards the development of a career. Job skills acts as a mediating influence on work experience towards the development of a career.

References
Analysis Inner-Outer Model Analysis of Emotional Intelligence and Performance of Staff from the Ministry of Religion in Kota Batam, Indonesia

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Abstract. The question that is frequently posed in general is how to create human resources that is capable of producing optimal performance, which eventually leads to the realization of the organization’s objectives. Numerous factors influence a person’s performance, which could eventually lead to organizational performance, work stress problems, emotional intelligence and performance; hence, these factors deserve attention. The variables in this study were emotional intelligence and performance of staff from the Ministry of Religion in Kota Batam. The tool for collecting data was the questionnaire and it was analysed using the SEM statistical tool and SmartPLS software. The evaluation involved 28 items on emotional intelligence and 6 items on performance. The population and sample in this study comprised 30 staff as respondents. The findings showed that emotional intelligence and performance have a positive and significant relationship. It was suggested that future studies look into the demographic aspects as well as other variables that were not included in this study, such as commitment, spiritual motivation and work satisfaction.

Keywords: Emotional Intelligence, Performance, Officer, Ministry of Religion.

1. Introduction

Contemporary human resources development should be seen as a part of the organization and society’s needs and not solely on national interest. Staff are capable of enhancing the quality, provide services as well as overcome problems, either individually or in a group. It should be realised that the involvement of staff from the Ministry of Religion in Kota Batam in providing public service should be included in the planning, implementation, utilization and evaluation processes. Staff should be capable of achieving a desired level of performance, which is one of the essential components in the service system in the Ministry of Religion, Kota Batam.

A study on the effects of training and development of staff on employee’s performance based on the level of job satisfaction was implemented in Pakistan. The findings showed a positive effect of development and training as well as job satisfaction on work performance.
Training and development leads to a higher level of job satisfaction among staff and they can fulfill their duties with full responsibility culminating in very good performances [1].

Another study was related to work stress and performance among public sector employees in Istanbul and investigated the moderating role of emotional intelligence. This study involved public sector employees and investigated the relationship between work stress and work performance while considering emotional intelligence as the moderating variable. The findings showed a negative relationship between work stress and work performance, while emotional intelligence had a positive relationship with work performance [2].

Other studies were related to important precursors and the effects of employee’s creativity in the service, employee’s emotional strategy and official work performance. Employee’s creativity in the service organization confirms that emotional fatigue and affective commitment are motivational factors in the employee’s emotional strategy, which influences service employees’ creativity and suggests the value of the employee’s creativity [3].

One study was related to the structural model relationship between the emotional intelligence dimension, conflict management and work performance. The findings from the structural fitness model showed that there was no positive and significant effect between the variables in the study. Besides that, the role of the moderator in conflict management in this study using the SERVQUAL model in the relationship between emotional intelligence and work performance was verified [4].

Numerous factors contribute to the staff’s performance, such as work stress, emotional intelligence, job satisfaction etc. Staff’s emotional intelligence is a contributing factor to organizational production. Hence, these findings had encouraged the researcher to carry out a study entitled “Emotional Intelligence and Job Performance of Staff from the Ministry of Religion in Kota Batam”. The limitations of the study were mainly regarding emotional intelligence and staff’s performance.

A summary of the problem in this study is as follows;

1. Does emotional intelligence have an influence on the performance of staff in the Ministry of Religion in Kota Batam?

   The aim of this study was to determine the influence of emotional intelligence on the performance of staff in the Ministry of Religion in Kota Batam.

   Measuring emotional intelligence and performance of staff from the Ministry of Religion, Kota Batam based on the staff’s perception was implemented by evaluating the items regarding emotional intelligence and performance appropriate with the literature review relevant to its adaptation/adoption [2].

   A study by Uğur Yozgat et al., (2013) showed that emotional intelligence had a positive effect on work performance. Meanwhile, [3] also showed a relationship between employees’ emotions and their related work performance. The results showed that the relationship between the employee’s emotional strategy and work performance was moderated by job satisfaction. Previous studies had related conflict management styles, emotional intelligence and work performance in a public organization. The results showed that EI in an public organization had an effect on work performance [8].

2. Method

   One important element in a study is to plan the design of the study. This particular study was a quantitative descriptive study and it was implemented in the offices of the Ministry of Religion in Kota Batam located in Jl. Masjid Baiturrahman Sekupang Batam. This study had used the census technique whereby the whole population was presumed to be the sample, which comprised 30 respondents who were staff from the Ministry of Religion, Kota Batam.
All the staff had participated voluntarily by filling in the questionnaire and they were given a briefing about the objectives of the study by the researcher.

The variables in this study were emotional intelligence and performance. The items in the emotional intelligence and performance instrument were adopted/adapted from Uğur Yozgat et al. (2013).

Emotional intelligence had 28 items, such as:

1. When I am faced with obstacles, I remember times I faced similar obstacles and overcame them.
2. I expect that I will do well on most things I try.
3. Other people find it easy to confide in me.
4. Some of the major events of my life have led me to re-evaluate what is important and not important.
5. When my mood changes, I see new possibilities.
6. Emotions are one of the things that make my life worth living.
7. I am aware of my emotions as I experience them.
8. I expect good things to happen.
9. I like to share my emotions with others.
10. When I experience a positive emotion, I know how to make it last.
11. I arrange events others enjoy.
12. I seek out activities that make me happy.
13. I am aware of non-verbal messages I send to others.
14. I present myself in a way that makes a good impression on others.
15. When I am in a positive mood, solving problems is easy for me.
16. By looking at their facial expressions, I recognize the emotions people are experiencing.
17. I know why my emotions change.
18. When I am in a positive mood, I am able to come up with new ideas.
19. I easily recognize my emotions as I experience them.
20. I motivate myself by imaging a good outcome to tasks I take on.
21. I compliment others when they have done something well.
22. I am aware of non-verbal messages other people send.
23. When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself.
24. I know what other people are feeling just by looking at them.
25. I help other people feel better when they are down.
26. I use good moods to help myself keep trying in the face of obstacles.
27. I can tell how people are feeling by listening to the tone of their voice.
28. It is difficult for me to understand why people feel the way they do.

Meanwhile, Performance comprised 6 items, such as:

1. How would you rate yourself in terms of the quantity of work you achieve?
2. How do you rate yourself in terms of your ability to reach your goals?
3. How do you rate yourself in terms of your performance potential among co-workers in your company?
4. How do you rate yourself in terms of quality of your performance in regards to customer relations?
5. How do you rate yourself in terms of quality of your performance in regards to management of time, planning ability, and management of expenses?
6. How do you rate yourself in terms of quality of your performance in regards to knowledge of your products, company, competitors' products, and customer needs?

This study employed the quantitative approach and data were obtained using the questionnaire that was developed by the researcher with respondents comprising staff from the Ministry of Religion, Kota Batam. The questionnaire comprised 34 items pertaining to emotional intelligence and performance.

The data collection technique in this study used the questionnaire and primary data comprised data obtained by the researcher via the questionnaire (survey method), which was completed by the respondents (staff from the Ministry of Religion, Kota Batam).

The respondents answered each item based on five choices and the answers showed whether they were inclined to move to the extreme left or right column, which indicates a positive or negative emotional intelligence and performance for each item.

The model of the study is as follows:

![Figure 1: Emotional Intelligence and Job Performance](image)

The data analysis had used the descriptive correlation analysis by considering the emotional intelligence factor on performance. This measurement was chosen because the researcher was aware of differences in the characteristics of the evaluator when evaluating the staff.

The data analysis in this study intended to determine the quantity and percentage of the respondent’s demographic characteristics. The analysis comprised descriptive statistics that used the variance-based statistical tool called SEM SmartPLS.

Next, the emotional intelligence variable’s effect on performance among staff from the Ministry of Religion, Kota Batam was analyzed using the SEM analysis that employed the Smart PLS 2.0 Partial Least Square (PLS) software. Partial Least Square (PLS) is one of the techniques in Structural Equation Modelling (SEM) that is capable of directly analyzing latent variables, indicator variables and measurement errors.

PLS is a powerful method of analysis because it can be assimilated in all data scales, does not involve much assumption and the measurement sample is not too large. Besides being used for confirmation of theories, PLS can also be used to develop relations that do not yet have a theoretical platform or to test propositions.

Analysis of relations between variables and indicators involves the Outer Model and Inner Model tests. The Outer model or measurement model, in principle, is used to test the indicator of latent variables or in other words, to measure how far the indicator can explain the latent variable. The reflective indicator was tested for convergent validity, discriminant validity or average variance extracted (AVE) and composite reliability. The Inner Model or structural model, in principle, tests the influence between two latent variables; whether it is exogenous or endogenous. It could also refer to testing a hypothesis between two latent variables. The test is done by looking into the percent variance as explained, which is $R^2$, for the dependent latent variable that is modelled to obtain the influence from the independent latent variable by using
the Stone-geisser Q square test measurement, as well as determining the value of the structural path coefficient. The estimation’s stability was tested using the t-statistic test that was obtained through the bootstrapping procedure. The table shows the criteria for the evaluation.

<table>
<thead>
<tr>
<th>Test Model</th>
<th>Output</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Model (Indicator Test)</td>
<td>a. Convergent Validity</td>
<td>a. A Loading factor value of 0.50 to 0.60 is sufficient</td>
</tr>
<tr>
<td></td>
<td>b. Discriminant Validity</td>
<td>b. Correlation value of Cross Loading with its latent variable should be bigger compared to the correlation value of other latent variables</td>
</tr>
<tr>
<td></td>
<td>c. Average Variance Extracted (AVE)</td>
<td>c. AVE value should be more than 0.50</td>
</tr>
<tr>
<td></td>
<td>d. Composite Reliability</td>
<td>d. A good composite reliability value when it is ≥ 0.70</td>
</tr>
<tr>
<td>Inner Model (Hypothesis Test)</td>
<td>a. R² latent variable endogen</td>
<td>a. Result of the R² such as 0.67; 0.30; 0.19 indicates a “Good”, “Moderate” and “Weak” model, respectively</td>
</tr>
<tr>
<td></td>
<td>b. Parameter Coefficient and t-Statistic</td>
<td>b. Estimated value for the path relationship in the structural model should be significant, which could be obtained with the bootstrapping procedure</td>
</tr>
</tbody>
</table>

Thus, if an item is consistently placed in a particular category, then it could be assumed to indicate convergent validity with a related construct, while the discriminant validity with other constructs. The reliability scale is generally evaluated according to the Cronbach’s Alpha (Cronbach, 1984). Nunnaly suggested that at the early part of the research the a reliability value within the range of 0.05 to 0.60 is presumed adequate [10]. Generally, the accepted reliability score in most studies is between 0.70 to 0.80.

<table>
<thead>
<tr>
<th>Score</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 0.50</td>
<td>Low</td>
</tr>
<tr>
<td>0.50 – 0.60</td>
<td>Moderate</td>
</tr>
<tr>
<td>0.70 – 0.80</td>
<td>Tinggi</td>
</tr>
</tbody>
</table>

3. Result and Discussion

Respondents’ data from this study are in the Table below:

<table>
<thead>
<tr>
<th>Table 3. Respondent’s Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
Table 3 shows that the total number of respondents in this study comprised 12 males and 18 females totalling 30 respondents in all. Next, the results of the validation tests on the variable items are shown in the following Table.

3.1. Indicator Test / Outer Model with SEM SmartPLS

The Outer model specifies the relationship between the latent variable and its indicators. As for the first test in this study’s model for the indicator test (measurement model), the indicators were presumed to be valid if the minimum loading factor value was 0.50. More details about the values are found in the Table below.

<table>
<thead>
<tr>
<th>Validity</th>
<th>Influence</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>EI1</td>
<td>0.332829</td>
<td>Invalid</td>
<td></td>
</tr>
<tr>
<td>EI10</td>
<td>0.697684</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>EI11</td>
<td>0.28991</td>
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<td></td>
</tr>
<tr>
<td>EI12</td>
<td>0.719178</td>
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<td></td>
</tr>
<tr>
<td>EI13</td>
<td>0.392769</td>
<td>Invalid</td>
<td></td>
</tr>
<tr>
<td>EI14</td>
<td>0.530466</td>
<td>Valid</td>
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<tr>
<td>EI15</td>
<td>0.618952</td>
<td>Valid</td>
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<tr>
<td>EI16</td>
<td>0.622716</td>
<td>Valid</td>
<td></td>
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<tr>
<td>EI17</td>
<td>0.501235</td>
<td>Valid</td>
<td></td>
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<tr>
<td>EI18</td>
<td>0.626931</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>EI19</td>
<td>0.657582</td>
<td>Valid</td>
<td></td>
</tr>
<tr>
<td>EI2</td>
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<td></td>
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<tr>
<td>EI20</td>
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<tr>
<td>EI21</td>
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<tr>
<td>EI22</td>
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</tr>
<tr>
<td>EI23</td>
<td>0.65719</td>
<td>Valid</td>
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</tr>
<tr>
<td>EI24</td>
<td>0.248363</td>
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<tr>
<td>EI25</td>
<td>0.322898</td>
<td>Invalid</td>
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<tr>
<td>EI26</td>
<td>0.61136</td>
<td>Valid</td>
<td></td>
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<tr>
<td>EI27</td>
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<tr>
<td>EI28</td>
<td>0.154837</td>
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<tr>
<td>EI3</td>
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<tr>
<td>EI4</td>
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<td>EI6</td>
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<td>EI7</td>
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<td>EI8</td>
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<tr>
<td>EI9</td>
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<tr>
<td>JP1</td>
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<td>JP4</td>
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<tr>
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<tr>
<td>JP6</td>
<td>0.846862</td>
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</tr>
</tbody>
</table>
A second test should be carried out because the first test had some invalid data. For the second test from the study’s model, a more detailed explanation of the above values is shown in the Table below.

Table 5. Validity Test

<table>
<thead>
<tr>
<th>Validity</th>
<th>Influence</th>
<th>Original Sample</th>
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</tr>
</thead>
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<td>EI12</td>
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<td>EI14</td>
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<tr>
<td>EI15</td>
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<tr>
<td>EI16</td>
<td>0.638615</td>
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<td>EI17</td>
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<td>EI18</td>
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<td>EI21</td>
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<td>EI22</td>
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<td>JP6</td>
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<td></td>
</tr>
</tbody>
</table>

Another test was carried out because the second test contained some invalid data. For the third test from the study’s model, a more detailed explanation of the above values is shown in the Table below.

Table 6. Validity and Reliability Tests

<table>
<thead>
<tr>
<th>Validity and Reliability</th>
<th>Influence</th>
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<th>Status</th>
</tr>
</thead>
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</tr>
<tr>
<td></td>
<td>EI12</td>
<td>0.731936</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EI14</td>
<td>0.557891</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EI15</td>
<td>0.601936</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EI16</td>
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<td>Valid</td>
</tr>
<tr>
<td></td>
<td>EI18</td>
<td>0.604953</td>
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</tr>
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<td></td>
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</tr>
<tr>
<td></td>
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<td>Indicator</td>
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<td>Job Performance</td>
<td>Status</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------------</td>
<td>-----------------</td>
<td>--------</td>
</tr>
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<td>EI16</td>
<td>0.635092</td>
<td>0.501831</td>
<td>Valid</td>
</tr>
<tr>
<td>EI18</td>
<td>0.604953</td>
<td>0.376612</td>
<td>Valid</td>
</tr>
<tr>
<td>EI19</td>
<td>0.662927</td>
<td>0.372189</td>
<td>Valid</td>
</tr>
<tr>
<td>EI2</td>
<td>0.548346</td>
<td>0.291259</td>
<td>Valid</td>
</tr>
<tr>
<td>EI20</td>
<td>0.812649</td>
<td>0.575439</td>
<td>Valid</td>
</tr>
<tr>
<td>EI21</td>
<td>0.819651</td>
<td>0.599133</td>
<td>Valid</td>
</tr>
<tr>
<td>EI23</td>
<td>0.666891</td>
<td>0.382292</td>
<td>Valid</td>
</tr>
<tr>
<td>EI26</td>
<td>0.631727</td>
<td>0.27555</td>
<td>Valid</td>
</tr>
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<td>EI4</td>
<td>0.655354</td>
<td>0.360229</td>
<td>Valid</td>
</tr>
<tr>
<td>EI5</td>
<td>0.574282</td>
<td>0.380349</td>
<td>Valid</td>
</tr>
<tr>
<td>EI8</td>
<td>0.704325</td>
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<td>Valid</td>
</tr>
<tr>
<td>EI9</td>
<td>0.788182</td>
<td>0.531656</td>
<td>Valid</td>
</tr>
<tr>
<td>JP1</td>
<td>0.638366</td>
<td>0.833903</td>
<td>Valid</td>
</tr>
<tr>
<td>JP2</td>
<td>0.660055</td>
<td>0.80728</td>
<td>Valid</td>
</tr>
<tr>
<td>JP3</td>
<td>0.453553</td>
<td>0.824942</td>
<td>Valid</td>
</tr>
<tr>
<td>JP4</td>
<td>0.38338</td>
<td>0.817596</td>
<td>Valid</td>
</tr>
<tr>
<td>JP5</td>
<td>0.397495</td>
<td>0.822875</td>
<td>Valid</td>
</tr>
<tr>
<td>JP6</td>
<td>0.37123</td>
<td>0.84713</td>
<td>Valid</td>
</tr>
</tbody>
</table>

**Validity and Reliability**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.456062</td>
<td>Invalid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.681807</td>
<td>Valid</td>
</tr>
</tbody>
</table>
Data from the third test involving the loading factor value from AVE, which was Emotional Intelligence, was invalid because it was below 0.50. For the fourth test from the study’s model, the results of the test for the loading factor value from AVE, which was Emotional Intelligence, was invalid because it was below 0.50. A more detailed explanation of the values is found in the table below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
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</tr>
<tr>
<td>Job Performance</td>
<td>0.679614</td>
<td>Valid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.926169</td>
<td>Valid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.927132</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Data from the fourth test involving the loading factor value from AVE, which was Emotional Intelligence, was invalid because it was below 0.50. For the fifth test from the study’s model, the data from the fifth test involving the loading factor value was valid because it was above 0.50. Detailed explanations for the values in the fifth test are found in the Table and Diagram below.

**Table 7. Average Variance Extracted (AVE) and Composite Reliability Tests**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.712921</td>
<td>Valid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.714571</td>
<td>Valid</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.712921</td>
<td>Valid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.714571</td>
<td>Valid</td>
</tr>
</tbody>
</table>

**Fig. 2.** Results of the Algorithm PLS test after discarding the Invalid Indicators

<table>
<thead>
<tr>
<th>Variable</th>
<th>Influence</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outer Loading</td>
<td>EI10</td>
<td>0.712921</td>
<td>Valid</td>
</tr>
<tr>
<td>(Convergent Validity)</td>
<td>EI12</td>
<td>0.714571</td>
<td>Valid</td>
</tr>
<tr>
<td>Indicator</td>
<td>Latent Variable</td>
<td>Status</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>----------------</td>
<td>--------</td>
<td></td>
</tr>
<tr>
<td>EI10</td>
<td>Emotional Intelligence</td>
<td>0.712921</td>
<td>0.37644</td>
</tr>
<tr>
<td>EI12</td>
<td>Emotional Intelligence</td>
<td>0.714571</td>
<td>0.276026</td>
</tr>
<tr>
<td>EI15</td>
<td>Emotional Intelligence</td>
<td>0.582692</td>
<td>0.279129</td>
</tr>
<tr>
<td>EI16</td>
<td>Emotional Intelligence</td>
<td>0.693969</td>
<td>0.507205</td>
</tr>
<tr>
<td>EI19</td>
<td>Emotional Intelligence</td>
<td>0.677688</td>
<td>0.057205</td>
</tr>
<tr>
<td>EI20</td>
<td>Emotional Intelligence</td>
<td>0.847961</td>
<td>0.581237</td>
</tr>
<tr>
<td>EI21</td>
<td>Emotional Intelligence</td>
<td>0.847379</td>
<td>0.604074</td>
</tr>
<tr>
<td>EI23</td>
<td>Emotional Intelligence</td>
<td>0.622862</td>
<td>0.388511</td>
</tr>
<tr>
<td>EI26</td>
<td>Emotional Intelligence</td>
<td>0.625168</td>
<td>0.280917</td>
</tr>
<tr>
<td>EI4</td>
<td>Job Performance</td>
<td>0.61895</td>
<td>0.365983</td>
</tr>
<tr>
<td>EI8</td>
<td>Job Performance</td>
<td>0.708343</td>
<td>0.288148</td>
</tr>
<tr>
<td>EI9</td>
<td>Job Performance</td>
<td>0.832246</td>
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</tr>
<tr>
<td>JP1</td>
<td>Job Performance</td>
<td>0.621606</td>
<td>0.838184</td>
</tr>
<tr>
<td>JP2</td>
<td>Job Performance</td>
<td>0.661699</td>
<td>0.815012</td>
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<tr>
<td>JP3</td>
<td>Job Performance</td>
<td>0.430195</td>
<td>0.819649</td>
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<tr>
<td>JP4</td>
<td>Job Performance</td>
<td>0.346727</td>
<td>0.812434</td>
</tr>
<tr>
<td>JP5</td>
<td>Job Performance</td>
<td>0.361151</td>
<td>0.816922</td>
</tr>
<tr>
<td>JP6</td>
<td>Job Performance</td>
<td>0.329535</td>
<td>0.843324</td>
</tr>
</tbody>
</table>

Validity and Reliability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Original Sample</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.507718</td>
<td>Valid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.679538</td>
<td>Valid</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>0.924165</td>
<td>Valid</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.927115</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Cross Loading (Discriminant Validity)
Based on the diagram and table above, it could be stated that all the indicators were valid because the factor loading values were greater than 0.50 and the composite reliability for all the variable were reliable because the loading value was more than 0.70.

![Diagram](image.png)

**Fig. 3. Bootstrapping**

related the t-statistic test. The values explain the hypothesis in this study. The test results are put in the form of tables to facilitate the analysis of the findings in this study. Following is a more detailed description of the values obtained from the test on the data above.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>AVE</th>
<th>Status</th>
<th>Composite Reliability</th>
<th>R Square</th>
<th>Status</th>
<th>Cronbach’s Alpha</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional Intelligence</td>
<td>0.507718</td>
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<td>0.924165</td>
<td></td>
<td></td>
<td>0.910635</td>
<td>Reliable</td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.679538</td>
<td>Valid</td>
<td>0.927115</td>
<td>0.364259</td>
<td>Moderate</td>
<td>0.909188</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

The interpretation of Table 9 above is as follows:
1. The AVE value for the variables was 0.50, meaning it was valid.
2. The composite reliability value for all the variables was valid because the value was more than 0.70.
3. R-square value for the job performance variable was moderate.
4. Cronbach’s alpha value for all the variables was Reliable because the value was more than 0.70.

3.2. Structural Test (Influence test/Hypothesis test)

The Inner model tested the influence of one latent variable on another latent variable, either an exogenous or endogenous variable.
Table 10. Structural Test (Influence test/Hypothesis test) after the Indicator Test

<table>
<thead>
<tr>
<th>Test</th>
<th>Results of the Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Determinant Coefficient $R^2$</td>
<td></td>
</tr>
<tr>
<td>Job Performance</td>
<td>0.364259</td>
</tr>
<tr>
<td>T- Statistic</td>
<td></td>
</tr>
<tr>
<td>Emotional Intelligence → Job Performance</td>
<td>17.42544</td>
</tr>
<tr>
<td>Parameter Coefficient</td>
<td></td>
</tr>
<tr>
<td>Emotional Intelligence → Job Performance</td>
<td>0.603538</td>
</tr>
</tbody>
</table>

Elaborations of the findings of the test above are as follows:

1. **Determinant Coefficient $R^2$**
   - Shows that emotional intelligence contributed to job performance by 36.42%, while the remainder 63.58% was influenced by another factor that was not found in the model. This means that job performance was influenced by emotional intelligence by 36.42%, while 63.58% was influenced by another variable not investigated in this study.

2. **T-statistic**
   - The t-statistic test results for the exogenous and endogenous variables are stated and the influence of emotional intelligence on job performance was significant because its t-statistic value was above the t-table (t-table with a significance of 5% and DF = 30, was equivalent to 2.0422).

3. **Parameter Coefficient**
   - The parameter coefficient of emotional intelligence to job performance was 0.6035, meaning that the positive influence by emotional intelligence on job performance was 0.6035. Hence, the higher the emotional intelligence, the higher the job performance.
   - The findings of the test showed that the relationship between emotional intelligence and job performance was 0.6035, which was in the moderate category [11]. The relations of both the variables was significant. The findings of the study was consistent with that of other [2], [12]. The findings were also consistent with previous studies whereby there was a relationship between emotional intelligence and job performance [13].

4. **Conclusion**
   - According to the findings and discussions in this study, the following conclusions were made;
     1. Influence of emotional intelligence on job performance
     - There was an influence by emotional intelligence on job performance by 36.42%.
     2. Relationship between emotional intelligence and job performance
     - There was a moderate and significant relationship between intelligence and job performance.
     - This relationship should be maintained and receive greater attention since the there is a strong relationship among the related variables.

**Acknowledgements**
- I would like to extend my deepest gratitude to Dr. Erizal, Head of the Ministry of Religion, Kota Batam and his colleagues, Mr. Hazriyanto, Lecturer at STIE Galileo and fellow lecturers in UIN Sultan Maulana Hasanuddin Banten.
References


Abstract. Changes occur in every day including in organizations. Previous studies showed that to succeed the change, individual commitment to change has to be developed. The aims of the research are to know the impact of change communication and organizational trust on a commitment to change and to test which of the two factors that have a more significant impact. The study conducted with 238 employees of banking and non-banking (insurance) companies in Jakarta. Data collected using the questionnaires of commitment to change inventory, change communication questionnaire and organizational trust inventory. The results indicate that both change communication and organizational trust have a positive impact on commitment to change. However, the result of change communication is still debatable. Results also show that between the two factors, organizational trust has a higher impact on the commitment to change compares to change communication. The applications of the study are essential for the organization to pay attention and develop organizational trust to establish a commitment to change.

Keywords: Change Communication; Commitment to Change; Organizational trust.

1. Introduction

Organizational change is an alteration of planning from organizational components to improve organizational effectiveness [1]. Based on that statement, organizational change is required for organizations to innovate to compete with other competitors. The importance of organizational change is also expressed by [1] as follows: “where to be competitive, organizations must be able to make constant changes, followed by having appropriate strategies to deal with the changes that occur” so that organizations can live sustainably over time.

Types of organizational change are very much diverse, such as organizational structure, organizational policy, or other policy about technological development. This kind of organizational changes, currently, has also been one of the major types of organizational change in Indonesia, including in banking and insurance companies, (e.g., in banking institutions they develop financial technology called FinTech, in which to be applied on smartphone applications to facilitate customers in conducting business transactions by themselves). Changes that occur due to FinTech or other programs in the banking system, have a good impact on customers, but on the other hand, might give different implications for
employees who work at the company, such as feeling unsure about their future and status in the company as a result of the company launching the FinTech program.

According to previous studies [2]–[4], people or employees are the most crucial part of the implementation of organizational change. If people reluctant to support or carry out the desired changes by the organization, then the organization will not be able to achieve the objectives of the expected change. In this regard, during organizational change, employees are required to accept, follow and run the change program, as well as committed to the change itself. Commitment to change is a mind-set that binds individuals to a behaviour that is deemed necessary for the successful implementation of initiation to change [3]. Previous studies [3], [4] showed that individual commitment to organizational change has a central role, in implementing and in the success of these changes itself. In other words, employees who are committed to change can predict the success of changes that occur in the organization. As a result, commitment to change needs to develop. About this, previous studies [1], [4]–[8] showed that many variables could influence the development of a commitment to change both internally and externally. Some of the essential variables that sources from the organization (external) are communication and trust.

Before and during the process of change, communication is essential, as according to [9], change communication is a process that occurs with various elements through shared realities that were built, which is essential in managing change. From the shared information that communicated, employees, understand the situation, which as a result, is willing to carry out the change program and committed to carrying out the change. Change communication is vital because it can provide information needed by employees as the existence of such information will give a clearer picture of changes to employees [10]. Even [11] stated that one of the roles of change leader is to communicate the organizational change, by socializing it before the implementation; as well as while monitoring the change program. Previous studies [4], [12]–[14], also showed that change communication had a positive impact on commitment to change. Meanwhile, although change communication is vital during organizational change, however, studies related to change communication on a commitment to change are still limited, which encourage the current researchers to conduct further investigation.

Another important and critical factor in change management is trust. As without confidence on the organization and management, people will not accept the organizational change, especially if the types of changes will impact their future status and well being [15], as well as if the changes will affect on their state and future in the organization, such a during merger and acquisition [16]. If there is trust and confidence in the organization, employees will easily follow every rule that has been made by the organization. [17] also stated that employees who have a high level of organizational trust would exert all its efforts to bring benefits for both themselves and the organization. [18], in this regard, stated that organizational trust is hope of another individual or group who will make reasonable efforts to behave by commitment, honest in any form of negotiation based on loyalty, and not taking undue advantage of others despite the opportunity. Based on these arguments, it concludes that employees who trust, believe and have confidence in the organization, willfully think in every action that the company does, including the policy taken about organizational change. In this regard, employees will volunteer to make changes to succeed in the change itself. Previous studies [4], [19]–[21] showed that there is a positive impact on organizational trust on a commitment to change. These previous researches have conducted in different types of organization and mostly in public or state-owned companies [20], [21], based on this limited studies, the researchers conducted the present studies in banking and insurance institutions.
Based on the discussion above, in sum, change communication, and organizational trust is the essential variables in developing a commitment to change. Although equally important, the current researchers are interested to see how significant is the influence of change communication and trust in organizations on a commitment to change, as well as to identify the differences in their impact on commitment to change. Thus, the purpose of this study is to determine the effect of change communication and organizational trust on a commitment to change and finding the differences of influences between the two variables.

2. Literature Review

2.1. Commitment to Change

[3] define commitment to change as a mind-set that binds individuals to present behaviour deemed necessary for the successful implementation of initiation to change. The mentality itself can link individuals to actions that reflect commitment [3]. The dimension of commitment to change consists of three [3], the affective commitment to change which is the desire to provide support for change based on the belief that it is profitable. Employees with affective commitment to change, reacted to change based on positive feelings about the changes that will occur to the company, as they empathize and realize the benefits of the change for the organization. The second dimension is normative commitment to change, which is a sense of responsibility that employees had to provide support for organizational change, due to the feeling that comes from external bonds. In other words, employees had to carry out organizational change because they believe they should do it. The third dimension is continuance commitment to change, in which employees relating costs that incurred when failing to support change; they choose to commit due to the high prices that must be paid when deciding not to run organizational changes. In other words, employees have no choice but to undertake regulatory changes.

2.2. Change Communication

According to [9], change communication is a process that occurs with various elements through shared realities that were built, which is very important in managing change, further, change communication refers to aspects such as communication to explain new perspectives, make employee participation, support training processes, address issues related to change and marketing issues. [9] also reveal that there are three aspects of communication-shaping of change. The first aspect is the individual aspect which is the aspect derived from the individual who can form the communication itself. These aspects are: a) individual differences (personality, age, race, gender, ethnicity, education, and experience), b) selective in perceptions (particular message recipients in what is seen and heard based on need, motivation, experience, and background), c) the level of emotion in the individual (how the messenger feel at that time influences interpretation, and d) action (non-verbal communication will support verbal communication). The second aspect is the organizational aspect, consists of organizational complexity, which deals with organizational structure, hierarchy, control, reward systems, etc. that affect the way of communication. This aspect is also related to filtering information or information manipulation. The third or last aspect is the aspect of the message, consists of the content and quality of the message conveyed. This aspect refers to the actual information transferred between the sender and the recipient of the message, which includes the clarity variable of the message content. In this study, the current researchers use the three aspects of change communication.
2.3. Organizational Trust
Organizational trust is the expectation of another individual or group that will (a) make a good effort or good faith to behave in accordance with commitments - whether explicit or implicit, (b) honest in any form of negotiation based on commitment, and (c) Won’t take profits from others despite the opportunity (Cummings and Bromiley, 1996). There are three dimensions of organizational trust, namely: predictability, integrity and benevolence. Predictability or dimension of commitment, a person with this dimension will behave in a way that fully demonstrates commitment. The second dimension is integrity. A person who has integrity, which is the dimension of refusing to take advantage of excess (in this case of the organizational change). The third dimension is good deed (benevolence). A person with good deeds is believed to be unlikely to make the slightest bad action even when there is an opportunity that no one else can see.

2.4. Commitment to change, organizational trust and change communication
To achieve the success of organizational change, commitment to change is essential and critical, as, without it, organizational change has the potential to be unsuccessful. As a result, commitment to change has to develop. Previous studies [1], [4]–[6], [8], [21] showed that many variables could influence the development of a commitment to change and two of the variables are organizational trust and change communication. [9] stated that change communication is a process that occurs with various elements through shared realities that were built and refers it to all aspects such as communication to explain new perspectives, make employee participation, support training processes, and address issues related to change and marketing issues. With the excellent means of change communication employees will have the information needed, and such information will provide a clearer picture of changes to employees [10]. Previous studies [19], [21], [22] also showed that there is a positive impact on organizational trust on a commitment to change. Based on these arguments, the following hypothesis develop:

H1: Change communication has a positive effect on a commitment to change.

Meanwhile, trust is a must during organizational change. As without trust people will not do whatever the management ask them to do. In other words, when employees have confidence in the organization, they will quickly follow every rule made by the organization and will exert all their efforts in order to bring benefits for both themselves and the organization [15], [17]. Previous studies about change communication, [4], [19], [21] showed that there is a positive impact of organizational trust on a commitment to change. Based on these discussions, the following hypothesis develop:

H2: Organizational trust has positive effects on a commitment to change.

3. Method
3.1. Research Design
The research design is a cross-sectional study (one-shot study) as the research was conducted in a single meeting on the specified respondents, also a retrospective study, due to the fact that this research investigates phenomena, situations, or problems that have occurred in the past, and a non-experimental type of research as there is no manipulation on any variables.

3.2. Sample and Sampling
The sampling method in this study is a nonprobability sampling design, using convenience sampling, which according to the characteristics of a sample. The sample used in
this study are 238 employees who work in banking and insurance companies. This research takes samples in banking and insurance companies in Jabodetabek (Jakarta, Bogor, Depok, Tangerang, Bekasi) area, in Indonesia. Characteristics of the sample are as follows: permanent employees with have worked for a minimum of two years, educational background is senior high school graduated and had experienced an organizational change in their present companies.

3.3. Data Collection Tools

The researchers measured the commitment to change using the Commitment to Change Inventory developed by [3] which consisted of 18 items. Commitment to Change Inventory is a Likert scale that ranges from a score of 1-6. Available answer options ranging from Strongly Disagree (STS), Disagree (TS), Somewhat Disagree (ATS), Somewhat Agree (AS), Agree (S), and Strongly Agree (SS). Respondents are asked to choose one of the answers from the available options. Each favourable item response translates into score 1 for STS choice, score 2 for TS option, 3 for ATS score, 4 for AS selection, 5 for S and 6 for SS. This questionnaire was translated into Bahasa Indonesia and modified to 6 (six) scales by [6] which tested its reliability and validity, also has been used many times in her researches.

To measure change communication, the researchers used Change Communication Questionnaire developed by [23]. The change communication measurement tool used by the researcher has been modified and has been translated into Bahasa Indonesia which also has been used by [4], [13]. The results of this modification to make the number of items in the gauge reduced to 12 items. Respondents’ answers in the Change Communication Questionnaire measurements were measured using a Likert scale ranging from 1 to 6, consisting of Response Strongly Disagree (STS), Disagree (TS), Somewhat Disagree (ATS), Somewhat Agree (AS), Agree (S), and Strongly Agree (SS).

The organizational trust variable was measured using Organizational Trust Inventory developed [18]. It consists of three dimensions, which divided into 12 items consisting of a) Predictability b) Integrity and c) Benevolence. The questionnaire has been developed, modified and translated into Bahasa Indonesia and used by [21]. The items contained in Organizational Trust Inventory are 15 items. The fifteen items are items for organizational trust as a whole. The Organizational Trust Inventory is using a Likert scale of 1-6 ranges, comprising the Response Option Strongly Disagree (STS), Disagree (TS), Somewhat Disagree (ATS), Somewhat Agree (AS), Agree (S), And Strongly Agree (SS). The questionnaire has also been used many times in Mangundjaya’s studies.

3.4. Data Analysis

Researchers have performed statistical processing using SPSS Statistics 20. Analytical processing conducted include Pearson product-moment correlation coefficient to determine the correlation between communication changes and organizational trust of commitment to change, linear regression techniques to find out how much influence the two independent variables to the dependent variable, hierarchical regression techniques to see which effect is more significant than the two independent variables to the dependent variable.

4. Result and Discussion

4.1. Demographic profiles

Respondents of this research are employees, who are permanent employees and worked at banking and insurance companies who have been experiencing organizational change.
There are 238 respondents as shown in Table 1 with the characteristics of the respondents, the percentage as well as the percentages of gender, age, length of works, and educational background. Table 1 shows that the majority of respondents are male (N=171 or 71.8%), and according to the categorization of Gloud (1979), the majority of respondents are under 30 years old (N=150 or 63%). Furthermore, the majority of respondents are the ones that graduated from university (N=162, or 68.1%), and have been working in the companies for about 2 to 5 years (N=136 or 57.1%).

### Table 1. Profile of Respondents

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency (N)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Man</td>
<td>171</td>
<td>71.8</td>
</tr>
<tr>
<td>Woman</td>
<td>67</td>
<td>28.2</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt;30 years old</td>
<td>150</td>
<td>63.0</td>
</tr>
<tr>
<td>31 – 44 years old</td>
<td>76</td>
<td>31.9</td>
</tr>
<tr>
<td>45 years old</td>
<td>12</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Length of works</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 – 5 years</td>
<td>136</td>
<td>57.1</td>
</tr>
<tr>
<td>&gt;5-10 years</td>
<td>73</td>
<td>30.7</td>
</tr>
<tr>
<td>&gt;10 years</td>
<td>29</td>
<td>12.2</td>
</tr>
<tr>
<td><strong>Educational level</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Senior High School</td>
<td>29</td>
<td>12.2</td>
</tr>
<tr>
<td>Diploma</td>
<td>31</td>
<td>13.0</td>
</tr>
<tr>
<td>Undergraduate</td>
<td>162</td>
<td>68.1</td>
</tr>
<tr>
<td>Master degree</td>
<td>16</td>
<td>6.7</td>
</tr>
</tbody>
</table>

4.2. Demographic profiles

### Table 2. Descriptive Analyses (N = 238)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment to change</td>
<td>4.20</td>
<td>.43</td>
<td>3.11</td>
<td>5.72</td>
</tr>
<tr>
<td>Affective Commitment to Change</td>
<td>4.42</td>
<td>.73</td>
<td>2.67</td>
<td>6.00</td>
</tr>
<tr>
<td>Continuance Commitment to change</td>
<td>3.96</td>
<td>.78</td>
<td>1.83</td>
<td>6.00</td>
</tr>
<tr>
<td>Normative commitment to change</td>
<td>4.21</td>
<td>.51</td>
<td>2.50</td>
<td>6.00</td>
</tr>
<tr>
<td>Change communication</td>
<td>4.38</td>
<td>.63</td>
<td>2.42</td>
<td>6.00</td>
</tr>
<tr>
<td>Organizational trust</td>
<td>4.46</td>
<td>.66</td>
<td>2.07</td>
<td>6.00</td>
</tr>
</tbody>
</table>

Table 2 shows that the score of continuance commitment to change is the lowest compares to other variables, and organizational trust has the highest score amongst them.

4.3. Regression Analysis

The result of the correlation coefficient (r) between change communication with a commitment to change is .236, which significant in the level of p< 0.01 (r = .236, p <0.01, one-tailed). This result showed that there is a positive and significant relationship between change communication and commitment to change. Also, the researchers also obtained R² = .056, which means 5.6% of the variability of commitment to change can be explained through communication change scores, whereas for the remaining 94.4% can be explained by other variables.
Furthermore, the researcher uses linear regression analysis to identify how far change communication influences commitment to change. The researcher obtains the $\beta$ value for the change communication variable of .236 which means that anyone with standard deviation increase in the change communication variable followed by a rise of .236 on the commitment variable to change and vice versa. The value of $\beta$ is a true value of a variable, the higher $\beta$ in a variable, the greater the value of the contribution of that variable to another variable. Based on the above table, it interpreted that change communication has a positive and significant influence on a commitment to change.

The result of the correlation between organizational trust variable with a commitment to change shows a positive and significant effect with $r = .366$, $p<0.01$. The value of linear regression analysis $R^2 = .134$, which means 13.4% of the variability of commitment to change can be explained through trust scores on the organization, while other variables explain the rest. Through the calculation of linear regression analysis, the $\beta$ value of .366, which means that each increase of 1 standard deviation on the confidence variable in the organization followed by a rise of .366 on a commitment to change. To sum, trust in an organization has a positive and significant effect to a commitment to change.

<table>
<thead>
<tr>
<th>Table 3. Linear Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Variable</strong></td>
</tr>
<tr>
<td>Change Communication with Commitment to Change</td>
</tr>
<tr>
<td>Organizational Trust with Commitment to Change</td>
</tr>
</tbody>
</table>

** significant at l.o.s. $p<0.01$ (one-tailed)

The correlation coefficient obtained by change communication and organizational trust showed: $r = .367$, $n = 238$, $p<0.01$. It concludes changes communication and organizational trust have a positive and significant relationship to a commitment to change. However, when viewed partially (respectively), change communication become insignificant to the commitment to change where $p>0.01$. Whereas, the impact of organizational trust is significant towards a commitment to change with $p<0.01$. Organizational trust has a value of $\beta$ of .354 whereas change communication has a value of $\beta$ of .021. The value of $\beta$ is a true value of a variable, the greater $\beta$ in a variable, the greater the value of the contribution of that variable to another variable.

The differences in the effect of change communication and organizational trust on a commitment to change are seen through the value of $\Delta R^2$. The higher the value of $\Delta R^2$, the higher the impact on other variables. In the above table, the amount of $\Delta R^2$ of the change communication is 0.00, while the value of $\Delta R^2$ of organizational trust is .079. Thus, the value of $\Delta R^2$ organizational trust against a commitment to change is higher than the amount of $\Delta R^2$ of communication changes, or even the score of communication to change has an insignificant impact on commitment to change.
4.4. Discussion

The study indicates that change communication has a positive impact on commitment to change. This study supports the previous research (Chawla & Kelloway, 2004; Pitts, 2006; Mangundjaya, 2014a; Foks, 2015; Mutidianti, 2015; Marchalina and Ahmad, 2017) which showed that there is a positive relationship between change communication and commitment to change. Therefore, it concludes that communication of change is a predictor of commitment to change. However, the beta coefficient value obtained from the linear regression between change communication and commitment to change is not too high, and even insignificant. This is assumed that there are other variables which also affect the relationship between change communication with commitment to change, such as psychological empowerment (Mangundjaya, 2015), readiness for change (Mangundjaya and Gondokusumo, 2013), organizational commitment (Mangundjaya, 2013), employee engagement (Mangundjaya, 2014b) and job satisfaction (Wulandari et al., 2015; Mangundjaya et al., 2015).

This study also showed that there is a positive impact on organizational trust on a commitment to change. This study is in line with previous researches (Kalyal & Saha, 2008, Mangundjaya, 2014b; Freund, 2014; and Mangundjaya, 2015). This result also affirms the last argument about the importance of trust during organizational change. Further analysis conducted by the researchers is to identify where there are differences between the score of organizational trust and change communication of the impact on commitment to change. The results showed that organizational trust has a higher effect compare to change communication process. These findings support Mangundjaya study (2014a), which showed the same results. It concludes that although change communication is critical. However, without organizational trust change will not be success effectively.

There are some limitations of this study, namely a) this study used questionnaires to collect the data, which is prone to common method biases (Podsakoff et al., 2003), further research with different types of data collection is needed. Another limitation is due to the kinds of organization, in this study data was collected from banking and insurance institutions, which cannot be generalized to other types of organization. Further study with different kinds of an organization should be conducted to get the consistent result.

5. Conclusion

This study showed that both organizational trust and change communication have a significant impact on commitment to change, in which organizational trust has higher score compared to communication changes in both banking and insurance companies. However, the influence of change communication on a commitment to change is still debatable. Which concludes trust is more important than change communication, or even clear communication
that can establish trust. It assumes, change communication itself is not enough to develop a commitment to change, it should be trust between employee to the organization, as, without trust, it is hard to get employee's commitment to change. As a result, to gain trust from employees, change agent and management should develop an open communication, before, during and after the change program. Moreover, conducting fair policies and treatment to all employees, is also needed to gain trust from the employees.

References
Pepperdine University.


Finding the Gap: Student Stress and Student Engagement of First-Year Undergraduate Student from Overseas

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Abstract. A high school student who has decided to continue their study to the higher level will face a change of role and demands. State University as a higher education form government has accepted students from the various region. A first-year undergraduate student has to face lots of changes of their resources in the environment to meet the demands. This situation can make undergraduate student feel stress. Stress that happened to an undergraduate student could give effect to engagement and activeness of student and affect student’s achievement. The aim of this research is to find out the correlation between student stress and student engagement of first-year undergraduate student from overseas. The subject of this research is 199 first-year undergraduate from faculty cluster of State University at West Java - Indonesia, which is Medical Cluster, Agro complex, Sosiohumaniora, and Science and Technology. The research method that is used is correlational with cluster sampling. The data was obtained with Student Stress modified questionnaire from [1] with 24 items and Student Engagement modified questionnaire from [2] with 14 items. The data was processed by using a correlational test to see if there a correlation between students stress and student engagement. The result of this research represents that there is a low negative correlation between student stress and student engagement of first-year undergraduate student from another region. This research has shown that the higher level of student stress will cause the lower level of student engagement of the first-year undergraduate from another region. It means that student stress effect the student engagement. These research findings can be applied at the university to make students more adaptable and have productive behavior in studying at higher education.

Keywords: Student Stress, Student Engagement, First-Year Undergraduate Students, Overseas Students.

1. Introduction
College has been a choice for student who had graduated high school. The desire to continue education to a higher level encourages high school graduates to pursue their dream to be accepted in favorite universities in Indonesia. In 2017, as many as 11 of 15 favorite state university in Indonesia is located on the island of Java, Indonesia (www.e-sbmptn.com). These favorite university has most applicants on national selection. This shows that there is a
high tendency for high school students who have graduated to continue their education to Java Island which is outside their area.

This encourages students from outside the region who study in certain areas to continue their studies in state university in Java, Indonesia. This is known as overseas students. Overseas students are students who continue their education outside their home areas by going to other areas to seek knowledge. According to [3], there are six main elements of overseas students which is one who leaving their homes, according to their own volition, for a certain period of time, having a purpose for livelihood, studying or seeking experience, usually with the intention of returning home, in the sense of habits or behavior perpetrated by many, who are entrenched.

One of the state universities on the island of Java provides data that in the academic year 2016-2017, below is the distribution of data of student origin. This shows that students who come from outside West Java Province there are as many as 30% of the total first-year undergraduate students of Padjadjaran University. This means that one-third of new students come from outside the region and must try to adjust to the new environment to be faced. There will be lots of differences and changes that they will face. In academic factor, they will face a different learning system. They will also face different culture and languages and have to have a responsibility for their daily needs, without any help from parents.

When entering a new environment, there will be many differences and changes when compared to the previous environment. As people migrating, individuals will try to find out the lifestyle, language, values, or norms contained in the new environment. These things can be different from their home region. This difference will not only be felt because of the movement from the area of origin to new areas, but also because of the displacement of high school students to undergraduate students. Students must adapt to their living away from home for the first time, keep academic achievements high, and adapt to new social environments [1].

In addition to the academic factor, first-year students will experience changes in the social environment. As many as 30% of students coming from outside West Java Province will enter new areas with heterogeneous people and come from various regions. The origin of these different areas will affect their ways of interacting with others, mindsets, and behaviors that are often done. Therefore, the first-year students, must be able to adapt themselves to these differences in order to interact well in their new environment.

<table>
<thead>
<tr>
<th>Province</th>
<th>Size</th>
<th>Province</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aceh</td>
<td>20</td>
<td>Lampung</td>
<td>52</td>
</tr>
<tr>
<td>Bali</td>
<td>7</td>
<td>Maluku</td>
<td>31</td>
</tr>
<tr>
<td>Banten</td>
<td>207</td>
<td>NTT</td>
<td>3</td>
</tr>
<tr>
<td>Bengkulu</td>
<td>13</td>
<td>Papua</td>
<td>10</td>
</tr>
<tr>
<td>DI Yogyakarta</td>
<td>11</td>
<td>Riau</td>
<td>60</td>
</tr>
<tr>
<td>DKJ Jakarta</td>
<td>671</td>
<td>Sulawesi Barat</td>
<td>1</td>
</tr>
<tr>
<td>Gorontalo</td>
<td>6</td>
<td>Sulawesi Utara</td>
<td>1</td>
</tr>
<tr>
<td>Jambi</td>
<td>21</td>
<td>Sulawesi Tenggara</td>
<td>1</td>
</tr>
<tr>
<td>Jawa Barat</td>
<td>4276</td>
<td>Sulawesi Selatan</td>
<td>15</td>
</tr>
<tr>
<td>Jawa Tengah</td>
<td>108</td>
<td>Sumatera Barat</td>
<td>263</td>
</tr>
</tbody>
</table>
Personal life on the overseas first-year students will be changed. If they had been accustomed to living with their parents, now they would have to live alone. The consequences that will be faced from living separately from parents is to be able to take care of personal needs and be able to choose activities that will not interfere with his or her personal life, without any help from parents. In addition, they can not get immediate social support either from their parents, relatives, or from their closest friends.

These changes can cause stress for first-year undergraduate students. Psychological stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being [4]. Stress is something that happens because of the interaction between humans and their environment. Psychological stress is the relationship between humans and the environment that will be judged by human beings as something more or less than the resources possessed and endanger the human well-being. There are two main concepts in stress theory, there are appraisal and coping. Appraisal is how individuals judge a state as stressful or not. [4] proposed three types of stress: stress caused by things lost or damaged, caused by the loss or destruction of a thing that might happen and threaten the individual (threat), and because it challenges the individual (challenge). When things in the environment are rated as challenging, the individual will continue to work to solve them. But when things in the environment are rated as threatening or disturbing, individuals will experience negative stress.

Based on this definition, it can be seen that there are 2 things that can be a cause of stress that is felt by someone, that is:

a. Extreme environmental conditions. Environmental conditions that can be a cause of stress is an environment that can cause damage or distress in a person. In this study, it can be seen that there is a change in the lives of migrant students. Based on preliminary data obtained, the four things that undergo these changes become the factors that cause stress in overseas students, they are:
   1. Academic Factor, ie changes in the academic system
   2. Environment Factor, ie changes to the campus environment as well as the current residence
   3. Interpersonal Factor, ie changes in interpersonal relationships
   4. Intrapersonal Factor, ie changes that occur in the self when facing a new environment
b. Cognitive appraisal. An environment that can cause stress in a person can not necessarily cause stress in others. This is due to individual differences in assessing whether a situation can threaten its well-being or not.

If the oversea first-year student feels that the surrounding environment is giving a negative stress, then the immigrant student will have a certain impact from it. Based on research conducted by [5], stress tends to increase in first-degree students and can have an effect on the physical and emotional health of students [6]. Other studies have also revealed

<table>
<thead>
<tr>
<th>Jawa Timur</th>
<th>57</th>
<th>Sumatera Selatan</th>
<th>22</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalimantan Barat</td>
<td>13</td>
<td>Sumatera Utara</td>
<td>185</td>
</tr>
<tr>
<td>Kalimantan Selatan</td>
<td>2</td>
<td>Bangka Belitung</td>
<td>7</td>
</tr>
<tr>
<td>Kalimantan Tengah</td>
<td>2</td>
<td>Kepulauan Riau</td>
<td>35</td>
</tr>
<tr>
<td>Kalimantan Timur</td>
<td>10</td>
<td>Abroad</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>6112</td>
<td><strong>Total</strong></td>
<td>6112</td>
</tr>
</tbody>
</table>

Resource: Rektorate Educational Section – Unpad 2017
that higher stress conditions in college students may lower their student engagement [7] in [6]. This shows a negative correlation the state of stress perceived by student engagement students.

According to Job Demand-Resource Model [8], when the resources owned by students are not in accordance with the demands they have, the student can experience stress. Resources in the form of Personal Resource that will provide capital to individuals to run their potential and activities optimally [9]. Human resources are the main factor driving other resources, so this becomes the main factor that needs to be managed [9]). This perceived stress can then affect the engagement of students, especially when the resources it possesses can interfere with the vigor, dedication, and absorption of students in meeting the demands possessed [10]. This can be explained as follows:

a. Vigor, is a desire and high energy level given to the work done. This is supported also by mental resilience when facing difficulties in the completion of tasks
b. Dedication, is a strong individual involvement in work and has enthusiasm, pride, feelings of inspiration and challenge to work
c. Absorption, is the last aspect of engagement. A person who has high levels in this aspect will give full concentration to his work so that he feels lost time and difficult to get away from the job.

Work Engagement is a positive, fulfilling, affective-motivational state of world-related well-being that can be seen as the antipode of job burnout [8], [10]. The effects of these changes can influence the engagement of students on their academic performance. Based on this definition, we know that engagement is a motivational concept [11]. When a student feels engaged with the activities and life of the lecture, they will give optimal effort to the activity. But when the student not feel engage, they will not be motivated to provide optimal effort in his lectures. Students are not employed by the university or college where they study. But the tasks of students who have structure of activities, such as attending classes and collecting assignments, may be referred to as a 'job' [12], [13]. Therefore, students can feel attachment or burnout in their 'job' or assignment as a student. Research conducted by [14], shows that a individual's stress can cause burnout and can also show signs of dysfunctional behavior when the person can not cope with the stressor appropriately.

When the overseas first-year students experience stress caused by the things that face, can affect the attachment in the university activities because it can not function in accordance with the role they have. This situation is also supported by other studies that reveal that higher stress conditions in students may lower their student engagement [7] in [6].

Student engagement is an important condition for students to feel during the study. Student engagement has been shown to influence graduates, classroom motivation, and attainment in lectures [15]–[17]. As students become more motivated to learn, they will be more successful in their education [17]. Based on the results of the study, students who do not have high student engagement will tend to be unmotivated to learn and obtain optimal results. Students will feel stress in their life aspects, such as academic, environmental, and interpersonal. The stress felt by this student can affect student engagement. This research will answers how stress and student engagement experienced by overseas students at state university in Java Island become first year students.

2. Literature Review

The aim of this section is to clarify the methodology of this research. This section will explain the research sample, research design and instruments that were used for data collection.
2.1. Sample

Population of participant in this study is first-year undergraduate student from other region form Universitas Padjadjaran as state university at Sumedang-Java, Indonesia. This study used cluster sampling that showed minimum sample is 178 students. Participants come from four cluster of faculty in Universitas Padjadjaran, which is Health Cluster, Agrocomplex Cluster, Sosiohumaniora Cluster, and Science and Technology Cluster. The sample of the study included 199 students. Grouping of faculties based on these clusters is the basis of cluster sampling, from which each cluster will be taken each randomly from one faculty. The selection of one faculty as representative of the cluster is done so that the samples taken can represent the students of Universitas Padjadjaran. Here is a table of faculty selection from each cluster faculty of Universitas Padjadjaran:

<table>
<thead>
<tr>
<th>Kluster</th>
<th>Fakultas Sampel</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Cluster</td>
<td>Fakultas Psikologi</td>
</tr>
<tr>
<td>Agrocomplex Cluster</td>
<td>Fakultas Teknologi Industri dan Pertanian</td>
</tr>
<tr>
<td>Sosiohumaniora Cluster</td>
<td>Fakultas Hukum</td>
</tr>
<tr>
<td>Science and Technology Cluster</td>
<td>Fakultas Geologi</td>
</tr>
</tbody>
</table>

Participants have such criteria:
- first-year students at Universitas Padjadjaran
- Oversear Student (from outside Bandung Regency, West Bandung Regency, Bandung City, Cimahi City, and Sumedang Regency)
  - Do not live with parents or close family.

2.2. Research Design

Research design of this study is non-experimental research with cross-sectional design. Non-experimental research is a descriptive study to obtain a description about phenomena that happened [18]. Research method of this study is correlational. The aim of this study is to find out the correlation between student stress and student engagement of Universitas Padjadjaran’s first-year undergraduate student from other region.

2.3. Instrument

Student Stress questionnaire was developed from Student Stress Scale [1]. It consists of four factors of stressor for first-year undergraduate from other region with 24 items. The factors that will be measured are academic factor, environment factor, interpersonal factor, and intrapersonal factor. Student stress has reliability measured using Cronbach alpha and the score is 8.73 which is reliable questionnaire. The second questionnaire that will be used was modified from Utrecht Work Engagement Scale-Student (UWES-S) [2]. It consists of vigor (5 items), dedication (5 items), and absorption (4 items). It has Cronbach alpha as 8.86 which is reliable.

3. Result and Discussion

Respondents from the study amounted to 199 people with 80 men and 119 women. The results of the study show that there is a negative correlation between student stress and student engagement. Spearman correlation coefficient correlation test showed that it score is -0.336,
which means when the students are getting stressed, the engagement will be lower. Psychological stress is a particular relationship between the person and the environment that is appraised by the person as taxing or exceeding his or her resources and endangering his or her well-being [4]). First-year students who come from different region and currently studying will certainly feel some changes. The changes felt by the new students who migrated will be interpreted as threatening or even challenging. When a person uses his environment as threatening, then the person can feel stress about what is happening around him. There are four factors that can cause stress on students, such as academic, environment, interpersonal and intrapersonal factor. The level of stress experienced by overseas students can be seen in the picture as follows:

![Student Stress](image)

**Fig. 1. Percentage of Students Stress**

From the picture above, obtained data that migrant students who are in the stress category category were 152 people (76%). This indicates that the migrant students feel that their resources tend to be less to face the new environment they face while they are students at public universities in Java. Based on the dimensions of student stress as follows:

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>P-value</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Factor</td>
<td>0.007</td>
<td>H0 is rejected</td>
</tr>
<tr>
<td>Environment Factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interpersonal Factor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intrapersonal Factor</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above test results indicate that there are differences in the forming dimension of stress on students, and based on data that academic factors play the biggest role in the occurrence of stress in new students. This can be seen in the correlation coefficient as follows:

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Student Engagement Correlation</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Academic factors are things that include the suitability of the study, the adjustment of learning methods, how to understand the different lecture materials in the high school, which makes the lecture life becomes increasingly felt difficult and stressful. The condition felt by the immigrant students is then seen by their attachment in performing the duties as a student. Student engagement is a positive state associated with well-being and can be seen as an antipode of a job burnout. A person who engage will have high energy and engage in his activities [10]. Based on the results of analysis, as follows:

<table>
<thead>
<tr>
<th></th>
<th>Coefficient</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Factors</td>
<td>-0.476</td>
<td>0.000</td>
</tr>
<tr>
<td>Environmental Factors</td>
<td>-0.088</td>
<td>0.215</td>
</tr>
<tr>
<td>Interpersonal Factors</td>
<td>-0.226</td>
<td>0.001</td>
</tr>
<tr>
<td>Intrapersonal Factors</td>
<td>-0.232</td>
<td>0.001</td>
</tr>
</tbody>
</table>

**Fig. 2.** Percentage of Student Engagement

Based on the figure above, the student engagement student level is generally at a high tendency level (75%). This indicates that the immigrant student has enough positive thoughts, is fulfilled, and has enough feeling involved in his duties as a student. Seen from its forming dimension, this condition can be seen as follows:
Based on the table above, it can be seen that the major of respondents who follow this research have a high level of student engagement in the three dimensions of student engagement. Based on the analysis of the data, it can be seen that the immigrant students feel excited when studying the material in accordance with the faculty. Despite the obstacles, the first-year students have the enthusiasm and pride to study at the state university. They also feel inspired and challenged by the field of lectures that are being occupied.

In testing of the proposed hypothesis, student stress and student engagement significantly related at first-year students of the University of Padjadjaran. Based on the Spearman correlation test, correlation coefficient can be seen which shows the degree of relationship between variables and p-value which shows the significance of relationship between variables as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>P-value</th>
<th>Coefficient Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Stress</td>
<td>0.000</td>
<td>-0.336</td>
</tr>
<tr>
<td>Student Engagement</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the spearman correlation test, p-value <0.05, which means H0 is rejected. This shows that student stress and student engagement have a significant relationship. Student stress and student engagement have a negative relationship. This means that the higher the student stress experienced by overseas students, the lower the student engagement will be felt by them. According to Job Demands-Resources Model, stress is generated by an imbalance between the demands faced with the resources owned by workers [19]. Students' demands for education require students to learn things that are appropriate to their field of knowledge. Things that are included in education is to study, do a good job, and consider things that happen rationally. The subsequent demands of research and development require students to implement the knowledge gained through research. The research is not only to develop student it self, but also to university to make overseas student more productive. Students are also required to develop soft-skill that is owned scientifically and academically in order to be able to think critically in facing the existing environment.

To meet these demands, students have resources both within themselves and from the environment. The resources of the student are self-efficacy, self-esteem (organizational
based), and optimism. These resources will work together with the resources that come from the environment to meet the demands they have. As first-year students, they will face several changes from both academic, environmental, interpersonal, and intrapersonal factors. Changes experienced in this academic field of learning system changes into a SKS system. In this SKS system, lecturers do not have full role in the delivery of materials as teachers, so that students must actively seek teaching materials. Changes in the environment can be seen from the current environment that is different from the original environment. Then changes in interpersonal relationships can be seen from the diverse student areas that can influence the mindset, culture, and language. Changes in the field of intrapersonal can be seen from the ability of students to take care of all their own needs because they have to migrate and stay separated from their parents. These changes are actually the resources they have to meet the demands.

As the first-year student faces changes in their environment, the student will try to deal with those changes with their self-esteem, self-efficacy and optimism resources [20]. The resources available to these students will determine whether they are capable of coping with changes in their environment. Therefore, when student’s judge that changes to things that act as resources from within themselves and the environment can not meet the demands and ultimately disrupt the well-being, the student can feel stressed.

[4] states that stress occurs because of an assessment of what is going on around it with the resources it has. This shows that when the immigrant college students assess the changes that occur at the beginning of the lecture as something that can disturb them, it can cause stress. Based on the results of the study, the great challenge facing students is the transition period where they have to live separately with parents for the first time, maintain and improve academic achievement, and put themselves in a new environment [1], [21]. Based on study, immigrant college students have moderate stress level. This is in line with the results of research showing that this transition period is a process of change and adjustment followed by challenges and stress for emerging adults to meet the personal demands of the academic and social environment. Changes faced to meet the demands of both academic, environmental, interpersonal and intrapersonal relationships make students stress.

According to the Burnout journal, the stress experienced by a person can cause burnout and can also show signs of dysfunctional behavior when the person can not cope with the stressor appropriately [14]. When stress can not be overcome, a person experiencing stress can experience dysfunction that can affect its performance, especially in their study progress. Other studies also explain that higher stress conditions in college students can lower their student engagement [6], [22]. When student engagement is owned by students low, students can not give optimal results during their education. This is in accordance with the results of research showing that active engagement can improve learning and personal development in the classroom [23]. Student engagement also positively correlates with academic results of values and diligence in learning [24]. Student engagement is an important thing for students to have. So if the assessment of the environment conducted by migrant students can cause stress, this may affect student engagement owned by immigrant students.

The relationship between student stress and student engagement is low. The relatively low relationship between student stress and student engagement variables makes the student can not have high student engagement level because of the level of stress that is classified as being. Relationships found only in the low category because there are still personal resources owned by immigrant students. These personal resources can assist students in using resources from the environment to meet their demands. However, the relationship can not be explained because the limitations of research that only examine the relationship between student stress
caused by changes in academic, environmental, interpersonal and intrapersonal relationships with student engagement owned by immigrant students.

Dimensions of academic factors are the dimensions that have the greatest degree of relationship. The results show that academic demands and pressures as well as limited time for themselves and the environment can cause student stress and negatively affect students [25]. Based on the analysis of data on the highest item, it can be known that the first-year students often feel uncomfortable following the lectures. Based on the supporting data, 5.5% of students feel that the system assigned tasks are different from the high school assignments, as many as 14% feel that the tasks are difficult with short deadlines, 3.5% of students feel that the lecture schedule is too dense with a lot of material. Then 11.5% of students feel that the material received is very difficult to understand, it is related to the statement of 9% of students who feel that the way lecturers teach is very different than when high school and make the student becomes difficult to understand the material given. Stressor that can affect the level of stress felt by students and most often faced by students during the teaching and learning process so that students often feel not in the mood to follow lectures. This can interfere with student engagement, especially in the dimensions of dedication, so that students are not so enthusiastic to attend the lecture activities.

The next dimension after academic factors is intrapersonal factors. As many as 9.54% of students feel less able to manage time well so many tasks are left behind, as many as 8% of students find it difficult to manage finances well so they do not pay attention to health by eating healthy food, related also with 3% too careful about his health. Due to having to leave the area of origin to college and separated from parents, as many as 5% of students find it difficult to manage their own needs because they are accustomed to assisted by parents. This factor explains the lack of ability of students in managing their own needs since life separated with parents. Students claimed not yet accustomed to organize activities, time, and own finances. The result of data analysis according to the highest score, it is found that since college, the student becomes less concerned about his health. This happens because the lack of students' ability to manage finances so that they can not pay attention to health well. The results showed that the engagement of students experiencing financial stress will be affected, such as not participating in lectures because they do not have enough money and the financial interest that can affect the academic performance [26]. This lack of attention to health can affect student engagement students especially in the vigor dimension. Impaired health can make students unable to provide optimal energy when attending lectures. This can make the students become unattached fully to the lecture activities. The results of this study are similar to studies conducted by Oh, [21].

There is no relationship between interpersonal factor and student engagement. This shows that the stress experienced by students does not affect student engagement owned. Based on the data analysis of the highest score of items, it can be seen that students find it difficult to adjust to the mindset of friends who come from the region. This did not affect student engagement because the area was disturbed only on the relationships during group work. However, based on the analysis of the lowest score data, it can be seen that students do not find it difficult to get closer to friends who come from different areas. In accordance with the data indicating that the student's origin does not affect the difference in the student stress level experienced, the student can have a good relationship with friends who come from different regions and do not disturb the level of student engagement they have.
4. Conclusion

There is a negative relationship between student stress and student engagement. This indicates that the higher the student stress students have, the lower the student engagement the overseas students have. The pressures that come from the new environment faced by immigrant students can reduce their attachment to lecturing activities at their faculty.

The thing that most influence student stress student level is academic in the form of difference from teaching method of lecturer, system of assigned task, and others. Therefore, each faculty can develop a program that can help first-year students to recognize the learning system at faculty.

First-year students entering new environment feel stressed when faced with new demands and different resources compared to resources in the previous environment. In addition to the academic factor, changes in the intrapersonal aspect also make new students feel difficult to interact with their environment. Faculty can arrange programs to help students recognize the values that exist in each faculty and facilities and infrastructure faculty that can support lectures activities.

Academic factor becomes the dimension that most have relationship with student engagement student. This shows that most academic affects students’ engagement. The relationship between student stress and student engagement is low. This can be caused by the measurement of personal resources of students in fulfilling their demands.

References

Padjadjaran.


Creating Purchase Intention Throughs Positive Electronic Wom, Brand Attitude, Satisfaction, and Brand Awareness. Case of Wardah Exclusive Lip Cream on Instagram

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Trisakti School of Management, Jakarta, Indonesia¹,²
vita@stietrisakti.ac.id¹

Abstract. This study was designed to determine the impact of positive E-WOM, brand attitude, satisfaction, and brand awareness towards purchase intention of Wardah Exclusive Lip Cream. Purposive sampling is used by comprising questionnaire of 124 respondents that are @wardahbeauty Instagram’s followers. Data analyzed using Structural Equation Modeling (SEM) using SmartPLS 3.0. The impact of Positive E-WOM to Brand Attitude, Satisfaction, and Brand Awareness is significant, positive and supported. Positive E-WOM, Brand Attitude, Satisfaction, and Brand Awareness to Purchase Intention has significant, positive and supported impact. Brand Awareness has no significant impacts, positive impact but not supported to Satisfaction.

Keywords: Brand Attitude; Brand Awareness; Wardah.

1. Introduction
The growing popularity of social broadcasting networks such as Facebook and Twitter have transformed the way online word of mouth (WOM) is disseminated and consumed in the digital age [1]. According to Dodson (2016:367), social media is a catchall term used to describe the tools and technologies that facilitate social interaction over the internet. Based on an online news report released by Association of Internet Service Provider Indonesia [2], Indonesia was reported to have more than 143.26 million internet users in 2017, and about 87.13% have social media accounts. A personal experience, family and friends, media, the internet, and increasingly social media strongly affect the attitude [3]. There are several ways to create a positive word-of-mouth, such as using brand endorsers, brand spokespersons, celebrities, and key opinion leadership [3]. This change of marketing, especially in digital media, affected the consumers purchase behavior, from recognizing the needs until post-purchase behavior. The example of industry that try to fit in and develop their market size are cosmetic and skin care industries. Within a year, Indonesia’s cosmetic industry had recorded new fantastic achievement. The industry has grown 20% than 2016, four times than national economic growth rate. Wardah Cosmetics produced by PT Paragon Technology and Innovation (PTI), started it journey on 1995, introduce itself as the first Halal cosmetic in Indonesia. Wardah Cosmetics already got verified bandage from Instagram and highest follower number (over than 1.5 million followers) compared to the competitor. We will
evaluate the digital marketing strategy of Wardah Exclusive Lip Cream, since its existence on Instagram was over than 63,000 photos shared by the Instagram users.

2. Literature Review

2.1. Positive Electronic Word-of-Mouth

Word-of-mouth communication is a communication process of recommending either individually or collectively towards a product or service in order to give in information personally [4]. Social media is one of example of online word-of-mouth. In Schiffman and Wisenblit (2015, p281), word-of-mouth refers to informal conversations between friends concerning products or services. It consists of communication where satisfied customers tell other people how much they like a business, product, service, or event (although the information transmitted can also be negative). Word-of-mouth refers to all kinds of interpersonal communication (positive and negative) about company, brand, or product between a receiver and a communicator, who is perceived as non-commercial [5]. In terms of social media or electronic word-of-mouth, [6] defined Electronic word-of-mouth as any positive or negative statement made by a potential, actual, or former customer about a product or a company, available to a multitude of people and institutions via the internet. [3] define electronic word-of-mouth as “word-of-mouth taking place online and occurs in social networks, brand communities, blogs, chat rooms, and tweets”. To create an electronic word-of-mouth, someone should connect to an internet and using a specific platform.

H1: Positive E-WOM has significant impact on Brand Attitude
H2: Positive E-WOM has significant impact on Satisfaction
H3: Positive E-WOM has significant impact on Brand Awareness
H4: Positive E-WOM has significant impact on Purchase Intention

2.2. Brand Awareness

A brand must be known and remembered by the consumer to lead the market. Brand awareness can be a brand successfulness predictor [7]. A brand that easily recognized by its consumer may determine if consumer next purchase decision. They can be loyal to a brand, or decided to switch to another. According to [4], brand awareness is the ability of consumer to recognize or recall the brand in sufficient detail to make a purchase. [8] said that “brand awareness is the probability of a consumer’s familiarity with the given brand”; more familiar consumer with the brand, the easily brand remembered by consumer. Brand attitude cannot be form and a purchase desire will not occur if the consumer does not know the brand. [9] stated that brand awareness is related to the strength of the resulting brand node or trace in memory, as reflected by consumers’ ability to identify the brand under different conditions.

H5: Brand Awareness has significant impact on Satisfaction
H6: Brand Awareness has significant impact on Purchase Intention

2.3. Brand Attitude

According to [4], brand attitude refers to consumer evaluation of the brand’s perceived ability to meet a currently relevant need. A marketer should help the consumer to evaluate the brand perceived ability to meet currently relevant need. Relevant brand needs may be negatively oriented (problem removal, problem avoidance, incomplete satisfaction, normal depletion) or positively oriented (sensory gratification, intellectual stimulation, or social approval). Based on [3], an attitude is a learned predisposition to behave in a consistently favorable or unfavorable way toward a given object. In the context of consumer behavior, an ‘object’ can be a product, brand, service, price, package, advertisement, promotional medium,
or the retailer selling product, among many other aspects of consumption. Based on a journal by Olson and Mitchell (2000), brand attitude defined as “consumer’s overall evaluation of a brand. Attitude is stable and enduring predispositions to behave”. Similar with other experts, a journal by [10] said that brand attitude is an assessment around favorable and unfavorable responses to brand-related stimuli or conviction.

**H7**: Brand Attitude has a significant impact on Satisfaction

**H8**: Brand Attitude has a significant impact on Purchase Intention

2.4. **Satisfaction**

Based on [4] customer satisfaction is a person’s feelings of pleasure or disappointment that result from comparing a product or service performance (or outcome) to expectations. When the consumer satisfied with a product/service, they will express their feelings and may recommend the product or service to other relatives. [11] also stated that satisfaction as an attitude-like judgment following a consumption experience. Satisfaction toward a product or service will be examined after they consume the product. The main thing that influences the consumer satisfaction is their expectation before consuming a product or purchasing a service. [3] stated that satisfaction refers to costumers’ perception of the performance of the product or service in relation to their expectation.

**H9**: Satisfaction has significant impact on Purchase Intention

2.5. **Purchase Intention**

[12] defined purchase intention as “another set of possible measures closely related to brand attitudes and consideration. Purchase intention examines consumer’s lean to purchase a product or brand or switch to another brand or product. According to the statement from Engel, Kollat, and Blackwell cited by [13] purchase intention is “a process used to evaluate consumer decision making”. This explained if purchase intention is a process so it has stages in evaluating the purchase decision that will be taken by an individual.

[14] defined purchase intention as “a decision based on consumer attitude toward buying a brand”. They indicated that the decision decided by the consumer to make a purchase is based on the attitude toward the product offered.

3. **Method**

Structural Equation Method (SEM) that simultaneously analyze multiple variables representing measurements associated with individuals, companies, events, activities, situations, and so forth. Goal of PLS-SEM is to measure the characteristic of constructs in model relationship (latent variables). Moreover PLS-SEM can better handle formative measurement models (validity assessment, significance and relevance of indicator weights, and indicator collinearity) and has advantages when sample size is relatively small. This research using 124 valid respondents from 175 distributed questionnaires to the followers of @wardahbeauty on Instagram through the direct message features. The valid respondent must have a criteria: [1] a follower of @wardahbeauty, [2] has an active instagram account for one past month, [3] woman and 17 years old minimum, [4] ever purchase Wardah Cosmetic Products, and [5] never purchase Wardah Exclusive Lip Cream. In this research, the quantitative method was used by the researcher to obtain the primary data.

4. **Result**

Based on data gathering process, the result is consisting of characteristics from respondent’s participation as Table 1 shown below:
Table 1. Respondent Characteristics

<table>
<thead>
<tr>
<th>Definition</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>124</td>
</tr>
<tr>
<td>Respondent’s Ages</td>
<td></td>
</tr>
<tr>
<td>17-19</td>
<td>31</td>
</tr>
<tr>
<td>20-22</td>
<td>32</td>
</tr>
<tr>
<td>23-25</td>
<td>29</td>
</tr>
<tr>
<td>26-28</td>
<td>22</td>
</tr>
<tr>
<td>&gt; 28</td>
<td>10</td>
</tr>
<tr>
<td>Respondent’s Occupation</td>
<td></td>
</tr>
<tr>
<td>Student/College Student</td>
<td>72</td>
</tr>
<tr>
<td>Employee</td>
<td>30</td>
</tr>
<tr>
<td>Part-timer</td>
<td>8</td>
</tr>
<tr>
<td>Freelancer</td>
<td>4</td>
</tr>
<tr>
<td>Work and Study</td>
<td>10</td>
</tr>
<tr>
<td>Followers of @WardahBeauty on Instagram</td>
<td>Yes</td>
</tr>
<tr>
<td>Has an active Instagram Account</td>
<td>Yes</td>
</tr>
<tr>
<td>Ever Purchase Wardah Product Except Wardah Exclusive Lip Cream</td>
<td>Yes</td>
</tr>
<tr>
<td>Ever Purchase Wardah Exclusive Lip Cream</td>
<td>No</td>
</tr>
</tbody>
</table>

(Source: Primary data processed (2018))

According to Hair et.al (2017:115) discriminant validity is the extent to which a construct is distinct from other others empirical standards. Moreover, the cross loading specifically is an indicator’s outer loading on the associated construct s that should be greater than any of its cross-loadings on other constructs.

Table 2. Cross Loading for Discriminant Validity Test

<table>
<thead>
<tr>
<th>Indicator</th>
<th>PE</th>
<th>BT</th>
<th>SA</th>
<th>BW</th>
<th>PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE1</td>
<td>0.806</td>
<td>0.278</td>
<td>0.358</td>
<td>0.166</td>
<td>0.173</td>
</tr>
<tr>
<td>PE2</td>
<td>0.872</td>
<td>0.390</td>
<td>0.370</td>
<td>0.195</td>
<td>0.228</td>
</tr>
<tr>
<td>PE3</td>
<td>0.912</td>
<td>0.463</td>
<td>0.429</td>
<td>0.349</td>
<td>0.331</td>
</tr>
<tr>
<td>PE4</td>
<td>0.933</td>
<td>0.527</td>
<td>0.562</td>
<td>0.323</td>
<td>0.418</td>
</tr>
<tr>
<td>BT1</td>
<td>0.458</td>
<td>0.847</td>
<td>0.648</td>
<td>0.450</td>
<td>0.648</td>
</tr>
<tr>
<td>BT2</td>
<td>0.414</td>
<td>0.854</td>
<td>0.691</td>
<td>0.437</td>
<td>0.682</td>
</tr>
<tr>
<td>BT3</td>
<td>0.374</td>
<td>0.873</td>
<td>0.658</td>
<td>0.574</td>
<td>0.834</td>
</tr>
<tr>
<td>BT4</td>
<td>0.435</td>
<td>0.863</td>
<td>0.694</td>
<td>0.406</td>
<td>0.690</td>
</tr>
<tr>
<td>SA1</td>
<td>0.406</td>
<td>0.802</td>
<td>0.853</td>
<td>0.394</td>
<td>0.781</td>
</tr>
</tbody>
</table>
A common rule of thumb is that the standardized outer loadings should be 0.708 or higher. This means that an indicator’s outer loading should be above 0.708 since that number squared (0.7082) equals to 0.50 (50 per cent). Note that in most instances, 0.70 is considered close to 0.708 to be acceptable. [15]. Using the same logic that used with cross loading analysis, an AVE value should be 0.50 (50 per cent) or higher to indicate that. On average, the construct explains more than half of the variance of its indicators. [15].

### Table 3. Convergent Validity And Composite Reliability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>Loading</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>Cronbach' Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive WOM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE1</td>
<td>0.806</td>
<td></td>
<td>0.778</td>
<td>0.933</td>
<td>0.906</td>
</tr>
<tr>
<td>PE2</td>
<td>0.872</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE3</td>
<td>0.912</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PE4</td>
<td>0.933</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Attitude</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT1</td>
<td>0.847</td>
<td></td>
<td>0.738</td>
<td>0.919</td>
<td>0.882</td>
</tr>
<tr>
<td>BT2</td>
<td>0.854</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT3</td>
<td>0.873</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BT4</td>
<td>0.863</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA1</td>
<td>0.853</td>
<td></td>
<td>0.696</td>
<td>0.872</td>
<td>0.793</td>
</tr>
<tr>
<td>SA2</td>
<td>0.899</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SA3</td>
<td>0.743</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brand Awareness</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BW1</td>
<td>0.857</td>
<td></td>
<td>0.638</td>
<td>0.839</td>
<td>0.736</td>
</tr>
<tr>
<td>BW2</td>
<td>0.705</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BW3</td>
<td>0.850</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchase Intention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI1</td>
<td>0.934</td>
<td></td>
<td>0.746</td>
<td>0.936</td>
<td>0.914</td>
</tr>
<tr>
<td>PI2</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI3</td>
<td>0.911</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI4</td>
<td>0.814</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PI5</td>
<td>0.841</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Source: Primary data processed using SEMPLS 3.0 (2018))
Table 4. R² Value

<table>
<thead>
<tr>
<th>Variable</th>
<th>R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Attitude</td>
<td>0.638</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.632</td>
</tr>
<tr>
<td>Brand Awareness</td>
<td>0.795</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>0.796</td>
</tr>
</tbody>
</table>

Source: Primary data processed (2018)

For example, in this research brand Image has 0.763 R-Square value, which means 76.3 per cent brand image validity construct can be described by perceived value variable, and the remaining 33.7 per cent will be described by other factors outside the model, and so with other variables described above.

Table 5. Predictive Relevance Q² Value Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Q² (=1-SSE/SSO)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Attitude</td>
<td>0.163</td>
</tr>
<tr>
<td>Satisfaction</td>
<td>0.386</td>
</tr>
<tr>
<td>Brand Awareness</td>
<td>0.040</td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>0.550</td>
</tr>
</tbody>
</table>

Source: Primary data processed (2018)

As a rule of thumb, the values can be respectively described as small (0.02), medium (0.15), and large (0.35) [15]. Based on the Table 5, Brand Awareness has a small effect size, followed by Brand Attitude with medium effect size with Q² value is 0.163. Satisfaction and Purchase Intention have a large effect size because their value is more than 0.35.

When the size of the resulting empirical t value is above 1.96, we can assume that the path coefficient is significantly different from zero at a significance level of 5 per cent (α = 0.05; two tailed test). [15].

Table 6. Summary of The Structural Model

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Path</th>
<th>Original Sample (O)</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics (O/STDEV)</th>
<th>P Values</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>PE → BW</td>
<td>0.308</td>
<td>0.089</td>
<td>3.461</td>
<td>0.001</td>
<td>Yes</td>
</tr>
<tr>
<td>H₂</td>
<td>PE → BT</td>
<td>0.488</td>
<td>0.075</td>
<td>6.543</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H₃</td>
<td>PE → SA</td>
<td>0.157</td>
<td>0.072</td>
<td>2.172</td>
<td>0.030</td>
<td>Yes</td>
</tr>
<tr>
<td>H₄</td>
<td>PE → PI</td>
<td>-0.136</td>
<td>0.057</td>
<td>2.395</td>
<td>0.017</td>
<td>Yes</td>
</tr>
<tr>
<td>H₅</td>
<td>BW → SA</td>
<td>0.004</td>
<td>0.064</td>
<td>0.056</td>
<td>0.955</td>
<td>No</td>
</tr>
<tr>
<td>H₆</td>
<td>BW → PI</td>
<td>0.324</td>
<td>0.054</td>
<td>6.041</td>
<td>0.000</td>
<td>Yes</td>
</tr>
<tr>
<td>H₇</td>
<td>BT → SA</td>
<td>0.704</td>
<td>0.054</td>
<td>13.096</td>
<td>0.000</td>
<td>Yes</td>
</tr>
</tbody>
</table>
The trade business (T2), the telephone has been used to find buyers and/or sell land, agricultural and plantation products, and to sell superior products. This benefit is not optimal because the prospective buyers contacted are limited to those who are known. The market for superior products is "closed" or not yet known by the wider community, such as superior products in the form of handicrafts from the Baduy tribe. For residents who have received chat services such as WhatsApp application, it is also limited to people they know or to those who have visited Kanekes Village as a place of residence for the Baduy Tribe. User and telephone relations cannot invite buyers from outside the Lebak area. The availability of telephones is limited to relations with those who are known only, so it is impossible to inform various superior products of the village market. Constraints occur in promoting superior products, so they cannot attract buyers who are in urban areas or outside the Lebak area.

### Table 6

<table>
<thead>
<tr>
<th>H0</th>
<th>BT → PI</th>
<th>SA → PI</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.523</td>
<td>0.075</td>
<td>7.015</td>
</tr>
<tr>
<td>0.255</td>
<td>0.072</td>
<td>3.552</td>
</tr>
</tbody>
</table>

Source: Data Processing on SmartPLS 3.0

5. Discussion and Conclusion

From Table 6, we can measure the significance impact of each variables based on one-goal (causalational) impact in research model. We can analyze each hypothesis which has been stated in the beginning of research process.

- Positive Electronic Word-of-Mouth has a significant impact on Brand Awareness (H1), with t Test score 3.461 > 1.96. The original sample is 0.308 which mean the impact of Positive Electronic Word-of-Mouth on Brand Awareness is positive.
- Positive Electronic Word-of-Mouth has a significant impact on Brand Attitude (H2), with t Test score 6.543 > 1.96. The original sample is 0.075 which mean the impact of Positive Electronic Word-of-Mouth on Brand Attitude is positive.
- Positive Electronic Word-of-Mouth has a significant impact on Satisfaction (H3), with t Test score 2.172 < 1.96. The original sample is 0.072 which mean the impact of Positive Electronic Word-of-Mouth on Satisfaction is positive.
- Positive Electronic Word-of-Mouth has a significant impact on Purchase Intention (H4), with t Test score 2.395 > 1.96. The original sample result is -0.136 which mean the impact of Positive Electronic Word-of-Mouth on Purchase Intention is negative.
- Brand Awareness has no significant impact on Satisfaction (H5), with t Test score 0.056 < 1.96. The original sample is 0.004 which mean the impact of Brand Awareness on Satisfaction is positive.
- Brand Awareness has a significant impact on Purchase Intention (H6), with t Test score 6.041 > 1.96. The original sample is 0.324 which mean the impact of Brand Awareness on Purchase Intention is positive.
- Brand Attitude has a significant impact on Satisfaction (H7), with t Test score 13.096 > 1.96. The original sample is 0.704 which mean the impact of Brand Attitude on Satisfaction is positive.
- Brand Attitude has a significant impact on Purchase Intention (H8), with t Test score 7.015 > 1.96. The original sample is 0.523 which mean the impact of Brand Attitude on Purchase Intention is positive.
- Satisfaction has a significant impact on Purchase Intention (H9), with t Test score 3.552 > 1.96. The original sample is 0.255 which mean the impact of Satisfaction on Purchase Intention is positive.
5.1 Implication

As we can see from the data processing result, the variable that impacts the most to the purchase intention is brand attitude. It does mean the company should focus on creating, delivering, campaigning, and massiving the desired attitude to make the potential customer has an intention to purchase the product. The result that positive e-wom does bring a negative impact to the purchase intention reflects that the message on the e-wom (especially amplified WOM that created by the company) must have a balance information, both positiveness and negativeness, of the product, so they will had a satisfaction because their expectation not too high because the messages are full of goodness of the product. The company can design their marketing communication to create the new attitude or trend to increase the product purchase intention. Positive e-WoM as the main variable on this research has a significant role in determining the brand attitude, brand awareness, satisfaction, and also the purchase Intention of Wardah Exclusive Matte Lip Cream. The brand should design the message acceptable and make sense during deliver the advantage of the product. Wardah can establish a campaign of using lipcream in any occasions, the look, and also collaborated with many influencers to build the attitude.

References


[14] J. C. Olson, Mitchell, and A. A, “Are product attribute beliefs the only mediator of
advertising effects on brand attitude?,” *Advert. Soc. Rev.*, vol. 1, no. 1.

The Effect of Religiosity in Choice of Saving in Sharia Banks Using Multinominal Logistic Approach

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Abstract. The aim of the research is to analyze the effect of religiosity on the choice of saving in Sharia banking in Madiun. This type of research is explanatory research using survey research design. The subjects of this study were Sharia and conventional banking customers in Madiun. The samples used in this study were 685 samples using purposive sampling technique. The analysis technique used in this study is multinominal logit. The results of this study indicated that religiosity affects the probability of the customer's choice to save in Sharia banking is lower than saving together in a sharia and conventional bank and only saving in conventional bank. This shows that religiosity influences the probability of saving only in Sharia banking dominated by emotional religious ideological mindset rather than economic rational mindset of customer.

Keywords: Religiosity, Sharia Banks.

1. Introduction
As the largest Muslim population country in the world, Indonesia has great potential to become the center of the development of the Sharia finance industry. However, the growth of Sharia finance has not been able to keep up with conventional financial growth. This can be seen from the market share of Sharia finance as a whole is still below 5%. It means there is still a low level of Muslim community that uses Sharia banking services in Indonesia generally. This research attempts to answer this phenomenon.

Savings have an important role both micro and macro. In the macro, the tube is one of the sources of investment to increase the economic growth of the country [1]. While micro-savings has an important role for someone in order to maintain the level of consumption in the future [2]. In facts, many different views about the factors that determine a person to save and choose where he will save. According to [3] these view differences are caused by the lack of an appropriate model to explain and describe precisely the observed community or individual saving behavior.

Based on existing theories, there is a major mainstream in studying the behavior of saving, namely the classical belief and the Keynesian belief. Both believe in the influence of interest rates. According to Keynes, the influence of the interest rate on savings is very complex and many possibilities will occur [4]. Based on the research conducted [5] states that there are two important decision factors in one's saving behavior, the first is how much income is used for consumption and the second is how much income he sets aside to save. Some
researches conducted by [6], [7], [8] and [9] state that the influence of self-control influences a person to save.

One's self-control is certainly influenced by one of them is religiosity [10] this also applies to one's saving behavior when he will decide where he will save and how much he saves. Religiosity is the main factor of a person's saving behavior, this is supported by research conducted by [11], [12], [13], and [14] which state that religiosity is the main motivation of someone bumping behavior. On the other hand, religiosity is not a major factor in saving this in accordance with research conducted by (Erol, et al., 1990), [16], [17], [18], [19], [20].

2. Literature Review

2.1. Consumer Choice Theory

The important decision that everyone faces is how much income will be used for current consumption and how much income will be used for future consumption purposes. Another decision is how and how much money will be saved because it depends on the prevailing interest rates [21]. Consumer choice theory can be used to analyze how people make decisions about their income to save or spend on consumption in the present. Also how the amount of money deposited depends on interest rates or not.

In general, everyone's saving behavior is determined by two important decision factors. First refers to some of the real income received will be used for consumption purposes. Second refers to how much real income money is received will be set aside for savings. Long before [22] described consumption / savings planning can be simplified into two periods, namely present and future. On the other hand, for consumption decisions everyone will maximize utility throughout the life period. But in maximizing the utility of each person is very limited the ability of the budget owned. Thus, actually everyone faces a trade off. Rational choice theory [23] states that social behavior (including economic behavior) is influenced by four factors. One of them is wert rational. This theory illustrates that human rational behavior cannot be separated from the belief in certain absolute values, such as religious values (religiosity), ethics and aesthetics or other values believed.

2.2. Religiosity

Economic behavior is largely determined by the level of one's faith or society. This behavior then forms the tendency of consumption and production behavior in the market. This perspective also influences saving behavior [12] Religion is a system that has been institutionalized in every society and is fundamentally a binding norm in everyday life. Religious teachings that have been understood can motivate the lives of individuals in interacting with God and fellow humans, even with the environment.

Religiosity is manifested in various aspects of human life. Religious activity does not occur only when someone performs ritual behavior (worship of maghdah) only. But it is appreciated into social life (worship of ghairu maghdah), including banking practices as part of economic muamalah.

[24] analyzes religiosity into five dimensions, namely ideological/ belief dimensions, ritualistic/ practical, experiential/ experience, intellectual / knowledge, and consequences:

First, the ideological dimension/ belief is concerned with how much a person believes in the truth of his religious teachings, especially towards fundamental or dogmatic teachings. In Islam, the contents of the dimension of belief are related to beliefs about the existence of God, Angels, Apostles / Prophets, the book of God, heaven, hell, qodho and qodar [25].

Second, the ritualistic/ practical dimension relates to how much a person obeys in doing ritual activities as ordered or encouraged by the religion he adheres to. In Islam, the contents
of the ritualistic / practical dimension include activities such as performing prayers, fasting, hajj (if capable), reading the Qur'an, climbing prayers, etc. [25].

Third, experiential dimensions regarding how a person feels and experiences unreligious feelings and experiences. In Islam, the content of the experiential dimension includes feeling close to God, being loved by God, prayers are often granted, a feeling of peace and happiness in obeying God [25], and being saved from disaster, receiving income that was not thought of before, such as grants, gifts and inheritance.

Fourth, the intellectual / knowledge dimension is related to how much a person has knowledge and understanding of his religious teachings, especially regarding the basic teachings as contained in his holy book.

In Islam, the content of the intellectual/ knowledge dimension includes knowledge of the contents of the Quran, the points of teachings that must be believed and implemented, Sharia law [25], and understanding of Sharia economic/ Sharia banking scientific principles.

Fifth, the dimension of practice/ consequence relates to how much a person behaves in a manner motivated by his religious teachings. The behavior in question is worldly behavior, namely how individuals relate to their world. In Islam, the contents of the dimensions of practice/ consequences include helping behavior, giving charity, upholding truth and justice, being honest, keeping the mandate, protecting the environment, not stealing, not gambling, not deceiving, struggling for the success of life according to Islam [25], adhere to and implement Sharia norms in culture, society, politics, and economics (business/ banking transactions) non-usury thus, religiosity can be described as a form of consistency between belief in religion as a cognitive element, feeling of religion as an affective element and religious behavior as a psychomotor element [26]. Religiosity is a complex integration between religious knowledge, feelings and religious actions in a person in all aspects of life.

3. Method

This type of research is explanatory research using survey research design and uses a quantitative approach to the choice of saving in Sharia banking. The subjects in this study were Sharia banking customers in Madiun. Methods in collecting data using a questionnaire that lists questions that are filled in by respondents who meet the criteria to be sampled.

The population in this study were customers of Sharia banking and conventional banks in Madiun, the sample used in this study was 685 samples with purposive sampling technique. With a number of consideration criteria, namely customers who have savings accounts, have carried out transactions in banks, have had a savings account for 1 year, at the time of opening a customer account open an account voluntarily not because someone else opened it.

4. Result

Respondents in this study were conventional and sharia bank customers in Madiun. The distribution of respondents is shown in Table 1.

The majority of respondents who save in Sharia banks and conventional banks are aged over 40 years. [27], that at the age of over 31 years, customers think the future for their children, so they will save more to prepare for education fees as early as possible. By sex 56% of women and 44% of men. This shows that the majority of respondents the most are women. [28] states that most customers are dominated by women. This condition is caused because women in Indonesia tend to be holders of family financial control and more time to transact with banks than men. Whereas based on the work, the majority of the respondent's work is private employees, namely 56%, civil servants as much as 25%, employers as much as 16% and students as much as 6%. Based on Khoiron's statement (2010) that employment affects
income, it can be assumed that customer income can affect customer relationships with banks. At the education level banking customers in Madiun are undergraduate. Logically, the higher the level of one's education, the higher the quality of one's thinking, which is the tendency to always act with the consideration of rationality arguments [7].

Table 1. Respondents Profile

<table>
<thead>
<tr>
<th>Profile</th>
<th>Descriptions</th>
<th>Conv</th>
<th>Sharia &amp; Conv</th>
<th>Sharia</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>20–24</td>
<td>11</td>
<td>9</td>
<td>7</td>
<td>27</td>
<td>4 %</td>
</tr>
<tr>
<td></td>
<td>25–29</td>
<td>36</td>
<td>29</td>
<td>23</td>
<td>88</td>
<td>13 %</td>
</tr>
<tr>
<td></td>
<td>30–34</td>
<td>56</td>
<td>45</td>
<td>36</td>
<td>137</td>
<td>20 %</td>
</tr>
<tr>
<td></td>
<td>35–39</td>
<td>56</td>
<td>45</td>
<td>36</td>
<td>137</td>
<td>20 %</td>
</tr>
<tr>
<td></td>
<td>&gt;40</td>
<td>121</td>
<td>97</td>
<td>78</td>
<td>296</td>
<td>43 %</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>123</td>
<td>99</td>
<td>78</td>
<td>300</td>
<td>44 %</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>157</td>
<td>126</td>
<td>102</td>
<td>385</td>
<td>56 %</td>
</tr>
<tr>
<td>Job</td>
<td>Students</td>
<td>17</td>
<td>13</td>
<td>12</td>
<td>42</td>
<td>6 %</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>149</td>
<td>120</td>
<td>94</td>
<td>363</td>
<td>56 %</td>
</tr>
<tr>
<td></td>
<td>Entrepreneurs</td>
<td>44</td>
<td>36</td>
<td>29</td>
<td>109</td>
<td>16 %</td>
</tr>
<tr>
<td></td>
<td>Civil Servants</td>
<td>70</td>
<td>56</td>
<td>45</td>
<td>171</td>
<td>25 %</td>
</tr>
<tr>
<td>Level of Education</td>
<td>Undergraduate</td>
<td>25</td>
<td>31</td>
<td>40</td>
<td>96</td>
<td>14 %</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>49</td>
<td>44</td>
<td>38</td>
<td>131</td>
<td>19 %</td>
</tr>
<tr>
<td></td>
<td>Bachelor</td>
<td>120</td>
<td>97</td>
<td>94</td>
<td>311</td>
<td>45 %</td>
</tr>
<tr>
<td></td>
<td>Post Graduate</td>
<td>86</td>
<td>53</td>
<td>8</td>
<td>147</td>
<td>21 %</td>
</tr>
</tbody>
</table>

The Multinomial Logit Model is useful for modeling customer savings behavior decisions in Madiun. In this case, the dependent variable is the customer decisions to save in Madiun. Decisions are classified into three, namely (1) saving only in Sharia banks; (2) saving in Sharia banks and conventional banks; and (3) only saving in conventional banks. Religiosity variable, being an independent variable that influences customers to save in Sharia banks in Madiun.

Logistic regression results require an evaluation to find out how well the logistic regression results are. Logistical regression evaluation results include:

a) Size of logistic regression Goodness of fit is called Pseudo R2, which is indicated by Negelkerke R2 value of 0.848. This value means that the Religiosity variable is able to explain the customer's choice of saving by 84%, while the remaining 16% is explained by other variables outside the research model;

b) Uji (b) Overall Model Fit test by inserting independent variables into the results model is better than the model that only includes intercepts -2 log likelihood with interception 1481.752, whereas by entering an independent variable, 2 log likelihood fell to 531,803 or there was a decrease in Chi-square by 949,949 and was significant at p = 0.00. In short, the model with independent variables provides better accuracy for predicting the choice of customers to save in Sharia banks Madiun.

c) Significance Test
The significance test of independent variables can be done in two ways, namely the Likelihood Ratio Test and the Wald Test.

1. Likelihood Ratio Test
   Variables contribute to the model with significance $P < 0.05$. It can be concluded that, the variables of religiosity affect the choice of customers to save in Sharia banks in Madiun.

2. Wald Test
   As for the government apparatus, the telephone is used by the village officials, district and sub-district officials in coordinating their daily work affairs such as meeting preparation and others. Work affairs for the village community, a telephone is used as a communication tool in finding job and employment affairs. For family members who work in big cities such as in Jakarta, or abroad such as in Saudi Arabia, Malaysia, Hong Kong, they can deliver messages and receive messages from their employers when they are home.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Model of Fitting Criteria</th>
<th>Likelihood Ratio Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>-2 Log Likelihood of Reduced Model</td>
<td>Chi-Square</td>
</tr>
<tr>
<td>Intercept</td>
<td>1154,783</td>
<td>622,980</td>
</tr>
<tr>
<td>R</td>
<td>1303,466</td>
<td>771,663</td>
</tr>
</tbody>
</table>

The chi-square statistic is the difference in -2 log-likelihoods between the final model and a reduced model. The reduced model is formed by omitting an effect from the final model. The null hypothesis is that all parameters of that effect are 0.

<table>
<thead>
<tr>
<th>Saving Behaviour</th>
<th>B</th>
<th>Std. Error</th>
<th>Wald</th>
<th>Df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% Confidence Interval for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Intercept</td>
<td>28,585</td>
<td>2,263</td>
<td>159,598</td>
<td>1</td>
<td>,000</td>
<td></td>
<td>,699</td>
</tr>
<tr>
<td>R</td>
<td>-.336</td>
<td>,176</td>
<td>130,553</td>
<td>1</td>
<td>,000</td>
<td>,495</td>
<td>,458</td>
</tr>
<tr>
<td>Intercept</td>
<td>14,282</td>
<td>1,365</td>
<td>109,416</td>
<td>1</td>
<td>,000</td>
<td></td>
<td>,495</td>
</tr>
<tr>
<td>R</td>
<td>-.289</td>
<td>,152</td>
<td>94,451</td>
<td>1</td>
<td>,000</td>
<td></td>
<td>,495</td>
</tr>
</tbody>
</table>

a. The reference category is: 3,00.

The results of the hypothesis testing show that the level of religiosity of customers who save only in Sharia banks has a positive and significant influence on attitudes towards the intention to save in Sharia banking. From the analysis of Glock and Stark's theory of religiosity, this empirical phenomenon can be understood both in ideological/belief aspects,
rituals, intellectual/religious knowledge, and experience, as well as in the aspects of consequences/application.

The results of this analysis reinforce the findings. In general, the level of religiosity of Muslim customers who save only in Sharia banks is very good (very high). This condition shows that the contribution of religiosity to saving behavior in Sharia banks is quite convincing.

The study of [29] in Pakistan shows that the strong Sharia vision (religiosity) of customers encouraging business transactions only through Sharia banking is a significant factor. The strength of Sharia vision (religiosity) simultaneously encourages public perception, that the interest rate on savings is not a problem for customers who only save in Sharia banks. They prefer a legitimate or permissible investment return on religion, not a matter of how high and low this return is when compared to the interest rate or inflation of conventional banks. Muslim societies that save in conventional banks are due to a lack of knowledge that Islam prohibits the payment and receipt of interest.

The influence of religiosity that strengthens attitudes on the intention to save in Sharia banks as reflected in this study proves the existence of an ideological-emotional mindset is more dominant than an economical rational mindset in customers who only have savings in Sharia banks. This type of customer group, as concluded does not think the high and low profitability of the savings return received.

The influence of religiosity that strengthens attitudes on the intention to save in Sharia banks as reflected in this research proves the existence of ideological-emotional mindset is more dominant than the rational mindset in customers who only have savings in Sharia banks. This type of customer group, as concluded by [12] and [27] does not think the high and low profitability of the savings return received. This group thinks like the conclusions of [17] study in Kuwait, Saudi Arabia and Egypt which shows that most Muslims in the dual banking system choose banks for religious reasons. Moreover, Sharia banks—according to customers are no different from conventional banks in staff returns and competencies and service speed.

According to [12], the economic behavior of Muslim customers who do not have an account in conventional banking is largely determined by the level of ideology/belief. This behavior then forms a tendency for consumption and production behavior in the market. This perspective also influences saving attitudes and behavior. When trust exists at a fairly good level, the economic motives (consuming/saving or producing) will be dominated by *mashlahah* motives (public interest), needs and obligations. This character is called as a devout Muslim. When measures of economic behavior are seen in terms of banking utilization, according to [12] this group can be classified as Muslims who truly avoid interest-based conventional banks.

The results of previous studies which concluded that religiosity is not a major and insignificant factor in the choice of savings customers in Sharia banks found the background of profitability, pricing, demographic preferences, and alternative financial institutions as important and main factors. Profitability preferences related to the view of profit sharing from Sharia bank savings is greater than the interest income from conventional bank savings. Pricing is related to the view of the costs of savings administration not being applied or lower than in conventional banks. Even in certain Sharia banks nullify administrative costs to customers.

Demographics relate to the view of the closeness of the bank office, the quality of service (fast, efficient, and friendly). The consideration of religion is not at all an election consideration for Sharia banks. Utilization of Sharia banks is used as an alternative to conventional banks due to profitability, pricing and demographic factors.
When linked to this research model, the majority of upper middle income customers will choose to save in conventional banks or have accounts in conventional and Sharia banks can be explained that the rational mindset (due to economic profitability) of customers. Economic background becomes dominant for customers choosing Sharia or conventional banks because of profitability, pricing, and demographic excellence. [16], and [30]. Both studies concluded that the motivation of customers to choose/ take advantage of Sharia banking seems to be dominated by factors of profitability, pricing, and quality of services provided by Sharia banks. Therefore, the relationship between non-Muslim customers and Sharia banks is built on the commitment of transactive rationality.

Customers who choose to only save in conventional banks or save in Sharia and conventional banks, which are the findings of this study, reflect a rational mindset (due to economic profitability) of customers. Economic background becomes dominant for customers choosing Sharia banks because of profitability, pricing, and demographic excellence. This empirical fact led to the conclusion, that groups of customers who save in Sharia banks and conventional banks or only save in conventional banks are economically rational customers (the behavior of establishing a relationship with a bank because of merely encouraging consideration of economic utility).

5. Conclusion

A person's religiosity affects someone choosing to save. In terms of the analysis of Glock and Stark's theory of religiosity, this empirical phenomenon is understood as good in ideological/ belief aspects, rituals, intellectual/ religious knowledge, and experience, as well as in the aspects of consequences / application. The results of this analysis reinforce the findings, that in general the level of religiosity of Muslim customers who save only in Sharia banks is very good (very high). This condition shows that the contribution of religiosity to saving behavior in Sharia banks is quite convincing.

Doubts about the position of interest are in the category of usury and therefore illicit law encourages these customers to continue to have relations with conventional banking. This customer group considers the actual profit sharing equal to interest, Sharia banking operations are the same as conventional banking. Understanding like this actually does not stand alone. This group of customers lives in a patrimonial socio-religious structure.

The structure of socio-religious life of the East Javanese community, especially in Madiun, which is more patriarchal, makes this group more confident with its role model social organization. Although the MUI has issued a fatwa on the law of bank interest, it is haram, but it does not seem to provide a widespread and massive influence.

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Strategic Agility in Environmental Turbulence A case of Banking Sector in Indonesia

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Abstract. Adapting to environmental turbulence is mandatory for every player in the banking sector. They need to develop rational strategies and respond effectively. Environmental Turbulence especially market turbulence and technological turbulence, which happen lately in banking industry, require firms to review their strategies continuously. Strategic agility with its dimensions: strategic sensitivity, resource fluidity, and collective commitment, is a capability of a firm that has been identified as a key to succeed in a highly competitive and rapidly changing environment. Strategic agility is also known as a source of competitive advantage which will also enhance performance of the firm. This study tries to examine strategic agility and its dimension and reveal its importance in the banking sector in order to gain competitive advantage in environmental turbulence. Furthermore, this study explores the application of strategic agility and its potential to improve unit performance through competitive advantage. The population of this study is managers in one of private bank in Indonesia. This study uses Structural Equation Modelling (PLS-SEM) to analyze the data. Findings of this study suggest that strategic agility has a role to gain competitive advantage by taking advantages from environmental turbulence specifically in market and technological turbulence which in turn will also improve firm performance.

Keywords: Strategic Agility, Environmental Turbulence, Competitive Advantage, Performance.

1. Introduction

Competition in the era of globalization is a huge challenge for companies but it also can be an opportunity. Companies are required to have a strategy to improve their position in this tight competition. Even for organizations at its peak of its life cycle that is at its mature stage still require to continue innovating. Moreover, technological innovation, and rapid change of customer preference requires high interaction between company and the customer.

In today’s business environment, organization need to actively observe every opportunities and challenge to be able to survive or even become the leader in the competition. Fundamental changes in technology, market conditions, and customer demand create a fast-changing and uncertain environment. To deal with this, many companies try to differentiate by adopting different procedures and instruments to improve their organization competitive position.

In the latest market conditions, organizations are faced with a variety of changes that often occur simultaneously and unpredictable which forces organizations to revise their work...
methods continuously in order to adapt quickly. In this context, strategic flexibility known as strategic agility shows the ability of an organization to manage market change through rapid proactive responses to threats and market opportunities [1]. Dreyerand and Gronhaug (2004) mention the importance of increasing strategic agility as a source of excellence in competitive markets in recent years [2]. Therefore, in a turbulent environment, one of the important features of organization's key success factors is strategic agility.

Many businesses are not sure how to deal with turbulent environments. They believe that identifying the causative relationship between environmental variables and actions taken by the management team can help to overcome this dynamic situation. Organizations shape their environment by influencing their industry or collaborating with each other, thereby gaining control of some parts of their environment. Such environment are not fully determined by external forces, but is also influenced by the company itself.

Building strategic agility in the era of dynamic environment is currently a challenge for banks in Indonesia. Even some bank in Indonesia cannot maintain their strategic agility so they need to merge with the other or be acquired. Therefore, organizations need to continue to give more attention to their strategic agility as dynamic capabilities through proper performance appraisal.

With this increasing competition in the Indonesian banking system, each bank tries to make various ways to increase or at least maintain their market share. Banks are supported by their competitive advantage to strengthen their position and guarantee their success in competition. Change of customer preferences and rapid development of technology greatly influences the banking business. This environmental turbulence faced by bank makes banking as one of the industry that need strategic agility the most.

The purpose of this study is to empirically investigate the mediation of competitive advantage [3] on the relationship between strategic agility [4] in order to achieve organizational performance in the environmental turbulence [3]. The context of this study is bank in Indonesia.

2. Literature Review

This section will discuss about the variables which consist of: strategic agility; competitive advantage, environmental turbulence, and performance.

2.1 Strategic Agility

Strategic agility is defined as organization's ability to ensure itself to be flexible to adapt in any environmental condition [4], as well as the organization's ability to continually adjust their strategic direction and develop innovative ways to create value. However, even though the idea of "renewal" and "adaptation" can be seen from various perspectives, focus of strategic agility are for various factors and strengths; including new ideas, technology, socio-economic variables, and various organizations and non-government in them.

Strategic agility provides the ability to connect insights about the external business environment with internal capabilities and convert it into actions. According to [4], such organizations are built to be able to survive themselves. This kind of organization have an awareness, structure and process that keeps them alert, and adaptive.

Organizations that have strategic agility aware of environment changes and can respond to it quickly and, ultimately, determine their own future. They predict the future and allocate significant resources for future development so that they can maintain their sustainable competitive advantage. They operate in capacities that are more than just survival: they lead in their own markets. Continuous self-renewal is a way of life for these organizations and their members.
Strategic agility consists of three capabilities, such as strategic sensitivity, collective commitment, and resource fluidity [4]. All three capabilities must support each other to achieve success, we cannot choose only one capability, but it must have a combination of the three capabilities. If collective commitment is not supported by the ability to move resources from a business unit because the individual motives and the main objectives of the business unit are not aligned, then strategic agility will have a negative impact [4].

[4] characterize Strategic Agility consists of three main capabilities: (1) Strategic sensitivity, includes the focus of the organization's attention and the level of intensity in which the company perceives and interprets the reality of market conditions (2) Collective Commitment, how company management can make quick and right decisions and without take organizational politics as consideration , (3) Resource Fluidity, the ability to adjust and renew business system and relocate resources quickly according to needs and circumstances. They argue that innovation and constant development of new capabilities are the only sources of excellence for sustainable competitiveness.

The first ability in strategic agility is strategic sensitivity which is defined as the ability to predict markets and become a leader in the industry [4]. Many previous studies presented this capability, because this ability is the basis for subsequent strategic decision-making and action. Usually it takes a long time for the organization to realize the need for change. The environment often provides some sign of change, but many organizations are not alert and ready to make changes if the signs of change have not been felt strongly [5]. Therefore organizations must have a higher level of awareness, sustainable awareness including honest and open strategic discussions among leaders, managers, and other stakeholders, so that there will be different opinions and inputs in an effort to make changes further [4].

Strategic sensitivity depends on accepting and analyzing various types of information to understand the environment to decide on effective actions [6]. Reading the environment effectively, analyzing and managing market information, and understanding the market environment are very important in order to be flexible and achieve success. Strategic sensitivity is very important to create a shared vision among leaders. Collaborating with consumers enables leaders to increase market needs and strategic sensitivity.

Collective commitment requires managerial leadership to work together in making important decisions and avoiding political conflict and self-interest. The faster leaders can make important decisions, the faster organizations can take advantage of opportunities [7]. Establishing strong shared goals strengthens trust among leaders for more committed and united teams [8].

Looked at how organizations with organizational leaders work together, especially in developing markets, achieving the possibility of success, especially when operating quickly. Speed, conflict, and cooperation allow the organization's leadership team to create effective strategies in a dynamic environment and ambiguity [9]. Furthermore, he also noted that formulating simple rules increased the ability of the organization's leadership team to act fast based on overall market knowledge. The importance of healthy market understanding to plan proactively in anticipating potential environmental turbulence [10].

Resource fluidity is the organization's internal ability to relocate resources quickly to capture opportunities and distance themselves from failures [4]. Examples of resources that move toward opportunities arise in several studies. [11] propose resource fluidity to create and manage adaptive and anticipatory flexibility. Furthermore, [12] ambitious organizations control flexible, varied and easy-to-use resources that allow flexibility. The ability to move resources to opportunity areas is very important to create competitive advantage [4].
2.2 Environmental Turbulence

Environmental turbulence is defined as environmental conditions with high level of uncertainty and risk. Environmental turbulence is an important construction that captures volatility in the corporate environment. Environmental turbulence is made up of a competitive business environment and risks that come up from the company, and the complexity and heterogeneity of the supply chain. Tan et al. (1999) suggest a environment turbulence that is conceptualized in terms of the time and resources that needed to compete with the competitors.

Uncertainty produce risks faced by companies. For example, the more uncertain the customer demand is, the greater risk of running out of stock and the excess stock faced by the company. Lee (2002) classifies the supply chain in terms of supply and demand uncertainty. The uncertainty of demand is due to the short product life cycle, the number of product types, the seasonal nature of the product, demand and high obsolescence costs. In other hand, technological uncertainty will also cause product age faster than the time it should. [13] categorizes uncertainty based on three levels of the supply chain planning hierarchy: strategic, tactical and operational.

Environmental turbulence is also characterized by uncertainties arising from unexpected changes in market demand, consumer preferences, new technological developments, and technological breakthroughs [14]. They found that in a turbulent environment there are three types of capabilities that will produce strategic advantage such as: (1) operational (the ability to carry out processes), (2) dynamic (planned capabilities to reconfigure operational capabilities), and (3) improvisational (the learned ability to spontaneously reconfigure operational capabilities). The last two abilities can be seen as dynamic capabilities in general. Therefore, there is a relationship between dynamic ability and competitive advantage in a turbulence environment.

2.3 Competitive Advantage

Competitive advantage is one of famous studies in modern strategic theory. Competitive advantage is a keyword in organizational space as the main method for creating a successful business. Some scholars have focused on the relationship between competitive advantage and organization success. However, it is hard to determine and measure competitive advantage [15]. [16] notice that it is important for managers to use analytics to understand internal and external environments of the organization. Linking business models to identify competitive advantage enables managers to identify areas of differentiation to achieve competitive advantage [16]. A typical measure for analyzing the effectiveness of competitive advantage is performance.

The creation of competitive advantage consists of inter-relationships within organizations on technology, innovation, human resources, and overall organizational structure [17]. [18] defines competitive strategies as the company’s efforts to create positive competitive positions in certain industries. The aim of developing competitive positions is to create profitable long-term positions through the application of three general strategies (cost, differentiation, and focus). Developing a competitive position to create competitive advantage is the basis of several modern seminal theories.

[19] argues organization can be different among other competitors if they have a competitive advantage as the organization’s distinctive competencies, thus giving them a place in the marketplace. These differences must relate to some product/service attributes which is the key buying criteria for the customer. Key buying criteria are variables and criteria that customers use while making their purchase decisions. The key buying criteria are different
between industries, and between market segments. Competitive advantage is an advantage gained over competitors by offering customers greater value, either through lower prices or by providing additional benefits and services that justify similar or possibly higher prices. A competitive advantage is meaningful if it is related to attributes valued by the market. Some examples of such attributes are product quality, price and after-sales service. Competitive advantages can be created through first mover advantage, environmental adaptation, new ideas, operating efficiency, quality, and customer responsiveness.

The creation of competitiveness excellence consists of inter-relationships within organizations on technology, innovation, human resources, and overall organizational structure. [18] defines competitive strategies as organizational efforts to create positive competitive positions in certain industries. The aim of developing competitive positions is to create profitable long-term positions through the application of three general strategies (cost, differentiation, and focus). Developing a competitive position to create competitive advantage is the basis of several modern seminal theories.

Competitiveness is one of the most important topics in strategic management. [20] Sustainable competitive advantage as a source of sustained superior performance of organizations. The advantage of competitiveness itself is the comparison of the relative performance of an organization among its competitors in the product market [21].

Using a structural approach, [18] suggests an industry analysis framework (five forces) that explains profit sustainability through the interaction between bargaining power in a particular industry. While [21] defines an organization that has competitive advantage as an organization that can produce more economic value than competitors. Economic value is the difference in perceptions of value seen by customers with actual economic costs for buying products or services.

In order to have a sustainable competitive advantage, organizations must have resources that meet the following attributes: valuable, rare, imperfect, and irreplaceable. [20] Resources include tangible assets, and intangible assets, for example: assets, capabilities, competencies, organizational processes, attributes, information, and knowledge possessed by the organization. The four attributes of the resource are suggested by assuming that the resource market is heterogeneous and does not move to make it a ‘durable’ advantage [21].

2.4 Organizational Performance

Although the concept of organizational performance is very common in the academic literature, to define it is difficult because of it has many meanings. Because of that, there isn’t a universally accepted definition of organizational performance. Achieving the success of strategy implementation, according to [22], is when the organization called to have a successful performance.

Provide a set of definitions the concept of organizational performance:

- Performance has an indicator of a set of financial and nonfinancial within offer information on the degree of achievement of objectives and results [23], [24].
- Performance is dynamic, requiring judgment and interpretation.
- Performance may be illustrated by using a causal model that describes the future result that affected by current actions.
- Performance may be understood differently depending on the person who involved in the assessment of the organizational performance (e.g. performance can be understood differently from a person within the organization compared to one from outside).
- To define the concept of performance is necessary to know its elements characteristic to each area of responsibility.
To report an organization's performance level, it is necessary to be able to quantify the results.

3. Hypotheses

Agility consists of three main capabilities: (1) Strategic sensitivity includes the focus of the organization's attention and the level of intensity in which the company perceives and interprets the reality of market conditions (2) Collective Commitment is how company management makes quick and brave decisions without limited by organizational politics, (3) Resource Fluidity is the ability to adjust business systems and relocate resources quickly according to needs and circumstances. They argue that innovation and constant development of new capabilities are the only sources of excellence in sustainable competitiveness.

Hypotheses 1: Strategic agility has positive impact on competitive advantage.

It has been established that in the environmental turbulence condition organizations should have the value chain engage in collective action to reduce the impact of environmental turbulence [25]. Therefore, firms with a greater level of strategic agility, having greater level of re-configurability and market acuity. If organization could arise competitive advantage they would show better achievement of competitive operations capabilities and competitive financial performance as they will be able to better adapt and more flexible adjust to the fast-changing environment compared to their competitors. This happens as the strategically agile firms can reconfigure their resources to fit the requirements of emerging change better according to the literature off strategic agility dimensions (strategic sensitivity, collective commitment, and resource fluidity).

Dynamic capability of strategic agility will help the firms with strategic option to exploit the opportunities and aware of the threats as they emerge [26]. The greater the environmental turbulence the more will be the beneficial effect of strategic agility [27]. The reverse scenario will emerge if the environmental turbulence is low as there will be no added value in being strategically agile because the exploitation of existing competencies will lead to better results [28]. Thus, it appears that environmental turbulence would impact on strategic firm agility on competitive advantage and financial performance of a firm. Therefore, the proposed hypothesis is:

Hypotheses 2: Environmental Turbulence has positive impact on strategic Agility.

Competitive advantage has been so popular in strategic studies, but it reveals that though the subject has received substantial attention, in most empirical studies it is not measured directly. On the contrary, performance indicators such as profit, productivities, etc are used as proxies. [29] addresses the differences between a firm's performance, and competitive advantage. This separation can also hela to have a better understanding of how competitive advantage relate to performance, and how this relationship enhances performance of the organization [30].

[31] found that even though there is a lot of literature about the interaction of competitive advantage and organizational topic but the relationship between competitive advantages and performance in has been insufficiently explained and much research in strategy literatures tend toward speculation.

Literature on competitive advantage in many industries in terms of customer-based dimensions of retention, satisfaction, and growth rather than in financial terms. Accordingly, it is suspected that developing competitive advantages will help organization to make a better satisfy customers relative to rivals. Indeed, the dynamic capabilities examined here enable firms to sense and seize on any opportunities and reconfigure/transform resources to address
market needs. Thus, based on the literature performance will rise as a result of developing competitive advantages:

Competitive Advantage refers to competition as a result of the obtainable scheme of the company [32]. Organization that can arise competitive advantage when they can outperform better than any other rivals. [33] are purposes that the organization have to utilize of the competition by looking for an opportunities and awareness of threat for the best support operations to perform exceed the competitors. [34] refers to the value of strategy which helps the companies succeed in performing businesses and achieve excellence operations and companies’ improvement. By this result, the following hypothesis is:

Hypotheses 3: Competitive advantage has positive impact on strategic Agility.

The next section outlines the research design and methodology of this research.

4. Method

The main objective of this study is to empirically investigate the mediating roles of competitive advantage on the relationship between strategic agility and performance in the turbulence environment. To analyze the hypotheses above, this research conducted at one of private bank in Indonesia, using 41 samples from the manager levels. We use questionnaire consist 48 items with Likert scale indicator from 1 (strongly disagree) to 6 (strongly agree). The use of scale 1 to 6 is aimed to avoid the tendency of respondents choosing neither agree or disagree in order to speed up the time of filling questionnaire.

Measurement was taken from previous studies. Strategic agility was measured with 19 indicators that represent strategic sensitivity, collective commitment and resource fluidity from [35]. Environmental turbulence was measured with ten indicators that represent market turbulence and technological turbulence, from [36]. Competitive advantage five indicators that represent from [36]. Unit Performance were measured with eight indicators that represent productivity, growth, satisfying rate, and reputation from [35].

5. Result

Sample of this study consisted of 15% female and 85% male respondent; with the average age of the respondent was between below 30 and above 50 in the second place. Majority level of respondent education was Bachelor, and majority of the number of subordinate in their unit is up to 10 people. The details demography of the participants is presented on Table 1 below.
Table 1. Demography Data.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Count</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>35</td>
<td>85</td>
</tr>
<tr>
<td>Female</td>
<td>6</td>
<td>15</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 30</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>31-40</td>
<td>10</td>
<td>24</td>
</tr>
<tr>
<td>41-50</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>&gt; 50</td>
<td>13</td>
<td>32</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S1</td>
<td>26</td>
<td>63</td>
</tr>
<tr>
<td>S2</td>
<td>14</td>
<td>34</td>
</tr>
<tr>
<td>S3</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td><strong>Tenure</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 - 4</td>
<td>12</td>
<td>29</td>
</tr>
<tr>
<td>5 – 10</td>
<td>13</td>
<td>31</td>
</tr>
<tr>
<td>11 - 20</td>
<td>4</td>
<td>10</td>
</tr>
<tr>
<td>&gt; 20</td>
<td>12</td>
<td>30</td>
</tr>
<tr>
<td><strong>Number of Subordinate</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 5</td>
<td>11</td>
<td>27</td>
</tr>
<tr>
<td>5 - 10</td>
<td>19</td>
<td>46</td>
</tr>
<tr>
<td>&gt; 10</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To analyze the research data, various analyses are used. Such as convergent and divergent validity and coefficient of correlation between variables of the research are examined. Then, to examine the validity of the question we can use confirmatory analysis. I use PLS to test the hypotheses.

Table 2 consists of items to show validity and reliability of the research. For Cronbach’s Alpha has normally value above 0.7 to ensure convergent validity. The values obtained show the convergent validity CR (strategic agility) = \( \sqrt{0.910+0.871+0.851} / \sqrt{0.910+0.871+0.851+0.171+0.241+0.275} \approx 0.936 \) of the measurement instrument is acceptable. Composite Reliability coefficients are also above 0.7, supporting the appropriate fit of the measurement models. For the second-order latent variable “strategic agility, CR, and AVE are calculated as follows.
Convergent validity is tested with AVE variables and it shown in the table, all of variable’s AVE is above 0.5 After confirming validity and reliability of measures of the constructs, the result of the structural model are evaluated, which shows how latent variables are connected to each other.

In the table 3, will show the overall effect of the exogenous constructs is indicated on unit performance and other latent variables.

**Table 2.** Validity and Reliability Indicators.

<table>
<thead>
<tr>
<th>Construct</th>
<th>AVE</th>
<th>Composite Reliability</th>
<th>R Squared</th>
<th>Cronbach's Alpha</th>
<th>Shared Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Agility</td>
<td>0.504</td>
<td>0.934</td>
<td>0.663</td>
<td>0.924</td>
<td></td>
</tr>
<tr>
<td>Strategic Sensitivity</td>
<td>0.513</td>
<td>0.513</td>
<td>0.828</td>
<td>0.766</td>
<td></td>
</tr>
<tr>
<td>Collective Commitment</td>
<td>0.512</td>
<td>0.878</td>
<td>0.758</td>
<td>0.836</td>
<td></td>
</tr>
<tr>
<td>Resource Fluidity</td>
<td>0.691</td>
<td>0.87</td>
<td>0.724</td>
<td>0.775</td>
<td></td>
</tr>
<tr>
<td>Environmental Turbulence</td>
<td>0.532</td>
<td>0.898</td>
<td>0</td>
<td>0.869</td>
<td></td>
</tr>
<tr>
<td>Competitive Advantage</td>
<td>0.581</td>
<td>0.873</td>
<td>0.639</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td>Unit Performance</td>
<td>0.601</td>
<td>0.922</td>
<td>0.509</td>
<td>0.903</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3.** Significance Test of Structural Model Results.

<table>
<thead>
<tr>
<th>Path</th>
<th>Path Coefficient</th>
<th>t-values</th>
<th>Error Probability</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic Agility -&gt; Strategic Sensitivity</td>
<td>0.91</td>
<td>26.203</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Strategic Agility -&gt; Collective Commitment</td>
<td>0.871</td>
<td>16.343</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Strategic Agility -&gt; Resource Fluidity</td>
<td>0.851</td>
<td>13.966</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Strategic Agility -&gt; Competitive Advantage</td>
<td>0.799</td>
<td>11.506</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Environmental Turbulence -&gt; Strategic Agility</td>
<td>0.814</td>
<td>12.194</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
<tr>
<td>Competitive Advantage -&gt; Unit Performance</td>
<td>0.714</td>
<td>8.844</td>
<td>0.000%</td>
<td>P&lt;0.01</td>
</tr>
</tbody>
</table>
Table 3 confirms the relationship between constructs of the model and hypotheses of the research are supported. As data of table show, all of hypotheses has a relationship with the level of confidence 90%.

6. Discussion and Conclusion

The main purpose of the present research was to analyze the causal role of strategic agility to competitive advantage in order to enhance unit performance in environmental turbulence and determine its dimensions. For this purpose, general dimensions of strategic sensitivity, collective commitment, and resources fluidity were introduced as meta-capabilities of strategic agility [4].

Finding of the research show that respondents agree on the issue that the capabilities of strategic sensitivity, collective commitment, and resource fluidity is equivalent to capabilities in agility at the strategic level. Hence, hypotheses related to dimensions of strategic agility are supported. In other words, if a bank want to achieve competitive advantage in order to
increase the unit performance, Bank must apply certain capabilities of the three dimensions of strategic agility that mentioned above.

The three meta-capabilities (strategic sensitivity, collective commitment, and resource fluidity) were statistically significant predictors of organizational performance. These findings supported [4] theory that all three meta-capabilities must be applied together to predict organizational performance.

The results of the study show that the most important dimension to achieve strategic agility is strategic sensitivity and the next rank belong to collective commitment and strategic sensitivity, even though all three capabilities must support each other to achieve success, we cannot choose only one capability, but it must have a combination of the three capabilities. If strategic sensitivity is not supported by the ability to move resources from a business unit because the individual motives and the main objectives of the business unit are not aligned, then strategic agility will have a negative impact [4].

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Does Diversification Strategy Reduce The Level of Financial Distress?  
(Evidence from Indonesia)

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Abstract. The objective of this study is to investigate the effect of diversification strategy towards the level of financial distress. Altman Z-score is used to measure the level of financial distress and Herfindahl index is used to measure diversification in this research. This study used 101 non-financial companies listed in Indonesian Stock Exchange during 2014-2016 (303 firm years) as samples. For testing the hypotheses, Mann Whitney test and panel data regression with random effect model was used. The results showed that there are Z score differences between high and low diversified firms; and diversification has a negative effect towards the level of financial distress. The control variables testing showed that liquidity, profitability, and firm size negatively influence the level of financial distress, while leverage has a positive effect towards the level of financial distress. Besides, the type of diversification has no effect toward financial distress.

Keywords: diversification, financial distress, altman z-score, herfindahl index

1. Introduction
The issues of financial distress are getting more attention in the last 20 years as the increasing number of big companies that went bankrupt [1]. Go public companies that faced financial distress and cannot improve their performances, will be delisted from the stock market [2]. Based on IDX fact book data, from 2009 to 2017, Indonesian Stock Exchange has forced delisted the trading of 27 companies because the companies were facing financial distress. Financial distress which is not overcome immediately will lead to bankruptcy and liquidation [3], therefore the managers have to set a strategy to avoid financial distress.

One of the strategies that can be applied in order to avoid and reduce the level of financial distress is diversification. Diversification happens when a company runs more than one business or industry [4]. Referring to the Resource Based View Theory, diversification is an important strategy to create competitive advantage and to survive in the business competition [5], [6]. Diversification will result in efficiency, synergy, and better risk management in the owned business segments [7], [8]; allow expansion of products and new markets [7], [8], as well as increasing the debt capacity [9], [10]. Those benefits of diversification will avoid the company from financial distress [11]-[13].

Many of the previous studies about diversification focus on the effect of diversification toward financial performance (profitability) [14]-[17]. The weakness of financial performance measurement is only focused on the shareholders wealth [4]. The funding resource of a company is obtained not only from the shareholders, but also from the creditors. A company which has good performance and high profit does not guarantee that it can pay its obligation, when the
profit does not turn into cash. Financial distress not only cover a company’s ability to generate profit and return to shareholders, but also represent a company’s ability to pay their obligation. Therefore, a study about the influence of diversification on financial distress is important to be carried out.

Studies about the effect of diversification on financial distress are rarely conducted. In a condition of industry distress, a company which is diversified will be spared from financial constraint [18]. Diversification reduced the probability of bankruptcy in America [12]. The product diversifications have negative impact on the bankruptcy risk in Vietnam [19].

This study aims to investigate the effect of diversification on the financial distress level in Indonesian companies. Diversification will give different impact in every company’s financial condition in many countries. This condition is caused by the differences in institutional and economic environment which happens in the related countries [20]. Referring to economic condition in Indonesia during 2012-2017 which is categorized as developing country [21] and tend to face financial distress [22], so the diversification effect testing toward financial distress in Indonesia is important to be carried out. This study contributes to accounting literature in several aspects. First, this study tests the role of diversification in reducing financial distress which rarely done. This study is the first study in Indonesia which specifically discusses the effect of diversification on financial distress. Second, related to the financial distress measurement, this study does not classify companies into two groups (companies that are bankrupt and companies that are not bankrupt) as conducted by the previous researchers [12]. The Altman Z score is applied in this study in order to reflect the financial distress level more precisely [23], [24].

The rest of this paper is organized as follows. Section 2 presents a literature review and hypothesis. Section 3 describes the research method. Section 4 discusses the empirical results. Section 5 offers our conclusions.

2. Literature Review and Hypothesis

2.1. Financial Distress

Corporate financial distress is a rather vague term, which can be further attributed to four generic terms commonly used in business research: failure, insolvency, bankruptcy and default [1]. Failure happens when a company’s revenue is not sufficient to cover its expense and when the level of investment return is lower compared to its capital cost. Insolvency happens when a company is unable to pay its short term obligation because the company is less liquid, and when the total debt is higher than the fair value of total assets. A company default occurs when the debtor breaks the debt covenants. Bankruptcy happens when a company is legally stated as pailit and has to be liquidated. Financial distress is a stage of decline in financial conditions which happens before bankruptcy or liquidation[3].

2.2. Diversification

According to the Resource Based Theory, diversification is one of company strategies to reach competitive advantage [7], [25]. Referring to the stakeholder theory, diversification will implicate to the increasing number and types of stakeholder, so diversified companies will interact and it is possible to gain more benefit from the stakeholders compared to non-diversified companies [6]. Diversification happens when a company enters a new industry [26]; a new business segment [5], or runs more than one business [4]. Diversification is differentiated into product diversification and geographic diversification [12], [27]. Product diversification consists of related and unrelated diversification. Related diversification is when a company produces new product/service which is related to the existing products in the company.
Unrelated diversification is when a company adds a new product/service which is not related to the existing products in the company. Meanwhile, geographic diversification is divided into national diversification and international diversification.

2.3. Diversification and Financial Distress

According to the stakeholder theory, the success of a company operational is influenced by its stakeholders. Diversification applied by a company will be followed by the increasing number and types of stakeholders. The diversified companies will interact and it is possible to gain more benefit from their stakeholders compared to the non-diversified companies [6]. The benefit gained can be the increasing of market which the company gets from customers, the increasing of economic scale and efficiency which are gained from the employees, as well as the increasing of debt capacity which is gained from the creditors. Those benefits gained by diversified companies from their stakeholders will help the company in reducing financial distress.

The influence of diversification on financial distress will be also explained using the resource based view theory. Based on the resource based view theory, diversification is a strategy to gain competitive advantage and to enable resource transfer inter-sections in a company [25], [28]. Diversification will improve performance as it enables the company to access skills, resources, assets or competency that cannot be bought or acquired by the non-diversified companies in a competitive market [7].

Diversification will give benefit for the company, and the benefit acquired is expected to be able to reduce financial distress. The resources sharing and skills transfer in a diversified company will result in a synergy which can reduce the operational expense and/or it can produce different products [7], [8]. A diversified company will operate in another geographic area and creates varied products, so it will increase the market power. This market power will stabilize the company position and the company can apply predatory pricing to increase its profit [5], [29]. Diversification will also increase the company’s debt capacity [9], [10]. The increasing profit as the effect of the synergy and market power, and the increasing debt capacity which is acquired from diversification will reduce financial distress [12], [13], [25].

Diversification will also give benefit of tax saving and help the company to gain optimized leverage level [11]. In addition, it is easier for a diversified company to get funding from the stock market (Stein, 1997). The tax saving benefit and the ease in getting funding will also reduce company’s financial distress. The diversification is proven to has negative influence on the tendency of bankruptcy and liquidation [12], [19]. From the previous explanation, a hypothesis is proposed:

H1: There are differences in the level of financial distress between high and low diversified firms.

H2: Diversification has negative effect on financial distress.

3. Research Method

3.1. Data and Samples

The samples used in this study were non-financial companies registered in Indonesian Stock Exchange (ISE) during 2014-2016. The sampling method used in this study was purposive sampling, and the criteria are: (1) the annual report closing date is on December 31st, (2) the companies did not carry out any merger and acquisitions, (3) the financial report is recorded in Rupiah currency, and (4) the data are available. This study is a preliminary research and we only use 101 firms (303 observations) as samples. The diversification data, the financial ratio to
calculate financial distress, and the control variable were acquired from the annual report downloaded from www.idx.co.id.

3.2 Research Variables

3.2.1 Financial Distress (The Dependent Variable)
Financial distress is measured using Altman Z Score. The higher the Z score indicates the lower level of financial distress in a company [23], [24], [31].

\[
Z\text{-score} = 0.012X_1 + 0.014X_2 + 0.033X_3 + 0.006X_4 + 0.999X_5
\]

\[X_1 : \text{Working Capital to Total Assets}\]
\[X_2 : \text{Retained Earnings to Total Assets}\]
\[X_3 : \text{Earning before interest and taxes to Total Assets}\]
\[X_4 : \text{Market value of Equity to Book Value of Debt}\]
\[X_5 : \text{Sales to Total Assets}\]
\[Z : \text{Overall Index}\]

3.2.2 Diversification (The Independent Variable)
Diversification used in this study includes product and geographic diversification [12], [32], and measured using the Herfindahl Index [32]–[35]. The Herfindahl Index can be calculated as follow:

\[
H = 1 - \sum_{i=1}^{n} P_i^2
\]

\[P_i: \text{the sales on segment i is divided by the total sales in the company}\]
\[n: \text{the number of segments in a company}\]
\[H: \text{Overall Index}\]

The Herfindahl Indeks number ranges between 0 and 1; if the number is getting closer to 1, it means that the company is getting more diversified [27], [33], [35].

3.2.3 The Control Variable
The control variables in this study were the company size (log total market capitalization), liquidity (current assets/ current liabilities), profitability (ROA=net income/ total assets), and leverage (DER=total debt/ total equity) [24], [36], [37]. The type of diversification (product and geographic diversification) were also used as the control variable. The type of diversification measurement would use variable dummy (0 = product diversification; 1 = geographic diversification).

3.3. Compare Mean Test and Regression Model
Compare mean test (Independent sample t test/ Mann Whitney test) using SPSS was used for testing the first hypothesis (H1). The panel data regression using Eviews 10 was applied in second hypothesis (H2) testing. Empirical model that was applied in order to test H2 is provided as follow:

\[
Z\text{-SCORE} = \alpha + \beta_1 \text{HERFINDAHL} + \beta_2 \text{SIZE} + \beta_3 \text{LIQUIDITY} + \beta_4 \text{ROA} + \beta_5 \text{DER} + \beta_6 \text{TYPE} + e
\]
4. Result and Discussion

4.1. Descriptive Statistic

Based on the purposive sampling, this study used 101 non financial companies registered in the ISE during 2014-2016 (303 observations). The descriptive statistics variable that consist of mean, minimum, maximum and standard deviation is displayed in the Table 1 below:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z score</td>
<td>1.759</td>
<td>-0.968</td>
<td>32.598</td>
<td>4.039</td>
</tr>
<tr>
<td>Herfindahl</td>
<td>0.312</td>
<td>0.000</td>
<td>0.995</td>
<td>0.250</td>
</tr>
<tr>
<td>Firm Size</td>
<td>12.285</td>
<td>10.178</td>
<td>14.649</td>
<td>0.939</td>
</tr>
<tr>
<td>Liquidity</td>
<td>4.642</td>
<td>0.0005</td>
<td>42.342</td>
<td>16.989</td>
</tr>
<tr>
<td>ROA</td>
<td>0.098</td>
<td>-0.426</td>
<td>0.432</td>
<td>0.089</td>
</tr>
<tr>
<td>DER</td>
<td>0.407</td>
<td>-8.204</td>
<td>9.175</td>
<td>1.047</td>
</tr>
</tbody>
</table>

From 303 observations, there are 52 observations (17.16%) do not apply diversification and there are 251 observations (82.84%) are proven applying diversification. Out of 251 observations that apply diversification, there are 191 observations (76.1%) applied product diversification and 60 observations (23.9%) applied geographic diversification. Most of the samples (83%) are proven facing financial distress as their Z score is below 1.8 [23].

4.2. Hypotheses Testing Results

4.2.1. H1 Testing Result

Compare mean test using Mann-Whitney and the T-Test aims to determine whether there are differences in the level of financial distress based on diversification, liquidity, profitability, leverage, firm size and type of diversification. The grouping of diversification, liquidity, profitability, leverage, and firm size in two groups (high/big and low/small) is based on the average of each variable. Table 2 shows the result of these tests:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Group (N)</th>
<th>Z score mean</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herfindahl</td>
<td>High (152)</td>
<td>2.093</td>
<td>0.004***</td>
</tr>
<tr>
<td></td>
<td>Low (151)</td>
<td>1.423</td>
<td></td>
</tr>
<tr>
<td>Liquidity</td>
<td>High (48)</td>
<td>4.381</td>
<td>0.076*</td>
</tr>
<tr>
<td></td>
<td>Low (255)</td>
<td>1.286</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>High (83)</td>
<td>3.096</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>Low (220)</td>
<td>1.259</td>
<td></td>
</tr>
<tr>
<td>DER</td>
<td>High (111)</td>
<td>0.884</td>
<td>0.000***</td>
</tr>
<tr>
<td></td>
<td>Low (192)</td>
<td>2.270</td>
<td></td>
</tr>
<tr>
<td>Firm Size</td>
<td>Big (176)</td>
<td>2.081</td>
<td>0.080*</td>
</tr>
<tr>
<td></td>
<td>Small (127)</td>
<td>1.329</td>
<td></td>
</tr>
<tr>
<td>Type of Diversification</td>
<td>Product (191)</td>
<td>1.851</td>
<td>0.385</td>
</tr>
<tr>
<td></td>
<td>Geographic (60)</td>
<td>1.695</td>
<td></td>
</tr>
</tbody>
</table>

Notes: * significant on alpha 10%
The compare mean test result shows that there are Z score differences between high and low diversified companies, therefore H1 is accepted. Z score in high diversified firms is higher than Z score in low diversified firms, so the level of financial distress in high diversified firms is lower than the level of financial distress in low diversified firms. Besides, the compare mean test result also showed that there are Z score differences based on the high/big and low/small of liquidity, profitability, leverage, firm size; and no Z score differences based on the type of diversification (product diversification and geographic diversification).

4.2.2. H2 Testing Result
The hypothesis two testing result using panel data regression (n = 303) with random effect model is provided in table 3.

<table>
<thead>
<tr>
<th>Variable</th>
<th>β</th>
<th>t-Stat</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>-1.922</td>
<td>-4.913</td>
<td></td>
</tr>
<tr>
<td>Herfindahl</td>
<td>0.194</td>
<td>2.292**</td>
<td>H2 accepted</td>
</tr>
<tr>
<td>Liquidity</td>
<td>0.052</td>
<td>6.283***</td>
<td>negative effect</td>
</tr>
<tr>
<td>ROA</td>
<td>1.095</td>
<td>5.534***</td>
<td>negative effect</td>
</tr>
<tr>
<td>DER</td>
<td>-0.031</td>
<td>-2.155**</td>
<td>positive effect</td>
</tr>
<tr>
<td>Firm Size</td>
<td>0.138</td>
<td>4.377***</td>
<td>negative effect</td>
</tr>
<tr>
<td>Types of diversification</td>
<td>-0.029</td>
<td>-0.361</td>
<td>no effect</td>
</tr>
</tbody>
</table>

Table 3: Regression Result

Dependent variable: Z score
R squared: 0.251
Adjusted R square: 0.234
F-statistic: 15.240***

Notes: * significant on alpha 10%
** significant on alpha 5%
*** significant on alpha 1%

Financial distress was the dependent variable in this study, which is measured using Altman Z score. The higher the Z score acquired, the lower the level of financial distress in a company [23], [24], [31]. The hypothesis testing result shows that the diversification coefficient was positive and significant, so it means that the higher the level of diversification, the higher the Z scores, so the lower the financial distress. Therefore, H2 is accepted and it can be concluded that diversification has negative influence on the level of financial distress.

4.2.3. Discussion
The hypotheses testing results proved that (a) there is Z score difference between high and low diversified firms, and (b) diversification negatively influence the level of financial distress.
The result of this study is in line with the result of study conducted by [12], [19] who concluded that diversification had negative impact on the tendency of bankruptcy and liquidation. The result of this study is in agreement with the stakeholder theory, which believes that a diversified firms will gain more benefit from its stakeholders compared to non-diversified firms [6]. It also supports the resource-based view theory which believes that diversification is a strategy to reach competitive advantage and allow resources transfer inter-sections in a company [25], [28].

[12], [13] explained coinsurance effect of diversification. Diversification will reduce the level of financial distress when there is an imperfect correlation between segments’ cash flow. When one segment has cash shortage, this shortage can be filled by the other segments that have cash overage. It allows a company to run the business normally and pay its obligation on the due date, so this condition will reduce the possibility and the level of financial distress in the company.

Product diversification which is conducted by a company will increase the sales by means of the creation of various new products, which will improve its market power and win in a competitive market [29]. The sales improvement can be realized into cash, which later can reduce the level of financial distress. A company which applies geographic diversification will also gain benefit. The benefit gained is from the low service cost and the optimal utilization of intangible assets, such as the marketing ability, production skill, and customer satisfaction [19]. Geographic diversification will increase company value and reduce financial distress through global manufacture and flexible production shift ability [38]. In addition, by operating in different geographic area, a company can reduce sales volatility and the risk of bankruptcy.

Diversification will improve performance, which includes reducing financial distress, when the diversification can create synergy and economic scale for the company. Economic scale occurs when investment mix applied by the company can result in cost saving or higher income. Synergy can be produced from skill sharing and resources transfer, which in the end creates cost advantage [7], [8], [39]. Sharing activity will enable managers of a diversified company to have a unique skill, which can be used to expand the multi-business strategy, increase performance, and reduce financial distress in a company [40].

Diversification also enables a company to increase its debt capacity [9], [10]; gain benefit from tax saving and help the company to get the optimal level of leverage [11] also ease the company in getting funding in the stock market [30]. Those benefits will help the company in avoiding and reducing financial distress. As examples of the study data, a company which has high diversification value also has high Z score. In 2015, PT. Enseval Putera Mega Trading’s diversification level was 0.99, and its Z score was 2.94; in 2014, PT. Kalbe Farma’s diversification score was 0.74, and its Z score was 3.15 (Z score above 1.8 means that a company does not face financial distress). On the other hand, a company which has low diversification level is proven to have low Z score. In 2014, PT. Achasti Pharma’s diversification value was 0.004, and its Z score was 0.97; in 2015, PT. AKR Corporindo’s diversification value was 0.03, and its Z score was 1.01 (if the Z score was below 0.81, it indicates financial distress in a company). Therefore, it can be concluded that the higher the diversification, the higher the Z score, and the lower the financial distress of a company.

4.4. The Effect of Liquidity, Profitability, Leverage, Firm Size and Type of Diversification on The Level of Financial Distress

The regression result shows that liquidity negatively influence financial distress. The higher the liquidity level, the more current assets availability in order to cover companies’ short term debt [24], [36]. Profitability is proven to have negative effect to financial distress. A company
that have high profitability will be more trusted by investors and creditors as their investment target [41]. The ease in obtaining fund will decrease the level of financial distress [24], [42], [43]. Leverage positively affect financial distress. The higher the leverage ratio is, the higher the business risk and default risk that cause financial distress [24].

Firm size is proven to have negative effect on financial distress. Big firms have many assets that can be converted into cash and are more trusted by the creditors when they look for loans in order to overcome financial distress [24], [42]. The type of diversification have no effect toward financial distress. Both product and geographic diversification will help a company to avoid and reduce financial distress [39]. Product diversification will increase the sales by creating various new products and efficiency in buying the capital resources for production. Meanwhile, geographic diversification allows a company to reach markets in different area and has an area which has low cost resources. The benefit of product and geographic diversification will reduce financial distress in a company.

4.5. Robustness Test

For improving the robustness of findings, this study conducted tests using another diversification proxy, which is number of segments [12], [35]; and other financial distress measurements, which are the Altman revision model (Z’ score) and Altman modification model (Z'' score). The Altman revision model can be applied to go public and non go public companies. The Altman modification model eliminated variable X5 in Altman classic model (Z score) because this ratio is different in the industry with different assets’ size. The higher the score obtained in the Altman revision and modification model, the lower the financial distress level in a company. The robustness test results which are regression coefficient, t statistic (written in parentheses), and significance from each independent variable are is showed in table 4 and table 5.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Z score</th>
<th>Z’score</th>
<th>Z’’score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Herfindahl</td>
<td>0.194</td>
<td>0.05</td>
<td>-0.026</td>
</tr>
<tr>
<td></td>
<td>(2.29)**</td>
<td>(0.449)</td>
<td>(-0.22)</td>
</tr>
<tr>
<td>Liquidity</td>
<td>0.005</td>
<td>0.05</td>
<td>0.007</td>
</tr>
<tr>
<td></td>
<td>(6.28)***</td>
<td>(5.71)***</td>
<td>(5.79)***</td>
</tr>
<tr>
<td>ROA</td>
<td>1.094</td>
<td>-0.036</td>
<td>-0.049</td>
</tr>
<tr>
<td></td>
<td>(5.53)***</td>
<td>(-1.18)</td>
<td>(-1.57)</td>
</tr>
<tr>
<td>DER</td>
<td>-0.03</td>
<td>-0.07</td>
<td>-0.064</td>
</tr>
<tr>
<td></td>
<td>(-2.15)**</td>
<td>(-4.65)***</td>
<td>(-0.86)***</td>
</tr>
<tr>
<td>Firm size</td>
<td>0.138</td>
<td>0.046</td>
<td>-0.05</td>
</tr>
<tr>
<td></td>
<td>(4.38)***</td>
<td>(1.18)</td>
<td>(1.339)</td>
</tr>
<tr>
<td>Type of diversification</td>
<td>-0.027</td>
<td>-0.222</td>
<td>-0.284</td>
</tr>
<tr>
<td></td>
<td>(-0.36)</td>
<td>(-1.913)</td>
<td>(-2.508)**</td>
</tr>
</tbody>
</table>

\[ Z' \text{ score} = 0.717 \left( \frac{\text{working capital}}{\text{total asset}} \right) + 0.847 \left( \frac{\text{retained earnings}}{\text{total asset}} \right) + 3.108 \left( \frac{\text{EBIT}}{\text{total asset}} \right) + 0.42 \left( \frac{\text{book value of equity}}{\text{book value of total debt}} \right) + 0.988 \left( \frac{\text{sales}}{\text{total asset}} \right) \]

\[ Z'' \text{ score} = 3.25 \left( \frac{\text{working capital}}{\text{total asset}} \right) + 6.56 \left( \frac{\text{retained earnings}}{\text{total asset}} \right) + 6.72 \left( \frac{\text{EBIT}}{\text{total asset}} \right) + 1.05 \left( \frac{\text{book value of equity/book value of total debt}}{\text{book value of total debt}} \right) \]
Variable | Z score | Z' score | Z'' score
--- | --- | --- | ---
Number of segments | -0.023 (-0.163) | 0.262 (1.78)* | 0.320 (1.81)*
Liquidity | 0.005 (6.13)** | 0.011 (5.92)** | 0.006 (5.67)**
ROA | 1.14 (5.72)** | -0.03 (-0.588) | -0.047 (-1.52)
DER | -0.03 (-2.13)** | -0.194 (-5.91)** | -0.06 (-3.79)**
Firm size | 0.139 (4.33)** | 0.09 (2.48)** | 0.059 (1.51)
Type of diversification | 0.068 (0.63) | 0.156 (-1.79)* | -0.267 (-2.36)**

The robustness test results show that diversification measured using the number of segments negatively affects financial distress measured using the Altman revision and Altman modification model.

5. Conclusion

This study aims to evaluate the effect of diversification on the level of financial distress. Although there are many studies about financial distress, this study gives contribution in assessing the impact of diversification which has rarely been studied so far, especially in Indonesia. The Mann-Whitney test result shows that there are financial distress differences between high and low diversified firms. The assessment using the panel data regression with random effect model shows that diversification has negative influence on the level of financial distress. The testing results of the control variables show that liquidity, profitability, and firm size has negative impact on financial distress, while leverage has positive impact on financial distress. Additionally, the testing result also shows that the type of diversification does not influence the level of financial distress.

Based on those results, this study suggests to the investors or creditors to invest in companies that apply diversification, have high liquidity, have high profitability, have big size, and have low leverage level, so the investors and creditors will be saved from the risk of financial distress. It is also suggested for the managers to apply diversification in order to reduce the risk of financial distress. The limitation of this study is not conduct a separated testing related to the type of diversification. The future studies can classify the type of diversification applied by a company into related and non-related diversification (for product diversification), as well as national and international diversification (for geographic diversification), so they can get a clearer explanation on which kind of diversification that can reduce financial distress.

References


Abstract. This research aims to examine the Intercandidate Agenda-Setting in the elections of DKI Jakarta province 2017 during the first and second round campaign. The underlying theory of research is the agenda-setting theory and the agenda building. This research is quantitative research with content analysis method. The data collection is done by downloading the Tweets from Twitter account @AhokDjarot (n = 1013) and @JktMajuBersama (n = 1613) during the campaign period on both rounds. Tweets is divided into four month periods for the entire campaign period, three month periods for the first round campaign period, and four weeks period for the second round of campaigning. By using Spearman and Rozelle-Campbell Baseline correlations, the results obtained show that intercandidate agenda-setting relationships are found in the first round although the correlation is not as strong as in the second round.

Keywords: Intercandidate, agenda-setting, social media, internet, election.

1. Introduction

The role of social media in political campaigns has become increasingly popular since Barack Obama successfully used Facebook as one of the main communication media to campaign during the presidential election in the United States in 2008 and proved by his victory he was elected President of the United States in 2008. General election candidates and politicians also began using various other social media platforms outside of Facebook, such as Twitter, Instagram, and Youtube.

In Indonesia, in the 2012 DKI Regional elections, according to Andriadi [1] social media has a very significant role in building participatory communication and political branding of the Jokowi - Basuki pair, by seeing the high traffic of conversations about Jokowi - Basuki in social media, especially Twitter and Facebook. [1] Andriadi then added some interesting facts that social media is able to become a catalyst that amplifies the Jokowi - Basuki campaign into various social pockets. Social media becomes a new public sphere for the public to discuss politics. In addition, the marriage between offline activism and online supporters and volunteers of Jokowi - Basuki representing actual participatory democracy.

With the election of Jokowi - Basuki as the Governor and Deputy Governor of DKI Jakarta in 2012, defeating the incumbent, and bringing a new face to Jakarta, it is no exaggeration if there are many opinions that the social media they use has a major impact on the success of election candidates. It can be concluded from a number of explanations above that the use of social media has become a very important element in political campaigns, especially at this time that the level of use is increasingly high and more and more forms of social media.

Furthermore, the 2017 DKI Regional elections is present amidst the high level of social media activities by the community, of which 132 million internet users are in Indonesia, 40% of whom are social media users (www.detik.com, 2017). Then the question arises as to how the campaign conditions for the 2017 DKI Jakarta Regional Election are followed by three pairs of candidates amid the high internet usage and social media by the
public. Kompas in December 2016 showed that 38.6 percent of respondents received information about the election through social media. The report also shows that Facebook is the most widely used social media for respondents to obtain information regarding the election.

In the DKI Jakarta Regional elections in 2017, there were three candidate pairs in the DKI Election, namely Agus Harimurti Yudhoyono - Sylviana Murni (supported by the Democratic Party, the National Mandate Party, the National Awakening Party and the United Development Party), Basuki Tjahaja Purnama - Djroat Saiful Hidayat (supported by the Indonesian Democratic Party of Struggle, Hanura Party and National Democratic Party), and Anies Baswedan - Sandiaga Uno (supported by the Gerindra Party and the Prosperous Justice Party). Then the 2017 DKI Jakarta Governor General Election resulted in two rounds, with the second round leaving only Basuki - Djroat and Anies Baswedan - Sandiaga Uno.

The use of social media as a media campaign by the pairs of candidates in the DKI Jakarta Governor General Election 2017 was recognized directly by one of the candidates, namely the Deputy Governor candidate from the Gerindra Party, Sandiaga Uno. Sandiaga said that 10 to 15 percent of the total voters in DKI Jakarta were first-time voters who were the first to take part in the election, which is why the Anies-Sandi pair used social media to get closer to the first-time voters in DKI Jakarta who were young people who acted as users active social media. In addition to focusing on beginner voters, in fact according to a survey conducted by the LSI (Indonesian Survey Circle), 58.9% of voters in DKI Jakarta are known to be active on social media (www.detik.com). This fact encourages each Jakarta DKI 2017 candidate pair along with his campaign team to be more active in campaigning through social media and winning the hearts of voters through social media.

The activeness of the participants of the DKI Jakarta Pilgub 2017 campaign on the use of social media is an interesting thing for communication practitioners. Every upload of news and information carried out by the candidate pairs implies the meaning to be conveyed. This makes every upload from each candidate pair unique and its own issues to be discussed. However, it does not rule out the possibility of interrelationships between issues and information discussed by the first candidate pairs and other candidates in their respective social media platforms. This then underlies this research, namely that researchers feel the need for research and verification of the relevance of the issues raised on social media between the 2017 DKI Jakarta Pilgub candidates.

The problems formulated in this study are whether the intercandidate agenda setting concept applies in the stone media medium, namely social media accounts between candidates during the 2017 DKI Jakarta Pilgub campaign period in two rounds.

Based on the formulation of the problem, the purpose of this study is to prove that there is a process of intercandidate the agenda - settings between social media and who has the most influence during the campaign period in the first round. To prove that there is an intercandidate agenda - settings between social media and who is most influential during the campaign period in the second round, and to find out which social media agenda is the most influential candidate in the second round of the campaign period.

2. Theoretical Review

Weimann & Brosius[2] proposed the dynamics of agenda-setting in the context of new media. They argue that along with the development of social media, sources where we can obtain and receive news, information, and opinions also continue to grow. At the intersection of new communication technology and the flow of the agenda there is a shift towards a more dynamic user-producer media environment. The emergence of "producer" according to Bruns in Vowe and Hen[2], has changed the conception in which the media agenda begins and ends in relation to the public agenda. Given the wide variety of choices for online media consumers to engage, share and create with varying levels of commitment and intensity, it is clear that the agenda-setting process can now regularly intersect and cross amateur and professional boundaries.[3]

In addition, technology transformation not only allows audiences, but also editors and journalists, to easily and quickly monitor other media outputs, including private chat on online platforms[2]. The dynamic nature of the current agenda-setting process can also be explained by the reduced impact of traditional gatekeepers. Unlike traditional media that must rely on routine processing procedures in an effort to produce reliable, credible, and accurate reports, independent bloggers are not bound by the code Bruns in Vowe & Hen[2] conceptualizes gatekeeping as "gate watching" to take into account the increasing power of decentralization "producer." The dynamic nature of the flow of the agenda is also driven by the "hybrid media system" proposed by Chadwick and Howard[4] who argues that the political process is increasingly determined by organizations, groups and individuals who combine older and newer media in the hybrid media system.
Traditionally, conceptualization suggests that setting an agenda requires a certain amount of time so that the media agenda is absorbed into the public agenda. But in a world that is increasingly dominated by fast news media, the lag time needed to "set" may not exist or may be too short to measure. For the offline world, McCombs[5] sets a range of four to eight weeks for agenda setting to apply. Decay of the impact of agenda setting is believed to be between eight and 26 weeks. However, Roberts, Wanta, and Dzwo in McCombs[5] compared online media sensitivity (major news sites) and important public online topics (bulletin board discussions) and found immediate effects in just one day. The impact of the agenda also decomposes quickly, only after two or three days. Online communication speeds have shortened the timeframe: Online information is processed and exchanged continuously in 24-hour cycles, often in real time.

Since McCombs and Shaw[6] formally produced axioms regarding agenda-setting research, there are three main focuses in research that have been traced: namely public agendas, policy setting agendas, and studies on media agenda-settings. Intermedia agenda-setting is one component in the study of media agenda-settings [7]. Media agendas try to investigate who made the media agenda and how to make it. Various factors have been identified such as personal characteristics, news values, organizational norms, politics, and external sources are considered capable of influencing decisions that then form a story. One example is that the New York Times, the White House, scientific journals, and public opinion polls play an important role in giving the issue on the media agenda in the United States[8].

When the study of the setting agenda generally revolves around diffusion, selection, and emphasis in news, the study of agenda-setting intermedia seeks to examine the relationships of several different media and try to find out how they affect each other. As quoted by Qian[7], the preliminary study of the intermedia agenda-setting process focused on the relationships between traditional media such as newspapers, television, and news agency offices.

Recently, a number of studies have expanded the scope of agenda-setting intermedia research into the realm of new media or the internet. Sweetser, Golan & Wanta in Qian[7] examine whether political advertisements and blogs from a candidate are able to influence the issue and news agenda of the headlines in the 2004 presidential election in the United States, which then results in the finding that there is a strong correlation between blogs and the media agenda while political advertising has no correlation with the media agenda. [9] analyzed the intermedia agenda-setting process in general election campaigns using 38 newspapers, online news channels, television news programs using content analysis. The research departs from the assumption that the intermedia agenda-setting is determined by the production structure of several types of media, the role of opinion leads from several news agencies, and the characteristics of certain issues. Kim[10] in their research on intermedia agenda-settings began to involve one of the social media platforms namely Twitter. They tried to investigate the first and second levels of the agenda-setting intermedia between political ads, newspapers and Twitter in the 2012 presidential election campaign in the United States between Barack Obama and Mitt Romney. While the links between press releases and media coverage have received scientific attention, later research related to agenda-setting intermedia highlights the possibility that an agenda-setting relationship can occur between political campaigns[11], which is then called the intercandidate agenda-setting.

In Kiousis and Shields[12] it was written that in political elections in Michigan, Kaid (1976) found that press releases mention announcement of campaigns and personal information published more frequently than those emphasized by political issues that should be. Tedesco[13][11] initiated an agenda-setting intercandidate study to study the possibility of candidates being able to set an issue agenda for their opponents. As a result, he found strong associations for the importance of issues in candidate news releases during the 2004 Democratic Party presidential election. The concept of intercandidate agendas was also further strengthened by an additional explanation from Roper in Tedesco[11] who said that public relations practitioners in politics must be aware of the issue position from opposing candidates, parties, and groups when communicating their own issue positions.

The ideas that underlie the consistency of the agenda for all competing news sources have been supported by several previous empirical studies. Research on setting up intermedia agendas, for example, shows that a particular media is able to influence the coverage pattern of news on other news organizations. In contrast to agenda research - traditional settings that have examined the extent to which information exchange can be used to form the importance of an object of reporting, the explanation of second-level agenda setting has linked the concept to framing and implicitly shows that investigating the role of information exchange influences significance an attribute is justified. Attributes can be considered as properties, characteristics, or properties that describe an object. According to Entman in Kiousis and Shields[14], "framing is to select some aspects of reality..."
that are considered to make them more prominent in various publications, in such a way as to promote a particular point of view, causal interpretation, moral evaluation, and behavioral recommendations”.

In the United States presidential campaign analysis in 2000, Tedesco[13][11] found that candidates' press releases were not only correlated with media coverage or publications regarding the issue of the importance of the object being discussed, but also the meaning of the attribute in question. Using concept mapping techniques, Miller, Andsager, and Riechert in Tedesco[11] found several associations between how candidates framed in news publications and how they were framed in the Republican Party's news release in 1996. In line with the research, they also detected similarities in how certain frames presented in a news release among candidates.

3. Methods
This study uses the positivist paradigm, which according to Guba[15], the positivist paradigm considers that the social world can be studied in an objective way and that reality is driven by unchanging natural laws.

The approach in this study is quantitative research in an effort to obtain a correlational relationship between the determination of the social media agenda related to the DKI Jakarta Election 2017 during the campaign period. Quantitative approaches are used because this research emphasizes the measurement of variables and proof of hypotheses relating to the explanation of a particular relationship[16] namely to measure the influence of determining the social media agenda among candidates for the 2017 DKI Jakarta Regional Election.

Judging from its nature, this research is explanatory because it tries to explain the relationship or the influence of one variable with another variable. This research uses content analysis method. Content analysis is a method used to study and analyze communication systematically, objectively and quantitatively towards the message that appears[17].

Content analysis is used to answer the question "what, to whom, and how" of a communication process[17]. The question "what" relates to the use of content analysis to answer questions about what is the content of a message, trends, and differences between messages from different message senders. While "to whom" is used to test the contents of messages that are shown to different audiences. And "how" is related to the use of content analysis to explain the form and techniques of making messages. The population of this study was official social media accounts, Twitter, from each candidate pair of DKI Jakarta governor and deputy governor during the 2017 DKI Jakarta Regional Election campaign in the first and second rounds. The Basuki Tjahaja Purnama-Djarot Syaiful Hidayat official twitter account, namely @AhokDjarot has 1013 uploads throughout the campaign period in the first two rounds. Anies Baswedan-Sandiaga Uno official twitter account, namely @jktmajubersama there are 1613 uploads throughout the campaign period in both periods.

Twitter account are collected manually and use the help of search engines on the Twitter page. The search is carried out using a simple programming language, for example to collect uploads from AhokDjarot's official account in the period of October 26, 2016 to October 31, 2016, can use a simple search language that is "from: AhokDjarot since: 2016-10-26 until: 2016-10-31 ". Thus, the process of collecting uploads is easier because it is limited to a predetermined time span.

The concept used in this research is agenda-setting. Agenda-setting is one theory of the effects or effects of the media on society and culture. Agenda-setting explains the power of media influence in shaping public opinion by giving emphasis to a particular issue to be considered important by the community. But in this study will try to see the influence of the political candidate agenda that arises on other candidates, or what Tedesco[11] calls an intercandidate agenda-setting that highlights the possibility that an agenda-setting relationship can occur between political campaigns.

In this study, all the uploads from official Twitter social media accounts belonging to the DKI Jakarta Election candidates will be examined in two campaigns. Of the various issues that have been uploaded, there are issues that are discussed or uploaded with a large portion and also the tone discussed in small portions. Issues that are uploaded in large portions are considered important issues for the public, and each candidate has the possibility of having issues that are considered to be important differently.

The division of issues in this study uses a combination of two basic issues. The first is based on the theme of the debate organized by KPUD DKI Jakarta. The Regional Election Commission (KPUD) of DKI Jakarta held four debates in the first round of elections that were held on January 13, 2017, January 27, 2017, February 10, 2017 and April 12.

The first debate is divided into six themes namely social, economic, education, security, environment and transportation[18] (source: Liputan6.com). Then the second debate theme discusses bureaucratic reform and
public services and structuring urban areas[19]). And the theme of the third debate includes population and improving the quality of life of the people of Jakarta related to disability policies (Source: Detik.com).

Issue sharing is carried out in two stages. In the first stage, it will take from the issue category in the first round of debate, because there is no significant change in issue or theme in the second round, as stated by the Chairperson of the Election Commission (source: Okezone.com) which states after discussing with experts from various universities and professional, it feels no need to lift something new in the second round. The issue category also complements the issue category from McCombs & Shaw[6] regarding the agenda of the 1968 Presidential election setting in Chapel Hill. Some of the issues raised were foreign policy, law enforcement, economy, people's welfare, and other issues. Especially for foreign policy issues in this study, it was changed to regional policy.

In this first phase, the coding process will be carried out to see if there are other issues outside the combined category of KPUD and McCombs & Shaw[6]. If there are a number of issues with a significant amount outside the predetermined category, it will become a separate issue category and proceed with the second stage coding process.

Towner & Munoz[20] has conducted the two-stage issue category in its research on the agenda-settings on Instagram, they have determined the issue categories from several previous studies and then conducted preliminary or preliminary coding to get a more detailed and new issue category. Meanwhile Conway, Kenski & Wang[21] in their research also carried out the process of identifying in advance what categories of issues contained in Twitter accounts in the US presidential election campaign.

In the first stage, using a joint issue category from KPUD and McCombs & Shaw[6], it was found that the categories of social issues, economic policy, education, security & law enforcement, environment, transportation, bureaucratic reform and public services, structuring urban areas, population, quality improvement community life, and lastly the nature and personal character of the candidates.

4. Results

Based on the Spearman correlation coefficient, it is proven that AhokDjarot account has a positive significance to the JktMajuBersama account with a positive relationship direction. Thus it was proven that there was an intercandidate agenda-setting between two social media accounts belonging to the candidate pair Ahok - Djarot and Anies - Sandi in the first round. With the following details: From the results of data processing, the correlation coefficient number between the @AhokDjarot and @JktMajuBersama accounts for the issue category is 0.359. If the sig value is <0.01 then Ho is rejected and H1 is accepted. From the sig (2-tailed) value is 0.000. Thus the sig <0.01 so that H1 is accepted, so it can be concluded that there is a significant relationship between cuitan on the @AhokDjarot account and the @JktMajuBersama account in the first period.

<table>
<thead>
<tr>
<th>Table 1: Spearman correlation coefficient</th>
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<tbody>
<tr>
<td>AhokDjarot-JktMajuBersama-</td>
</tr>
<tr>
<td>Round 1</td>
</tr>
<tr>
<td>Spearman correlation coefficient: 0.359</td>
</tr>
<tr>
<td>Conclusion: Significant</td>
</tr>
<tr>
<td>AhokDjarot-JktMajuBersama-</td>
</tr>
<tr>
<td>Round 2</td>
</tr>
<tr>
<td>Spearman correlation coefficient: 0.690</td>
</tr>
<tr>
<td>Conclusion: Significant</td>
</tr>
</tbody>
</table>

Based on the table above it is also proven that both AhokDjarot and JktMajuBersama accounts have positive significance with a positive relationship direction. Thus, it was proven that there was an intercandidate agenda-setting between two social media accounts belonging to the candidate pair Ahok - Djarot and Anies - Sandi in the second round. With the following details: From the results of data processing, the correlation coefficient number between the @AhokDjarot and @JktMajuBersama accounts for the issue category is 0.690. If the sig value is <0.01 then Ho is rejected and H1 is accepted. From the sig (2-tailed) value is 0.000. Thus the sig <0.01 so that H1 is accepted, so it can be concluded that there is a significant relationship between cuitan on the @AhokDjarot account and the @JktMajuBersama account in the second period.

Significant relationships show the love contained in the @AhokDjarot and @JktMajuBersama accounts which have the same issues raised. Cuitan similarity is mainly for issues concerning the quality of life of the community. Other than that, other similarities are love about the nature, character and achievement. In this social media campaign, the candidate pairs show their achievements during their tenure in government and also in the
professional world. In addition, the two candidate pairs utilize their social media accounts to show support and testimony from the community.

It can be seen from the results of the first and second rounds that the correlation strengthened in the second round, this can be caused by the 2017 DKI Jakarta Pilgub contestant in the 3 contestants, namely the candidate pair Agus Harimurti and Sylvi. Of course the pair also has its own social media agenda and may also have a correlation or influence on the other candidate's agenda. This is the main reason why in the first round the correlation of social media agendas between @AhokDjarot and @JktMajuBersama, although significant, but the correlation strength values are weak and lower than the second round.

From the description above it can be concluded that the agenda-setting intercandidate can also occur in the scope of new media, especially social media. Tedesco's[11] previous research which became a pioneer in the agenda-setting intercandidate research still uses press releases from candidates for the US presidential election from the Democratic party. The results of this study also reinforce the explanation from Roper (2005) cited by Tedesco[11], that political practitioners must be aware of and the position of the issue of candidates, parties, or groups that are opposite when communicating positions from their own issues.

The results of this study also show that social media now has a role in political campaigns by strengthening previous research[22] which has also been proven that there is an intermedia agenda-setting between social media and traditional media in the same case namely the DKI Jakarta provincial governor election.

5. Conclusion
From the results of the research that has been done can be concluded as follows. First, there is a process of intercandidate the agenda-setting between each candidate's social media during the first round of the campaign which runs from 26 October 2016 to 11 February 2017, with the most influential @AhokDjarot account agenda.

Second, the process of intercandidate the agenda-setting between the social media of the calom pair during the second round campaign period which runs from March 7, 2017 to April 15, 2017. In this second round, cuitan is divided based on the week period. In this round the results were also different from the first round where the social media agenda of the candidate pair Anies Basweda and Sandiaga Uno on his official account, @JktMajuBersama, dominated his influence on the social media agenda of the Ahok dam Djarot candidate pair on his official Twitter account @AhokDjarot.

This research supports the statement that social media has become one of the main political stages. In the future for candidates or public relations practitioners in the political field must consider the issue agenda on social media in building or designing strategies and maneuvers in politics or campaigns. From the results obtained in this study it is important to see and analyze the agenda of political opponents. Thus a strategy can be designed to be able to influence and lead the political opponents agenda according to their own agenda in order to get a chance to win a political constellation.

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Indriani, *Intermedia agenda setting antara media sosial dan surat kabar [Thesis]. Pasca Sarjana Komunikasi. FISIP UI.*
Design of Standard Operational Procedures for Commercialization of BPPT's Food Technology Products in Incubation Programs

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Abstract. Business incubation is one of the technology transfer schemes that can be carried out by government institutions in Indonesia such as the Badan Pengkajian dan Penerapan Teknologi (BPPT) so that their findings can be produced and commercialized to be utilized by the public. One of the business incubation service providers in Indonesia is the Balai Inkubator Teknologi (BIT). BIT is a BPPT work unit that provides incubation services for incubation participants (tenants). Based on previous research, the performance of BIT has not been optimal based on the survival rate of tenants who graduated only 29%, which was mentioned due to the lack of standardized references for facilitators in assisting tenants. To improve it, in this study we will make a design model for Standard Operational Procedure (SOP) for BIT market access which can be a good reference. In developing the model, various approaches are used, namely lean startup, business model canvas, blue ocean strategy, marketing Funnel, analytical hierarchy process (AHP), etc. In order for the model to be valid and reliable, in this study three food products were made observations, namely cassava rice, spirulina sago noodles, and black garlic (BG).

Keywords: Incubation, SOP, BPPT, Lean Startup, Business Model Canvas, Blue Ocean Strategy, Marketing Channel, AHP

1. Introduction

One indicator that can be used to evaluate the level of innovation in a country is the number of patents. In order to increase the number of patents, the Government of Indonesia has made patents as one of the KPI of the institutions especially education and research institutions. And BPPT one of it. In the process of evaluating technology, BPPT shows its seriousness in carrying out its duties, as evidenced by the many patents held, namely 172 patents. Of the several patents, only a small portion can be used by the public. This shows that the findings or inventions cannot all be called innovations because innovation according to [1] is a form of success of inventions that can be utilized by the community through the process of commercialization and production.

In commercializing its technological products, BPPT has regulatory constraints so that state institutions cannot conduct business activities directly. Therefore, it is necessary to transfer the technology to other parties as stipulated in Government Regulations (PP No. 20 of 2005 article
Commercialization activities can develop well and sustainably if the parties that accept the technology transfer process are professional business people. In the implementation of business development activities as a result of technology transfer can be done with various schemes, one of which is through an incubation program. According to PP No. 27 of 2013 the definition of incubation is the process given to incubation participants (tenants) in the form of assistance for business development. It is well known that the Incubation activity consists of 3 stages, namely pre-incubation, incubation and post-incubation. While for more detailed activities there are no concessions agreed globally so that each business incubator in practice will have a different curriculum. Differences can occur because the problems faced by each tenant in developing a business are unique.

Through the incubation program, BPPT in its organizational structure has a work unit of Technology Incubator (BIT) that functions as a business incubator. BIT was formally established in 2001 with the main function as a work unit for the commercialization of technology, especially the results of the BPPT study. As a business incubator, BIT focuses on technology in accordance with the functions of BPPT as the parent institution. In carrying out incubation services, the performance of the given BIT can be said to be not optimal because the survival rate of tenants who graduate is only 29% with 46.67% experiencing obstacles at the market access stage. The problem regarding the unequal assistance by the facilitator according to Cakrasiwi (2015) has an important role in the low success rate of BIT in delivering tenants to develop their business at a further stage. In order to improve the performance of BIT, this study will create a design for the market access SOP model that can be used as a reference to improve the existing SOP model that is too general. The proposed SOP improvement model to be reviewed is to make reference to market access for each technology field as shown in figure 1.

In commercialization many approaches can be used where one of them is the concept of The Lean Startup developed by Ries. With his experience as a businessman and mentor of start-up companies, Ries sees that there are inefficiencies in the theory of business development so Ries took the initiative to develop a method written in the book The Lean Startup. The Lean Startup can be called a revolutionary business concept because it is considered an efficient method and is suitable for startups.

Many positive reviews have been expressed by various business experts regarding the positive benefits of the concept of The Lean Startup, so that BIT in 2014 tried to adopt it to be applied in incubation activities. BIT seeks to translate concepts in its business process activities from Pre- Incubation to Incubation in the business validation phase. The application of Lean Startup concept in Indonesia according to Nirwan requires various adjustments related to regulatory differences, market conditions, and startup capabilities compared to applications in the United States as the country where this method was developed.

In this study to compile a reliable reference model of activities, in this study three observations will be used. And three BPPT inventions that can be observed are Cassava Rice, Spirulina Sago Noodles, and Black Garlic (BG).
2. Lean Startup for Incubation Curriculum

In developing the SOP model, it starts with conducting a literature study of various theories. With a variety of positive reviews, since 2014 BIT has adopted this concept, therefore in this study Lean Startup is the main method used. In its application, [3] Ries states that good business is a business that continues to be developed, measured, and studied for all ideas, products, and data obtained, therefore in business incubation activities the validation process should not only be done at the beginning of the idea, the idea of business development but at each stage so that the market access stage needs to be validated on the planned business model with the aim of verifying. The concept of the business model used in this study is the canvas model business (BMC) developed by [6]Ostewalder and Pigneur because it is easily made and understood even though it is not a marketing and efficient expert, which can be presented on a piece of paper. BMC has been proven to be used in various fields of business, the only difference is which blocks will be the starting point. In his book, to facilitate the preparation of business models, Ostewalder and Pigneur divided 4+1 epicenter groups based on inventive, offer driven, customer driven, finance driven, and multiple-epicenter driven resources. Of the five concepts that best fit the BPPT invention, which is an innovation product, is an offer-driven group so the preparation of the BMC will begin by describing the value propositions offered. In this study also tried to propose the BMC compilation model to be adapted to the conditions of the products produced by tenants which in its preparation were enhanced by adopting a blue ocean strategy (BOS) strategy and marketing funnel.

3. Methodology

The study of the development of market access SOP models is carried out in four stages illustrated in the following figure:
3.1 Stage 1
At this stage the expected output is as follows: 1.) identification of the problem to be resolved; 2.) the purpose of the study is determined; 3.) Study of literature that can be a supporting theory in research.

3.2 Stage 2
The model development phase is the phase where the future model is expected to be formulated as an SOP. To achieve this, the steps that need to be taken are: 1. Comparative study of SOPs of other business incubator institutions; 2.) Preparation of tenant business models that are objects of observation; 3.) Identification of food regulation in Indonesia. 4.) Identification of retail requirements; 5.) Model development.

3.3 Stage 3
The model that has been made at the development stage so that it is valid and reliable it needs to be tested. Because this research is qualitative, the test is carried out using the triangulation method. Triangulation carried out is a method of triangulation, namely document study, interview, and observation. The results of triangulation will be input at the final agreement stage with BIT as the owner of the system. This activity is packaged with the FGD method. The expected results from the FGD in addition to obtaining the final SOP model output are also expected to obtain the weights from each variable which are indicators of success.

The weight obtained from the FGD was further processed by the AHP technique which in this study for efficiency was carried out with the Expert Choice V11 application.

3.4 Stage 4
This stage is the final stage of research where all results are presented and conclusions are made.

4. Model Development
4.1 Benchmarking of Incubation Stages
There are seven business incubator institutions studied to be a comparison in making SOP models. This comparative study data was obtained from the final report of the study of technology business incubator institutions compiled by the Ministry of Research, Technology and Higher Education (2017). The seven institutions studied as a comparison of SOP incubation processes have different characteristics. From the results of the comparative study, it can be seen that at present there are no business incubators who have made SOPs to assist market access in accordance with the technology field. So that in this study cannot provide input regarding the process that can be a stage in the development of market access SOP models.

4.2 Compilation of Business Models
In this study a more in-depth study was conducted on BMC applications in offer-driven groups. With the aim that the business model is more comprehensive, the preparation is combined with other marketing theories such as BOS and marketing funnel. Theory of BOS is used to compile a value proposition while the funnel marketing helps improve its business model. From the studies that have been carried out, in this study three patterns of business model preparation were proposed based on the characteristics of each product. The prepared value proposition was tested on the Google search engine to determine the level of market understanding of the product. From the search results or what is well known as the Search
Engine Result Page (SERP), you can find out what strategies can be done in preparing the business model. The first BMC pattern is aimed at products with SERP testing on the first page and the number of competitor products is small, then the next step that needs to be done is the BMC model developed by [7] Carpenter which can be seen in Figure 4. Whereas the second BMC pattern is aimed at the SERP test results obtained by the product on the first page but there are many similar products so that business competition becomes tight so that the business model preparation aims to penetrate the market by exploring key partners that can be invited to cooperate and reference to the preparation of BMC can be seen in Figure 5. While the third pattern is aimed at products with SERP results not found on the first page but on the second page, the strategy that must be done is to increase awareness and reference to the preparation of BMC can be seen in Figure 6.

And to make it easier to fill in each block then to make BMC with 1st Pattern, 2nd Pattern, and 3rd Pattern by collaborating the BOS method and marketing funnel are as follows:
Using the references mentioned above, it was found that cassava rice products are suitable for using the first pattern of BMC, for products of spirulina sago noodles more in accordance with the 3rd BMC pattern, and BG products using the second pattern BMC reference.

4.3 Mandatory Food Regulation in Indonesia
From the studies that have been conducted, compulsory regulations are obtained which need to be obeyed by tenants if they want to commercialize food products as follows: a.) Comply with food, quality and nutrition security requirements, therefore, in the packaging it is necessary to display clear information, it must be true and accountable.; b.) The design used must meet ergonomic visual display rules.; c.) Have a registration number issued by BPOM if production is carried out not in a residence and PIRT for the location of residence.; d.) Optional: Halal certification issued by the MUI.

4.4 Mandatory Retail Requirements
This activity is carried out to determine the criteria for products that can be marketed through third parties, especially retail. Retail that is a partner in this study is retail, which is the target of tenant marketing, which has locations in the cities of Jakarta, South Tangerang and Lampung. From this study, the results of the tenants stipulated by the tenants are as follows:

<table>
<thead>
<tr>
<th>No.</th>
<th>Document Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Deed of Establishment and Deed of Amendment in accordance with Law No. 40 of 2007 concerning Limited Liability Companies and Decree of the Ministry of Law and Human Rights</td>
</tr>
<tr>
<td>2</td>
<td>Company Registration Certificate that is still valid</td>
</tr>
<tr>
<td>3</td>
<td>Certificate of Business Domicile that is still valid</td>
</tr>
<tr>
<td>4</td>
<td>Valid Trading Business License</td>
</tr>
<tr>
<td>5</td>
<td>The Taxpayer Identification Number of the Company and the authorized Directors</td>
</tr>
<tr>
<td>6</td>
<td>Valid Identity Card</td>
</tr>
<tr>
<td>7</td>
<td>Current Account for at least the last 3 months</td>
</tr>
</tbody>
</table>
4.5 Making SOP Design Models

The development of the SOP model has begun with the needs assessment stage so that some data can be obtained that can be used as input for the preparation of the SOP model for the food market access process which can be seen in Figure 8 where it can be explained as follows:

![Fig. 8. Results of Needs Assessment](image)

4.5.1 Business Validation

Ries[3] states that business development activities are not only carried out by planning but need to be tested from the planned concept. In the lean startup method the business model that has been compiled with the BMC method needs to be tested for reliability by applying it in real terms in the field or by Ries[3] called the Get Out Of The Building (GOOB) stage. The purpose of this activity is to find out whether the BMC has been arranged accordingly or not, if it is appropriate, then the tenant's business can be further developed but if it is not right it needs to be repaired or the worst possibility must be ended. By adopting GOOB on lean startup[3], the procedures for implementing this concept are as follows: 1.) Prepare BMC.; 2.) Determine the location of the business validation implementation in accordance with the business model that has been prepared.; 3.) Determine the target of success.; 4.) Prepare a number of questions that can be used to evaluate the entire business.; 5.) Analyse the implementation of business validation activities

4.5.2 Commercialization

In the commercialization activity itself consists of 3 stages, namely the stage of fulfilling the legal aspects, the promotion stage, and the sales stage.

5. Model Testing

5.1 Triangulation Testing

5.1.1 Triangulation testing on experts (in-depth interview)

The triangulation technique used in this study is a type of triangulation method. The results of the SOP resulting from the development of the literature study tested the data validity and validity of the two schemes tested on the expert team and tested on the actual ecosystem. Model testing with interviews is carried out involving one marketing expert and two business experts and the results obtained are as follows: a.) For time efficiency and effectiveness of commercialization, the fulfillment of legality aspects in the marketing access stage should only be in the form of document collection rather than providing assistance for certification / legality of business entities.; b.) Taking into account the demands of the modern retail industry that demands professional relations, in addition to the legality aspect, BIT must provide additional criteria for tenants, namely sustainable production so that they can meet demands on delivery deadlines, prices offered and product availability.; c.) The success of the validation stage of the tenant business model is largely determined by the level of understanding of the business model planned by the tenant.; d.) In preparing the business model the tenant also needs to be considered: 1.) Market development trends.; 2.) Analysis of business competition on similar products to determine the positioning, branding, accuracy of pricing policies, and packaging.
5.1.2 Triangulation testing on real ecosystem (observation)

Designing the SOP model that has been tested to experts, the model developed is tested again by applying the model to the actual ecosystem from the commercialization stage. The location of the testing consists of small retail stores, modern retail stores, and internet-based stores according to the business model that has been developed. From the three business models, it can be seen that the channels of product marketing are modern retail stores, special small retail stores (organic and herbal), and pharmacies, therefore the model testing activities are carried out at that place. From the testing phase of the SOP model by means of observations obtained the following results: a.) the efficiency of time and the achievement of the objectives of commercialization, it is better before the access stage of marketing for the tenant has the legality that has become a condition set by modern retailers.; b.) To overcome the costs of benefits set by modern retailers, at the price fixing tenants must at least have a profit margin of at least more than 40% of the cost of production.; c.) Before the commercialization activities are carried out, tenants need to determine the marketing strategy to be carried out whether or not they are brand holders.; d.) To optimize the business development process, for tenants who already have a large number of markets (BG cases), the tenants need to have a process of escalating the production process.

5.2 Improvement of the Design and Development of the SOP Model and Monitoring Mode

5.2.1 Audience with the BIT Expert Team (FGD)

The FGD activities are planned to be attended by all entities from BIT as system owners who will later become implementers of the models designed by researchers. The FGD results are as follows: 1.) Need some adjustments including the business validation stage, and the addition of the process of signing a memorandum of understanding; 2.) The adjustments that need to be made in the SOP of the Business Model Compilation Assistance are: a.) Kasie FUT as an Incubator Manager has the responsibility of making reports with the help of the facilitator and; b) the role of the Head of BIT in the preparation of business models is only involved in giving recommendations.; 3.) Determination of weight of criteria and indicators of success (KPI) that shown below:

<table>
<thead>
<tr>
<th>No.</th>
<th>Criterion</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Validation</td>
<td>0.35</td>
</tr>
<tr>
<td>2</td>
<td>Commercialization</td>
<td>0.65</td>
</tr>
</tbody>
</table>

Table 3: Determination of Sub Criterion and Its Weight

<table>
<thead>
<tr>
<th>No.</th>
<th>Sub Criterion</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Business Model Making</td>
<td>30% of 0.35</td>
</tr>
<tr>
<td>2</td>
<td>Determining the Location of Validation</td>
<td>20% of 0.35</td>
</tr>
<tr>
<td>3</td>
<td>Validation implementation</td>
<td>50% of 0.35</td>
</tr>
<tr>
<td>4</td>
<td>Fulfilment of Legality Aspects</td>
<td>7.69% of 0.65</td>
</tr>
</tbody>
</table>
And the KPI for the system are:

<table>
<thead>
<tr>
<th>No</th>
<th>Criterion</th>
<th>Sub Criterion</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Promotion</td>
<td></td>
<td>23.08% of 0.65</td>
</tr>
<tr>
<td>6</td>
<td>Sales Transaction</td>
<td></td>
<td>69.23% of 0.65</td>
</tr>
</tbody>
</table>

Table 4: Determination of KPI

<table>
<thead>
<tr>
<th>No</th>
<th>Criterion</th>
<th>Sub Criterion</th>
<th>KPI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Validation</td>
<td>Business Model Making</td>
<td>Business Model</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Determining the Location of Validation</td>
<td>Alternative Location</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Validation implementation</td>
<td>Validation Report</td>
</tr>
<tr>
<td>2</td>
<td>Commercialization</td>
<td>Fulfilment of Legality Aspects</td>
<td>Deed of company</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Company Registration Certificate (TDP) that is still valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Certificate of Business Domicile that is still valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Valid Trading Business License (SIUP)</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>The Taxpayer Identification Number (NPWP) of the Company and the authorized Directors</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Valid Identity Card (KTP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Current Account for</td>
</tr>
</tbody>
</table>
5.2.2 Determination of Weight Using Expert Choice V11

The weight value that has been obtained from the FGD is processed by the AHP method and for time efficiency, Expert Choice V11 software is used in this study. The final results of the weight values that have been processed are as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Criterion</th>
<th>Weight</th>
<th>Sub Criterion</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Validation</td>
<td>0.33</td>
<td>Business Model Making</td>
<td>0.098</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Determining the Location of Validation</td>
<td>0.054</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Validation implementation</td>
<td>0.178</td>
</tr>
<tr>
<td>2</td>
<td>Commercialization</td>
<td>0.67</td>
<td>Fulfilment of Legality Aspects</td>
<td>0.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Promotion</td>
<td>0.15</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Sales Transaction</td>
<td>0.46</td>
</tr>
</tbody>
</table>

| TOTAL | TOTAL | 1   |

6. Result

From the picture below, it can be seen that there are three boxes with different colours when compared to the others, it is done to show the improvements that have been made.

The first revise (point 8.3) is the flow of decisions regarding product development improvement decisions that are permitted to be carried out in marketing access activities are minor improvements while for validation results that require major improvement in product development it is necessary to conduct monitoring and evaluation activities which will certainly
a bad value for the development of tenant businesses. From the results of the FGD, it was agreed that minor improvements that could be made include: a.) Colour adjustment of packaging design.; b.) Adjustment of product information on packaging.; c.) Adjusting the volume of products sold.

**Fig.9. Final Model of Market Access SOP**

Then for the second adjustment is the stage of fulfilling the original legality aspect is a process changed by collecting documents because the main output at this stage is only to collectively document the legality aspects of the business and products. Whereas for the third adjustment is the addition of the process of making cooperation agreement documents because some parties make this document a basis for cooperation. In the activity of signing the cooperation agreement, it will involve the Head of the Administration Section.
As for adjusting the SOP for the Tenant Business Model Compilation, shown in the figure below, there are some improvements. Adjustment by adding consideration to the decision if it is necessary to adjust the business model to be carried out by the tenant if the business model changes on the advice and input from the incubator manager (Head of FUT) and / or Head of BIT if it is minor then can be carried out immediately if major changes are define business models, adjustments must be made starting from the beginning.

From the results above, a monitoring model was created which in its adoption adopted the management system dashboard concept. In the development of this monitoring model the data entered is: a.) Flow of activities.; b.) Indicator of success.; c.) Weight of criteria and sub criteria. This monitoring design was developed with due regard to the design of the official BIT website (http://bit.bppt.go.id/) because in the future it will be used as the official media from BIT to monitor the progress of the tenant incubation process. And here are the results of developing a monitoring model:

![Diagram of Tenant Business Model Compilation Process]

**Figure 10:** Final Model of Assistance in Preparing Tenant Business Models
7. Conclusions
The application of the concept of lean startup as a theoretical foundation in the preparation of the incubation curriculum in BIT can be applied well but needs some adjustments, especially in determining the indicators of success. In testing the model, the results show that it is necessary to adjust the Market Access SOP model and the SOP for Business Model Compilation. In testing the model, it was found that the success of market access activities was very dependent on the commitment of the tenants and the completeness of the legal documents that they had, so it is necessary to adjust the Market Access SOP model.

Acknowledgements
This research is supported financially by Lembaga Pengelola Dana Pendidikan (LPDP) from Kementerian Keuangan Republik Indonesia.

References


Can Tempeh be Greenly Marketed by the Indonesian Tempeh Movement (ITM)?

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Abstract. The Indonesian Tempe Movement (ITM) has been green-marketing a 300-year-old food from Indonesia to gain international recognition, earning 10,000 followers in addition to major public figure and governmental supports. The main purpose of this article is to introduce and promote Tempeh and ITM using the concept of green marketing. Tempeh, a soy-based fermented food, has been predicted to be potential to provide the world's ever-growing needs of affordable, nutritious, and sustainable protein sources. Compared to beef, tempeh contains similar amount and quality by producing just a fifth of total emission and consuming only tenth of total energy, on top of being sold at up to 12 times cheaper. Compiling such scientific data, the non-profit organization (ITM) green-markets the movement with aims to get people joining in sharing the knowledge, hence giving people access to affordable, nutritious, and sustainable protein source. In order to achieve the mission of ITM, marketing mix approach (4P) has been adopted. Tempeh as a new product, based on scientific research and development, has now been created using a tempeh-making technique that is greener by conserving up to 50% of water. Tempeh chips are also made of locally grown organic soybeans and handmade by underemployed individuals. The price is set up to cover the associated costs including the environmental and social costs. Tempeh, for example is also environmentally friendly. Bananas leaves are used to cover the Tempeh. Place of distribution include local market and online healthy snacks shop. The main promotion is mainly through the social media. The movement wraps its green and sustainability message through workshops, tempeh chips, educational videos, and campaigns. To sum up, the Indonesian Tempe Movement's practices provide insights on science-based green marketing that incorporates environmental, social, and economical aspect.

Keywords: Tempeh, Indonesian Tempeh Movement, Marketing Mix, Green marketing

1. Introduction

One of the major trends in modern business has been green marketing[1]. An increase in the consumer’s awareness concerning environmental issues along with stricter regulations introduced by governments, particularly in industrially developed countries, has led to the demand for green or ecological products and sustainable business activities [2]. At the same time, the green movement became successful on the political arena of many European countries [3].

The green marketing of products and services has gradually become an important jargon and concept in emerging markets in Asia including Indonesia. By adopting resource conserving and environmentally friendly strategies in all stages of the value chain, the not for profit and profit companies can address the growing
environmental concerns. For example, in Australia, business firms face social and legal pressure to adopt environmentally-friendly business strategies. As a result, many companies responded to the pressures and adopted environmentally-friendly strategies.

In Indonesia, some companies have been pursuing green marketing strategies for some time now. Many companies have launched programs to contain damage to the environment and project themselves as environmentally-friendly companies. The Indonesian companies and consumers are increasingly becoming environment conscious and many environmental management initiatives have been launched by different segments of the society. Several companies have launched advertising campaigns to project environmentally conscious corporate images and promote products that are less harmful to the environment.

Research indicates that consumers are voicing their concern for the environment into their purchasing behaviour in different ways. There is a growing amount of evidence suggesting that consumers are choosing products or avoiding others based on their impact on the environment [4][5]. Others suggest that not only do consumers desire to purchase products that are less environmentally harmful, but also are willing to pay more [6][7].

Around the world, there has been an increasing number of companies, which have introduced green products. The degree to which green marketing has been incorporated into a company’s marketing strategies has varied between companies. This may include modifying existing products to be less environmentally harmful. This is the case of Indonesian Tempe Movement, which has invented a new and innovative way of making tempeh, which is more environmentally friendly.

Indonesian Tempe Movement (ITM) is a non-profit organization that aims to give people access to affordable, nutritious, and sustainable protein source through promoting tempeh. It was founded in 2014 by tempeh-focused food scientists to translate scientific findings into activities that educate society about tempeh, connect stakeholders in the tempeh industry, and empower people through social entrepreneurship. ITM has reached 9 countries and 6 continents by 2018 with its initiatives including tempeh workshop, tempeh talks, culinary events, festivals, scientific conferences, social media campaigns, and book publishing.

As sustainability being one of the ITM’s core messages, ITM conveys green marketing for the movement in general and some products in particular.

The objectives of this article include:
1. Analysing the green marketing strategies of Indonesian Tempeh Movement (ITM)
2. Evaluating the impact of the green marketing strategies of Indonesian Tempeh Movement (ITM)

2. Literature Review

Based on the literature review on green marketing, there are four main research areas of categories. They include the relevance of green marketing, the impact of green marketing on firms’ performance and competitiveness, the factors considered by consumers when purchasing green products and finally improving effectiveness of green marketing.

In the context of Asian countries, during the 1990s companies faces increasing environmental challenges due to pressure coming from government, industry groups and competitors. The increasing influences of communities on companies, the high cost of complying with environmental regulations, and changing consumer attitudes are forcing companies to become environmentally conscious.

It is suggested that properly designed environmental standards can trigger innovations that actually lower the total cost of a product or improve its value making companies more competitive. These innovations allow companies to use raw material, energy and labour more efficiently. However, poll findings show that a majority of US consumers are environmentally conscious but their concerns are not transferred into their purchase decisions [8].

In order to improve the impact of green marketing strategies, it is suggested that companies should build formal and informal alliances with environmental groups to improve the credibility and give a strategic direction to their green marketing programs.

3. Methodology

The green marketing strategies and impacts were obtained by examining internal documents and by conducting in-depth interviews with the ITM co-founders, staffs and customers.
4. Findings

a. Green marketing of Tempeh

Based on the depth interviews, it shows that there are opportunities and threats for green marketing of tempeh in Indonesia.

Opportunities

Since environmental problems facing the people are getting more serious every day, it becomes important to promote environmental consciousness. Fast economic growth without prevention or control of potentially environmental problems, could eventually lead to more environmental problems. Thus, the internal societal pressures and growing compulsion within the Indonesian society to solve present environmental problems will give rise to demand for environmentally friendly products ("green" Tempeh) and business strategies for ITM.

There is a growing external pressure for eco-friendly products and production methods. Environmentally-friendly products are bound to find wider market opportunities in the global context by preventing the possibilities that other countries may use their environmental standards as trade barriers against exports. Tempeh can enjoy the competitive advantage in terms of brand recognition and image both in the domestic and foreign markets. In term of partnership, this also opens the access to connecting with other organizations that have particular consideration or idealism in sustainability.

Threats

Companies allocate low priority to green marketing. At present, there are many environmental problems which need to be solved and in the short term only few problems can be focused on. The benefits of green marketing may not be outstanding to be clearly perceived by the customers.

At the moment there is not enough pressure felt by environment damaging products to shift to more environmentally-friendly products in Indonesia. Because of lack of awareness and understanding, not many customers are sensitive to the potential damage to the environment caused by conventional products. Since results of green marketing are not obvious in the short term, it is difficult to influence the target group to become environmentally aware. The positive impact of green marketing is not felt to be real by many groups. For example, there are perceptual problems associated with refilling of products. Many consumers do not accept refill products because they are concerned about hygiene when refilling products. Another example, the cost of recycled paper is higher than prime paper, which discourages people from using recycled paper.

In this regards, the Indonesian Tempe Movement's green marketing strategy acts as an educative initiative that will serve more educated consumers in Indonesia to notice the value of green marketing down the line.

Another potential threat of the green marketing initiated by the Indonesian Tempe Movement is the cultural barrier. Tempeh has been known as a traditional food that is identical with traditional cuisines. Modifying its branding that is cored at its production method could be perceived as a compromise of cultural practice.

b. Indonesia Tempeh Movement

Product

Indonesia Tempeh Movement (ITM) has a few products including both main product and derivative product. The main product or service is to introduce tempeh to society through training, hands-on workshop, masterclass and words of mouth. Tempeh chip is a derivative product produced by the ITM, and this product can testify to the society the process of how to make tempeh hygienically in a small industry scale. Apart from this product, the ITM also produces fresh tempeh, tempeh starter, a natural preservative for tempeh, merchandises including t-shirt, tote bag, apron and tempeh books. At the moment, the ITM is in the process to create more innovative derivative products such as tempeh masker, and tempeh noodle.

The tempeh training offered by the ITM employs a specific method taking into account hygiene and sanitation factor, it is also environmentally friendly. This training does not only consider the environment by using less water and fuel, but also minimizes waste. In minimizing the use of water and fuel, the ITM has been supported by MBRIOR & D to develop a fermented liquid made from local fruit in order to shorten the tempeh making process time.

The liquid is used in the process of soaking the soybeans, in which the soybeans can be soaked for a longer time without being decay, and the soybeans are not required to be boiled and washed many times. Consequently, the use of fuel and water is less, and at the same time, less waste is produced.
Waste from this tempeh making process, including the used water, the soybean skins can be used to feed animals, or as an organic fertilizer. The ITM tempeh training makes use of bamboo produced by local farmers. Besides, the ITM also teaches how to make tempeh using local leaves from different places in Indonesia to cover tempeh, including coklat leaf, simpur leaf (from Belitung), bamboo leaf, waru and jati leaf (from central Jawa), sagu and bawang utan leaf (from Papua), and off course banana leaf. Every local place in Indonesia can use local leaves to cover the tempeh and other food. This covering leaf does not only contribute to the specific aroma of tempeh, but it is also environmentally friendly and preserves local wisdom.

Price
The price applied by the ITM is not only profit oriented, but it also considers the sustainability of the ITM activities. Cross subsidy is used for finance. For example, to run a social event in places where no charges are applied, such as training in the prison, rehabilitation centre, or villages, the finance can be sourced from the proceeds of tempeh chips and other merchandises.

The ITM products are sold with competitive prices using premium materials. For example, tempeh chips only use local soybeans produced by local farmers, as well as coconut oil produced by local company.

Promotion
For promotion, media social including facebook, instagram, twitter and website www.tempemovement.com are used. In addition, brochure, leaflet, infographic about tempeh, and public figures are also used to promote tempeh and the ITM. To minimise the production costs, promotional material are designed by the ITM and parties joined in voluntary basis in the context of a movement.

Place
The tempeh training has been conducted not only in places in Indonesia, but also in several different countries, including Australia, Holland and France. In Indonesia, this tempeh training has reached different segments of the market including marginalized people, such as prisoners, patients from drug rehabilitation centre, as well as high class people. The places to hold the training range from prisoners, schools and universities.

Policies and practices
The foundations of the green marketing strategy are called 4-Rs, including:
1. Recycle – the company collects all types of packaging for recycling.
2. Refill – all outlets provide product refill service
3. Reuse – the company encourages reuse of promotional material
4. Reduce – by reduction, the company has eliminated all unnecessary packaging. In the company office, environmentally-friendly practices such as energy conservation, efficient use of stationary, sharing of computers and transportation facilities have been established.

5. Conclusions
The answer to our title is yes, though in introduction stage, green marketing in Indonesia is characterized by opportunities and threats. The green marketing strategy of the Indonesian Tempe Movement serves as a platform for branding, education, and partnership to develop socially-conscious business.
Future research can explore factors that may influence the intention to consume “green tempeh” using a well-established Theory of Planned Behaviour. The outcome may be able to shed the light on how to strategically communicate the message to the audience about the “green tempeh”, which is environmentally friendly.

References
Blockchain Technology: Revenue Streams of Long Tail Business Model

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Abstract. Blockchain technology is predicted to have a bright future as disintermediate of the financial institution become more popular. This research analysis the potential revenue streams through blockchain technology. However, the promising of disintermediation of their technology leaving turmoil all of start-up to release the decentralize system because of there is no revenue. We proposed long tail business model in term of release initial coin offerings (ICO) based on physical asset-backed of cryptocurrency. Rather than close platform to release ICO by the provider of cryptocurrency, we tends to open the platform to niche market like personal businessman, MSMS’s or others to releasing their ICO. The result show many users of cryptocurrency make an ICO to raise funds and also many transaction of currency exchange occur in the platform. It look like high product of ICO with low of volume of funds but currency exchanges will often occur. Therefore, margin of currency exchange will made a new revenue streams for blockchain technology start-up to monetize their platform to shift to another stage of growth and stability.

Keywords: Blockchain Technology, Long Tail, Business Model, Revenue Streams.

1. Introduction

Blockchain technology is currently attracting great attention from public because the uniqueness of their technology characterstic as a foundation for disintermediate transaction [1]. The problem of double-spending in such as banks, notaries, escrow agents potentially replaced by blockchain technology [2]. Blockchain is a digitized decentralized ledger to allow record keeping of all peer-peer transactions without the need for a centralized authority [3]. Latest reviews of technical papers on blockchain research shows that the majority of scientific papers have focused on increasing and the challenge of the current Protocol, especially for cryptocurrency in General and particularly to Bitcoin [4].

The increasing of peer-to-peer platform like blockchain technology can’t be denied and has changed the way for commercial transaction [5]. The main issue in developing of blockchain technology is the elimination of trusted parties [6], [7], [8]. Among the hype of that, the first question to answer the appropriate solution whether blockchain technology is the best technology to build peer-to-peer platform transaction trying to remove trusted parties such a
Even multidisciplinary blockchain research framework about intermediaries tends to disseminating how blockchain technology could provide intermediary services [10].

There are three element of intermediaries function as the bank’s core business, (1) rising funds, (2) make loans and (3) provide services. It was managed trillions dollars of global economy and takes trillions fee per transaction through system of slow payment, additional cost and takes more time [11], [8]. Finally, the customer bears the burden and opened over 45% per year of criminal opportunities from financial intermediaries activities include payment networks, money transfer and stock exchange [12]. It was worth estimated to save up sixteen billion dollars fees per year from Banking and Insurance transaction through smart contracts of blockchain technology [13] while others was estimated could reduce infrastructure cost $15-20 billion per annum by 2022 [14].

Blockchain technology also was introduce new venture of raising funds through initial coin offerings (ICO) [15], [16], [17]. Coins are units of original value from the blockchain, therefore it is also important to distinguish between coins and tokens. The only purpose of a coin is to exchange values, and have limited functions beyond that [18]. Token is new type of digital assets that represent underlying of asset. At least, there are three taxonomies to understand of tokens [19]. First is currency tokens like Bitcoin that can be used to purchase goods and service. Second is platform tokens like Ethereum that provide a payment gateway and three is asset-backed tokens which is bound to underlying physical assets such as real estate, fine art, or even gold collections.

The promising of blockchain technology was envisioned as an online payment or platform tokens without trusted parties [6]. But many entrepreneur or start-up company difficult to choice about decentralized system that may release a fixed revenue streams [20]. This research aims to see the possible revenue streams from blockchain technology in term of disintermediate function of trusted parties. As a research methodology, we first define a framework to classify current activities of banking system and investigate possible activities of blockchain technology to acquire revenue streams.

2. Literature Review

The most important thing of disseminating new technology is about the adoption. The adoption of diffusion of innovation theory has four main elements include (1) an innovation (2) is communicated through certain channels (3) over time (4) among the members of a social system [21]. This theory was explain how idea and invention of technology will adopted through reducing uncertainty of a system over time [3]. Blockchain technology also need a decision making tool that will defining its technology as the correct perspective to reach disintermediate [9].

The rise of blockchain technology was marked by the operation of a peer-2-peer electronic cash system as known by Bitcoin [6]. It is outline the mechanism of new currency based on cryptography security system that will eliminating the trusted parties by online transfer to be sent directly from one party to recipient party [22]. Blockchain technology as one of the most enchanting research fields because the digital disruption has shaken financial services [23]. Whereas, level of analysis of multidisciplinary blockchain research fields is around (1) User and society, (2) Intermediaries, (3) Platforms, (4) Firms and Industries [10].

At least, there are five different activities between banking system and blockchain technology. First is payment when banking system offers an intermediary function in term of approving transaction between customers, while blockchain technology offers the anonymity of users [24]. Second is clearing and balancing systems. Users or customers takes more time to reconcile their transaction and also check their balance as an operating procedure of
intermediary parties. Blockchain technology can reduce transaction time and simplifying of reconciliation process through real-time in clearing and balancing arrangements [22].

Third is get funding, if banking concept execute fundraising from customers whom excess funds through saving, Giro or time deposit product. Blockchain technology is trying to re-modelling the business through initial coin offering (ICO). It may be characterized with the publication such as white paper or token sale term that contains detail information about price (pricing per coin), product (supply of token), place (IT adopted) and promotion (business plan and marketing team) to raise money through cryptocurrencies [25]. It is not only get funding from investor or customers but creating new opportunity from a broader access to capital.

The fourth is securities, the term of asset securities was shifted from non-asset to asset backed. When asset native is issued on-chain as a digital representation, it is called tokenising [8], [26], [27]. The last is lending or loan or credit by removing the necessity for gatekeepers within the lending business, the blockchain will build it safer to borrow cash and supply lower interest rates [8].

There is term that will confuse of blockchain researcher to clearly define about. The idea of distributed use to architecture, not for a policy of decision making [28]. Whereas decentralization is open network for everyone to access the ledger, identities are not recorded and the validation may lead decreasing speed of transaction [24], [9]. Blockchain is type of distributed ledger that is made out of a chain of cryptographically connected 'squares' containing bunched exchanges [27].

Before we examine potential revenue streams in discussion section, better we start to define what type of business model of blockchain technology. Business model is the art of how company to generate revenue and making profit [29], [30], [31]. In term of revenue streams, we found type of activities blockchain technology include infrastructure providers, application developers, and Operators [27]. Most revenue streams in one or more of the following ways [32], [27], [33].

<table>
<thead>
<tr>
<th>NO</th>
<th>REVENUE MODEL</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Software as a service</td>
<td>Charging fee for using API and infrastructure</td>
</tr>
<tr>
<td>2</td>
<td>Professional Services</td>
<td>Developing custom applications for enterprise clients</td>
</tr>
<tr>
<td>3</td>
<td>Flat Fees &amp; Transaction Fees</td>
<td>Charging fee for subscription or fee per transaction</td>
</tr>
<tr>
<td>4</td>
<td>Maintenance fee</td>
<td>Charging for the maintenance of a distributed ledger network codebase</td>
</tr>
<tr>
<td>5</td>
<td>Service Level Agreement (SLA) or Premium support packages</td>
<td>Providing professional 24/7 support and training</td>
</tr>
<tr>
<td>6</td>
<td>Consulting</td>
<td>Providing consulting services to customers seeking to adopt DLT: can range from ideation and the development of a proof-of-concept to a full-production deployment network</td>
</tr>
<tr>
<td>7</td>
<td>A utility token</td>
<td>It might be discharged which might be wont to access the network or can even be listed inside the network.</td>
</tr>
</tbody>
</table>

3. Method
We use the long tail business model as a research approach in order to create a new opportunity of revenue model. The long tail concept was proposed by Chris Anderson in his book titled The Long Tail. It’s concept is about selling that focusing on a large numbers of product with low volume (Anderson, 2006). We was defined in the section two the potential
disruption of banking system including payment, clearing and balancing system, funding, securities, and lending with blockchain technology. After that, we try to investigate a new revenue model through long tail business model canvas (see figure 1).

To evaluate the business model canvas, we will arrange FGD and in depth interview with a stakeholder of the blockchain technology including 30 interviewee from Islamic Fintech Association, 4 interviewee from Otoritas Jasa Keuangan (OJK), 30 MSME’s. The outcome of the method will describe a value proposition, customer segment and finally making a decision about the revenue streams. The revenue streams describe revenue generating from customer segment whom buy the value proposition of the product [30]. Revenue streams can take from two streams; (1) transaction revenue that come from one-time of payment, (2) recurring revenue that come from ongoing payment and re-purchase of others similar product.

![Fig. 1. Long Tail Business Model Canvas Concept](image)

<table>
<thead>
<tr>
<th>PARTNER NETWORK</th>
<th>KEY ACTIVITIES</th>
<th>CUSTOMER RELATIONSHIPS</th>
<th>CUSTOMER SEGMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>content producers</td>
<td>match-making platform management</td>
<td>online interaction &amp; communities</td>
<td>large breadth of niche segments</td>
</tr>
<tr>
<td>communities of interest</td>
<td>focus on match-making</td>
<td></td>
<td></td>
</tr>
<tr>
<td>KEY RESOURCES platform</td>
<td>breadth &amp; reach</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. Discussion

The real challenge of commercialism niche content is finding interested potential consumers [30]. If we see the old model of music industry, the customer segment focusing on mass audience an match making with the value proposition from superstar artist and hits. While, the new model was open the platform did not focus on mass audience but switch to niche market like people who want buy or listen a song from another hits maker. Rather than entering the main market, our interviewee proposing to open a strategic avenue to pursue a “niche market strategy”. Niche market is small market that consist an individual or a small group of customers with similar characteristics and needs [34].

Therefore, banking industries usually target mass market of funding customer and they also try to match making with the customer of lending product. They earn revenue streams from the deviation of lending margin and funding interest. Different from blockchain technology is reworking everything from payments transactions to however cash is raised within the non-public market [8]. As we mention above, blockchain can beyond question have an impact on just about each side of the financial set-up. Because it relates to banking and also the disruption we will expect to work out happening. Our research results show the initial coin offering (ICO) are mostly carried out by blockchain provider or operator and we proposed the initial coin offering offer by users.
Initial coin offerings (ICOs) represent a completely unique mechanism for funding extremely innovative ventures that use distributed ledger technology (DLT) [16], [25]. ICO represent radical innovation in financial technology. In ICO, investors get the token directly from start-up; tokens unit is supposed to be the future of the venture project (for example, utilities, property rights, royalties) [16]. ICOs alter start-ups to lift massive amounts of funding with negligible effort whereas avoiding compliance and reduce intermediator cost [35].

Let we illustrate the value proposition canvas above. Nature of Initial Coin Offering (ICO) usually written in white paper document. It is a document in which the company provides the information deemed necessary for the public and is an important component of the campaign company ICO [36]. It mention the details of ICO total cap and distribution, legal and compliance, team, security, marketing and public relation, and also have within a maximum time of coin selling [37], [38]. While, Niche segment or one customer for example, stands as a home industry and needs some funding in term of rising of their working capital around 200 dollars. They open register in the Initial Coin Offering (ICO) platform and offering their equity crowdfunding to mass market about 50 coins. They start to campaign within a certain period to raise funds. It kind of online word of mouth and not just a peer-to-peer transaction or equity crowdfunding. It is an example of new economic model for raising working capital for home industry. If we compare with raise money through venture capital is a difficult process. Entrepreneurs have gathered with sat through countless meetings with partners, and last a long time in negotiations over equity and assessment in hopes of exchanging some part of their company for review. At blockchain, we do not need a platform to raise money. we don't need to venture capitalists. And also we do not need negotiations. All users can raise money from anyone at any time, and anyone can invest in their projects.

Indonesia still have gap financing about 988 trillion and over 49 million MSMEs unit not yet bankable [39]. World bank suggest there are between 365-445 million MSMEs in emerging country: 25-30 million are formal SMEs; 55-70 million are formal micro enterprises; and 285-345 million are informal enterprises. it was estimated 70% of all micro, small and medium enterprises in emerging country lack access to lending [40]. It may give large breath access of people, MSME’s, home industry and or start-up company to rising funds through Initial Coin Offering. Quarterly report of cryptocurrencies was mention about $7,735,207,391 amount raised from April – June 2018, include 339 Number of ICOs with the average amount raised over $22,817,720 [41]. Only 18-20% of ICO that reach hard cap from April-June 2018 and numbers of cryptocurrencies provider in the world was recorded in www.coingecko.com over 3431. Our interviewees expected it might looks like one-third (small) of number of ICO will offers by cryptocurrencies provider in large volume and three-
quarter (large) offers by users (MSME and personal) of cryptocurrencies in low volume in the future. 

So where is revenue streams come from? Our interviewees estimated that ICO are fundamentally shift from seed fundraising to new investment ecosystem [42], [43]. It kind of mid of utility and equity token because represent ownership of an asset and also provide users with future access to a product or service. For example case study from cryptocurrency (asset-backed) like gold or Dinar and Dirham, when the crypto coin sold for currencies. It can represent ownership of the ingots and also enable the crypto coin to purchase for another product or services [44].

![Fig. 3. Long Tail Business Model Projection](image)

It is supposed to bring through individuals to exchange currency from fiat to gold or Dinar and Dirham. It additionally implies the model of revenue streams from fee based income to margin of currency exchange. Cryptocurrency may enable to provide price of sell and buy of the crypto coin in the website, normally buy price expensive from sell price because the difference in numbers indicate the margin of the exchange. This revenue model tends to comply with Islam because it is similar with the Ba’i al-Sarf or currency exchange. But it may contradiction with the term and condition of purchasing gold via online. It should be cash transaction and handover directly and it was narrated that Ubada bin As-Samit:

“Ubada bin As-Samit and Muawiyah met at a stopping place on the road. ‘Ubada told them: ‘The Messenger of Allah forbade selling gold for gold, silver for silver, wheat for wheat, barley for barley, dates for dates’”’ one of them said: ‘salt for salt,’” but the other did not say it-“unless it was like for like, hand to hand. And he commanded us to sell gold for silver and silver for gold, and wheat for barley and barley for wheat, and to hand, however we wanted.”’

And one of them said: “Whoever gives more or ask for more has engaged in Riba.”

But sharia Standard no 57 on Gold and its Trading Controls point 3/4 Sale of Gold Ingots for Currencies is the solution of the problem above. It cited following below:

“When gold ingots are sold for currencies, the counter-values must be exchanged during the contracting session. Possession of the ingot by the buyer, or his agent, is realized either physically or constructively. Constructive possession is realized by allocation of the ingot and by enabling the buyer to dispose of it, or by holding a certificate that represents ownership of a specified ingot that is distinguishable (an allocated ingot) from others, by serial numbers or other distinct marks from other ingots, provided the certificate is issued the day the contract is concluded [Trade Date “T+0”], by officially or customarily recognized agencies, enabling the buyer to take physical possession of the purchased ingot at his request” [45].
It impact the ICO usually launch by cryptocurrency provider with the low of numbers of product shift to ICO launch by cryptocurrency users with the high numbers of product. The important challenge of marketing niche content is finding interested potential patrons. Powerful search and recommendation engines, user ratings, and communities of interest have created this much easier. Many types of ICO products was indicated the high volume of currency exchange between fiat and cryptocurrency, even volume of each product is low.

![Fig. 3. Long Tail Business Model Revenue Streams](image)

5. Conclusion
In this paper we tried to use a long tail business model as a model of revenue streams approach but still comply to Islamic. It may produce aggregate revenue or even exceeding revenues produced via long tail business model, because each currency exchange even in the first market of cryptocurrency will impact to the margin. It is also will eliminate the cost of intermediaries into free from the advantage of blockchain technology. Furthermore, the future research topics of ICO about the Islamic scheme of contract for the underlying asset as the asset-backed of the crypto coin.

Acknowledgements
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References


The Relationship of Work Stress, Emotional Intelligence, and The Performance of Staff in the Office of the Ministry of Religion Batam City Indonesia

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³Faculty of Human Development, Sultan Idris Education University, Tanjong Malim, Perak, Malaysia

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Abstract. Issues that generally are facing is how human can create resources capable of generating optimal performance so that the objectives of the organization can be achieved. Many factors can affect the performance of the person who will ultimately be able to realize the achievement of organizational performance. Problem in the work stress, emotional intelligence, and performance becomes important to be noted. The variables examined in this study are work stress, emotional intelligence, and the performance of staff in the Office of the Ministry of Religion, Batam city, Indonesia. The data collection tool in research were using questionnaires and analyzed with SPSS statistics tools. This assessment involved 13 items of work stress, 28 items of emotional intelligence, and 6 items of performance. Populations and samples in this study was 33 staff as respondent. The acquired results of the research showed that the stress of work and the performance has a negative and significant relationship, emotional intelligence and performance had a positive and significant relationship, whereas stress work and emotional intelligence competencies the negative was not significant. Upcoming research suggested to examine the demographic and other variables which were not examined in this study such as; commitment, and job satisfaction.

Keywords: Work Stress, Emotional Intelligence, Performance of Staff.

1. Introduction

Human resource development should be seen as part of the Organization's purposes, the community, and not simply the interests of the State. The staff should've been able to improve the quality of service and resolve problems encountered, either individually or in a group. Need to be aware that the involvement of staff in the Office of the Ministry of Religion Batam city in terms of providing public servants should be included starting from the process of planning, implementation, evaluation, and utilization of results. Staff are expected to achieve a performance that is one of the essential components in a system of public service in the Office of the Ministry of Religion Batam city.

There are many factors that contribute to the achievement of the performance of the staff such as work stress, emotional intelligence, job satisfaction, etc. Emotional intelligence is the driving
factor in the success of an employee of an organization. Whereas work stress also participated in
determining the level of performance of employees. Based on the description, the authors are
interested in conducting research with the title "work stress, emotional intelligence, and the
performance of Staff in the Ministry of Religion Batam city".

This research is limited to the stage of work stress, the emotional capabilities, and performance
of the staff. Formulation of the problem are:
1. Is there a relationship of work stress with the performance of staff in the Ministry of Religion
   Batam city?
2. Is there a relationship of emotional intelligence with the performance of staff in the Ministry
   of Religion Batam city?
3. Is there a relationship of work stress with emotional intelligence staff in the Ministry of
   Religion Batam city?

The purpose of this research is;
1. To know the relationship between work stress with the performance of staff in the Ministry of
   Religion Batam city.
2. To know the relationship between emotional intelligence with the performance of staff in the
   Ministry of Religion Batam city.
3. To know the relationship of stress of working with emotional intelligence staff in the Ministry
   of Religion Batam city.

According to Robbins [1]performance is the result or the person's overall success rate during a
certain period in carrying out the task compared to a range of possibilities, such as the standard
work, targets/goals or criteria.

The performance is a process about how the work underway to achieve results work
[2]According to Looker, Terry & Gregson, Olga [3]stress is defined as the status when it shows up
in the mismatch between the demands with capabilities. Sebaradar, Shabnam. &Asadi, Hameidah
[4]described that emotional intelligence plays a vital role in the professional life and it is very
helpful in the achievement of career success.

Measurement of work stress, emotional intelligence, and the performance of the staff of the
Ministry of Religion based on staff perception of Batam city is done by evaluating the item of work
stress, emotional intelligence, and performance in accordance with the relevant literature
references Adaptation/Adoopsi [5]

Research conducted by the Yozgat et al.,[5]results showed a negative relationship was found
between job stress and job performance, emotional intelligence had a positive impact on job
performance.

2. Research Methods

In a study, one of the things that's important is devising a research design. Type of this research
is quantitative descriptive research. The research was conducted at the Office of the Ministry of
Religion Batam city which is located in JL. Baiturrahman mosque in Sekupang Batam. The Census
technique with the overall member population as a sample was used. The sample in this research
were 33 respondents from the staff in the Office of the Ministry of Religion Batam city. So in this
study population was a sample, consisting of staff of the Office in the Ministry of Religion Batam
City. All staff participated voluntarily in filling the questionnaire which had been briefed about the
purpose of the research provided by the researchers. The variable in this study were work stress,
emotional intelligence, and performance.

Item instrument of work stress, emotional intelligence, and performance in this study is an
adaptation/adoopsi of [5]

Work stress has 13 items namely;
1. Working here makes it hard to spend enough time with my family
2. I spend so much time at work; the trees??
3. Working here leaves little time for other activities.
4. I frequently get the feeling I am married to the company
5. I have too much work and too little time to do it in.
6. I sometimes dread the telephone ringing at home because the call might be job-related
7. I feel like I never have a day off
8. Too many people at my level in the company get burned out by job demands
9. I have felt fidgety or nervous as a result of my job
10. My job gets me more than it should
11. There are lots of times when my job drives me right up the wall
12. Sometimes when I think about my job I get a tight feeling in my chest.
13. I feel guilty when I take time off from job

Emotional intelligence there are 28 items namely;
1. When I am facing with obstacles, I remember times I faced similar obstacles and overcame them.
2. I expect that I will do well on most things I try.
3. Other people find it easy to confide in me
4. Some of the major events of my life have led me to reevaluate what is important and not important
5. When my mood changes, I see new possibilities.
6. Emotions are one of the things that make my life worth living
7. I am aware of my emotions as I experience them.
8. I expect good thing to happen.
9. I like to share my emotions with others.
10. When I experience a positive emotion, I know how to make it last
11. I arrange events that others enjoy
12. I seek out activities that make me happy
13. I am aware of non-verbal messages that I send to others.
14. I present myself in a way that makes a good impression on others
15. When I am in a positive mood, solving problems is easy for me
16. By looking at their facial expressions, I recognize the emotions people are experiencing.
17. I know why my emotions change.
18. When I am in a positive mood, I am able to come up with new ideas.
19. I easily recognize my emotions as I experience them.
20. I motivate myself by imagining a good outcome to tasks I take on.
21. I compliment others when they have done something well.
22. I am aware of non-verbal messages that other people send.
23. When another person tells me about an importance event in his or her life, I almost feel as though I have experienced this event myself.
24. I know what other people are feeling just by looking at them.
25. I help other people feel better when they are down.
26. I use good moods to help myself keep trying in the faceoff obstacles
27. I can tell how people are feeling by listening to the tone of their voice
28. It is difficult for me to understand why people feel the way they do

Whereas, the performance consists of 6 items namely;
1. How would you rate yourself in terms of the quantity of work you achieve?
2. How do you rate yourself in terms of your ability to reach your goals?
3. How do you rate yourself in terms of your performance potential among coworkers in your company?
4. How do you rate yourself in terms of quality of your performance in regard to customer relations?
5. How do you rate yourself in terms of quality of your performance in regard to management of time, planning ability, and management of expenses?
6. How do you rate yourself in terms of quality of your performance in regard to knowledge of your products, company, competitors' products, and customer needs?

A quantitative approach is used in this research. The data obtained by using a questionnaire developed by researchers with the respondent is the staff in the Office of the Ministry of Religion Batam city. The instrument used was a questionnaire consisting of 47 items. Items used is an item of work stress, emotional intelligence, and performance.

The source of the data used in the research is primary data, and data collected by researchers from the object of research. Primary data collection was done by way of survey method by distributing questionnaires to respondents. A questionnaire distributed to staff in the Office of the respondent's Ministry of Religion Batam city. Respondents gave answers on every item with the given five choices of answers. Answers of the respondents viewed from the trend are the answers of respondents tend to move to the left-most columns or to the right-most column, which dispute the work stress, emotional ability, and good or bad performance of each item. Here is a picture of the model of research;

![Work stress, emotional intelligence, and performance](image)

**Fig. 1.** Work stress, emotional intelligence, and performance

Data analysis for testing was using a descriptive analysis of correlation factors with work stress, emotional intelligence, and performance. These measurements are selected because of the awareness of researchers to the nature of the appraiser’s differences when evaluating staff. Analysis of the data used in this study was to find out the quantity and percentage of demographic characteristics of the respondents, also a correlation between variables. Data analysis in this research was descriptive statistic and correlations. Demographics of respondents in this study in terms of the gender of the respondent.

**3. Results and Discussion**

The data of the respondents in the study can be seen in the following table:
Table 1: Respondent Data

<table>
<thead>
<tr>
<th>Gender</th>
<th>The Total Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Man</td>
<td>12</td>
</tr>
<tr>
<td>Women</td>
<td>21</td>
</tr>
<tr>
<td>Total</td>
<td>32</td>
</tr>
</tbody>
</table>

Table 1 shows that the number of respondents in the study consisted of 12 men and 21 women of 33 respondents. In order to describe the research variables, certain criteria based on the average score obtained the now respondent categories are used. The score in accordance with the five categories score Likert scale developed and used in the study. As for the criterion in question as propounded by Abdurahman [6] shown in Table 2 below:

Table 2: Criteria Analysis Description

<table>
<thead>
<tr>
<th>The Range Of Category Score</th>
<th>The interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 – 1.79</td>
<td>Not Very Good/Very Low</td>
</tr>
<tr>
<td>1.80 – 2.59</td>
<td>Not Good/Low</td>
</tr>
<tr>
<td>2.60 – 3.39</td>
<td>Enough/Average</td>
</tr>
<tr>
<td>3.40 – 4.19</td>
<td>Good/High</td>
</tr>
<tr>
<td>4.20 – 5.00</td>
<td>Very Good/Very High</td>
</tr>
</tbody>
</table>

The following research results analysis mean score of respondents against the variables examined, as shown in the following table:

Table 3: Descriptive Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Stress</td>
<td>2.62</td>
<td>Enough</td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>3.73</td>
<td>Good</td>
</tr>
<tr>
<td>Performance</td>
<td>3.70</td>
<td>Good</td>
</tr>
<tr>
<td>Total Mean Score</td>
<td>3.35</td>
<td>Enough</td>
</tr>
</tbody>
</table>

A descriptive analysis of the results of menscore to work stress variables (2.62), emotional intelligence (3.73), and performance (3.70) and mean score overall of 3.35 was on stage enough. Furthermore, the validity results of the items can be seen in the following table:

Table 4: Results of Test validity of work stress

<table>
<thead>
<tr>
<th>Item</th>
<th>r_statistics</th>
<th>r_table (0,349)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SK1</td>
<td>.627</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK2</td>
<td>.655</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK3</td>
<td>.681</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK7</td>
<td>.650</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK8</td>
<td>.551</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK9</td>
<td>.376</td>
<td></td>
<td>Valid</td>
</tr>
<tr>
<td>SK12</td>
<td>.653</td>
<td></td>
<td>Valid</td>
</tr>
</tbody>
</table>

Test the validity of the 32 respondents by using SPSS program version 20.0 obtained test results validity against the 13 items and only 7 items in the questionnaire statements have a value
of r-statistics (Corrected Item-Total Correlation) above 0.349, thus there are 7 items a valid statement.

Table 5: Results of Test Validity of Emotional Intelligence

<table>
<thead>
<tr>
<th>Item</th>
<th>r_statistics &gt; r_table (0.349)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KE2</td>
<td>.562</td>
<td>Valid</td>
</tr>
<tr>
<td>KE3</td>
<td>.476</td>
<td>Valid</td>
</tr>
<tr>
<td>KE4</td>
<td>.589</td>
<td>Valid</td>
</tr>
<tr>
<td>KE5</td>
<td>.470</td>
<td>Valid</td>
</tr>
<tr>
<td>KE8</td>
<td>.603</td>
<td>Valid</td>
</tr>
<tr>
<td>KE9</td>
<td>.644</td>
<td>Valid</td>
</tr>
<tr>
<td>KE10</td>
<td>.678</td>
<td>Valid</td>
</tr>
<tr>
<td>KE12</td>
<td>.683</td>
<td>Valid</td>
</tr>
<tr>
<td>KE14</td>
<td>.455</td>
<td>Valid</td>
</tr>
<tr>
<td>KE15</td>
<td>.599</td>
<td>Valid</td>
</tr>
<tr>
<td>KE16</td>
<td>.539</td>
<td>Valid</td>
</tr>
<tr>
<td>KE17</td>
<td>.508</td>
<td>Valid</td>
</tr>
<tr>
<td>KE18</td>
<td>.564</td>
<td>Valid</td>
</tr>
<tr>
<td>KE19</td>
<td>.615</td>
<td>Valid</td>
</tr>
<tr>
<td>KE20</td>
<td>.747</td>
<td>Valid</td>
</tr>
<tr>
<td>KE21</td>
<td>.725</td>
<td>Valid</td>
</tr>
<tr>
<td>KE22</td>
<td>.458</td>
<td>Valid</td>
</tr>
<tr>
<td>KE23</td>
<td>.612</td>
<td>Valid</td>
</tr>
<tr>
<td>KE26</td>
<td>.631</td>
<td>Valid</td>
</tr>
<tr>
<td>KE27</td>
<td>.477</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Test the validity of the results of the questionnaire respondents 33 using SPSS program version 20.0 obtained test results validity against the 28-item statement. 20 item statements in questionnaires that have a value of r-statistics (Corrected Item Total Correlation) above 0.349 thus Revelation 20 items are valid.

Table 6: Results of Test Validity of Performance

<table>
<thead>
<tr>
<th>Item</th>
<th>r_statistics &gt; r_table (0.349)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KIN1</td>
<td>.717</td>
<td>Valid</td>
</tr>
<tr>
<td>KIN2</td>
<td>.583</td>
<td>Valid</td>
</tr>
<tr>
<td>KIN3</td>
<td>.805</td>
<td>Valid</td>
</tr>
<tr>
<td>KIN4</td>
<td>.751</td>
<td>Valid</td>
</tr>
<tr>
<td>KIN5</td>
<td>.817</td>
<td>Valid</td>
</tr>
<tr>
<td>KIN6</td>
<td>.830</td>
<td>Valid</td>
</tr>
</tbody>
</table>

The results of validity test on the questionnaire with respondents 33 was obtained by using SPSS program version 20.0. The results validity test against 6 statement in the questionnaire that each have a value of r-statistics (Corrected Item-Total Correlation) is above 0.349. Thus all statements is valid.
Table 7: Reliability test results of work stress, emotional intelligence, and performance

<table>
<thead>
<tr>
<th>Variable</th>
<th>Cronbach's Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Stress</td>
<td>0.844</td>
<td></td>
</tr>
<tr>
<td>Emotional Intelligence</td>
<td>0.919</td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>0.909</td>
<td></td>
</tr>
</tbody>
</table>

Table 7 retrieved values of Alpha Chronbach's 0.844, 0.919, 0.909 (greater than 0.70), then the device of this questionnaire can be trusted and reliable (reliability).

Table 9: Normality test results

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Asymp. Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>33</td>
<td>0.000000</td>
<td>.96824584</td>
<td>.032c</td>
</tr>
</tbody>
</table>

Table 9 shows the test result that the value of Asymp normality. Sig. (2-tailed) value is 0.032 and brought significant (0.05) thus the data distribution is not normal. For the next process because the data distribution is not normal then a non parametric test is performed to measure the relationship between the variables. Correlation of test results as shown in the following table:

Table 10: Non parametric Correlation test results

<table>
<thead>
<tr>
<th></th>
<th>Work Stress Correlation Coefficient</th>
<th>Emotional Intelligence Correlation Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall's tau_b</td>
<td>Work Stress</td>
<td>Emotional Intelligence</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>1.000</td>
<td>-.016</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Emotional</td>
<td>Intelligence Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>-.016</td>
<td>1.000</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Performance</td>
<td>Correlation Coefficient</td>
<td>.291*</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>.055</td>
<td>.027</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Spearman's rho</td>
<td>Work Stress</td>
<td>Emotional Intelligence</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>1.000</td>
<td>.019</td>
</tr>
<tr>
<td>N</td>
<td>33</td>
<td>33</td>
</tr>
<tr>
<td>Emotional</td>
<td>Correlation Coefficient</td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>.019</td>
<td>1.000</td>
</tr>
</tbody>
</table>
Performance Correlation Coefficient -0.347*, 0.443**

Exam results correlation test nonparametrik table 10 shows that the relationship between work stress and emotional intelligence (0.019) are on a very weak category, work stress with performance (-0.347) are on a weak category, and emotional intelligence with performance (0.443) are on a weak category [7]. The relationship of work stress and performance, emotional intelligence and performance significantly. Work stress and emotional intelligence are not significant. The results of this research are consistent with research done [5].

4. Conclusion
The relationship of work stress and performance. There was a weak negative relationships and significant between work stress and performance. The relationship of emotional intelligence and performance. There was a weak positive relationship and significant between emotional intelligence and performance. The relationship of work stress and emotional intelligence. There were relations which are very weak and insignificant between work stress and emotional intelligence. These relationships need to be constantly maintained and given the attention that there are relationships between the variables in question. For the next research other variables besides work stress, emotional intelligence, and performance such as motivation and commitment is required to be examined. In addition, it is recommended to study with a larger sample size and statistical tools such as; Amos, SmartPLS, etc.

sAcknowledgement
Thanks to Prof. Madya Dr. Syed Sofian Syed (Salim UPSI Lecturer), Dr. Eng. Anzarullah Lawi (Universal University Lecturer), Indra Firdiyansyah (STIE Galileo Lecturer), M. Yahmin (Chairman of STIE Galileo) and other colleagues at STIE Galileo.

REFERENCE
Talent Retention Model for Millennials Based on Engagement Drivers
Case study: LQ45 Company

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Faculty of Economic and Business, University of Indonesia, Indonesia¹,²,³,⁴,⁵
muh.panji@ui.ac.id²

Abstract. Millennial employees have psychic characteristics that are different from other generations. Millennial employees have the lowest engagement rates compared to Generation X and Baby Boomers (Hewitt 2016). The purpose of this study is to analyze the main engagement generation of Millennial employees in LQ 45 companies, analyze the factors of engagement of Millennial employees who work for LQ 45 companies and formulate engagement enhancement strategies that are in line with the characteristics of Millennial employees. The data used in this study are primary data obtained through questionnaires and secondary data from LQ 45 Company Samples, namely PT Astra International, Unilever, Elnusa, PT and PT Wijaya Karya. The method used in this study is descriptive analysis, factor analysis and Tree Diagram. The results showed that work life balance is the main engagement driver according to the perception of Millennial, autonomous Generation employees and career opportunity is the main engagement driver according to expert perceptions. Factor analysis forms six factors of engagement, namely organization, compensation and benefits, the work, teamwork, pride, and performance. The model for increasing the engagement of Millennial employees is presented in a Tree Diagram with the Co-Auto Balance Gamification formula.

Keywords: Engagement Driver, LQ 45, Millenial, Strategy, Tree Diagram Model

1. Introduction
Employee engagement is still one of the most strategic issues in the field of corporate human resources (HR) until 2018. Research from Hewitt [1] states that the level of engagement in a company has significant financial implications. Consistently through a statistical approach, there is a relationship between the level of engagement that is high and the financial performance of a company. Every 5 (five) percent increase in engagement level will increase revenue growth by 3 (three) percent. However, making employees engaged is one of the challenges for the company because each employee has a different level of engagement. Based on research conducted by...
Hewitt [2] there is a difference in the level of employee engagement based on generation as shown in Figure 1.

![Segment level engagement based on generation](image)

**Fig. 1.** Segment level engagement based on generation [2]

The engagement level of Millennial employees is the lowest compared to the Baby Boomers and Generation X generations. This fact needs special attention because in 2020 this generation is projected to be the largest generation in the world of work. Globally, this generation is projected to reach a portion of 50 percent in the world of work because in that year the majority of Millennials has entered the productive age. Millennials have essentially the same needs as other generations, but Millennials have unique needs shaped by technology, constant feedback (such as social media), changes in the composition of the workforce and economic volatility [2].

The proportion of Millennials in each country is different. Indonesia's workforce in 2016 has been filled by three different generations, namely Baby Boomers, Generation X, and Millennial. The proportion of Millennials to the national workforce is shown in Table 1. The data in Table 1 if calculated shows that the number of Millennials who work has reached 46,847,228 people, while the total workforce has reached 120,647,697 so the percentage of Millennial work has reached 38.83 percent. Generation X (age range 35 to 54 years in the table) is still slightly higher in the percentage of 45.30 percent, while Baby Boomers are only 15.87 percent. This calculation uses a 2016 database, meaning that in 2018 the number of Millennials in the world of work has increased by more than 38.83 percent.

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Working Age that Works</th>
<th>Proportion (%)</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-19</td>
<td>4,873,611</td>
<td>38.83</td>
<td>Milenial</td>
</tr>
<tr>
<td>20-24</td>
<td>12,295,397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-29</td>
<td>14,557,279</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-34</td>
<td>15,120,941</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35-39</td>
<td>15,452,579</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40-44</td>
<td>14,748,920</td>
<td>45.30</td>
<td>Generation X</td>
</tr>
<tr>
<td>45-49</td>
<td>13,374,073</td>
<td></td>
<td></td>
</tr>
<tr>
<td>50-54</td>
<td>11,077,423</td>
<td></td>
<td></td>
</tr>
<tr>
<td>55-59</td>
<td>8,259,948</td>
<td>15.87</td>
<td>Generation Baby</td>
</tr>
<tr>
<td>60+</td>
<td>10,887,526</td>
<td></td>
<td>Boomers</td>
</tr>
<tr>
<td>Total</td>
<td>120,647,697</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Badan Pusat Statistik (2016)
*based on criteria of Howe and Strauss (2000)

The increasing dominance of the Millennial in the world of work in Indonesia with its special characteristics has made the formulation of appropriate human capital strategies very necessary so that the potential of this generation can be utilized optimally. Increasing the number of Millennials in the world of work requires special attention by the human resource management, including in terms of engagement, because of the fact that Millennials have the lowest level of engagement.
compared to other generations. This fact must be accommodated by the company by formulating a strategy for increasing engagement for the Millennials. Millennials need to be further investigated according to the need for advancing corporate human resources in various industrial sectors in Indonesia.

The industrial sector that contributes to the national Gross Domestic Product (GDP) includes the oil and gas and non-oil and gas sectors. The non-oil sector business sector is the biggest contributor to Indonesia's GDP. Non-oil and gas GDP reaches 89.97 percent of total GDP in 2017. The business sector of the non-oil and gas sector includes industries in LQ 45. The LQ 45 industry can come from all sectors of non-oil and gas business as long as the company engaged in the business field meets the characteristics and has a fast track program for Fresh graduates.

Millennials are often associated with the motto we hired to leave. Based on the Millennial survey conducted by Deloitte [3] stated that 62 percent of Millennial employees in Indonesia already have the confidence to leave their company before 2020. The conditions in which Millennial employees have plans to leave the company make it difficult for employees of the Millennial to be engaged in their company. Based on these considerations, research is needed that is related to the Talent Retention model based on employee engagement of Millennial employees in LQ 45-based companies so that they can be utilized to minimize the tendency of Millennial employees to move companies.

The problems can be formulated as follows:
1. What is the main engagement driver for Millennial employees in LQ 45 companies?
2. What are the factors of engagement of Millennial employees in LQ 45 companies that can make them engaged with the company?
3. What is the right management strategy for Millennial employees in LQ 45 companies so that they can be engaged with the company?

This research was conducted on Millennial employees who work in companies in Companies listed on LQ 45. The research focused on analyzing Millennial employee engagement drivers at LQ 45 companies. The theory of engagement used was a theory from Hewitt who introduced The Aeon Hewitt Engagement Model [2] and the generation theory used is according to Howe and Strauss [4].

2. Literature Review

Previous research related to Millennial and employee engagement has been carried out. In 2014 Aguilar conducted a research related to Millennial employee motivational drivers. In [2] Hewitt conducted research related to the trend of employee engagement and Simbolon has also conducted research related to Quality of Work Life Generation X and Y in the same year. In addition, Fountain [8] has also conducted research related to the relationship between the level of engagement, engagement drivers, and bullying behavior. Research related to engagement and generation has been carried out by Amuzu in 2017. The recapitulation of previous research is shown in Table 2.

<table>
<thead>
<tr>
<th>No</th>
<th>Title</th>
<th>Year</th>
<th>Writer</th>
<th>Method</th>
<th>Result</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Engaging the Workforce: Baby Boomers, Generation Xers</td>
<td>2017</td>
<td>Cecilia S. Amuzu</td>
<td>Multivariate Analysis of Variance (Manova)</td>
<td>There is no difference in engagement drivers between Northcentral University, Proquest</td>
<td></td>
</tr>
</tbody>
</table>

Table 2. Recapitulation of the results of previous studies
<table>
<thead>
<tr>
<th>2</th>
<th>2015 Trends in Global Employee Engagement</th>
<th>2016</th>
<th>Aon Hewitt</th>
<th>Descriptive Analysis</th>
<th>The main engagement factors of Millennial employees are career opportunities, salary (pay), company reputation (organization reputation), brand alignment and recognition (recognition)</th>
<th>Aon Hewitt Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Analysis of Quality of Work Life in Generation X and Y Alumni of the Faculty of Economics and Management of IPB</td>
<td>2016</td>
<td>Dwi Astrid Avianti Simbolon</td>
<td>Descriptive Analysis, Pairwise Comparison, The House Model</td>
<td>QWL priority factors in Generation X are workplace safety, compensation and conflict resolution. The QWL priority factor in Generation Y is compensation, career development, and pride.</td>
<td>Essay of IPB Bachelor Degree of Management</td>
</tr>
<tr>
<td>4</td>
<td>Relationship among Work Engagement, Drivers of Engagement, and Bullying Acts in Registered Nurses Working in Hospital Settings</td>
<td>2016</td>
<td>Donna M. Fountain</td>
<td>Descriptive Analysis, Correlation Analysis</td>
<td>All psychic engagement drivers increase employee engagement,</td>
<td>Rutgers The State University of New Jersey</td>
</tr>
<tr>
<td>5</td>
<td>Identification of Motivational Drivers of Generation Y Employees</td>
<td>2014</td>
<td>Camille M. Aguilar</td>
<td>Descriptive Analysis</td>
<td>The main motivation factor for Millennial employees is in the category of</td>
<td>San Jose State University, Proquest Dissertatio</td>
</tr>
</tbody>
</table>
3. Method
   a. Framework
      Millennial employees have the lowest engagement rates compared to baby boomers and Generation X. Besides low engagement rates, the proportion of the Millennial workforce has reached 38.83 percent in 2016. This means that in 2018 the proportion will increase. The increase in the proportion of Millennials in the workforce needs special attention because of the low level of engagement. The level of engagement of Millennial employees must be considered by all types of companies, including LQ 45 companies.

      ![Research Framework](image)

      **Fig. 2.** Research Framework

      This research takes the object of Millennial employees who work for LQ 45 companies in Indonesia. The selection of research locations nationally was determined deliberately by considering that the research sample was able to represent the talent who entered through the fast track process in the LQ 45 company. The study was conducted from November 2018 to December 2018. The data used in this study were primary data and secondary data that were qualitative and quantitative. Primary data is in the form of data obtained from respondent answers to Millennial employees and expert respondent answers. Secondary data in the form of company documents, internet data, the Central Statistics Agency, and literature studies for theoretical references that are in accordance with the research topic.

      Population is a generalization area consisting of: objects / subjects that have certain qualities and characteristics determined by researchers to be studied and then conclusions drawn [9] The population of this study is Millennial employees who work for LQ 45 companies. The population data from this study are not specifically known. However, to ascertain the specific sample size, in
In this study, the determination was carried out using the formula Lemeshow [10] where this formula is suitable for determining the exact number of populations that are not known as follows.

\[
n = \frac{Z^2 \times P (1-P)}{d^2} \tag{1}
\]

Remarks:
- \( n \) = Number of sample
- \( P \) = Estimation (0.5)
- \( Z^2 \) = \( z \) score in confidence level 90% = 1.645
- \( d^2 \) = Sampling error (10%)

Based on these opinions, the sample size in this study can be determined as follows:

\[
n = \frac{1.645^2 \times 0.5 (1-0.5)}{0.1^2} 
\]

\[
n = 67.65 \approx 70
\]

The calculation resulted in a sample size of 67.65 people or rounded up to 70 people so that this study must at least get as many as 70 respondents. Sampling in this study using non-probability sampling method with snowball sampling technique and purposive sampling. The snowball sampling technique is a technique in which a sample of researchers comes from a small group that is relevant to the research question and the sample then invites other participants who have relevant characteristics to become respondents. The purposive sampling technique is sampling by selecting individuals based on their relevance to the research question [11].

The snowball sampling technique is done by sending a questionnaire link to employees who meet the criteria of this study that are sent freely via email and social media. Online questionnaires are created using Google Form. The online questionnaire is aimed at all Millennial employees who work for LQ 45 companies in 2018. The questionnaire instrument uses a six-point differential semantic scale that measures perceptions of the importance of each engagement factor for respondents. Specifically, a score of one indicates that the factor is not very important, the score of six is very important, and the score between one and six is not labeled. The number of response options as many as six was chosen based on the research findings of the optimal number of response categories related to validity, reliability, and ease of use [12]. The response format does not provide a neutral choice (middle response) to avoid the tendency of respondents to choose the neutral value so that the resulting answer can give a picture that fits the scale of relative importance perceived by the respondent without any biased answers.

The total sample of Millennial employees obtained in this study amounted to 131 people and fulfilled the requirements for the minimum number of samples. The distribution of respondents from this study based on the sub-sector where respondents work can be seen in Table 3.

<table>
<thead>
<tr>
<th>Subsector</th>
<th>Number</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Astra Internasional</td>
<td>116</td>
<td>88.50</td>
</tr>
<tr>
<td>Unilever</td>
<td>4</td>
<td>3.10</td>
</tr>
<tr>
<td>Elnusa</td>
<td>3</td>
<td>2.30</td>
</tr>
<tr>
<td>Wijaya Karya</td>
<td>2</td>
<td>1.50</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>131</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
In addition, purposive sampling technique is done by contacting experts in the field of human resources both from academics, professionals, and consultants in the field of human resources through e-mail and personal contact. Experts who stated they were willing to become respondents were then sent special expert questionnaires. The first expert respondent in this study worked as a lecturer at the Faculty of Economics and Business, University of Indonesia; the second expert worked as a human resource consultant at a consulting company consisting of HR experts where he was the founder of the company and also worked as general manager of HRD at a company located in Tangerang; the third expert works as human capital analytics in a manufacturing company located in North Jakarta; The fourth expert works as a human capital director at a health drink producer company located in Jabodetabek. The fifth expert works as vice president of human resources at a mining company located in Jakarta. The questionnaire was presented with open questions "How do you think about the processing strategies of Millennials to be engaged with the company"

b. Data Processing and Analysis Method

Test Validity shows the extent to which a measuring device can measure what is measured. The validity test aims to determine the validity level of the questionnaire. Validity testing is done by testing the measuring instrument with a sample of at least 30 people [13]. Based on the validity test conducted, it was found that all the questions in this research questionnaire were declared valid with r counts greater than r table (N = 131). Reliability Test is a procedure to determine the extent to which measurement results remain consistent, if measurements are taken twice or more for the same symptoms by using the same measuring device [14] Reliability test states that the research instrument is reliable if the alpha count value is greater than the r-table value. The alpha coefficient assumes that if the a-cronbach value is greater than 0.60 (a-Cronbach theory) then the questionnaire can be said to be reliable. Reliability testing is carried out on data that has been collected from questionnaires distributed online to respondents. Reliability testing uses the Cronbach's Alpha technique with the help of Software Statistics Product and Service Solution (SPSS) 20.0. Based on the reliability test conducted, it was found that the Cronbach's Alpha value was 0.89 (greater than 0.60), meaning that the research instruments used were reliable.

c. Descriptive Analysis

This study uses a score of six points converted into percentages, where the score of six is a positive pole (100%), and the score of one is a negative pole (0%). A numerical linear scale can be made with the following formula.

$$RS = \frac{m-n}{b}$$ .........................................................(2)

Remarks :

- RS = scale range
- m = highest score in range
- n = lowest score in range
- b = number of class or category made

Based on these equations, the measurement results through a semantic differential scale, where m = 100 percent, n = 0 percent, into six classes (b = 6), then the calculation is:
\[ RS = \frac{100\% - 0\%}{6} = 16.67\% \]

The standard for the six categories of classes formed is:
- 0.00% - 16.67% = very unimportant
- 16.67% < modus ≤ 33.34% = unimportant
- 33.34% < modus ≤ 50.01% = slightly unimportant
- 50.01% < modus ≤ 66.68% = slightly important
- 66.68% < modus ≤ 83.35% = important
- 83.35% < modus ≤ 100.00% = very important

Data processing for descriptive analysis was carried out using the help of Microsoft Office Excel 2013 Software and SPSS 20.0 for Windows software. Descriptive analysis conducted produces output in the form of information about the importance of each of the Millennial employee engagement drivers based on the mode by utilizing the scale range of the six class categories formed. In addition, descriptive analysis of expert answers resulted in priority driver engagement according to experts presented in the form of a venn diagram to see the similarity of perceptions of expert respondents.

4. Result and Discussion

Talent respondents who filled out questionnaires as many as 131 employees with bachelordegree, the dominant tenure of 105 people less than 2 years, and work locations in DKI Jakarta, and were dominated by men. Descriptive analysis results have been carried out to measure the relative importance of engagement drivers of Millennial employees who work for LQ 45 Sample companies Engagement drivers according to Hewitt's theory [1] consist of six groups which are then divided into 25 questions representing six groups of engagement drivers. The response of each respondent indicates the perception of Millennial employees for each engagement driver as on table 4.

<table>
<thead>
<tr>
<th>Company Name</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Astra Intern</td>
<td>3</td>
<td>2.3</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Elnusa</td>
<td>107</td>
<td>83.6</td>
<td>83.6</td>
<td>85.9</td>
</tr>
<tr>
<td>Unilever</td>
<td>10</td>
<td>7.8</td>
<td>7.8</td>
<td>93.8</td>
</tr>
<tr>
<td>Wijaya Karya</td>
<td>8</td>
<td>6.3</td>
<td>6.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>128</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Company’s Subsector</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Automotive</td>
<td>3</td>
<td>2.3</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>Construction</td>
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### Location

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### Education

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<td></td>
<td>Single</td>
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### Working Experience

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<tr>
<td>Valid</td>
<td>&lt; 1 tahun</td>
<td>30</td>
<td>23.4</td>
<td>23.4</td>
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<td></td>
<td>1 - 2 Tahun</td>
<td>79</td>
<td>61.7</td>
<td>85.2</td>
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The results of the analysis show that the majority of engagement drivers presented in this study are considered very important by Millennial employees. Engagement drivers that are considered to be the most important are work life balance with a mode value of 98.50 percent. This result is supported by Duchscher's [17] study which states that Millennials tend to give a higher level of importance to work life balance than previous generations, describing them as a generation that actively strives to achieve and maintain a harmonious balance between home and work life.

Diversity is an engagement driver that is relatively considered less important by Millennial employees who work for LQ 45 companies with 55.80 percent mode value. Diversity referred to in this study is related to diversity in the work environment or work group, such as diversity of sexes,
age, or diversity of core competencies possessed by each individual in the work group. Respondents in this study consider that diversity is not the priority to make them engaged with their company.

a. Engagement Priority Driver for Millennial Employees according to Experts

Five experts have contributed to become respondents in this study. These experts come from human resource academics, human resource consultants, and human resource professionals. Open questions about the strategy of increasing the engagement of Millennial employees have been provided with diverse responses. The results of expert respondent answers are presented in the form of visualization of the Venn Diagram as follows.

![Expert perception Venn diagram](image)

**Fig. 4. Expert perception Venn diagram**

Source: Processed data (2018)

Figure 4 shows that autonomy is engagement driver which is considered a priority by expert two, expert four, and expert five. It can be concluded that autonomy is the most important engagement driver for Millennial employees according to experts. Millennial employees prefer to work for companies that already have a clear system that gives them the opportunity to do their best in achieving their goals according to their potential. These characters make autonomy important to them according to expert perceptions. In addition, career opportunity can also be interpreted as the main engagement driver because it is considered a priority by expert two, expert three, and expert five. Experts in this study stated that career path and position name are one of the most important things for Millennial employees. They are people who want to be instant, want to be considered capable, want to be considered great, compare with each other because of the internet of things, don't really like working hard and need recognition. This character makes career opportunity very important for Millennial employees according to expert perceptions.

The company really needs creativity as the main capital in running a business. Millennial employees need greater autonomy in doing their jobs according to their personal creativity and initiative. Therefore, Millennial employees must be given space to develop their potential and independence in carrying out their work duties. In addition to autonomy at work, Millennial employees who work for LQ 45 companies also need clear career growth so companies need to pay attention to career opportunities for Millennial employees. Companies can implement functional career paths in addition to structural career paths to accommodate those needs.
b. Factor Analysis of Engagement of Millennial Employees

Testing the correlation between variables in the perception of Millennial employees is carried out using the Barlett test of sphericity method and Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) measurements. Value of KMO and Barlett’s Test, where the results of factor analysis show KMO-MSA value of 0.81 (greater than 0.5) with a significance of 0.000 (smaller than 0.05). This shows that the existing variables and samples have met the requirements for further analysis, so it does not need to be iterated. The next step is to extract the variables so that fewer factors will be formed. One of the results obtained from the extraction of variables is the value of communalities. The value of communalities is the number of variants of an initial variable that can be explained by existing factors. The greater the value of communalities of a variable, the more closely related to the factors formed.

The next process is to analyze component matrix, which is the stage that shows the distribution of each variable on the six factors formed. Values that indicate the magnitude of a variable with respect to each of the new factors formed can be seen in the component matrix table, namely the loading value. Factor rotation will increase the value of the variable loading which initially is already large and reduces the loading value which was initially small. The eigenvalue and loading values that meet the requirements (eigenvalue> 1.1 and loading> 0.5) in each of the factors formed can be seen in Table 5.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Variance (%)</th>
<th>Variable</th>
<th>Loading</th>
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<tr>
<td>Work Atmosphere</td>
<td>6.25</td>
<td>24.99</td>
<td>5. Work Life Balance</td>
<td>0.877</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>6. Benefit</td>
<td>0.748</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>14. Environment</td>
<td>0.746</td>
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<td></td>
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<td></td>
<td>12. Salary</td>
<td>0.554</td>
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<td></td>
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<td>23. HR Practice</td>
<td>0.489</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>25. Enabling Infrastructure</td>
<td>0.470</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>16. Health and safety work system</td>
<td>0.319</td>
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<tr>
<td>Vigor</td>
<td>2.22</td>
<td>8.88</td>
<td>20. Career Path</td>
<td>0.807</td>
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<td></td>
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<td></td>
<td>9. Learning and Development</td>
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<td></td>
<td></td>
<td></td>
<td>3. Innovation</td>
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<td></td>
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<td></td>
<td>15. Autonomy</td>
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<td></td>
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<td>4. Recognition</td>
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<td>2.04</td>
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<td></td>
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<td>10. Managing Performance</td>
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<td>19. Diversity</td>
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<td>8. Coworkers</td>
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<td>5.43</td>
<td>18. Responsibility</td>
<td>0.730</td>
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<td></td>
<td></td>
<td></td>
<td>24. Value</td>
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<td></td>
<td>7. Communication</td>
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<td></td>
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<td>13. Bussiness Process</td>
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<td>Absorption</td>
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<td>17. Pride</td>
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<td></td>
<td>22. Company Purposes/Focus</td>
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<td></td>
<td></td>
<td></td>
<td>11. Reputation</td>
<td>0.518</td>
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Source: Processed data (2018)
The results of factor analysis show there are six factors that can make Millennial employees engaged with their company (eigenvalue> 1). A loading value of less than 0.50 according to Suliyanto [16] is considered not to have a meaningful role on the factors formed so that these variables can be ignored in the formation of factors. The loading value shows the magnitude of the correlation between the variables and the latent construct (factor). The data in the table shows that the number of variants that can be explained by factor 1 is 28.53 percent, factor 2 is 8.83 percent, factor 4 is 7.71 percent, factor 5 is 5.45 percent, factor 6 is 4.23 percent, so a total of six factors can explain the variant of 59.91 percent. The first factor formed was named an organization. The customers variable is the engagement driver with the highest loading value of 0.86 so that it can be concluded that the customers have the highest correlation with the latent organization of 86 percent. The second factor is the factor that is given the name compensation and benefits. The pay variable has the highest loading value of 0.81 so that it can be concluded that pay has the highest correlation with compensation and benefits at 81 percent. The third factor formed is a factor named the work. The variable with the highest loading value on this factor is autonomy of 0.79 so it can be concluded that autonomy has the highest correlation to latent the work of 79 percent. The fourth factor that is formed is a factor named team work where co-workers or coworkers become variables with the highest loading value of 0.72, which means co-workers have the highest correlation with latent team work by 72 percent. The fifth factor that is formed is a factor that is given the name pride where the sense of accomplishment becomes the variable that has the highest loading value of 0.78, which means that the sense of accomplishment has the highest correlation with the latent pride of 78 percent. The last factor is named performance where innovation is a variable with the highest loading value of 0.71, which means innovation has the highest correlation with latent performance of 71 percent.

Test the accuracy of the model of the factors formed is concluded by utilizing the reproduced correlation matrix table output (Appendix 10). Based on the output of the reproduced correlation matrix, information is obtained that there are 40 percent residuals above the diagonal line that changes. Thus, the model formed from factor analysis is stated to be good because only 40 percent of the residuals above the diagonal line change or less than 50 percent.

c. **Strategy for Increasing Millennial Employee Engagement**

Based on the results of the analysis carried out, efforts are needed to improve the engagement of the Millennial employees. Increased engagement is done to get a positive impact on the high level of engagement of Millennial employees. Managerial implications in this study are presented through a tree diagram model as an approach used to identify the causes and consequences of a problem [18]. The compilation of tree diagrams in this study was formulated to develop logical steps in order to achieve a goal of increasing the engagement of Millennial employees in LQ 45 samples. Factor analysis resulted in six factors that could make Millennial employees engaged in their company. The strategy for increasing the engagement of Millennial employees in LQ 45 companies is presented using the tree diagram model as shown in Figure 5.
The action plan for increasing the engagement of Millennial employees in LQ 45 companies recommended in this study is based on priority driver engagement according to Millennial employees and experts. Engagement drivers in question are work life balance, career opportunity, and autonomy. The strategy to increase engagement through engagement drivers is realized through the Co-Auto Balance Gamification formula, namely increasing engagement by utilizing the gamification system applied to Millennial employees. Gamification means implementing game elements into non-game contexts such as work in an organization with the aim of attracting users and resolving problems [19]. Gamification is not just a game with entertainment value. Gamification means entering game elements into existing processes to increase productivity, improve expertise and drive performance so as to increase employee engagement [18]. An example of a company that applies gamification is Spotify, an online music streaming application company that has replaced the annual review system with a mobile gamified solution that is able to attract 90 percent employee participation even though the program is voluntary.

Implementing a gamification system through work life balance, career opportunity, and autonomy can be done by designing a game platform that is able to provide greater autonomy, freedom and independence for Millennial employees in doing their jobs while providing a balance between personal and work life and providing opportunities career growth. The gamification application scheme for Millennial employees in LQ 45 companies as shown in the model begins with identification, socialization, challenges, giving feedback, and giving rewards.

The first stage that can be done by the company in implementing this gamification is identification of work tasks that are suitable for gamification and in accordance with the objectives of the company. Next is to socialize the game platform and game elements that will be applied to the process so that employees (end users) can understand the gamification system. This socialization will be more effective if it is realized through a training program. After the employee is ready to use the gamification platform, the employee is given output-based daily, weekly, or
monthly challenges that are continually updated after the completion of the task. Companies must give freedom to employees in solving these challenges based on creativity and personal initiative (autonomy). The platform should provide task completion instructions and problem solving scenarios for problems that are regular and predictable as recommendations for decision making. This is to ensure that input from management remains available so that the opportunity to make mistakes can be minimized. In addition, the completion of work assignments in the form of challenges can also be done with a virtual working mechanism that enables employees to work without the need to enter the office. This virtual working mechanism will provide more opportunities for Millennial employees with their families and take care of other interests without disrupting their productivity (work life balance).

Management can provide regular feedback for each work completed in the form of the challenge. The form of feedback that can be given in the form of points, increasing the level of challenges, as well as providing recognition (recognition) by utilizing game elements in the form of a badge (rank) for employees with the completion of the best tasks. These achievements besides being displayed on the game platform are also posted on the office social media group. Millennials really like to compare with each other because of the internet of things so this method will trigger employees to continue to solve the challenges given. This makes work feel more fun because of the motivation to solve challenges as when someone plays the game. Employees who are able to collect the most badges are given additional bonus incentives, vacation packages, or long-term rewards in the form of career opportunities.

This strategy is expected to make employees feel more entertained and motivated to complete tasks so as to make employees achieve the conditions of say, stay, and strive. Say means employees will always talk positively about their company to consumers, family, colleagues, and prospective employees who want to work in the same company so that indirectly employees become corporate image promotion agents without the need to incur additional costs. Stay means employees will feel comfortable and want to stay working at the company. Strive means employees have felt part of the company so they are strongly motivated to succeed the company.

5. Conclusion

Autonomy and career opportunity are the main engagement drivers of Millennial employees according to expert perceptions. The results of factor analysis show that there are six main factors that cause the Millennial Talent in representatives of LQ 45 companies to be engage with their company. These factors are Vigor, Dedication, absorptions, Teamwork and work atmosphere.

The strategy undertaken to increase the level of Millennial Talent engagement is realized through a tree diagram model based on primary engagement drivers according to Millennial employee perceptions and expert perceptions. Work life balanced, Learning and development, leadership, autonomy, and career opportunity are the main engagement drivers used for strategy formulation based on Millennial employee perceptions and expert perceptions. The strategy formulation should involving inspiring leader to increase the engagement of Millennial employees/talents.

References


Transformational Leadership, Dynamic Capabilities and Non-govermental Organizations Performance: Strategy, Structure, and Environment

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1adcbright@gmail.com, 2yasmine73@ui.ac.id

Abstract: The dynamic capability approach has become a general theoretical framework for analyzing how companies (profit sectors) overcome rapidly changing environments. This paper uses a dynamic capability approach through the presentation of a theoretical framework and empirical evidence about how the relationship between transformational leadership style and dynamic capabilities influences the performance of non-governmental organizations - NGOs - (nonprofit sector). The research explained in this paper is only a part of the author’s research. The concept and operationalization developed in this paper will be used for further empirical research scheduled in November 2018.

Keywords: Competitive environment, dynamic capabilities, non-governmental organizations, organizations performance, organization structure, and transformational leadership.

1. Introduction
In the global context, recent assessments of non-profit organizations such as non-governmental organizations (NGOs) show that in the last three decades, NGOs are increasingly expanding the impact of their activities around the world and placing them as important role holders in the economic and social development of the society [1]. The same thing happened in Indonesia, especially after the collapse of the new order and the rise of reformation in 1998, where there was a paradigm shift in socio-political dynamics from elite-based to community-based, Indonesian NGOs rose to show increasingly significant roles and performance [2].

Along with the growth of NGOs in both the scale and scope, at the same time NGOs face increasing attention and pressure from the media, policy makers, companies, and among NGOs themselves, for better accountability for the impact of their activities [3]. This situation leads to the questions of accountability for NGOs [4]; [5].

According to Ebrahim [4] in the context of NGOs, accountability is a complex and dynamic concept not only as a means by which individuals and organizations are responsible for their actions, but also in the sense that organizations and individuals take internal responsibility to shape the organization's mission and values, and open themselves to public supervision or external, and to assess performance in relation to organizational goals. Whereas for NGOs realizing accountability is not an easy matter considering that accountability moves in many dimensions and involves many actors, uses various kinds of mechanisms and performance standards and requires organizational response at various levels. This argument reinforces the findings of Edward and
Hulme [5] that NGOs have multiple accountability, namely "downward" to partners, beneficiaries, their staff and supporters, and "upward" to the trustees, donors and governments where they operate.

To ensure that NGOs can maintain their space to adapt, innovate and maintain a variety of accountability with different constituents, Lewis [6] has offered an effective management model for NGOs to realize organizational accountability. This management model emphasizes organization, environment and outcomes as interrelated aspects. The model was built based on the argument of De Graaf [6] which states that in managing its organization, NGOs need to understand and influence the broader organizational environment outside of their direct field of operation, as it is very crucial for NGOs, because unlike commercial organizations that can measure their success based on their activities and direct results (i.e. production, sales and profits) NGOs must understand and assess the implementation of their work plans in the context of the external dimensions of their environment [6]. However, the working environments of NGOs in reality are dynamic and risky [7] As the context in which most NGOs operate tends to be in conditions of scarce resources, institutionally and culturally complex [8]. Especially for NGOs working in politically unstable regions, which may face difficult operating conditions in terms of access to society, staff security and problems with getting accurate information [9]. The situation is currently aggravated by increasingly dynamic conditions of environmental change. Thus it can be said that in order to survive NGOs need to have the ability to manage this highly dynamic environment.

Organizational ability to manage or adapt to dynamic environments commonly referred as dynamic capabilities [10]. So far, the dynamic capability approach has become a general theoretical framework for analyzing how companies (the private sector) address rapidly changing environments, especially at high speed markets [10] and recognized as a source of sustainable competitive advantage and prerequisites for long-term organizational survival [11]; [12]; [1] But the question then, whether dynamic capabilities be a relevant theoretical framework for analyzing how non-profit organizations such as NGOs manage and adapt to dynamic environments?

The author analyzes the answers to these questions using two approaches. First is the composite management theory approach initiated by Lewis [9] which states that NGO management should not be seen as a completely new field of management, but can be seen in composite terms as a flexible spread of a combination of theory and practice relevant from the world of business and the public sector. Where in practice, NGO management might be understood as a continuous performance of improvisation by referring to ideas and techniques from other fields (profits and the public sector). Then it is possible for organizations such as NGOs to develop dynamic capabilities as profit organizations can develop in different ways. Research on public organizations [12]; [4] has proven that even public organizations can develop and benefit from dynamic capabilities. Second, through organizational learning theory approaches which refer to Korten [13] that the key to the success of NGOs is to translate ambitious plans into practical activities and achieve conformity between needs, program output and competence with its ability to embrace mistakes, learn with people, and build new institutional knowledge and capacity through action. In other words it should has organizational learning abilities. Brown and Convey's [14] in Lewis [6] also stated that organizational learning is the key for NGOs to survive. Thus, considering the high need for organizational learning the authors refer to the approach of Zollo and Winter [15] regarding the concept of dynamic abilities that see organizational learning abilities as a source of dynamic ability, and according to Zott [16] learning mechanisms improve dynamic abilities and offer insight into the evolution of dynamic capabilities [17]. For authors theese idea becomes a valuable clue about the potential of NGOs to develop dynamic abilities through organizational learning.
But according to Helfat et al. [18] the application of dynamic capabilities must be done intentionally, and managerial perceptions of organizational leaders about the need for change are important triggers for the performance of dynamic capabilities [11]. Other studies conducted, also showing that leaders are a key factor to recognize opportunities and make decisions that affect organizational processes [19], because their actions and decisions create an organizational context, affect the response of managers at the middle level and the impact of performance [20], in Cabrales et al., [21]. Thus, referring to several arguments about leadership in NGO organizations in the context of dynamic environments for example in Shiva and Suar [22], given that NGOs face external situations and resource crises that are more difficult to predict than profit organizations [23], to overcome it NGOs need transformational leaders (Khandwalla, 1990). In the context of dynamic capabilities itself, Cabrales states that only transformational leaders can directly influence dynamic capabilities because they are able to promote various sensing, seizing, and reconfiguring organizational resources.

Furthermore, Wilden et al., [24] argue that the realization of potential benefits derived from the dynamic capabilities of the organization depends also on two factors: organizational structure and competitive intensity in the market where the company is embedded. In this case the author also believes that in the context of NGO performance, organizational structure and competitiveness have an influence on the performance of NGOs as well as other forms of organization. [20]

The research that will be conducted aims to find out how the performance of NGOs in a very dynamic environmental context is influenced by transformational leadership style and dynamic ability by considering the contingency effects of competitive structure and intensity in the NGO sector. The research was conducted quantitatively by distributing questionnaires to 2848 NGOs working on thirteen main sectors and operating in various levels of government throughout Indonesia. This study uses the analysis of Structural Equation Modeling (SEM), among others because the Partial Least Squares (PLS) approach is suitable for research that has a theoretical basis that is still lacking where PLS is a causal-predictive analysis in conditions of high complexity and very suitable to develop as suggested by SEM covariance like LISREL.

2. Literature Review

2.1 Transformational Leadership

Transformational leadership refers to leaders who are able to move followers beyond their immediate interests. [18],[22] Transformational leaders have the ability to attract followers by charisma, give individual attention to each subordinate, inspire followers to take on grassroots challenges, and function as a role model for selfless service that provides a rational for its presence other than just money as a consideration for subordinates [22]. Referring to Bass and Avolio [25] transformational leadership has five interrelated dimensions that are: ideal influence (as an attribute), here leaders build trust, inspire strength and pride, and go beyond their own individual interests to their followers; ideal influence (as behavior), leaders act with integrity, talk about their values and beliefs, focus on the desired vision, and consider the moral and ethical consequences of their actions; inspirational motivation, leaders behave in ways that motivate the people around them by giving meaning and challenges to the work of their followers; intellectual stimulation, leaders stimulate the efforts of their followers to be innovative and creative by questioning assumptions, reframing problems and approaching old situations with new ways; and individual considerations, where leaders pay attention to each follower's needs for achievement and growth by acting as a coach or mentor.
2.2 Dynamic Capabilities

Dynamic capability according to Teece et al. [10] is "the company's ability to integrate, build, and reconfigure internal and external competencies to address rapidly changing environments". A quite number of studies that support the argument of Teece et al. [26] some of which mention that dynamic capabilities can support the creation of competitive advantage [24] or hold the potential for sustainable competitive advantage and indirectly produce competitive advantage [27]; it is also said that companies that adhere to dynamic capabilities improve their performance [28].

Winter [15] through his observations, came to a conclusion that although there are some who argue that dynamic capabilities support the achievement of competitive advantage, his research came to a conclusion that the concept of dynamic capabilities is a useful addition to strategic analysis tool kits, but strategic analysis itself remains a problem understanding how the idiosyncratic attributes of individual companies affect prospects in the context of certain competition.

Although mentioning that the analysis of dynamic capability models shows that it overcomes the problem of resources at the infrastructure level and has some similarities with traditional contingency theory, Medcof [18] said that this similarity can be a source of ideas to decipher and refine models of dynamic capabilities. But according to Medcof, this analysis leaves little doubt that the dynamic ability model is actually a renewed contingency approach (neo-contingency). Whereas Helfat and Peteraf [18], refer to the definition of dynamic abilities from Teece et al. [29] suggested a new concept that supports a more comprehensive approach to dynamic resource-based theory, namely capability life cycle (CLC), where in this concept they include all organizational capabilities, ‘dynamic’ or in other words a source-based perspective dynamic resource-based view. Furthermore, Eisenhardt and Martin [12] depart from the understanding that the concept of dynamic capability is an extension of the resource-based perspective (RBV), arguing that dynamic capabilities actually include well-known organizational and strategic processes such as forming alliances and product development whose strategic value lies in their ability to manipulate resources into value creation strategies. Although idiosyncratic, they show similarities or ‘best practices’ throughout the company. Their extensive structural patterns vary with market dynamism, ranging from strong and grooved routines in a fairly dynamic market to fragile semi-structured at high speeds. They evolved through well-known learning mechanisms. Where the mechanism of learning is in line with the ideas of Zollo and Winter [15]; [15] and Zott [16] that suggested dynamic capabilities can be seen as embedded in routine organizational processes that aim to influence change, where sub-processes that are dynamic capabilities can be classified as routines for variation, selection, or retention, which are materials for evolutionary learning systems. Yi Chien and Han Tsai [17] also mentioned that knowledge resources and learning mechanisms are very important for the development of dynamic capabilities.

2.3 Organizational Structure

Hatch and Cunliffe in their book Organization Theory, Modern, Symbolic, Postmodern Perspective [30] stated that organizational structure refers to the relationships between people and the roles and responsibilities they assume in the organization. In simple terms the social structure of an organization is commonly referred to as an organizational structure, by modernist organizational theorists defined as hierarchies, division of labor, and coordination mechanisms.

While Hitt et al., in their book on The Concept Of Strategic Management, put forward the view that effective structures provide the stability that companies need to successfully implement strategies and maintain their current competitive advantages while simultaneously providing flexibility to develop the benefits needed in the future. An effective flexible organizational structure enables companies to tap into current competitive advantages while developing new ones.
that can potentially be used in the future. In other word, organizational structure influences the company's response to change [10]Which is consistent with contingency theory, which confirms that the organizational context presents obstacles that must be adjusted by the company by modifying its structure. Fadeyi and Ajagbe [31]reinforced this argument through the conclusions of the results of their research which stated that organizational performance is highly dependent on organizational structure, when a structure that clearly exists people will perform better, tasks are divided well and productivity increases.Long before the aforementioned arguments, Fredricsson has shown that the pervasive effects of structure offer a reasonable explanation of why companies develop certain ways to make strategic decisions.

2.4 Competitive Intensity

Competitiveness is a complex, multidimensional and relative concept, related to the large number of interdependent variables that make it difficult to feel and define. Determining competitiveness itself is a research problem, as well as measuring competitiveness. According to Webster's English Dictionary, 'competitiveness' comes from the Latin word 'competer' which means 'involvement in business competition in a market'. The term commonly used in academics and business practice is 'competitive ability'. ([23]This definition shows that the reason why a company needs 'competitiveness' is because of competition.

Furthermore, according to Hitt et al., [31]when companies conduct maneuvers to obtain profitable positions in the market by carrying out a series of ongoing competitive actions and reap competitive responses among competing companies, competitive competition will emerge. The series of actions and competitive responses that companies need to build or maintain their competitive advantage and increase their market position are called competitive behavior. Whereas all competitive behavior - that is, a series of actions and total responses taken by all companies competing in the market - is called competitive dynamics. These competitive behavior of a company will eventually form market characteristics.

Regarding the intensity of competition, industrial organizations theory offers a framework known as the five forces of five forces Michael Porter [32]which is commonly used in the business literature to investigate the competitive environment in a sector (industry). Five competitive forces together manifest the intensity of competition within a sector and form the starting point of strategy formulation. These five Porter forces depart from the concept of an industrial organization (Industrial Organization / IO) to obtain what is then called the five forces that determine competitive intensity and, therefore, describe the attractiveness (or not) of an industry in terms of its profitability. Five of Porter's strengths include the three forces of 'horizontal' competition, namely the threat of substitute products or services, the threat of setting rivals, and the threat of new entrants. Whereas the other two from 'vertical' competition are supplier bargaining power and customer bargaining power. [33]

NGOs Performance

Performance is one of the most debated concepts and there has never been an agreement between various researchers and theorists on this matter [34]But some researchers argue that the main criterion of organizational performance is the growth and long-term survival of an organization[32]; [28]The diversity of definitions in the scientific literature creates ambiguity rather than clarity in defining performance. Experts argue that for the definition of organizational performance we must consider all activities that occur in different entities and different interests from those involved. As the purpose of the entity. But actually the most important of these performance issues is making the most appropriate instrument for assessing performance. Referring to Herman and Renz, [35]and Gill et al. [35]in Ramadan and Borgonovi [7]it is
emphasized that the most important thing is the understanding of the right indicators to measure and evaluate performance.

3. Hypotheses and Research Model
   
a. Research Model

![Research Model Diagram]

The research model of the study, can be seen in Figure 3.1 which designed to deep investigate the influences of transformational leadership and dynamic capability to NGOs performance. This model related four concept which are transformational leadership, dynamic capabilities, organizational structure, and competitive intensity, to analyze their impact on NGO performance. Figure 3.1.

b. Hypotheses Development

According to research model, the formulated hypotheses need to be tested, divided into four sections. First, the relationship of transformational leadership with NGOs performance. Second are the relationships of transformational leadership with the elements of dynamic capabilities. Third analyzing the contingency effect of the organization structure to the relationship of dynamic capabilities and NGO performance. And the last hypotheses analyses the impact of competitive intensity to the relationship between dynamic capabilities and NGOs performance.

c. Transformational Leadership and NGOs Performance

Goel and Kumar [23] in Shiva & Suar [22] stated that leadership studies so far have shown that transformational leadership styles have characteristics that are needed by leaders in non-government organizations [36] [25] and compared to transactional leadership styles transformational leaders achieve greater improvements and are considered to be higher in business matters, development, and performance [25]. These are characters needed by such organizations like NGOs. Based on the description, the researcher formulated the hypothesis as follows:

**H1**: Transformational leadership style has a positive effect on the performance of NGO organizations.
d. **Transformational Leadership and Dynamic Capabilities**

Cabrales, et al. [37] research results show that only transformational leaders can directly influence dynamic abilities. This is because transformational leaders are able to promote various sensing, grabbing, and reconfiguring capabilities. Although it is still minimal in the literature data, based on the finding, the researchers submitted hypothesis:

**H2**: Transformational leadership style have a significant influence on the organizations dynamic capabilities

---

e. **Dynamic Capabilities and Organizational Structure**

Burns and Stalker [29] and Lawrence and Lorsch put forward the idea that the environment dictates the best form of organization. Their ideas are in line with the argument of Teece [29] which states that organizational structure influences the company's response to change. Regarding the form of organizational structure, Burns and Stalker claim that the mechanistic management structure is most suitable for a stable environment. Whereas the flexibility of the form of an organic organization is more in line with a changing environment because it supports innovation and adaptation needed. Some other studies report a positive relationship between organic structure and company adaptability and performance (for example, Zahra and Covin, others argue that formal planning and mechanistic structures improve firm performance (eg, Adler and Borys, 1996; Schwenk and Schrader, [38] revealed that organic versus mechanistic structures on performance are multifaceted, the results of Wilden et al.’s research show that organic organizational structures can better utilize dynamic capabilities. To further proving previous studies result, the researcher proposed the following hypothesis:

**H3**: Effect of dynamic capabilities on organizational performance increases with a more organic organizational structure.

---

f. **Dynamic Capability and Competitive Intensity**

Through a dynamic capability approach, in his effort to find the causes of competitive advantage, Teece then concluded that the intensity of competition, competitive power approaches and strategic conflict approaches responded by minimizing the intensity of competition through increasing rival costs and exclusive behavior [10] While the dynamic capability approach and resource approach rely on high performance routines that operate 'within the company,' shaped by processes and positions, where pathways of dependency (including increased yield) and technological opportunities mark the way forward [29]. Quoting Wilden et al. Zahra states that companies whose spread dynamic capabilities in highly competitive markets will benefit from dynamic capabilities to support innovation, encourage new market discovery and opportunity identification activities. Whereas the results of Wilden et al.’s own study show that when companies compete in environments with limited resources, dynamic capabilities provide the basis for adapting to competitive pressures and to survive. The discussion brings researchers to the following hypothesis:

**H4**: Effect of dynamic capabilities on organizational performance increases with higher intensity of competition

---

4. **Methodology**

This study aims to find out how NGOs are able to provide optimal performance in a very dynamic environment through analysis of the relationship of transformational leadership styles and dynamic capabilities by considering the contingency effects of organizational structure and competitive intensity. A quantitative approach using self-administered questionnaire was conducted and the population and analysis unit of this study are non-profit organizations, namely
NGOs operating in the territory of the Unitary Republic of Indonesia whose data is taken from the SMERU institution which has a complete and easily accessible NGO database. A total of 2848 NGOs were sent the questionnaire. Respondent as unit of analysis whose are in managerial level or at least as a senior staff considered that they have sufficient knowledge and experience to be able to fill the questionnaire well.

To measure construct variables, researchers adapt previous studies as follows:

- For transformational leadership construct, researchers refer to the research of Shiva and Suar [22] which uses the Multifactor Leadership Questionnaire (MLQ5) formulated by Bass and Avolio [25].

- To measure the dynamic capabilities construct, researchers refer to the measurement method used by Wilden et al. which composes it based on the concept of Diamantopoulos and Winklhofer [39], [28] and [26].

- Researchers measured organizational structure construct using a five-item version of the measurement scale that referred to Wilden where this measurement scale was adapted from Covin and Slevin [39]. This scale assesses the extent to which a company is structured in an organic versus mechanistic way (also called organic). Measured on a 6-point scale, this type of semantic differential scale requires respondents to evaluate the operational management philosophy of each organization. A value of 1 represents a statement relating to a mechanistic structure, while 6 is anchored by a statement that represents an organic structure.

- To measure competitive intensity in the NGO sector, researchers used a measurement mechanism initiated by Schwenger [38] who adopted Porters five forces ([33]) to see how NGOs developed the concept of strategy in the face of competitive intensity by adjusting to the natural conditions of NGOs so that the dimensions of five forces already adapted to the context of the NGO [38].

- To measure NGOs performance this study uses a measurement framework suggested by Scholey and Shobel (2016), namely performance measurement for non-profit organizations with a balanced score card approach. There are four main points of view in assessing performance based on this measurement framework: First from a stakeholder perspective. Second, from a financial perspective. Third from an internal perspective. Fourth, the point of view of learning and growth.

5. Findings
5.1 Measurement Model Assessment

Variable measurements of this study were carried out using SEM with PLS. PLS-SEM is considered more profitable than covariant-based structural equation models when analyzing predictive research models that are in the early stages of theoretical development [40] as conditions in this study. Besides PLS-SEM does not require a large number of samples, Hair et al., [41] stated that the number of representative samples for the SEM method with PLS in the range of 30 to 100. In reality respondents who were willing to fill out questionnaires were only 30 organizations.
Table 1. Construct Validity and Reliability

<table>
<thead>
<tr>
<th>Construct</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Intensity (X4)</td>
<td>0.813</td>
<td>0.689</td>
</tr>
<tr>
<td>Dynamic Capabilities (X2)</td>
<td>0.910</td>
<td>0.531</td>
</tr>
<tr>
<td>Transformational Leadership (X1)</td>
<td>0.938</td>
<td>0.561</td>
</tr>
<tr>
<td>NGOs Performance (X5)</td>
<td>0.946</td>
<td>0.638</td>
</tr>
<tr>
<td>Moderating Effect X3X2</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Moderating Effect X4X2</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Organization Structure (X3)</td>
<td>0.893</td>
<td>0.677</td>
</tr>
</tbody>
</table>

Table 2. R Square

<table>
<thead>
<tr>
<th></th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Capabilities (X2)</td>
<td>0.616</td>
<td>0.603</td>
</tr>
<tr>
<td>NGOs Performance (X5)</td>
<td>0.789</td>
<td>0.734</td>
</tr>
</tbody>
</table>

The table 1 and 2 shows indicators for all constructs having AVE values above 0.5, which means that all indicators in each construct are valid. While output shows accuracy, consistency of the accuracy of measuring instruments for measurement in this study can be seen in the Composite Reliability(CR) table where a construct or variable has good composite reliability if it has composite reliability ≥ 0.7 and based on the table, all constructs in the study have composite reliability values> 0.7, which means that all constructs are reliable.

Goodness of fit models are measured using R-square dependent latent variables with the same interpretation as regression can be seen at table 5.2 which shows the results that transformational leadership styles can explain dynamic abilities by 60%, while transformational leadership styles and dynamic capabilities can explain NGO performance by 73%.

The table 3 will show the results of the hypothesis test.
Table 3. Hypothesis test

<table>
<thead>
<tr>
<th></th>
<th>Original Sample (O)</th>
<th>Sample Mean (M)</th>
<th>Standard Deviation (STDEV)</th>
<th>T Statistics (O/STDEV)</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competitive Intensity (X4) -&gt; NGOs Performance (X5)</td>
<td>0,041</td>
<td>0,132</td>
<td>0,186</td>
<td>0,218</td>
<td>0,827</td>
</tr>
<tr>
<td>Dynamic Capabilities (X2) -&gt; NGOs Performance (X5)</td>
<td>0,137</td>
<td>0,114</td>
<td>0,252</td>
<td>0,544</td>
<td>0,587</td>
</tr>
<tr>
<td>Transformational Leadership (X1) -&gt; Dynamic Capabilities (X2)</td>
<td>0,785</td>
<td>0,800</td>
<td>0,055</td>
<td>14,250</td>
<td>0,000</td>
</tr>
<tr>
<td>Transformational Leadership (X1) -&gt; NGOs Performance (X5)</td>
<td>0,367</td>
<td>0,358</td>
<td>0,189</td>
<td>1,945</td>
<td>0,052</td>
</tr>
<tr>
<td>Moderating Effect X3X2 -&gt; NGOs Performance (X5)</td>
<td>-0,177</td>
<td>-0,065</td>
<td>0,208</td>
<td>0,848</td>
<td>0,397</td>
</tr>
<tr>
<td>Moderating Effect X4X2 -&gt; NGOs Performance (X5)</td>
<td>-0,093</td>
<td>-0,056</td>
<td>0,215</td>
<td>0,433</td>
<td>0,665</td>
</tr>
<tr>
<td>Organization Structure (X3) -&gt; NGOs Performance (X5)</td>
<td>0,210</td>
<td>0,254</td>
<td>0,212</td>
<td>0,992</td>
<td>0,322</td>
</tr>
</tbody>
</table>

1. H1: Transformational leadership style has a positive effect on the performance of NGO organizations
   H1 not accepted as the t statistic value 1,945 ≤ 1,96 which states the relation between transformational leadership and NGO performance is not significant though the original sample value 0,367 shows that the direction of the relationship between the two variables is positive;

2. H2: Transformational leadership style have a significant influence on the organizations dynamic capabilities
   H2 accepted as the t statistic value 14,250 > 1,96 shows that the relationship between transformational leadership and dynamic capabilities is significant and the original sample value 0,785 shows positive direct relationship between the two variables

3. H3: Effect of dynamic capabilities on organizational performance increases with a more organic organizational structure.
   H3 not accepted as the t value 0,848 ≤ 1,96 and original sample value -0,177 shows negative direct relationship between two variables

4. H4: Effect of dynamic capabilities on organizational performance increases with higher intensity of competition
   H4 not accepted as the t value 0,433 ≤ 1,96 and original sample value -0,093 shows negative direct relationship between two variables

6. Conclusion
   In the context of NGOs, transformational leadership style does not have a significant effect on NGO performance even though there is a positive relationship between transformational leadership and NGO performance perhaps due to the fact that NGO leadership is now increasingly being applied by broad stakeholder bodies through a series of routine practices supported by
shared commitment to learn, transform and provide sustainable value to customers. Chew and Dovey [42] Whereas in the context of NGOs it turns out that dynamic capabilities can be supported by transformational leadership which reinforces the argument of Cabrales, et al. [37] that only transformational leaders can directly influence dynamic capabilities. This is because transformational leaders are able to promote various sensing, grabbing, and reconfiguration capabilities. In contrast to the findings of this study shows that in the NGO context the organizational structure and intensity of competition have no impact on the performance of the institution.

References


Organizational Resilience: As Mediating Effect of Organizational Culture and Organizational Performance
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Faculty of Economy and Business, Brawijaya University, Malang, Indonesia¹,²,³,⁴

Abstract: Disruption technology emerge when the flow of innovation in digital cannot be retained. Organizational resilience needed to cope with these changes and challenges. This research paper aims to contribute to knowledge by examining the mediating role of organizational resilience in between of organizational culture and organizational performance. The result revealed that organizational culture has a significant effect on organizational performance. While it was mediated by organizational resilience, the relationship between organizational resilience and organizational performance was not significant. But overall, the result revealed that organizational resilience partially played as a mediating role between organizational culture and organizational performance. The implication of this study that the General Manager and Human Resource Manager appropriately understand the importance of organizational culture in integrating with organizational resilience to achieve superior organizational performance as a strategy to anticipate disruption technology. Limitation of this study is small sample size so that for future study should use a larger sample size in a different kind of business.

Keywords: Organizational Resilience, Organizational Culture, Innovation, Disruption Technology

1. Introduction
Nowadays, digital innovation is coming in the age of industrial revolution 4.0. The development of economy and business enters a new era that foster difficulties, disruption technology and even crisis to organizations. The business has shifted from the established ones to the different ways of business run by millennial generation, in which innovation is the main factor in these changes. In regard to these conditions, organizations who still want to survive must take action and make changes accordingly. How organizations respond and take proactive action to this condition? This research paper is important for organizations who still want to exist in this era.

Recently, resilience has become the main interest for academicians and practitioners due to emerging of many turbulent external environments. The concept of resilience has been growing significantly in many disciplines as the need for coping many external disturbances in order to...
become survive and maintain sustainability. Resilience has been defined many different ways in the literature, depends on its characteristic as multi-discipline and multi-dimensional. Derived from ecology, resilience defines as the ability of a complex system to return to stability after disruption [1].

In the human resource management issues, research in the context of organizational resilience and its relationship with other variables is still rare. This paper aims to contribute to knowledge by examining the mediation role of organizational resilience between organizational culture and organizational performance in the hotel industry in Indonesia.

2. Literature Review

2.1 Organizational Resilience

Within the organizational context, the literature has two perspectives on what organizational resilience means [2]. The first perspective defines organizational resilience as an ability to rebound from unexpected and adverse situations [3]. Organization deliberate efforts are to react and re-establish a strong fit with avoiding and limiting dysfunctional systems [2]. Organizational resilience that focuses on restore or bounces back to the benchmark after a crisis is also called reactive or operational perspective [4]. The second perspective of organizational resilience defined as a capability of organization to absorb, develop new capability and create other opportunities to grow, and engage transformative activities to prevent disruptive and other disturbances that potentially threaten organizational survival [5]; [6]; [2]. This second point of view, which is also called a strategic perspective (Valikangas and Romme, 2012), organizational resilience goes beyond the rebound and re-establish from the crisis. Strategic organizational resilience thrives because it has the dynamic capability to anticipate disruptive and other unexpected challenges. Both perspectives of strategic resilience as well as operational resilience are needed for the success of the organization [7]; [2]. The decision of determining whether to act operational or strategic perspective of organizational resilience, it depends on the maturity level of the organization itself [8]. This research synthesizes the maturity of organization, operational and strategic organizational resilience.

2.2 Organizational Culture

In recent years, understanding the role of organizational culture as a strategic resource or asset is important for organizations. Culture defined many ways by researchers, one defined as "something to do with the people and the unique quality and style of the organization" [9].

Organizational culture defined as a combination of norm, beliefs, values and behavior patterns that shape the core identity of an organization [10] management styles and processes [11]; [12]. It can differentiate organization to competitors. Organizational culture plays a key role in determining strategy formulation, leadership style, working climate, and organizational behavior and processes ([14] manifested by managers and leaders.

Organizational culture is difficult to measure. Researchers used the concept of Competing Values Framework (CVF) to measure it quantitatively. This research used CVF developed by [10] by identifying four characteristics of culture which are positively associated with performance and effectiveness of organizations, namely: adaptability, mission, involvement, and consistency. Denison's concept is supported by Gregory et al. [15] research that organizations not only need a strong culture but also have a balanced combination of those four characteristics that deliver flexibility in thinking.
2.3 Organizational Performance
Organizational performance is the most important component to measure success as well as failure level of the organization. Organizational performance is used in the empirical study as an outcome of many variables that influence it. Organizational performance defined as an indicator to measure how does the extent the organization reaches its goal [5][16].

Balanced scorecard approach used to measure organizational performance in their research in the hotel industry, and taken financial perspective out of the questionnaires because of difficulties in accessing the real data. This research adopts this concept in using the indicators. [16]

2.4 Organizational Culture, Organizational Resilience, and Organizational Performance
The relationship between organizational culture and organizational performance had been reported a significant link between a particular type of strong culture and superior financial performance[16]; [17]; [18]. Recent research mentioned that organizational culture had significantly affected organizational performance [19]; [20]; [21] This study is to test the hypothesis:
H1. Organizational culture has positively an effect on organizational performance. [22] The relationship between culture and resilience is that resilience means as cultural adaptability to cope with external disruptions. While Parsons described resilience and culture are tightly linked. The relationship between organizational resilience and organizational performance had been proven by Carden et al. [22] that organizational resilience enhanced organizational performance in the financial aspect. [23] had investigated resilience and its effect on organizational performance. This study is to test the mediating role of organizational resilience between organizational culture and performance, herewith the hypothesis:
H2. Organizational culture has positively an effect on organizational performance mediated by organizational resilience. Based on the above hypotheses, the conceptual model can be figured out as follows:

Fig. 1. Conceptual Model

OC = Organizational Culture
OR = Organizational Resilience
OP = Organizational Performance

3. Method
We use software WarpPLS 3 version to process and analyze data. This software uses two models to analyze data, such as measurement model and structural model.

The research conducted in 3-star hotels, resorts and premium guest houses in two towns in East Java, Indonesia. The technique sampling method was purposive sampling. An amount of 76 set of questionnaires administered to General Managers and Human Resource Managers or the persons
in charge in those positions of each company. The 70 set of returned questionnaires were valid for analyzing.

Composite reliability and Cronbach's Alpha are significant and reliable if all the instruments used in the research should be above the criteria of > 0.70 [23]. To test convergent validity, the values of Average Variance Extracted (AVE) should be above the criteria of > 0.50. To test collinearity vertically as well as laterally, the result of Full collinearity of all variables should be below the criteria of < 3.3. The R-Squared coefficient is above 0.5 indicated the model is good.

4. Result and Discussion
4.1 Measurement Model Analysis
Measurement model analysis was to test reliability and the validity of instruments used in this research.

<table>
<thead>
<tr>
<th>Table 1. Latent Variable Coefficients</th>
<th>OC</th>
<th>OR</th>
<th>OP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Composite Reliability</td>
<td>0.926</td>
<td>0.894</td>
<td>0.937</td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>0.913</td>
<td>0.866</td>
<td>0.926</td>
</tr>
<tr>
<td>Aver. Var. Ext.(AVE)</td>
<td>0.514</td>
<td>0.501</td>
<td>0.576</td>
</tr>
<tr>
<td>Full Collinearity (VIF)</td>
<td>2.202</td>
<td>1.488</td>
<td>2.337</td>
</tr>
<tr>
<td>R-Squared</td>
<td></td>
<td>0.317</td>
<td>0.629</td>
</tr>
<tr>
<td>Q-Squared</td>
<td></td>
<td>0.316</td>
<td>0.624</td>
</tr>
</tbody>
</table>

As described in Table 1, the results of composite reliability and Cronbach's Alpha were all significant and reliable because all instruments used in this research were above the criteria of > 0.70 [23]. Average Variance Extracted (AVE) were all above the criteria of > 0.50. The result of Full collinearity demonstrated that all variables were below the criteria of < 3.3 so that the model was free of multicollinearity. The R-Squared coefficient of organizational performance was 0.629 indicated the model was good. It meant that organizational performance construct 62.9% could be explained by organizational culture and organizational resilience. To measure predictive validity, this research indicated a good result because the value was more than zero. Discriminant validity was valid and adequate, as described in Table 2.

<table>
<thead>
<tr>
<th>Table 2. Latent Variable Correlations</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>Organizational Culture (OC)</td>
</tr>
<tr>
<td>Organizational Resilience (OR)</td>
</tr>
<tr>
<td>Organizational Performance (OP)</td>
</tr>
</tbody>
</table>

Overall, the analysis of the measurement model was reliable and valid.

4.2 Structural Model Analysis
The structural model analysis was to test the hypothesis, particularly the direct and indirect relationship between organizational culture and organizational performance. The first step, we tested whether organizational culture influence organizational performance directly was to test hypothesis H1. The result showed in Figure 1 that organizational resilience has significant effect on
organizational performance (coefficient = 0.76, P < 0.01 and values of R² = 0.58). Hypothesis H1 was supported.

Fig. 2. Direct Effect Model

Then, we tested organizational resilience as mediating constructs. PLS result shown in Figure 2, mentioned that organizational culture had positively and significantly an effect on organizational performance (coefficient = 0.59, P < 0.01; R² = 0.63). Other results demonstrated that organizational culture has significantly effect on organizational resilience (coefficient = 0.56, P < 0.01, while organizational resilience has not significantly affect organizational performance (coefficient = 0.28, P = 0.05). So that, estimation result of an indirect effect on organizational culture to organizational performance declined from 0.76 to 0.59 but still significant (P < 0.01). This result revealed that partial mediation happened on the effect of organizational culture on organizational performance. This partial mediation revealed that organizational resilience was not the only mediator in the relationship between organizational culture and organizational performance, yet other mediators [25] Therefore, hypothesis H2 was also supported.

Fig. 3. Indirect Effect Model

The practical significance of this research was to estimate whether statistical findings exist or not in population, and it can be measured by effect size [26]. Effect size organizational resilience to organizational performance was 0.177, and according to Cohen [27], this value was adequate for practical significance.

The result of model fit indices and P values mentioned that Average Path Coefficient (APC) = 0.478, P < 0.001, Average R-Squared (ARS) = 0.473, P < 0.001, and Average Variance Inflation Factor (AVIF) = 1.586, good if < 5, are all significant and fulfilled the criteria. This result was concluded that the model was fit and supported by data.

The result of testing hypothesis 1 reveals that organizational culture has positively and significantly an effect on organizational performance. This result supports the statements of some researchers [19]; [20]; [21] Organizational culture as a resource can enhance organizational performance in which the financial aspect was excluded from the indicators of the balanced scorecard. While the result of testing hypothesis 2 reveals that organizational culture has positively an effect on the organizational performance with partial mediating role by
organizational resilience. Partially, the result of analyzing the relationship between organizational culture and organizational performance supports Parsons [28]. On the other hand, the result of analyzing the relationship between organizational resilience and organizational performance was not significant. This is understood that this result does not support Carden et al. [29] because the measurement of organizational performance was excluded financial aspect. But overall, the result of analyzing organizational resilience as a mediating role as stated in hypothesis 2 was positive and significant.

5. Conclusions
In conclusion, the effect of organizational resilience on the relationship between organizational culture and organizational performance is partially mediated. Understanding the concept of this research, fully mediated might be achieved when the indicator of the financial aspect is also included in the measurement of organizational performance. The implication for General Managers and Human Resource Managers is that to understand the importance of organizational culture to be integrated in executing organizational resilience in order to cope disruptive technology and other disturbances. Limitations of this study are small sample size and excluded financial aspect to measure organizational performance.

Acknowledgments
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Minimizing Resistance to Change: The Role of Communication and Perceived Organizational Justice

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Abstract. This study aims to analyze the effect of change communication on worker’s resistance to change mediated by perceived organizational justice, in a manufacturing company in Indonesia. This company has been undergoing organizational change for the past two years. Data from 260 respondents were collected using survey method and then analyzed with Structural Equation Modeling (SEM). The result showed that change communication has negative and significant effect on resistance to change and positive and significant effect on perceived organizational justice. Moreover, perceived organizational justice has negative and significant effect on resistance to change, and the effect of communication on resistance to change is partially mediated by perceived organizational justice. This research corroborates the previous research that states change communication and organizational justice play an important role in minimizing resistance to change.

Keywords: Resistance to Change, Communication, Perceive Organizational Justice, Organizational Change

1. Introduction
In today’s 4.0 industrial era, organization is often challenge with the necessity to implement a new system and technology in which at the end change the way business process was done. This necessity is driven by the pressure to become more efficient, agile, and also competitive. As the consequences, organization needs to conduct series of organizational change processes effectively, in order to improve its business processes and finally increase the organizational performance. In addition to that, the change is one of the most critical aspects in creating more effective management. [1] Organization which does not have the capability to change, will be decline gradually and finally peril from the market.[2]

Organizational change process is not an easy thing to do. It needs commitment from the top-level management, and also full support from all the organization members. It is not rare that the organizational change process fails. Some of the main causes for failure in organizational change include lack of top level management support, unclear vision, mission and tactical plan, technological difficulties in supporting the change, lack of financial resources and the most crucial is unable to resolve problems related to human resources or individuals in the organization [3]; [4]
Among the problems causing the failure of change in the organization, individuals or workers are often referred to as the most influential one. This statement is highlighted by Madsen, John, and Miller [5] who proposed that organizational change interventions will not be succeed unless the individuals within the organization also change.

Oreg [6] stated that each individual shows a different response to change. There are some individuals who will give a positive response toward the change process, while others show the opposite. In other words, there are two possible individual attitudes in dealing with changes in the organization. Moreover, the individual can accept the change process that occur in the organization or reject it and becoming resistance to change.

Saruhan [7] states that the most common obstacle to successful organizational change is the resistance of worker in the organization. Resistance to change is a negative emotional or behavioral response to changes in work routines which is real or imaginative [4].

There are several aspects or factors which can cause individuals in an organization accept or resistant to change. If the change leader cannot comprehend the situation, manage employee resistance and then alter it into commitment, the organizational change process will be at risk. This condition calls numerous researchers to investigates factors that can cause individuals resistance to change.

Hussey [1] stated that one of the factors which can minimize resistance to change is communication, while Raina [8] stated that communication is a process which plays a central role in determining organizational success or failure. These statements were also supported by Klonek, Kauffeld and Lehmann-Wilenskrook [9] who stated that an effective change communication plays an important role in organizational change process. Effective communication can help individuals to understand the logic of the change process that includes what, why, when, who, how, and also what’s in it for me.

In addition to communication, previous resource also found that there are other factors which can affect individual resistance to change. One of the factors is perceived organizational justice. Krause [10] stated that perceived organizational justice is one of the factors that can affect workers’ readiness as well as resistance to change. Cobb, Folger, and Wooten [11] found that a positive perception of organizational justice during the process of change will lead to organizational commitment, trust, and willingness to accept the change.

Organizational justice is the overall perception of what is fair in the organization. Organizational justice is divided into three dimensions; distributive, procedural and interactional justice. Distributive justice relates to employee’s perception about the fairness in the process of resolving dispute and allocating resources. Procedural justice is defined as the fairness in the process that leads to outcomes, while interactional justice refers to the treatment that an individual receives as decisions are made and delivering the news with sensitivity and respect [2], [12].

Individual react to actions and decisions made by organizations/management day by day. An individual’s perception whether these decisions as fair or unfair can influence the individual’s subsequent attitudes and behaviors. Jones and Martens [5] stated that that there will be a strong desire to change within the employees if the employee feels justice in the organization.

This study aims to investigate the role of effective change communication and perceived organizational justice in minimizing resistance to change. Additionally, this study also aims to investigate the role of organizational justice as the mediator in the relationship between change communication and resistance to change in Indonesia context. Previous research about organizational change, specifically resistance to change, mostly conducted in western culture which according to Hofstede adopt more individualistic as well as low power distance value. On the contrary, Indonesian people, as most of Asian country in majority adopt more collectivist as
well as high power distance values. This value difference raised questions whether the research model is also applicable in Indonesian context.

This study was conducted in a manufacturing company located in Jakarta and West Java, Indonesia, which are undergoing organizational change. Due to fierce competition and technological advancement, this company needs to implement new IT system and adopt new technology in production to increase performance.

Three research questions which are going to be answered through this research are:
1) Does change communication have positive significant effect on workers’ resistance to change?
2) Does change communication have positive and significant effect on perceive organizational justice?
3) Does perceived organizational justice have positive and significant effect on worker’s resistance to change?
4) Does perceived organizational justice mediates the relationship between change communication and workers’ resistance to change

2. Literature Review
Change can be defined as doing things in a new way as a result of technological advancement, invention of a new systems, following new management procedures, or reorganizing [13]; [14]state that the individual's resistance to change is one of the causes of organizational change failure. Moreover, Palmer, Dunford & Akin [13]described two types of change resistance; active and passive.

The active resistance to change is characterized by frequent organizational members criticizing, making mistakes, mocking, feeling afraid, using facts selectively, blaming, damaging, frightening/threatening, changing facts, obstructing, initiating rumors and opposing the change process, change leader, change goals in particular as well as organization. Meanwhile, the passive resistance to change is characterized by agreeing verbally but not following the changes, failing to implement the changes, procrastinating in doing something, ignoring, hiding (information, advice, help, support) and following changes which lead to failure.

Palmer, Dunford, & Akin [15]also states that more than one factor can lead to resistance to change. Some of the factors are individual dispositional characteristic, there are some people who do not like change, feel uncomfortable with uncertainty, have negative perceptions on the consequences of change, want to maintain the old culture, power conflict, lack of confidence in one’s own ability to change, the belief that changes are not in line with the members of the organization, and members of the organization do not agree with the way changes are made.

Kreitner and Kinicki [4] describe resistance to change as an emotional response or negative behavior towards changes in work routines which is real or imaginative. While Oreg [6]states that resistance to change refers to the tendency of individuals to prevent change with actions that show how he/her rejects the change. He also added that change will affect every aspect of an individual's life. However, the response of each individual will be different, some of them will accept the change process and actively participate to help the change succeed, while other will avoid or event reject the changes. [16] According to Oreg [6] resistance to change consists of four dimensions, which are; (a) routine seeking behavior, in which organizational change is seen as routine disruption or opportunity to increase stimulation. When an individual faces a new stimulation, such a thing that may be not in line with their situation which leads to stress. (b) emotional reaction which is the amount of individual’s stress and worries in facing changes. For example, when an organizational member considers a change decrease their control on their own life,
therefore the individual will be stressed and tend to reject the changes. (c) short term focus, in which in term of the initial change aspect mostly involves more duties and energy instead of maintaining the status quo, therefore some workers will reject the changes [5]), even though each individual has the probability to support certain changes, and lastly (d) cognitive rigidity, some researchers have studied the cognitive process which is the basis of someone to give response on an organizational change. Such thing determines how a worker process information about changes and determine how they should react. A stiff and close-minded worker tend to less willing and less capable in adapting to the new situation.

Communication is a process in which information is transmitted and understood between two or more people [16] Communication aims to control, motivate, deliver expressions as well as emotions, and provide information [2], [8] states that communication is a process which plays a central role in determining which organization will be succeed or fail. Postmes, Tanis, & De Wit [17] state that there are two types of communication, based on the direction. They are vertical and horizontal communication. Vertical communication helps the management define an organization, and thus it can strengthen the definition of the workers’ existence in the organization. Vertical communication is divided into two directions which are downward communication and upward communication. Downward vertical communication is communication which flows from one level of a group to the lower level. Furthermore, the second type which is upward vertical communication is a communication which flows from the lower level to the higher or upper level.

In addition to vertical communication, [7] states that horizontal communication occurs between members of the same group. Horizontal communication is a message conveyed between individuals in the same organizational level [18]. Horizontal communication in an organization occurs during the staff meetings, information presentation and shift turnover [19].

Organizational justice reflects how each individual feels that they are treated fairly in the workplace [4]. Additionally, [20] mentions that organizational justice focus on the impact of managerial decision making, perceived quality, the effect of justice, the relationship between individual and situational factors and explains perceptions of individual justice in the organization. The perception of organizational justice has four dimensions: distributive justice, procedural justice, and interactional justice. Interactional justice is divided into two: informational justice and interpersonal justice [20].

### 3. Research Model

This study’s research model replicate the model developed by Saruhan [7] The research model illustrates how organizational justices mediates the effect of communication on workers’ resistance to change. This model was developed base on the model of change recipient reaction to organizational change that was developed by dynamic of resistance to change framework which was developed by Oreg, Vakolla and Armenakis [21] That model suggests that communication and organizational justices are the two variables on the process aspects of change that have important role in affecting resistance to change.
4. Research Hypothesis

Bovee [7], Thill and Schatzman [22] stated that cooperation and interpersonal relationship occur more easily with good communication and appropriate social interaction. Furthermore, this can help organization to reduce anxiety and uncertainty felt by the workers about the results of the change implementation. McShane and VonGlinow [16] also stated that the existence of honest communication which frequently happens is the first priority and strategy needed in organizational change. In addition, several studies have shown a positive relationship between employee communication and support for change efforts [7]. Thus, based on the explanation above, we develop hypothesis 1 as follow:

H1: Communication negatively affects the resistance to changes.

Saruhan [7] states that to yield a successful change effort, communication should also be conducted to improve workers’ perceptions of justice in the organization. Some empirical studies also emphasize the importance of communication in the perception of justice. This is aligned with Kilbourne et al. [23] who stated that the amount of information provided by an organization to its worker will affect the employees' perceptions of organizational justice. Based on this, the hypothesis we developed hypothesis 2 which is:

H2: Communication positively affects the perception of organizational justice.

Jones and Martens [5] stated that there will be a strong desire to change in an individual if the individual gets organizational justice. Employees who perceive the existence of organizational justice tend to be better in dealing the changes [24]; [24] also mention that the existence of a positive perception of organizational justice during the change process will lead to organizational commitment, trust, and willingness to accept change. Accordingly, we proposed hypothesis 3 which is:

H3: Perception of organizational justice negatively affects the resistance to changes.

Daly and Geyer [25] found that the positive effect of communication on workers’ resistance to change is mediated by perceptions of justice. In addition, providing accurate information during the change process with the perception of justice will reduce the resistance to change [26] It can be concluded that the existence of accurate communication from the organization to its workers will
improve workers’ perception of organizational justice which finally decrease workers’ resistance to change. Accordingly, we develop the fourth hypothesis which is:

H4: The effect of communication on resistance of change will be mediated by perception of organizational justice.

5. Research Method
This study follows conclusive research procedure with descriptive cross-sectional single type. Descriptive research is a type of conclusive research which has the main purpose of describing something. Single cross-sectional is a study where a sample of respondents is taken from the target population in which the information is also obtained once only [27]. In general, we want to investigate the effect of communication on resistance to change and organizational justice, and the effect of organizational justice on resistance to change, and lastly, we also want to investigate whether perception of organizational justice mediates the relationship between communication and resistance to change.

The sampling method used in this study is non-probability sampling with a type of purposive sampling. Malhotra [27] states that non-probability sampling is subjective sample selection in which researchers have personal judgment or sampling techniques that do not use the opportunity procedure to choose, but are chosen based on the judgment of the researcher. Purposive sampling according to Malhotra [27] is that respondents taken by researchers become samples because researchers consider the sample to have information needed for the research. In this study, researchers will only take samples of respondents with characteristics of working for at least one year.

The population of this study are the workers of Company ABC. The workforce consists of as many as 365 people. Based on the calculation of the Slovin formula, it was found that the minimum number of samples in this study were 230 workers. The questionnaires distributed by the researchers were 290 sheets, and 260 were returned and can be processed for further analysis.

In this study, the measurement used Likert 1-6 scale, which contains statements for resistance to change from Oreg [6] Organizational justice from Colquitt; [20] and change communication from Postmes, Tanis, & De Wit [17]. Before conducting the field test, a pre-test was conducted to 30 respondents first which was processed using SPSS. The data collected in this study were processed and analyzed using Structural Equation Modeling (SEM).

6. Research Result
The pre-test result of this study indicates that all indicators of the research variables are valid and reliable. All indicators have KMO values, factor loading, and Cronbach alpha above the standard, of which the KMO and the loading factor are above 0.5 and the Cronbach alpha is at least 0.6. After conducting the validity and reliability test on the measurement model using SEM, it was found that all indicators are valid and reliable. The validity test of the measurement model was done by looking at the t-value from the standardized loading factor of each observed variable in the model. The t-value must have a value of more than 1.64. In the analysis of the measurement model, in addition to looking at the t-value, the standardized loading factor or SLF value was also seen, where the SLF value must reach a value of 0.50 and if it can reach a value of ≥ 0.70, it will be more ideal (Hair, Black, Babin, Anderson, & Tatham, [28]). The analysis of the measurement model show that the RMSEA value from this research model is 0.076 which can be considered as good fit. A model can be considered as good fit if it has RMSEA value below 0.08.
After analyzing the measurement model, the next step is to analyze the structural model. In the analysis of the structural model, we found RMSEA value of 0.058 which is considered as good fit. The figure 2 will shows the structural model result.

![Path Diagram of the Overall Model](image)

**Fig. 2. Path Diagram of the Overall Model**

In a one-tailed test, the relationship between positive latent variables that has the t-value ≥ 1.645 shows that the relationship between the latent variables is significant, so the hypothesis is accepted. Meanwhile, if the relationship between the latent variables is negative, then the relationship between the latent variables can be significant and the hypothesis can be accepted if the t-value is ≤ -1.645. If the condition is not fulfilled, it indicates that there is no significant effect on the other latent variables. Based on the picture 2, we can see the effect between communication, perception of organizational justice and resistance to change which will be shown in the following table.

<table>
<thead>
<tr>
<th>No.</th>
<th>Path</th>
<th>t-value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Communication → Resistance to Change</td>
<td>-2.20</td>
<td>Significant</td>
</tr>
<tr>
<td>2</td>
<td>Communication → Perception of Organizational Justice</td>
<td>4.91</td>
<td>Significant</td>
</tr>
<tr>
<td>3</td>
<td>Perception of Organizational Justice → Resistance to Change</td>
<td>-2.95</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Based on table 1 above, it can be concluded that the relationships between the latent variables in this study is significant. Besides looking at the t-value to determine the significance, the attribute of t-value (positive or negative) also determined the direction of the relationship between one latent variable to another. If the relationship between latent variables is positive; t-value ≥ 1.645; then the relationship will be positive. Conversely, if the relationship between latent variables is negative; t-value is ≤ -1.645; then the relationship will be negative. If the two conditions are not met, then the relationship hypothesis will be rejected.

**H1: Communication negatively affects the resistance to change.**

From the hypothesis test result, it was found that the hypothesis 1 obtained a t-value of -2.20 which means that H1 is accepted since the t-value ≤ -1.645. This result indicates that the
communication variable has a negative and significant effect on workers’ resistance to change. From the result obtained, it can be interpreted that the higher the change communication score was in the organization, the lower the workers’ resistance to change will be. Conversely, the lower the communication score was as perceived by the worker, will increase workers’ resistance to change. This finding is in line with the previous research conducted by Saruhan [7] that also found negative and significant effect of communication on resistance to change.

**H2: Communication positively affects the perception of organizational justice.**

The result of this study found the t-value 4.91 which means that H2 is accepted. It indicates that communication variable has a positive and significant effect on the perception of organizational justice. From the result obtained, it can be interpreted that the higher the communication score was as perceived by the workers, the higher workers’ perception of organizational justice will be. Conversely, if the communication score is lower (perceived as ineffective), the perception of organizational justice will be worsening as well. This finding also in line with the previous research conducted by Saruhan [7].

**H3: Perception of organizational justice negatively affects the resistance to change.**

The result of his study found also t-value of -2.95 for H3. Thus, H3 is accepted, because the t-value is ≤ -1.645. This result indicates that workers’ perception of organizational justice have negative and significant effect on resistance to change. It can be interpreted that the higher worker perception on organizational justice, will decrease resistance to organizational change. Conversely, if the perception of organizational justice as perceived by the worker is higher, then the resistance to change will be increase. This finding also in line with the previous research finding conducted by Saruhan [7]. He found that there was a negative and significant effect of perception of organizational justice on workers’ resistance to change.

**H4: The effect of communication on the resistance to change is mediated by the perception of organizational justice.**

This result found that the t-value of relationship between communication and perception of organizational justice was 4.91, which means the relationship between communication and perception of organizational justice is significant because the t-value is ≥ 1.645. Therefore, the relationship of perception of organizational justice to the resistance of change is also significant, in which the t-value obtained was -2.95 ≤ -1.645. A significant relationship of communication on resistance to change through perception of organizational justice is a mediating or indirect effect relationship. The indirect effect between the two variables occur when there is no direct arrow between the two latent variables, but through one or more other latent variables according to the existing path [20]. Thus, it can be concluded that hypothesis 4 is accepted because there is a mediation or indirect effect of the communication variable on the resistance to change variable through the perception of organizational justice variable.

**7. Discussion**

Based on the conclusions, it is proven that change communication has negative and significant effect on workers’ resistance to change. In the results of this study, we found that the respondents (workers of Company ABC) perceived change communication as relatively high during the
organizational change process. We also found that that vertical communication has lower mean than horizontal communication.

Vertical communication occurs between different hierarchical level as form the managers to subordinates. From the descriptive result we can see that the lowest mean score from vertical communication is from the aspect of providing information about the organizational change. Lack of information regarding matters related to organizational change can cause uncertainty among the worker. This condition can lead to the tendency of employees to resist the ongoing organizational changes. In order to overcome this, the change agents are required to be more proactive in providing information regarding the organizational changes to all employees. The information provided can be carried out by conducting more socialization, giving pocket books containing of all information on the change process, and also conducting regular meetings to discuss the change that can provide two ways communication.

Based on this study, it is also proven that the perception of organizational justice has a negative and significant effect on resistance to change. Overall, from the descriptive analysis it was found that the perception of organizational justice in the Company ABC shows that justice was implemented during the change process and it was perceived as good. The type of justice of the organization that has the lowest value in this study is related to distributive justice. Distributive justice is related to the way the organization distribute resources or rewards to the workers. Distributive justice which are need to be improved in this study are related to salaries, rewards, evaluations, and promotions received by the employees which are perceived as not reflecting the contributions given by the employees. This finding is very important to be considered by the organization, since the perception of organizational justice significantly influential the sustainability of the organizational change process.

Descriptive statistic of this research showed that the level of resistance to change at Company ABC is quite high. The resistance to change is one of the obstacles in the process of organizational change. In this study, there are four types of dimensions of resistance to change, which is routine seeking that include the extent to which one enjoys and seeks a stable and routine environment. Then, related to emotional reaction including some emotional reactions to changes that can cause resistance to change. Next is the short-term focus including covering the extent to which individuals feel uncomfortable with change in the short term compared to the benefits of change in the long run. Finally, cognitive rigidity is an individual's reluctance to consider alternative ideas and perspectives from change.

In this study, the highest mean value is shown on the dimension of short-term focus, this means that when there is someone or some party who presses a worker to change something, they tend to reject the change even though the employee thinks that the change can ultimately benefit the employee, because they focused attention more on short term result rather than long term.

On routine seeking dimension, the result shows that workers prefer routines compared to unexpected events in everyday life and show that employees prefer to do the same things rather than trying new and different things. This indicates that workers tend not to accept changes and things that are new. This indicates the tendency of employees within the Company ABC. This problem needs to be taken seriously to prevent it from hampering the organizational change process in company ABC.

There are two strategies that can be implemented to overcome the problem of resistance to change. The change management team, should recognize the characteristics of employees better, so they can understand what are the needs and desires of employees related to the process of organizational change. The relationship between change agent and employee must also be well established, so that if there are things to be conveyed from both parties, they can be conveyed well through the right means.
In addition, as explained earlier, communication and perception of organizational justice are important in affecting the resistance to change. Accordingly, communication especially the one that regarding organizational change should be designed carefully. Involving the employees in the decision-making during organizational change process is also an important thing that needs to be done by the organization. It should be done so that the employees can feel directly involved in the process of change. In addition, the full involvement of employees in the process of change will makes the employees do not feel threatened by the changes itself.

Based on the results of this study as a whole, it was found that resistance to change at company ABC is significantly affected by communication and perception of organizational justice. Because of this result, organization needs to consider and pay more attention to these factors to minimize the resistance level of change in the organizational change process conducted at Company ABC.

8. Conclusion
Communication has a negative and significant effect on resistance to change. Communication has a positive and significant effect on the perception of organizational justice. Perception of organizational justice has a negative and significant effect on resistance to change. The effect of communication on the resistance to change is mediated partially by the perception of organizational justice.

9. Research Limitation
The following are some limitation of this research:

1. In this study, the sample was taken using convenient sample. The researcher did not have the ability to distribute the questionnaire independently choose the sample. We asked the help from HR department to distribute taken does not cover all units in the organization. Therefore, this study has limitation in term of generalizability. In further research, it is suggested to use other sampling method that can increase the generalizability of the research.

2. This study only covered one organization. Again, this condition limits the generalizability of this result. In future research it is suggested to conduct research from more that one company.

3. The questionnaire used in this research was self-report. This type of questionnaire is prone to bias.

4. This research only involved two variables, and there are other variables that can also influence resistance to change. For future research it is suggested to add other variables such as leadership, organizational trust, employee involvement, employee empowerment, organizational culture, and others.

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Impact of Communication in Organization to Readiness for Change: Case of Research Organization X

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Abstract: Changes in government research institutions are an interesting phenomenon and need to be studied. Like other government agencies, government research institutions have a bureaucratic and organizational culture and climate that is not easy to change. Organizational change cannot be accomplished if it is not supported by organizational readiness to change from individual level to organizational level. Organizational readiness as a medium and a tool for determining the success of change needs to be reviewed. The purpose of this research is how organizational communication conducted by research institute X to impact on organizational readiness to change. The method used is mixed methods with survey about organizational readiness to change and depth interview and observation to see the phenomenon of change and organizational communication in research institute X. The results obtained are communication within organizations that are not well managed and less effective have make readiness to organization change in research institution X becoming quite low. This indicate that organizational communication has an impact on organizational readiness to change in research institute X.

Keyword: Organizational Change, Readyness to Change, Organizational Communication

1. Introduction

Since introduction of the Republic of Indonesia Presidential Regulation No. 81 of 2010 concerning Grand Design of Bureaucratic Reform in 2010-2025 has been passed, it applies to all government agencies, both ministries and non-ministries. Including also non-ministerial institutions engaged in research, one of them is the X research institution as the largest research institution in Indonesia. The X research institute has a business core that conducts research activities in basic up to applied research. The research institute X also carried out reforms in its organizational field in lieu of that regulation. This has an impact on the organizational order in the management of all organizational resources. 2018 is a very meaningful moment of change, namely the plan for reorganization in all aspects of the organization.

Organizational changes that are carried out as organizational reform activities are to be able to increase organizational productivity with the resources, they have to be able to perform optimally. The direction of change that refers to organizational effectiveness and efficiency is expected to increase scientific production and innovation technology for the development of science and
technology in Indonesia by research institute X. Organizational change that being done is including restructuring on organizational system changes, organizational policy changes, human resource management with redistribution plan in each work unit etc. The plan of change is a phenomenon that is important to be studied and understood as part of empirical studies of organizational development. The phenomenon of organizational change is linked to how organizational behaviour occurs with what factors have a positive and negative impact on the success of its implementation plan.

As an X research institute that has the largest research activity in Indonesia, conducting an activity plan for implementing organizational change is an interesting thing to review. This study examines in the form of organizational management studies to look at organizational communication factors that will impact the readiness of the organization to change.

2. Methodology
This study uses a mixed method approach used in social research with triangulation data analysis to express and interpret data from quantitative and qualitative. Also This study uses case study approach to a phenomenon of organizational change in research institutions by in-depth interviews and observations. In addition, it also performs quantitative measurements with surveys regarding organizational readiness to change. This measurement involves the researcher as the population and on the other hand uses random sampling by involving researchers from all units of the research centre work unit in research institute X.

Measurement of organizational readiness to change using adaptations from the Scale of Timmerand Zif [1] with a validity value of 0.75 and has been validated in several of their studies. The ORC scale with 6 item questions with a Likert scale, namely 6 levels of answer choices responded to by the subject of this study. The ORC scale measures three dimensions of formation, namely trigger identification, gearing up to take action, and action's degree of novelty. As for digging deeper into the ORC, in-depth interviews and observations were carried out as well as to explore organizational communication.

Data results from this research data are then processed and interpreted based on the forming dimensions with data triangulation method.

![Fig. 1. Triangulation analysis](image)

Triangulation analysis is a method used to analyse data from quantitative measurements from ORC and qualitative data from deepening ORC perceptions and organizational communication. From Creswell [2] and Neuman [3] the method of data triangulation analysis evolved into a new
research method by leaving a parallel line that allows science to explain a significant percentage of existing phenomena and is still open to exploring critical issues that around the phenomena studied. So, this research uses the data triangulation analysis to help examine the phenomena of the collected data so that it can describe the critical issues in relation to the impact of organizational communication on the change readiness of research organizations X.

The framework in this study is as follows.

![Figure 2. Research Framework](image)

Figure 2 explains the scope of the research conducted so that it can answer the questions in this study.

3. Theoretical Discussion
   a. Organizational Communication

   Organizational communication is the flow and process of communication in organizations related to the flow of communication based on organizational structure both from top to bottom or from the bottom up. Effective communication significantly helps managers in organizations to perform better in their basic functions as managers of organizations such as in planning, leadership, control, and organizational change activities. Effective communication skills can form managers to communicate future organizational plans so that all employees can perform to achieve a common goal in the organization. Effective organizational communication [4]; [5]; [6]; [7]can provide and increase the motivation of employees to finish their job well, be willing to perform optimally and perform well, besides providing information resources good, so that it can help employees in the decision making process in identifying and assessing alternative solutions or activities that will be carried out to solve the problem. In addition, it is also in helping employees in the socialization process with one employee with another or with the structural party, and can help control the process of organizational behaviour of employees to be able to be in accordance with the behavior expected by the organization. [8]argues that organizational communication skills are needed by change agents to communicate various information plans and implementation of organizational changes in internal or informal forums so as to minimize resistance and increase commitment to change in organizational members.

   Orpen [8]argues in research that managers who have satisfaction and good work motivation will have a positive impact on organizational communication skills so that it will minimize
information bias in the organization. Fahmi and Maroofi [9] argue that communication styles in organizations can influence the level of work involvement of managers. Clampitt [5] explains that organizational communication is important to do precisely to help organizations deliver various plans, strategies, and actions to members so that they are willing and willing to support and are committed to supporting organizational goals. Organizational communication strategies must pay attention to sensitive and psychological issues that cover issues of organizational change. Elving [7] argues that the function of communication is conveying messages and information to motivate people so that they are ready to change as expected by organizational change.

b. Organizational Readiness
The organizational readiness for change is one of the important variables that can give effect to organizational change success. Like the theory of changes from Lewins about the Process Organization changes model. Keidel [10] says changes have an organization changes construct to increase productivity and employee quality of life’s. Porras and Robertson [11] explain that organizational change as a set of theories, values, strategies, and techniques to be able to change the work environment so as to encourage organizational development. Whereas Jones [6] argues that organizational change as an organizational process redesigns structure and culture to help and improve the effectiveness of achieving organizational goals.

Fig. 3. Organizational Change Process from Lewin’s Model 1951 (resourches: Jones, 2007)

Armenakins et al. [12] and Lehman [1] develop and explore the readiness for organizational changes inspirations from Lewin’s model [13] about the organization of change process models with three steps. The three steps of the Lewis model of organization changes are unfreezing, movement, and refreezing. Every step of the process of organization change can give us a description of how to plan and strategic change from an organization. The process of changes is like life cycles because of the dynamic and changes of environment form organization. This is reason why organizations should be aware of and be prepared to encounter change with flexibility to change too.
Armenakis et al. [12] and Chonko et al. [8] explain that organizational readiness to change is as a cognitive concept that influences resistance behaviour or supports organizational change. So ORC is related to the collective belief of members of the organization to the organization's willingness to make changes [1]; Timmor [1] argue that ORC as a strategy orientation is used specifically to support organizational capacity effectively as an effort to support the achievement of organizational goals. Therefore, ORC as a concept of organizational behaviour that supports organizational change so that it is not just an attitude. Organizational readiness for changes is the initial process that must be carried out by the organization before implementing the change plan. Readiness to change organizationally is needed to prepare the initial stages for the success of the change process, although it does not guarantee success but can know the potential failure and reduce resistance to these changes.

Organizational readiness for changes are formed from three dimensions based on the theory of Armenakis et al. [12] and Chonko et al. [8] which are indicators of whether an organization is ready or not to make planned changes, namely: trigger identification, Gearing up to take action (preparing), and Action's degree of novelty. These three dimensions illustrate that in the process of preparing for organizational change, the internal organization, namely management, needs to identify the root causes of change, identify potential problems that will occur when changes are made, and identify problems that will arise after the changes are made. Then in trigger identification is related to how quickly the organization is able to identify things that can trigger change. While it is the stage of gearing to take action as a form of preparing for change, the organization needs to develop strategies to minimize possibilities that are not relevant or hinder organizational change. This is related to how much time is used to make the right call to start improving the implementation of change. In addition, the last stage of readiness is the action degree of novelty, namely the action of the organization to make changes as a form of novelty. So, this is related to the organization in making a change response by innovating.

Various previous studies explained that organizational communication is useful for communicating or providing information about strategies and plans for organizational change from managers to organizational members so that there is commitment and support from them [12]; [14]; [15]; [1]; [16].

The purpose of this study is to identify organizational communication carried out by research institute X to be able to support the readiness of organizations to change. From these objectives, the research question is how the role of organizational communication can support the readiness of research institutions X to change? The benefit of this research is to be able to identify organizational communication factors that can hinder and support change readiness in research X. Another benefit is to provide policy recommendations related to organizational communication strategies to be able to support research readiness X in making changes. In general, the benefits of this study are to be able to strengthen the theory and become an empirical basis for the role of organizational communication in the organization's readiness to change.

4. Discussion
Based on the measurement results regarding the readiness of the organization to change in research institute X, it was discovered that 137 researchers from all levels of the first research position had responded, young researchers, middle researchers, and principal researchers. Based on the distribution of respondents' data in the survey are as follows:
The distribution of responses based on the functional positions of researchers seen from Figure 4 is that there are 137 researchers involved, namely the highest number of middle rank researchers as much as 38%, then the first and young researchers the percentage of 26%, the senior researchers there are 7% and research professors as much as 4%. From the distribution of responses based on the level of functional positions of researchers, the most respondents were young researchers, while the least number of respondents were in the functional positions of researchers as research professors.

**Fig. 4. Distribution of Researcher Based on Functional Level**
Fig. 5. Distribution of Researcher Based on Gender

Distribution of researcher respondents based on sex differences can be seen in Figure 5. The picture explains that female respondents were 45% and male respondents were 55% of the total respondents 137 researchers.

Fig. 6. Distribution of Researcher Based on Working Times

In addition, based on the distribution of researchers' responses based on the duration of work, research institute X can be seen in Figure 6. Figure 6 explains the variations in the length of work
of researchers working in research X glue, namely the highest number of researchers' responses in
the range of 11-20 years of work 33%, while the respondents who respond the least are those with
more than 34 years of work, only 3%. As for the duration of the researcher's work based on the
other length of work is in the range of 6-10 years by 29%, <6 years as much as 19%, and 21-34
years by 18%.

![Fig. 7. Distribution of Researcher Based on Education Levels]

The distribution of research respondents based on education level has variations, namely
researchers with undergraduate education (S1) which is equal to 27%, researchers with a graduate
education level (S2) of 54%, and researchers with a doctoral degree education (S3) of 19%. The
distribution can be concluded that the highest number of respondents is at the two-level education
level.

Based on the distribution of responses seen from the functional levels, sex, length of work, and
education level explained that respondents who assessed and perceived the readiness of the
organization to change were represented. This can support the results of the assessment of the
organization's readiness to change quite accurately because all elements of the researcher have
been represented.

The results obtained explained that the organization's readiness to change in research institute
X had a mean value of 3.79 so it was at the level of lacking and preparing for an organizational
change plan. This explains that researchers' perceptions of research X's readiness to change are
still low. This has implications for how the research institute management X will communicate
about its organizational development strategies for all members of the organization. Data from the
analysis can be seen in the following table:

<table>
<thead>
<tr>
<th>Readiness to Change Dimension</th>
<th>The average value of the organization's readiness to change</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trigger Identification</td>
<td>3.75</td>
<td>Low</td>
</tr>
<tr>
<td>Gearing up to take action (preparing)</td>
<td>3.85</td>
<td>Low</td>
</tr>
<tr>
<td>Action's degree of novelty</td>
<td>3.77</td>
<td>Low</td>
</tr>
</tbody>
</table>
Based on the results of the measurement of the organization's readiness to change in the X research institute, which is predicted by its researchers, it is illustrated that the organization has not been able to prepare a plan and strategy for change optimally. It was detailed with its three dimensions, namely research institute X has not been able to identify the problems why institutional productivity, especially in the production of knowledge and utilization of research results is not optimal. Researchers believe that research institute X is still confused to be able to explore, map, and develop the potential of human resources, physical resources, and the resources of science and technology owned. In addition, the lack of ability of research institute X to appreciate the success of its researchers in developing science and technology. Besides being able to identify external problems, it has not been able to be accurately identified from the needs of its stakeholders, namely the government, academics, industry, and the community so that they have not been able to precisely determine the strategy in the future. The dimensions of gearing up to take action or process changes are perceived by researchers towards organizational readiness to change, namely organizations still cannot quickly correct errors in organizational management, so there are doubts among researchers about the ability of research institutions to be able to succeed in make organizational changes to be more effective and efficient. Some activities or programs have been carried out to improve and maximize productivity but have not been effective and tend to be considered not to have a significant impact on the organization. The final dimension is action degree of novelty perceived by researchers regarding their institutions, namely organizations are not optimally responsive to change both internally and externally so that existing innovations are still partial in that they are only in certain work units and have not been mutually integrated with each other. This has an impact on imbalance and the existence of disparities between work units in productivity and governance.

Based on the results of the interview regarding the readiness of research institute X to change in some researchers who were the subjects of the research, the results were obtained which explained several things as follows:

1. Research institute X needs to pay attention to the three dimensions of the organization's willingness to change as a basis for developing organizational change strategies, namely identification of triggers (challenges), willingness to change, and actions to make changes.
2. The research institute X still lacks the resources it has to support the organizational change plan.
3. Research institute X has not seriously mapped the potential and capacity of capabilities of the resources it has.
4. Unidentified potential resources are developed, main resources, and potential resources.
5. Research institute X still uses the old pattern in managing the organization, so that the change plan is still considered to be less than optimal.
6. There is an indication of high inertia to make changes from members of the organization, namely the majority of researchers.
7. Desire changes only to the intrinsic motivation of individual researchers or members of organizations that are related to their needs.
8. Age and duration of work affect perceptions about the readiness of research institutions X to change.
9. There is a desire for researchers to change to a better direction in research institutions X, so as to be able to increase productivity and have better competitive ability.
10. The need for research institutions X to make changes to be more adaptive to changes from internal and external sides.
Supporting the measurement results for ORC with a survey conducted on 137 researchers included in less categories, namely organizations perceived by organizations to be less prepared to plan and implement organizational changes. This is supported by extracting data in depth interviews which leads to the hope that researchers for organizations design changes that are more effective and communicate them openly and effectively. In addition, it was found that each individual researcher expects a better change in the organization but is still limited to the needs and perceptions of individual researchers so that it is not comprehensive. Then the need for change is done thoroughly from every aspect of the organization to be more productive and effective and efficient.

The phenomenon of organizational change is inseparable from how organizational communication activities are communication from management to all members and from organizational members to management to support success and minimize resistance. Organizational communication in institution X research was one of the factors that was explored to find out its impact on ORC research institute X. Interviews and observations were conducted on researchers who had responded to ORC measurements.

The results of the interview data and observations from a qualitative approach to organizational communication are as follows:

1. The pattern of weak interaction in each work unit and management affects organizational communication
2. Communication of organizations in research institutions X is still weak and has not used communication skills optimally
3. There is a communication barrier between management and its members
4. Management is less able to use media that is effective in communicating information related to organizational change plans
5. Capacity of management capabilities in conducting organizational communication
6. Lack of smooth communication between work units makes obstacles in the delivery and response of the right information
7. Organizational communication is considered less open and only top-down

Based on the results of the interview above, it can be explained that organizational communication has an important role in the process of planning the implementation of organizational change in research institute X. The results obtained regarding the description of organizational communication in research institutions X have not been effective and not optimal in the use of communication media. This has implications for the perception of researchers that communication in research institutions X is still less open, less effective, still lacking the ability of the management to inform organizational plans to members, so that it impacts on a lot of information that is responded to inappropriately. Then all of that will have an impact on the potential for resistance to change, so that the organization is considered to be not making optimal preparations in implementing the change plan.

The dynamics of organizational communication influence the readiness of the organization to change.

The policy change regarding the change in orientation of research results that are more tangible to be able to be diffused in the wider community is the basis for X research institutions to be able to increase the productivity of science and technology. The expected productivity of science and technology is not only on the production of knowledge, but also on the products of research that must be disseminated and commercialized to the wider community. That is why research institute X makes organizational changes to be more effective and efficient in achieving organizational
goals, namely increasing the quantity and quality of research results that can be disseminated and commercialized.

Organizational change is the basis for the X-ray organization to conduct reengineering on the internal aspects of the organization. Researchers individually expect a more significant change in the management of research institutions X in exploring the potential and utilizing the resources they have. Research institute X actually has a lot of resources that are unlimited and have advantages in the field of human resources, because it is a chosen human resource with a deep capacity of knowledge and skills in their fields, so that they have many achievements both inside and outside the country. However, the organization cannot yet see the potential and capital to develop the organization in the future. There are indications that the organization is still unable to map the capabilities and potential resources it has, so that it makes the organization experience difficulties and confusion in setting targets in the future.

The lack of optimal management of research institutions X in using the skills, abilities and use of organizational communication media makes information or messages about plans for implementing organizational change less properly conveyed. This was responded to by many members, namely researchers at research institute X became confused and doubted the direction of the change in the organization in the future. In addition, the existence of researchers perceives that organizational change needs to be done to improve the productivity of science and technology. But they also perceive that research institute X is less prepared for a primal organizational change. As in the ORC dimension, research institute X is still not able to precisely identify organizational problems accurately and quickly, so that problem solving and decision-making plans are still considered inappropriate. The speed of research institute X to respond to changes and problems is still perceived to be slow, because many of the problems that have occurred so far have not been resolved thoroughly and there are protracted tendencies, because the strategy used is not appropriate. And the novelty activities of the organization have not been optimized, because organizational resources have not been properly explored. All of these have implications for the implementation of organizational change strategy strategies to be less than optimal in integrating organizational resources.

5. Conclusions
Organizational change is a common activity as a form that the organization is dynamic in responding to changes both from internal and external organizations. Organizational change cannot just happen to be able to successfully achieve the goals to be achieved from change. Organizational change needs careful planning and optimizing potential resources that can support the success of these changes. Organizational readiness to change needs to be in every organization to successfully implement changes. As research institute X is implementing the change plan. When viewed from the aspect of organizational communication, it is still not able to use optimal communication strategies, so that changes in the organization of the telephone become appropriate. But on the other hand, it becomes confusing in the direction of the goal that is considered unclear. This has implications for researchers' perceptions of ORC in research institutions X is still lacking, because organizations are considered not able to identify the root of the problem correctly, have not been able to map the potential resources of the organization, and have not been able to identify problems related to change. In addition, the organization is perceived as still not able to use and does not have the right strategy to achieve organizational goals. Therefore, X research institutions are perceived as having no change innovations that are in line with the needs of the organization in the future. That makes an obstacle in implementing the expected change plan. When organizational communication has not been able to be used optimally and effectively, the strategy for implementing organizational changes is hampered. So, it will bring
up the lack of preparedness of the organization to make changes even if there is resistance from the members of the organization.

Based on the findings of this study explaining the important role of organizational communication skills from the management to be able to support the readiness of the organization to change. Therefore, the research team X needs to consider and use communication strategies as an important part of the change plan to be able to increase the readiness of the organization to change.

This research still needs to explore other aspects that explain organizational change. As for this study, it is only limited to exploring aspects of organizational communication and organizational readiness to change. The boundaries of the aspects studied in the study need to be studied in further research by exploring other aspects of organizational behaviour. So for further research there needs to be other aspects that need to be explored in order to explain the factors that support and weaken the organization's readiness to change.

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References


Exploring High-Performance Work Systems for Sustainability in the Hotel Industry

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Abstract. High-Performance Work Systems have become highly important in a business competition in the last few decades. HPWS as a resource for sustainable competitive advantage. This paper aims to explore how high-performance work systems deliver sustainability of the organizations where disruption technology as the main factor of external challenges. A research paper is proposed in regards to this issue. A descriptive analysis as a statistical tool was used to analyze the data and mean as the measurement of the variable. The result reveals that High-Performance Work Systems deliver a contribution to the role of achieving sustainability of the organizations through training which develops the flexible capability to adapt to external changes and challenges. This study is particularly useful for practitioners by identifying advantages of High-Performance Work Systems action for organizations and how it can be a resource of sustainable competitive advantage. This paper gives valuable reference to general managers as well as human resource managers to maintain High-Performance Work Systems in order to achieve sustainability of the organizations.

Keywords: High-Performance Work Systems, Sustainability, Disruption Technology, Hotel Industry

1. Introduction

Disruption technology has fostered the emergence of industrial revolution 4.0. Innovation in business into the digital era has given many difficult conditions for organizations. A business that built over many years must be adjusted and transformed into digitalization. Why organizations should respond to the coming new era? How do organizations start to react to this difficult conditions? The importance of this research paper is to help practitioners and executives find the answer to those questions and what the main factor that organizations must focus in order to maintain survival and build sustainability of their firms.

Since the last few decades, the growing research of examining the relationship between human resource management and the effect of organizational performance has been done by many researchers. Human resource management research which focuses on high-performance work systems has a positive impact on firm performance [1]. There has been continued debate among researchers in regard to the different perceptions and arguments about the "black box" in the relationship between human resource management and organizational performance. Therefore, these differences stimulate a growing interest in further research linking human resource management system and firm performance [2]. Recent studies of human resource management highlight the need for further progress of examining the mediating roles of organizational
capabilities or more specific dynamic capabilities between HPWS and organizational performance, such as human resource flexibility [3] Human resource management systems that enhance competencies, commitment, and employee productivity called High-Performance Work Systems (HPWS) [4] [5] High-Performance Work Systems (HPWS) defined as a specific combination of human resource practices, work structures and processes that maximizes employee knowledge, skills, commitment, and flexibility [6] The term of HPWS itself has been difficult to get an agreed definition because the significant difference between the theoretical, empirical, and practical approach used by researchers, for instance: High Performance Work Practice (HPWP), High Commitment Management (HCM), High Involvement Management (HIM) [7] However, HCM and HIM are not equivalent to HPWS [8]

HPWS derived from a bundle of human resource management systems which include human resource policies, practice, and process and can be linked to outcomes at both employees and organizational levels [9]; [10] The significant aspect of HPWS definition is a bundle of systems and not an individual characteristic of the human resource. The key point of view for the firm success in the market nowadays is dominantly derived from a human resource of the firm, as human resources are one of the most important resources to generate competitive advantage of the firms [11]

[12] The concept of HPWS can be approached from the perspective of Resource-Based View (RBV) of the organization, which implies that a resource can be qualified as a source of competitive advantage as long as the resource is rare, hard to be imitated, and adds value to the organization [12]; [13] According to this concept, Lado and Wilson [14] mentioned that sustainable competitive advantage can be achieved as long as human resource systems are able to develop specific competencies and capabilities of the organizations. Besides, it can also provide the organization with both increased fit and flexibility [15] HPWS indicates a system or a bundle of human resource practices which design to increase skills, commitment, and involvement so that employees can be of resource for sustainable competitive advantage [1]

Sustainability is increasingly a strategic issue for organizations to look for a competitive advantage. Sustainable competitive advantage refers to a benefit of firms or organizations that differentiating from their competitors and cannot be duplicated [16]. And it can be reached if a human resource of a firm or organizations become unique, rare, and difficult to imitate [17]; [13] as a result of creating values executed by Senior Human Resource Managers [18] According to Swierz (1995), values can be shaped through firm performance resulted from the investment of a company on recruitment, training, and employee development. Sustainability can also be reached when organizations have a competitive advantage in the hospitality industry [1]; [18] In accordance with those previous research (Combs et al., 2006), HPWS through its indicators used in this research (training, salary system, evaluation system, and autonomy that relates to employee motivation) can be explored to deliver contribution of sustainability for the firms or organizations.

Organizations in hotel industry face a competitive and complex environment, where human resource management plays a critical role in this difficult conditions. As the product of the hotel industry is a service experience, organizations mostly depend on human resource capabilities to interact face to face with customers. According to Baum and Tracey, human resource management play a key role in service quality, satisfaction, and customer loyalty as a measurement of firm performance [19]; [20] In this context, HPWS is mostly needed in the hotel industry as the key role to face competitive and cope with the complex environment. Notwithstanding, research to investigate HPWS in the hotel industry as the key for competitive advantage is still rare. The objective of this research paper is to explore how HPWS can contribute sustainability of the organizations in the hotel industry where competitiveness is very tight and strong, particularly in facing the disruption technology and other external disturbances.
2. Method
This research conducted within 3-star hotel industries in 2 towns in East Java Indonesia, found the population of the 3-star hotels and equivalent were 38 firms. The technique sampling method was purposive sampling. A questionnaire survey was administered to 76 General Managers and Human Resource Managers or the persons in charge of those positions. These respective respondents were persons who were responsible for developing their human resources. Each firm represented by two respondents and only 6 sets of questionnaires were not returned.

Descriptive analysis was a statistical tool used to analyze the 70 sets of returned questionnaires. High-Performance Work System used in this research has 4 indicators according to Combs et al. [1] consist of training, salary system, evaluation system, and autonomy that relates to employee motivation. Each indicator has 2 items accordingly. SPSS software was used to process the data. The result of validity and reliability tested were all valid and reliable. The scope and limitations of this study were that organization as unit analysis and small size of samples.

3. Result And Discussion
The questionnaires were processed using descriptive analysis with mean and standard deviation to describe the data. The result displayed in Table 1.

<table>
<thead>
<tr>
<th>High-Performance Work System (HPWS)</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Training should be done in order to follow external changes.</td>
<td>4.56</td>
<td>0.67</td>
</tr>
<tr>
<td>Training should be employed to potential employees for career development.</td>
<td>4.01</td>
<td>0.84</td>
</tr>
<tr>
<td>Salary System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Salary should be paid based on experience/expertise.</td>
<td>4.13</td>
<td>0.90</td>
</tr>
<tr>
<td>Salary should be paid more for employees who work in a team.</td>
<td>3.57</td>
<td>0.88</td>
</tr>
<tr>
<td>Evaluation System</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Performance evaluation is executed at least once a year.</td>
<td>4.41</td>
<td>0.63</td>
</tr>
<tr>
<td>Rewards are given to employees with outstanding performance.</td>
<td>4.44</td>
<td>0.65</td>
</tr>
<tr>
<td>The autonomy that relates to employee motivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employees are given authority for making the decision to finalize their jobs</td>
<td>4.03</td>
<td>0.68</td>
</tr>
<tr>
<td>Employees are given opportunities to create innovation in their jobs.</td>
<td>4.31</td>
<td>0.69</td>
</tr>
</tbody>
</table>

Result in Table 1 showed that all the mean values were above its standard deviations. It demonstrated that all the data did not contain outliers. The highest mean value was 4.56. It indicated that respondents chosen an item of training should be done in order to follow external changes was the most preferred of all respondents. On the contrary, the lowest mean value was
3.57. It indicated that respondents chosen an item of salary should be paid more for employees who work in a team was the lowest preference of all respondents. The most preference of respondents to choose an item of training should be done in order to follow external changes means that most respondents agreed that this kind of training should be done. It reveals that respondents realized the organizations need the capability of continues adaptation in order to follow the changes in external environments. Otherwise, the organizations will no longer survive. This finding indicates that flexible capability is needed and important to face continues changes and cope with external environments. HPWS which focus on training to enhance employee capabilities to continuously adaptable with external changes and challenges. Flexible capability drives organizations to achieve sustainability. This result supports Delery’s statement that HPWS can also provide the organization with both increased fit and flexibility ([15]).

In addition, values of human resource can be created and shaped through training of employees (Swiercz, 1995) responsible by Senior Human Resource Manager [18] to become unique, rare and difficult to imitate and substitute [12]; [13] and at the end will impact to organizational performance. This results also supports Lado and Wilson [14] research that sustainable competitive advantage can be reached if organizations develop specific competencies and capabilities. In this context of research, specific competencies are the ability to adapt to external changes and when it is done continuously and consequently will foster the sustainability of the organizations.

Sustainable competitive advantage is also needed in the hotel industry. As this research was conducted in the hotel industry, the result also supports Combs and Suryaningtyas [18]. The lowest preference of respondents to choose an item of salary should be paid more for employees who work in a team. It means that only a few respondents agreed with this statement. This result reveals that employees who work independently should receive the same level of salaries as employees who work in a team. From this point of view, Human Resource Managers should create and socialize the importance and advantages of working in a team. And when it works, they should appreciate the team by giving higher salaries respectively, based on employee contributions to the organizations.

4. Conclusions

Overall, the conclusion of this research is that HPWS can foster organizations to achieve sustainability through training that develops flexible capability and shaping values to employees so that organizations have the capability to adapt with external changes and challenges, such as disruptive technology as an impact of digital innovation.

The implication for General Manager and Human Resource Manager is that they should focus on developing HPWS including building teamwork which contribute to the key role in achieving sustainability of the organizations. Further research should be done in different kind of businesses with and larger sample size.

References

Agile Approach to Minimize Risk Product Innovation in Functional Food Creative Industry

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Abstract: Product innovation is one of the most risk activities in business. Innovation purposed at delivering disruptive impact, or creating new market spaces or step-changes in product, process or business-model performance. The heart of the Agile method in product development is the use of a series of rapid, iterative learning loops, and become an integrated perspective in whole aspects in built to breakthrough innovation and create new source of value. This research purpose to implement the agile path method in food product innovation and how this approach can minimize risks which occur during disruptive condition. To reach the aim of this research, three major stages were conducted in lemongrass tea as functional food industry which were (1) Identify and analyse risk factor based on its complexity and adaptiveness, (2) Build the SWOT framework based on risk identification, and (3) Choose and analyse the best agile approach from SWOT Strategies. As the result, WT (weakness-threat) strategy has been chosen based on risk perception and become the key factor for the development of lemongrass tea to reach global market.

Keywords: Agile, Risk, SWOT, Food Industry

1. Introduction
Innovation purposed at delivering disruptive impact, or creating new market spaces or step-changes in product, process or business-model performance[1]. In common, these new phenomenon become parts of product life cycle to sustainable and profitable[2]. Innovation in products gain company growth, generate increased sales and profits, and become a crucial component in business planning. New product development is an interdisciplinary activity requiring input from top management, scientific, technical, marketing, finance, sales and other personnel[3].
Risk exist in every business activities and caused by many conditions and risk management identify, analyse, and control the risk in every company activities to run effectively and efficiency. Product innovation is one of the most risk activities in business. In product innovation, risk factors can be differentiated in terms of their technological, organizational, and commercial factors. Risks are inevitable in innovations. As an innovation strategy based on risk avoidance cannot be an option, proactive risk management is needed in which risks are identified in the early phases of product development when there is still time to influence the course of events.

The food and agricultural industry characterized by a number of features which challenge and shape the innovation process: volatility, long production cycles, slow growth, complex supply chains, traceability/food safety, highly regulated, technological convergence, a commodity industry and consolidation/coordination of a very fragmented industry. These characteristics can be classified into two major categories: complexity and adaptiveness.

Functional food is one of creative industry which offers innovation in line with the development of science and changes of lifestyles. Nowadays, consumer demand for food not only as the source of nutrients but also provides health benefits. Concept of functional food is containing active components and having physiological function used as disease prevention and treatment or gaining optimal health. For instance, lemongrass tea functional food contained high antioxidant with natural ingredients. Antioxidant acts as radical scavenger which donates hydrogen ion to neutralize free radical in human cells and inhibits occurrence of cancer. Incorporation of antioxidant in the diet might help in reducing oxidative stress and occurrence of degenerative disease such as cancer. Lemongrass (Cymbopogon spp.) plant grows in tropical and subtropical region and is commonly cultivated as spices or essential oil. Lemongrass extract was reported to inhibit colon cancer in animal models. Reported that ethanolic extract of lemongrass contains 535.44 to 1007.35 mg/100 g total phenolic and have 80.38 to 93.31% antioxidant activity.

The heart of the Agile method in product development is the use of a series of rapid, iterative learning loops. At the exploration phase of the development lifecycle, each loop focuses on answering a key question that is determined to have a high degree of importance and uncertainty, in order to build a progressively clearer picture of the desired solution. At the later stages of the development cycle, the loops shift their focus to realize and develop parts of the solution. However, as prototypes get closer to complete functionality there are important constraints and considerations which lead some companies to limit their adoption of Agile methods to the early-stage activities, at least initially.

Being agile means applying previous knowledge while learning from current experience in order to deliver high-quality products, under budget constraints and in short time frames.

This research aims to implement the agile path method in food product innovation and how this approach can minimize risks which occur during disruptive condition.

2. Methodology

To manage risk in business activities, understanding risk is a starting point to help producers make good management choices in situations where adversity and loss are possibilities then identifying the risk sources is a critical step in managing the risks. This research has three major stages. Firstly, classified risk factors in two categorize which are complexity and adaptiveness which identified from features in food and agriculture innovation process. Secondly, the competences are important to be evaluated. Competences scope on the industry’s strength, opportunities, weakness, and threats. The SWOT analysis is a business analysis technique that organization can perform for each of its products, process, services, and
markets when deciding on the best way to achieve future growth. The process involves identifying the strengths and weaknesses of the organization, and opportunities and threats present in the market that it operates in[16]. Once this is completed, SWOT analysis determines what may assist the firm in accomplishing its objectives, and what obstacles must be overcome or minimized to achieve the desired results[17]. In this research, SWOT analysis built on risk perspective and actions to minimize risk rely on Agile Path to solve problems in development phase.

The phase-gate and Agile approaches are distinct in their implementation, and generally suited to different innovation objectives. Companies adopting two general approaches when trying to introduce Agile into an existing phase-gate process: (1) Integrating Agile into a single innovation process, and (2) Adding a partly parallel Agile path. Integrating Agile into a single innovation process typically involves using iterative loops within the existing phase-gate process, but with the overall structure retained as is. With this approach companies may be, in effect, deceiving themselves that they have embraced Agile principles, when nothing fundamental has changed[1]. Agile approaches start to be applied at the front end of the development process. There are clear benefits to be enjoyed from investigating concepts with substantial levels of uncertainty that need to be better understood and explored. These set the stage for the downstream development activities that include detailed design, market testing and launch as seen on Figure 1. To facilitate the hand off, the transition point between the Agile process and the existing phase-gate process needs to be carefully defined and managed especially if aspects of the detailed design have already been covered in the development of earlier-stage prototypes[1]. Thirdly, as the last step, mitigation constructed in agile view to minimize risk product innovation especially on functional food industry which focused on lemongrass tea as a case study.

**Figure 1: Agile Path**

Interviews conducted to respondents whom produce lemongrass tea in KutaiKartanegara, East Kalimantan and respondents whom work at Agency of Industrial Research and Standardization Samarinda, Ministry of Industry Republic of Indonesia. Interviews are held to identify the risk factors in lemongrass tea product and to explore the perform of strength, opportunities, weakness, and threats in this industry. At the end, deep discussion with all respondents built for breakthrough innovation and create new sources of value developed as an agile process to minimize the risk in lemongrass tea product.
3. Result And Discussion

The risk factors of lemongrass tea industry classified as shown on table 1. Complexity faced by the lemongrass tea industry is complexity in supply chain. Even though the lemongrass as raw material available during all years, the supplier could not deliver on time, and sometimes the production quantity is not enough to fulfil the production demand.

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Risk Identification</th>
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</thead>
<tbody>
<tr>
<td>Complexity</td>
<td></td>
</tr>
<tr>
<td>1. Complexity in supply chains</td>
<td>- Supply delay for raw material</td>
</tr>
<tr>
<td></td>
<td>- Lack of supplier for supporting material</td>
</tr>
<tr>
<td></td>
<td>- Unstructured supply chain</td>
</tr>
<tr>
<td>2. High degree of regulation</td>
<td>- Lack of understanding for government regulation</td>
</tr>
<tr>
<td>3. Traceability and food safety requirement</td>
<td>- Undocumented process production</td>
</tr>
<tr>
<td></td>
<td>- Undocumented procedure</td>
</tr>
<tr>
<td></td>
<td>- Non-standard production floor</td>
</tr>
<tr>
<td>4. Quality standards</td>
<td>- Under qualified raw material</td>
</tr>
<tr>
<td></td>
<td>- Unexpected product by market</td>
</tr>
</tbody>
</table>

Adaptiveness

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Risk Identification</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Volatility:</td>
<td>Product price fluctuation</td>
</tr>
<tr>
<td>a) Price</td>
<td>- Defect product and material</td>
</tr>
<tr>
<td>b) Production conditions</td>
<td>- Lack of human resource professionalism</td>
</tr>
<tr>
<td>2. Industry convergence</td>
<td>Failure to fulfill production target</td>
</tr>
<tr>
<td>3. Commodity nature of raw materials</td>
<td>Defect material</td>
</tr>
<tr>
<td>4. Increasing need for chain coordination</td>
<td>Miscommunication among chains</td>
</tr>
</tbody>
</table>

*Adapted [8]

Furthermore, the lemongrass tea has lack of supplier for supporting material such as tea bag packing, nor outer packing. Generally, the supply chain of the lemongrass tea industry is unstructured. Then, the regulation of food process production is quite complicated for small and medium size industry like lemongrass tea to fulfil the requirement. The lemongrass tea production could not be trace due to undocumented formal process production and procedures. Moreover, there are non-standard food safety requirement the production floor. For risk factor in quality standards, this research identify that the government does not have national regulation for lemongrass teabag, and the industry does not have a formal quality standard too.
In other aspect, there are under qualified raw material that could not identified by the production team. For an instance, the humidity level of raw material or the fungus which covered raw material. These condition cause unexpected product due to its bad input.

The adaptiveness risk factor for lemongrass tea industry is important to facing an agile and disruptive environment. First, the volatility of food creative industry base on the price and production condition. The price factors influenced by the price of supporting material and raw material. It causes product price fluctuation. The production condition influences the failure result of product and defect material. In general, there is an issue of human resources professionalism in this lemongrass tea industry. The capability and competency of their human resources are inferior. Second, risk in industry convergence. The machines and layout of floor production could process variation of product base on lemongrass, but it could cause failure to fulfil production target when line production is delay. Third, risk factor in commodity nature of raw material. Lemongrass is the only main raw material that this industry need. The nature of lemongrass is sensitive to the humidity level [10]. When the level of humidity is too high the lemongrass will get mildew and leads to defect material. Another risk factor which identified is the increasing need for chain coordination risk factor. As mention before that there is unstructured supply chain for lemongrass tea industry. These condition potentials to create miscommunication among chains in their supply path if they fail to manage the open coordination.

SWOT analysis applied in food creative industry where the environment is agile and competitive [18]. Industrial experts in strategically planning the growth, expansion, market research, environmental scanning and analysis in order to have a clearer picture of how their strengths can be reinforced by capitalizing on the opportunities and how weaknesses can slow the development and magnifying threats [19]. SWOT of lemongrass tea, KutaiKartanegara shown in table 2.

<table>
<thead>
<tr>
<th>Strength</th>
<th>Weakness</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product Quality Assurance</td>
<td>1. Lack of professionalism</td>
</tr>
<tr>
<td>2. Economic Pricing</td>
<td>2. Supply in consistencies</td>
</tr>
<tr>
<td>3. Healthy lifestyle</td>
<td>3. Lack of legal, social &amp; cultural knowledge</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Forward looking halal and healthy food creative industry</td>
<td>1. Capacity to meet the demand</td>
</tr>
<tr>
<td>2. Rising functional food demand</td>
<td>2. High energy and raw material cost</td>
</tr>
<tr>
<td>3. Online Marketing</td>
<td>3. The competitor from global market</td>
</tr>
</tbody>
</table>

3.1 Strength
Product quality assurance became the first strength of lemongrass tea industry of KutaiKartanegara. The industry has strict requirement on raw lemongrass and in process production of the tea. In the processing lemongrass, the concoction temperature based on the research result of Agency of Industrial Research and Standardization Samarinda, Ministry of Industry Republic of Indonesia. Functional food in creative industry try to provide an affordable product for everyone as one of their strategy to introduce their product. They have to set their product in economical price. Fortunately, there are a big movement in society around the world of
changing lifestyle to become healthier. People want have a healthy body and habits, including the food they consumed.

3.2 Weakness
The lemongrass tea of Kutai Kartanegara as a small medium size enterprise has problem in their professionalism of the human resources. There are no Standard Operation Procedure for their activities. With unprofessional worker, it would not be effective to run their business. Another problem is the availability of raw material. In some occasions, the raw materials which meet quality requirement are rare to find due to the changing weather. The last weakness in lemongrass tea product developments is the lack of legal, social & cultural knowledge. As a new product, many steps should be done. For an instance, paper work to do to complete legal administration include searching regulation which is connected to standard of food product to expand the market. Another example, create the way to educate potential market about benefit which brings inside the product.

3.3 Opportunities
Nowadays, the market of halal and healthy food creative industry is growing fast accordance with the regulation of halal product applied in Indonesia and the consumers not only Moslem but everyone who interested in halal and healthy life style [20]. These phenomena become opportunities for the lemongrass tea to enlarge their market. Besides, the healthy lifestyle rises functional food demand. People like instant and simple things but still want back to nature. Functional food can provide what customers need and contribute in market competition. Another opportunity is reaching many potential customers by information technology. Market places, social media, and website can be used to achieve better expansion.

3.4 Threats
The lemongrass tea industry facing some threats that risky to their sustainability. Firstly, the production capacity does not meet the demand. Secondly, the production cost is increasing especially in energy and material cost because of manual process and lack of supervise in process. Thirdly, high competition due to another functional food industries grow fast with variety function to offer. The last threat come from the global economic crisis that decrease the ability of people to buy functional food.

3.5 Agile Strategies
The researchers build four possible strategies in agile perspective.
SO Strategies – the lemongrass tea industry should focus on global marketing by product professional branding and online marketing system.
ST Strategies – the industry focus on the efficiency of process production to reduce cost and gain competitiveness through competitive product price.
WO Strategies – the industry constructs a robust supply chain form to enter global market.
WT Strategies – the industry target on standardize the process production and quality product by fulfill the government regulation. Production capacity must be plan correctively to meet between demand and production cost. Also, the industry needs to develop their human resource professionalism such as capabilities and integrities.

Refer to agile path in Figure 1, built for breakthrough innovation done by focus on Standard Operation Procedure and integrate all variables on process including its administration. New sources of value by minimize the risk in each factor in table 1 and time to market to win competition in disruptive era as an innovation product.
4. Conclusion
In risk perspective, WT strategies are the most fit strategies to applied based on Agile Path. These strategies accommodate to mitigate risk factor which might occur in industry. Agile Path built for breakthrough innovation in WT strategies by creates new sources of value.

In further, the research might focus to build procedure to standardize all process that will support agile condition in lemongrass tea process production. Also, the research might formulate capacity requirement planning in order to balance supply and demand based on production cost.

References


The Effects of Ownership Types, Concentration, and Foreign Banks’ Modes of Entry Risk-Taking Behaviour and Capital Ratio

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Abstract: This paper examines the effect of ownership types and concentration, as well as the impact of foreign bank’s entry modes on bank’s risk-taking behavior and capital ratio and also analyze the effect of bank-risk taking behavior and capital ratio have to one another simultaneously. This study uses panel data of 87 banks in Indonesia and Malaysia from 2003 to 2016. This study finds that government-owned bank and foreign-owned banks take more risk and have higher capital ratio compared to the privately-owned bank, while foreign banks that enter the market with merger & acquisition strategy tends to take less risk than those who enter the market with greenfield strategy. Moreover, the result also shows that bank-risk taking behavior and the capital ratio has negative effects on one another and that banks take less risk and hold more capital during the financial crisis period. These findings have major implications towards government’s and foreign ownership limitations such as limiting the number and entry of foreign and state ownership will be effective to reduce bank-risk taking behavior and implementing minimum capital adequacy policies will be able to initiate less-aggressive risk-taking behavior.

Keywords: Bank risk, Capital ratio, Ownership types, Ownership concentration, Capital regulation, Foreign bank entry

1. Introduction
The Asian Financial Crisis in 1997/1998 has a profound effect on almost all countries in Southeast Asia and resulted in several bank’s restructuring policies. Indonesia in particular decided to roll out several policies to reduce the number of banks in the country to create a safeguard for banks to help them survive the financial crisis through the minimum capital adequacy ratio policy. Both Indonesia and Malaysia have implemented 8% minimum capital adequacy ratio, quite different from other Southeast Asian countries which mostly implemented higher capital ratio. Moreover, both Indonesia and Malaysia have the 2nd and 3rd highest ownership concentration level in Southeast Asia and the state-owned banks in both countries dominated the banking industry in terms of asset despite only having small number of state-owned banks. Taking the similarities in both the banks ownership characteristics and
policies implementation, Indonesia and Malaysia seem fit to be used as samples in this study. However, the high capital ratio does not automatically mean a reduction in bank-risk, as previous studies has proven otherwise. Based on regulatory hypotheses, banks would increase their risk along with the increase in their capital ratio [1]. If the regulatory hypothesis holds, then the government plan to reduce bank-risk using a minimum capital adequacy ratio policy would backfire. Although other researches show different result, motivated by the moral hazard theory. This is one of the fundamental reasons why this research is deemed necessary.

Another significant implication from the policies enacted after the financial crisis is the rise of foreign-owned banks and the domination of state-owned banks in both Indonesia and Malaysia. State-owned banks in Malaysia represent about 40% of the banking industry’s total asset while in Indonesia, it represents around 38.7% in 2016. Foreign-owned banks also dominated the banking industry regarding the number of banks in Malaysia. State-owned banks have been proven to be more inefficient compared to another type of banks due to their political ties with the government and the complicated bureaucracy (Lassoued, Sassi, Ben, & Attia, 2016) but they still give loans more than any other banks (Indonesia Statistics Institution, 2016), thus, increasing their credit risk. Foreign-owned bank’s participation also rises rapidly in the following years after the financial crisis, while most studies show that foreign-owned banks usually take more risks due to their disadvantages in acquiring comprehensive information like private-owned or state-owned banks [2]. The notion that both state-owned banks, which dominated the banking industry, and foreign-owned banks, which show rapid growth in the last few years, to take more risk compared to private-owned banks could pose as a threat to the banking industry.

Foreign bank’s mode of entry also shows different behavior in risk-taking, as banks which enter the market via merger & acquisition might get influenced by the domestic banks it acquired or merged with [2]; [3]. While talking about ownership, we also have to acknowledge that type of ownership is not the only factor that might influence bank’s risk-taking behavior and capital ratio policies; ownership concentration has also been the focus of many studies, starting with [4] The agency theory, formulated by Jensen & Meckling, [4] provides insight about how shareholders tend to focus on revenue while managers who face the threat of losing their job prefer to contain and limit bank risks. Based on the agency theory, banks with concentrated ownerships usually take more risks, as supported by previous studies such as Chalermchatvichien [5] and Eisenhardt, [6] The interesting part about this research also lies in the effect that bank-risk taking behavior and the capital ratio has one another, which means that both variables are endogenous variables and require two-step simultaneous least square regression (2SLS) testing.

This study contributes to the existing bank-risk taking and capital ratio literature with a focus on the banking industry in Indonesia and Malaysia. The findings show that capital ratio and bank-risk taking behavior indeed have an adverse bi-directional effect towards one another, which means that an increase in capital ratio will be effective to reduce bank’s risk-taking, as intended by the Basel Committee and the government of both countries[7] Furthermore, this study also proves that government-owned banks and foreign-owned banks take more risks and has higher capital ratio compared to private-owned banks, which means that policies to reduce or put a limit to both state and foreign banks to be created or enter the market might help to reduce the overall risk in Indonesia and Malaysia banking industry. Moreover, this study also examines the effect of foreign bank’s entry modes on risk-taking behavior and capital ratio. The result shows that banks which enter the market via M&A take fewer risks than other entry mechanisms. This finding is in accordance with the asymmetric information theory and could help the government to control the mode of entry for foreign banks in the future. Also, during the global financial crisis period, banks in Indonesia and
Malaysia also tend to have less aggressive risk-taking behavior, to control their risk-level and avoid insolvency while taking the initiative to have a higher capital ratio as a safety measure. The rest of this paper is presented as follows. Section 2 will provide a brief explanation on literature review, which includes theory that will be tested and previous studies. Section 3 will describe the model and methodology used on this research. Section 4 presents the results and give brief analysis based on those results, and section 5 will give a summary and some recommendations.

2. Literature Review And Hypotheses Development

Studies in bank-risk taking behavior have become a crucial part of researches in the banking industries. There are two main theories on the relationship between bank risk-taking behavior and capital ratio, i.e., the regulatory hypotheses and moral hazard theory. Regulatory hypothesis explains that regulators push banks to increase their capital by the increase the risk-level [8]; [9].

On the other hand, the moral hazard theory explains that capital ratio will affect bank-risk taking behavior negatively due to the availability of a deposit insurance scheme. When deposit insurance is provided, banks will be inclined to reduce their risks when their capital ratio increases. Since the incentives, they receive from deposit insurance decreases, and they have to cover their risks with their capital. The tendency to increase risks to reap benefits from deposit insurance cause moral hazard behavior. Based on the theories and previous studies, these are the hypotheses developed:

H1a: Bank risk taking behavior has a negative effect on capital ratio
H1b: Capital ratio has a negative effect on bank risk-taking behavior

Regarding the type of ownership, banks categorized into three types, state-owned banks, foreign-owned banks, and private-owned banks. Based on the political theory, state-owned banks have the highest inefficiency level due to political intervention and government bureaucracy [10];[11] Shleifer & Vishny. Previous studies also prove that banks with political connection have higher chance to be rescued by the government in case of insolvency [12]. Similarly, foreign-owned banks have also been proven to take more risks compared to private-owned banks due to asymmetric information issues, causing foreign-owned banks to be at a disadvantage due to unavailability of information regarding the clients and the local banking industry itself. Moreover, due to the rapid growth and high profitability of the banks in Indonesia and Malaysia, foreign-owned banks are willing to take more risks in return of high benefits in the future [12]; [13]; [14].

Specifically, foreign-owned banks can be classified into two categories based on their mode of entry, by merger & acquisition and by greenfield investment. According to asymmetric information theory, banks who enter the market via merger & acquisition will have an advantage regarding acquiring information, regulation and market-wise, from the banks they acquired or merged with [15]; [2]). In contrast, [16] also mention that banks who enter via greenfield investment would be easier to monitor by the managers from home country compared to those who enter via M&A. Moreover, managers in banks who merged with local banks, may have their agenda and increase the agency problems within the company, thus increasing the risks. Therefore, based on the theories and studies by [14]; [17]; [15]; [10], state-owned and foreign-owned banks are expected to have negative sign on Z-Score or positive sign on bank risk-taking behavior while foreign bank’s mode of entry using
merger & acquisition is predicted to have a positive sign on Z-Score and negative sign on bank risk-taking behavior. The hypotheses generated are as follow:

H2: State-owned banks take higher risks compared to private-owned banks
H3: Foreign-owned banks take higher risks compared to private-owned banks
H4: Foreign bank's mode of entry has an effect on bank’s risk taking behaviour

Indonesia and Malaysia are also the 2nd and 3rd highest ownership concentration countries in Southeast Asia. Banks with high ownership concentration indicate a higher power of shareholder compared to managers. According to the agency theory, shareholders have the tendency to take more risks to increase their future revenue due to their ability to diversify their portfolio, thus reducing their portfolio risks while managers prefer to take more moderate stance on risk-taking since they have to ensure their position within the company due to their inability to diversify their jobs [4]Other contradictory views said that shareholders would be more involved and would increase their monitoring towards managers so managers wouldn’t be able to pursue personal benefits, this view shows that ownership concentration has an adverse effect on bank-risk taking behavior. Based on the explanations mentioned in the agency theory, the hypotheses generated is as follow:

H5: Ownership concentration has a positive effect on bank-risk taking behavior

Aside from bank-risk taking behavior, this study also focuses on the bank’s capital ratio. State-owned banks tend to have higher capital ratio level as they usually have more assets and broader clients network, which indicates their needs to be more careful due to higher responsibility [15]; [10] Foreign-owned banks, in contrast, have more access to international investors and capital markets would be able to increase their capital easier compared to domestic private-owned banks [17]Based on the concentration views, banks with high ownership concentration has been proven to have a lower capital ratio level [18]However, other studies have proven otherwise, where banks with highly concentrated ownership indicate that the shareholder will have higher stakes within the company and get more motivated to monitor the manager, one of which is through capital ratio policy [19]; [20]According to previous studies as explain above, these are the hypotheses created:

H6: State-owned and foreign-owned banks has higher capital ratio compared to private-owned banks
H7: Ownership concentration has positive effect on bank’s capital ratio

This study will also include the period of financial crisis in 2008 – 2010, which leads us to also put a focus on the crisis period. During the crisis, banks which enjoy the benefits of deposit insurance will take fewer risks as deposit insurance will do its job to stabilize the banking industry or using its “stabilizing effect” [21]Similarly, the previous study in Indonesia also finds that during the crisis period, the existence of deposit insurance system will be able to reduce systemic risk in the banking industry, fulfilling the objective of deposit insurance itself [22]Also in accordance with the moral hazard theory, during the crisis with rising tension and possibility of failure, banks would prefer to utilize the deposit insurance provided by the government, rather than using their own capital as a safeguard, therefore, a bank’s
capital ratio is predicted to decline during the financial crisis period [21]. The hypotheses generated for the effect of crisis are as follow:

H8a: Banks tend to take less risks during the financial crisis period
H8b: Banks tend to reduce capital ratio during the financial crisis period

Based on the literature review and previous researches, the table below shows the expected sign of each independent variables towards dependent variables. The proxy used for bank-risk taking behavior is Z-Score, which means that the higher the Z-Score is, the lower risks taken by banks, thus the sign expected for Z-Score will have a negative effect on bank risk-taking behavior.

<table>
<thead>
<tr>
<th>Table 2.1: Expected Sign from Independent Variables</th>
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<tbody>
<tr>
<td><strong>Dependent Variable : Z-Score (Bank Risk-taking)</strong></td>
</tr>
<tr>
<td>Independent Var</td>
</tr>
<tr>
<td>Capital Ratio</td>
</tr>
<tr>
<td>Foreign-Owned Banks</td>
</tr>
<tr>
<td>State-Owned Banks</td>
</tr>
<tr>
<td>Mode of Entry (M&amp;A)</td>
</tr>
<tr>
<td>Active Shareholder</td>
</tr>
<tr>
<td>Passive Shareholder</td>
</tr>
<tr>
<td>Leverage</td>
</tr>
<tr>
<td>Size</td>
</tr>
<tr>
<td>Inflation</td>
</tr>
<tr>
<td>GDP Growth</td>
</tr>
<tr>
<td>Crisis</td>
</tr>
<tr>
<td>GDP Growth</td>
</tr>
</tbody>
</table>

3. Research Methodology
This study tested the data from all conventional commercial banks in Indonesia and Malaysia for the period of 2003 – 2016 and employed total of 87 banks, with 71 of those coming from Indonesia and 16 banks from Malaysia. The odd numbers for the samples are caused by a lack of data for Banks in Malaysia, as not all banks publish their financial/annual report. The bank-risk taking behavior represents by Z-score, and the data for the capital ratio is represented by the capital adequacy ratio (CAR). All bank-level data including both main
variable and control variables are collected from financial reports published by OtoritasJasaKeuangan (OJK) in Indonesia and from respective banks annual financial report in Malaysia, hence, the author was having difficulty to collect the data for banks in Malaysia, resulting in a small number of banks in Malaysia. Country-level data collected from central banks in both countries (Bank Indonesia and Bank Negara Malaysia) and the World Bank’s website.

a. Model Specification
Several proxies have been used in the past to explain bank-risk taking behavior, as bank risk has several dimensions, from credit risk, operational risk, market risk, or solvency risks. In this paper, we use insolvency risk to explain bank risk-taking behavior, using Z-score as a proxy, which shows bank’s distance to insolvency risks, which means that the higher the value of Z-score, the less insolvency risk associates with the bank. The value of z-score can be calculated by adding the value of return on the asset with capital to asset ratio and dividing it with the standard deviation of return on the asset as used by previous studies [9]; [23]The main variables used to explain bank-risk taking includes ownership type, which uses dummy variables that indicate whether the bank is state-owned, foreign-owned, or private-owned based on the share of the bank’s largest shareholder which has to exceed 50% to be included in one of the categories. Also, this study also measures the foreign bank’s entry mode using the dummy variable to represent foreign banks that enter the market via merger & acquisition or greenfield investment. Other main variable is ownership concentration which use the interaction of the share of largest shareholder with a dummy variable that indicates whether a bank has passive shareholder (PS) if the largest shareholder owns less than 20% share in the company, active minority shareholder (MAS) for 20%-50% ownership or active shareholder (AS) for more than 50% ownership.

Bank-risk taking model uses leverage, which indicates how much loans that bank use to finance or to support its asset, bank size, to shows the difference between a bank with large asset and banks with small assets. While capital ratio model uses bank size as well, with some additional bank-level variables like weighted risk asset to total asset ratio to show the amount of risky asset compared to total asset, return on the asset as the proxy for profitability, and asset growth. Both variables also use macroeconomic-level control variables like GDP growth and Inflation rate. Following previous studies by [24]; [25]this study will also use simultaneous regression or 2SLS to be able to analyze the effect that bank risk-taking behavior and capital ratio have to one another. Therefore, to examine the influence of ownership type, structure and foreign bank’s entry mode towards bank risk-taking behavior and capital ratio these are the model used in this study:

\[
RISK_{i,j,t} = \alpha_0 - \alpha_5 \text{CAP}_{i,j,t} + \alpha_2 \text{OS}_{i,j,t} + \alpha_3 \text{OT}_{i,j,t} - \alpha_4 \text{SIZE}_{i,j,t} + \alpha_5 \text{LEVERAGE}_{i,j,t} - \alpha_6 \text{GDP}_{j,t} + \alpha_7 \text{INFR}_{j,t} + \epsilon_{i,j,t} \tag{3.1}
\]
The variable ME (Mode of Entry) examines the effect of the Bank’s mode of entry on bank-risk taking behavior. Banks that enter a market via merger & acquisition will have an advantage regarding the information acquired. Furthermore, model 3.4 is used to check the consistency of bank risk-taking behavior and capital ratio during the crisis period. The fifth model (Model 3.5) examines the effect of capital ratio along with, as the ownership type, ownership structure on bank-risk taking behavior. Hence, making bank risk and capital ratio to be endogenous variable, and other control variables such as risk-weighted asset to total asset ratio (RWATA), asset growth (AG) and Return on Asset (ROA) along with both macroeconomic variables, GDP growth, and inflation rate.
The sixth model, quite similar with the second and fourth model, is developed to analyze bank’s capital ratio during the crisis period (2008 – 2010) with the same control variables used in the previous model. However, during the testing for model 1a, 1b, 2a, and 2b, this study will exclude return on the asset from the instrument list as it might act as an endogenous variable that correlates with bank-risk taking behavior.

4. Results And Analysis
This part presents the findings and the analysis from the testing using simultaneous regression for all the three models.

a. Descriptive Statistics
Table 1 shows the descriptive statistics for all variables used in this study. As previously explained, this study uses panel data of 87 banks operated in Indonesia and Malaysia for the period of 2003 – 2016. Overall, this study uses the total of 1215 observations over 14 years period. The Table below shows the summary for all variables.

<table>
<thead>
<tr>
<th>Table 4.1: Summary Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variables</td>
</tr>
<tr>
<td>lnzscore</td>
</tr>
<tr>
<td>CAR</td>
</tr>
<tr>
<td>Foreign</td>
</tr>
<tr>
<td>State Owned</td>
</tr>
<tr>
<td>MAS</td>
</tr>
</tbody>
</table>

CAP_{i,j,t} = \beta_0 - \beta_2 RISK_{i,j,t} + \beta_3 OS_{i,j,t} + \beta_4 OS_{i,j,t} - \beta_5 SIZE_{i,j,t} + \beta_6 ROTA_{i,j,t} - \beta_7 RWATA_{i,j,t} + \beta_8 AG_{i,j,t} - \beta_9 GDP_{i,j,t} - \beta_{10} INFR_{i,j,t} + \epsilon_{i,j,t} (3.5)

CAP_{i,j,t} = \beta_0 - \beta_2 RISK_{i,j,t} + \beta_3 OS_{i,j,t} + \beta_4 OS_{i,j,t} - \beta_5 SIZE_{i,j,t} + \beta_6 ROTA_{i,j,t} - \beta_7 RWATA_{i,j,t} + \beta_8 AG_{i,j,t} - \beta_9 GDP_{i,j,t} - \beta_{10} INFR_{i,j,t} - \beta_{11} CRISIS_t + \epsilon_{i,j,t} (3.6)
Most of the Indonesian and Malaysian banks have highly concentrated ownership as both countries listed as the 2nd and 3rd countries with the highest ownership concentration level in Southeast Asia. The mean and the standard deviation for ln Z-Score of banks in both counties is quite similar with previous studies in Asia [24]; [25] However, the value of standard deviation is high due to the different characteristics in the two countries used as samples. Other main variables, Capital Adequacy Ratio shows that the lowest value in the observations is recorded by Just bank in 2008 when the bank failed due to liquidity problems that lead to insolvency. Moreover, this study also uses various control variables such as leverage which has the average value of 0.856 which explains that banks in Indonesia and Malaysia still use loans to finance its assets compared to equity, where around 85% of bank’s total asset is supported by liabilities. Return on Asset in this study also shows a similar result with previous studies, as does its asset growth and the risk-weighted asset to total asset ratio. Lowest values for both variables are also shown by Jtrust Bank in 2008. Also, the negative inflation rate is recorded by Malaysia in 2009 with 5.02% inflation rate, calculated with GDP deflator.

b. Empirical Results

The purpose of this study is to analyze the effect of ownership types, concentration and foreign bank’s entry modes on bank risk-taking behavior and capital ratio. Also, it aims to investigate the impact of bank risk-taking behavior and capital ratio on one another. Due to the endogenous trait of bank risk-taking behavior and capital ratio, this study uses the simultaneous regression method or 2SLS with random effects model, so the violations for a classic assumption do not change the results for the regression result. The results shown by Table 2 confirm hypotheses 1a and 1b. We find that capital ratio has a negative effect on bank risk-taking behavior, supporting the moral hazard theory [21]; [23] When the bank increases their capital ratio, the incentives they received from deposit insurance, the protection provided by the government in case of insolvency, also decreases since they can’t depend on the
coverage provided by deposit insurance completely, so some of the risks they take will have to be covered by their capital. This finding supports the motivation to create Basel II regulations that implement the minimum capital adequacy ratio to reduce risk-level [7]. Therefore, in accordance with the moral hazard theory, we found that bank-risk taking behavior also has a negative effect on capital ratio, which indicates that when banks take more aggressive stance on risk-taking, they will decrease their capital ratio instead of increasing it because banks want to utilize available deposit insurance completely and avoid using their capital as protection measure. This result supports previous studies by [14]; [24]; [25].

Other findings from the regression result also support hypotheses 2 and 3 to show that both government-owned banks and foreign-owned banks take more risks than private-owned banks. Based on the asymmetric information theory, foreign-owned banks have less information regarding both the clients and the market itself, especially for the first few years. However, the reason behind more aggressive risk-taking behavior from foreign-owned banks could also be fueled by the difference in needs and objectives between the shareholders in home country and the managers in host country, as mentioned before in the agency theory [15]; [4]. Moreover, in the context of Indonesia and Malaysia, foreign-owned bank tend to expect more revenue and opportunities in the future due to the rapid growth of the banking industry, therefore, they are willing to take more risks in return for more income and benefits in the future [12]; [13]; [26]. Regression results also prove the political and social theory, which explain that state-owned banks are influenced by political interests which may differ from the bank’s interests to gain more revenue. Banks with a political connection is also said to have the higher chance of getting covered and rescued by the government if they have problems. This finding is in line with previous studies by [12]; [7] and [25].

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Results of model 2 support hypotheses four which claims that foreign banks that enter the market via merger & acquisition take less risk compared to those who enter via greenfield strategy. This finding is also in line with the asymmetric information theory and consistent with previous studies [27]; [2]. The regression results also show that both state-owned and foreign-owned banks keep higher capital ratio compared to private-owned banks, proving hypotheses six right. State-owned banks have the responsibility to keep higher capital ratio as they need to keep the prudent principle [28] while foreign-owned banks have broader access to international investors and capital market, so it’s easier for them to increase their capital anytime they want to [17]. Finally, the regression results also support hypothesis 8a and 8b and find that banks act differently by taking fewer risks and higher capital ratio during the financial crisis. As banks face insolvency risks during the time leading up to the crisis, banks tend to be less aggressive in taking risks to try and contain their risks level to avoid insolvency and at the same time increase their capital ratio to avoid having insufficient capital in case of a bank run. These results are also consistent with the findings from [17]; [21]. However, previous studies also noted that the global financial crisis doesn’t have a significant impact on banking industries in Southeast Asia, including Indonesia and Malaysia.

c. Robustness Test

Aside from the analysis of the estimated models, to ensure that all the findings within this study are consistent, we conducted a robustness test by using another proxy for dependent variables. We changed ln Z-Score, as the proxy for bank risk-taking behavior, with loans to deposit ratio [5]; [25] and changed the capital adequacy ratio, the proxy for capital ratio, with capital to asset ratio or capitalization [29]; [25]. We use the same method of simultaneous regression or 2SLS with random effects model to test the dependent variables and find similar results with the previous test. We found that bank risk-taking and capital ratio have a
significant and negative effect to one another and that foreign-owned and state-owned banks take more risks and have higher capital ratio compared to private-owned banks while ownership concentration shows no relation to any of the dependent variables. Therefore, we can conclude that our findings are consistent.

5. Conclusion
This study found that bank risk-taking behavior and capital ratio has negative effect on one another, following the moral hazard theory. In terms of type of ownership, one of the findings also shows that both state-owned and foreign-owned banks take more risks and keep higher capital ratio level compared to private-owned banks, while foreign banks that enter the market via merger & acquisition has higher bank-risk level compared to those who enter the market with greenfield strategy. This result implies that the Government could take more conservative decisions regarding foreign ownerships by implementing limitations on both foreign and government ownership to reduce overall risk level in the banking industry.

However, ownership concentration doesn’t have any effect towards both bank risk-taking behavior and capital ratio based on our results. In addition, this study also proves that banks act differently by taking lower risks and keep higher capital ratio during the financial crisis period. Based on the findings, it would recommend the government to enact higher minimum capital adequacy ratio regulation and limit the ownership of both state and foreign investors if the government wants to lower the banking industry’s overall insolvency risk level and provide a guideline of how banks in Indonesia and Malaysia acts during the financial crisis period.

References


## APPENDIX

### Table 4.2. Effect of Capital Ratio, Ownership Type and Concentration towards Bank Risk Taking Behavior, using simultaneous regression (2SLS)

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Full Model</th>
<th>Crisis Model</th>
<th>Full Model</th>
<th>Crisis Model</th>
<th>Capital Adequacy Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lnzscore (Model 1)</td>
<td>Lnzscore (Model 2)</td>
<td>Random Effects 2SLS</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constanta</td>
<td>0.3635</td>
<td>0.3936</td>
<td>0.3554</td>
<td>0.3902 **</td>
<td>1.6885 ***</td>
</tr>
<tr>
<td>CAR</td>
<td>1.3870 ***</td>
<td>1.3930 ***</td>
<td>1.3451 ***</td>
<td>1.3535 **</td>
<td>1.6885 ***</td>
</tr>
<tr>
<td>Lnzscore</td>
<td>0.2779 ***</td>
<td>0.2914 ***</td>
<td>0.1501 ***</td>
<td>0.1527 ***</td>
<td>0.0627</td>
</tr>
<tr>
<td>Foreign</td>
<td>-0.3541 ***</td>
<td>-0.3570 ***</td>
<td>-0.5606 ***</td>
<td>-0.5506 ***</td>
<td>0.1501 ***</td>
</tr>
<tr>
<td>StateOwned</td>
<td>-0.7642 ***</td>
<td>-0.7516 ***</td>
<td>-0.7703 ***</td>
<td>-0.7574 ***</td>
<td>0.2203 ***</td>
</tr>
<tr>
<td>PS</td>
<td>-2.0389</td>
<td>-2.0105</td>
<td>-2.1041</td>
<td>-2.0720</td>
<td>0.5290</td>
</tr>
<tr>
<td>AS</td>
<td>-0.1178</td>
<td>-0.1432</td>
<td>-0.0826</td>
<td>-0.1125</td>
<td>0.0627</td>
</tr>
<tr>
<td>MA</td>
<td>0.3261 *</td>
<td>0.3065 ***</td>
<td>0.3261 *</td>
<td>0.3065 ***</td>
<td>0.3261 *</td>
</tr>
<tr>
<td>Leverage</td>
<td>-1.8174 ***</td>
<td>-1.6835 ***</td>
<td>-1.7895 ***</td>
<td>-1.6606</td>
<td>-1.7895 ***</td>
</tr>
<tr>
<td>RWATA</td>
<td>-0.2618 ***</td>
<td>-0.2563 ***</td>
<td>-0.2618 ***</td>
<td>-0.2563 ***</td>
<td>-0.2618 ***</td>
</tr>
<tr>
<td>ROA</td>
<td>0.3458 *</td>
<td>0.4055 **</td>
<td>0.3458 *</td>
<td>0.4055 **</td>
<td>0.3458 *</td>
</tr>
<tr>
<td>AG</td>
<td>0.0054</td>
<td>-0.0016</td>
<td>0.0054</td>
<td>-0.0016</td>
<td>0.0054</td>
</tr>
<tr>
<td>Size</td>
<td>0.2322 ***</td>
<td>0.2182 ***</td>
<td>0.2329 ***</td>
<td>0.2189 ***</td>
<td>-1.1153 ***</td>
</tr>
<tr>
<td>GGDP</td>
<td>5.8884 **</td>
<td>9.8485 ***</td>
<td>5.7256 **</td>
<td>9.5785 ***</td>
<td>-2.230 *</td>
</tr>
<tr>
<td>INFL</td>
<td>-0.6660</td>
<td>-1.8833 **</td>
<td>-0.6134</td>
<td>-1.8003</td>
<td>-0.3503</td>
</tr>
<tr>
<td>Crisis</td>
<td>0.2598 ***</td>
<td>0.2520 *</td>
<td>0.2598 ***</td>
<td>0.2520 *</td>
<td>-0.0600 *</td>
</tr>
<tr>
<td>No. Observasi</td>
<td>1199</td>
<td>1199</td>
<td>1196</td>
<td>1196</td>
<td>1197</td>
</tr>
<tr>
<td>Prob &gt; Chi</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
<td>0.0000</td>
</tr>
<tr>
<td>R-sq within</td>
<td>0.1234</td>
<td>0.1269</td>
<td>0.1271</td>
<td>0.1303</td>
<td>0.0874</td>
</tr>
<tr>
<td>R-sq between</td>
<td>0.0218</td>
<td>0.0251</td>
<td>0.0240</td>
<td>0.0273</td>
<td>0.3412</td>
</tr>
<tr>
<td>R-sq overall</td>
<td>0.0638</td>
<td>0.0696</td>
<td>0.0666</td>
<td>0.0712</td>
<td>0.1907</td>
</tr>
</tbody>
</table>

Significant at 10% *  
Significant at 5% **  
Significant at 1% ***
Abstract: This study aims to analyze the effect of family ownership and CEO characteristics on foreign investment of the Indonesian publicly listed family firm. CEO characteristics are proxied by three variables which are CEO founder and CEO descendant, CEO education, and CEO background. This study uses the purposive sampling of family firms which divided into two categories, group and standalone. By using the Random effect model, this study found that family ownership significantly lessen foreign investment due to the risk of expropriation and high monitoring cost. This effect is more pronounced in standalone firms rather than firms within a group. On the other hand, higher CEO education brings more foreign investment. In addition, dividend and board size reduced foreign investment meanwhile firm’s profits and crisis increased foreign investment.

Keywords: Foreign Investment, Family Ownership, CEO

1. Introduction
The worldwide phenomenon of liberalization encouraged foreign investment as the crucial source of capital in any market. Foreign investment was particularly essential in emerging markets where the capital market is yet to be developed [1]. In addition, emerging markets offer more attractive opportunities to foreign investors compared to developed markets because of their relatively higher growth prospects [2]. Of the eight emerging markets recorded by International Monetary Fund, Brazil has the highest amount of net portfolio equity inflow whereas Indonesia is in the fifth place although foreign investment amount of 60% of total portfolio investment of the listed firms owned by foreigners (Detik Finance). Foreign investment defined as a ratio of the number of shares held by foreign investors to outsider ownership, including the mutual fund, retail investors, and banks, etc., which maximum share ownership of up to 95 percent.

One of the attractive factors by foreign investors is the corporate governance (CG) both of the firm and the country where those firms operate [3]; [4]). CG is traditionally defines a relationship between the principal (shareholder) and agent (manager) [5]. There are four major values of CG framework: fairness, responsibility, transparency, and accountability. Those values lead to a discussion about shareholders and board of directors. Shareholders are related to controlling shareholders which defined as shareholders who have the highest voting rights in a company or...
shareholders who able to affect firms’ activities in other ways International Finance Corporation. Meanwhile, controlling shareholders often associated with family-owned firms or family firms.

There is a large number of developing countries in Asia whose majority of the company’s shares is held by their founder of the family of the founder or commonly referred to family firms. A family firm is a company with no less than 25 percent of shares voting rights owned by the founder or family members [6]. In India, the founder’s holdings affect foreign investment on an inverted U-shaped basis due to alignment and entrenchment effect, whereby this influence is greater in companies within a business group [1]. At the same time, there is a negative relationship between control-ownership disparity on foreign investment in Korean firms and the higher impact on companies incorporated in Chaebol Group [7]. In Indonesia, many companies are more dominated by family firms. They accounted for more than 95 percent in Indonesia [8]. Therefore, the issue of transparency and regulation are relatively weak [9]. Their cash flow rights are more concentrated compared to companies in other East Asian countries [10].

The OECD framework for corporate governance suggests the importance of accountability of the board of directors and its shareholders in the implementation of good corporate governance. Mace [11] advice that the board of directors is only in charge of following all the decisions taken by the Chief Executive Officer (CEO). Zahra & Pearce [8] found that CEOs have enormous organizational power to influence financial decision making and to monitor the planning and implementing of strategies. Several studies have analyzed the influence of CEO characteristics on firm managerial decisions in the short and long term. The three CEO characteristics discussed in this study are related to generation, education, and business expertise.

A survey conducted by the Price Waterhouse Coopers [8] found that family firms in Indonesia controlled by 23% of the first generation, 37% by the second generation, and 33% by the third generation respectively. Some of the second and third generations still manage the company professionally and successfully. For example, such as Noni Purnomo (the third generation) in Blue Bird, Bryan Tilaar and Putri Kus Wisnu Wardhani (the second generation) in Martha Tilaar Group and PT MustikaRatu Tbk. On the other hand, others were facing problems that lead to bankruptcy, which Nyonya Meneer is one of them. Nyonya Meneer declared bankrupt due to its non-performing loans (Detik Finance). Previous studies found that CEO education which graduated from a prestigious university and has a master's degree or more significantly increases the firm's performance since they can develop better strategies [12]. Furthermore, a study in Thailand found that CEO with business expertise also has a positive effect on a firm's financial performance [13].

We examine the influence of family ownership of the Indonesian publicly listed family firms on foreign investment and compare the effect of firms within a group with the standalone ones. Furthermore, we also investigate the effect of CEOs’ characteristics such as CEO founder and CEO descendant, the level of CEO education and CEO's business expertise on foreign investment. The remainder of the paper is as follows. Section 2 presents a brief of relevant literature review and hypothesis development, follows by research methodology in Section 3. Section 4 describes the results and discussion. Section 5 concluded the paper.

2. Literature Review
A study in India observes how founders affect foreign investment by constructing two theories, i.e., entrenchment and alignment effect. Entrenchment effect arises due to the power to separate ownership and control rights [14]. Therefore, it becomes more difficult for outsiders to monitor these firms' activities, especially when founders also control information flow to outsiders [15]. Therefore, the expropriation risk will be higher. These arguments advocate that firms with higher
founder ownership coupled with weak governance mechanisms require reasonably extra supervision, thereby requiring more monitoring cost.

In contrast, an alignment effect based on the monitoring role of foreign investors who bring fresh capital and global-level monitoring activity to be shared with the host country, particularly emerging markets [1]. As a result, foreign investors can integrate ownership structure in emerging markets with a global-standard [16]. A study in Kores suggests control-ownership disparity as a form of controlling shareholders on foreign investment. Control-ownership disparity defines as the difference between cash flow rights and control rights. Control ownership disparity occurs when several shareholders of a company have a voting power greater than equity ownership. High control-ownership disparity indicates that controlling shareholders can own and use their voting rights over equity ownership and vice versa. Therefore, foreign investors become more anxious to face the risk of expropriation. As a result, they tend to decrease their investment [7]. Thus, the hypothesis is as follows.

H1: There is a negative influence of family ownership on foreign investment in Indonesian publicly listed firms.

The emergence of a group or business group is driven by an inefficient capital market that needs an internal capital market that can fulfill the companies’ needs [1]. The second hypothesis is based on several studies which found that there was more significant lack of transparency and the higher risk of expropriation in business groups compared to standalone firms [17] and [14]. A study found that firms in a group of business tend to have a significant influence on foreign investment than standalone firms [7]. The hypothesis is as follows.

H2: There is a greater influence of family ownership in firm within a group than a standalone firm on foreign investment.

[18] According to Hambrick [18], the best way to understand why an organization is doing a thing or taking a decision is to consider how the behavior of the main actors in the company, namely the president director. The basis of this theory caused by the character of the chief director as part of management that can determine the firm’s performance [18], [19] and [20] find that the risk is higher when led by the founder than the offspring, this is because the founders tend to prefer to take risks. In contrast, Molly et al. [21] found that companies that were led by founders had lower leverage when compared to companies led by descendants of the founder.

Garcia-Ramos & Garcia-Olalla [22] conducted a study on the impact of the characteristics of directors on the performance of family firms in Europe led by CEO founder and CEO descendant. The results show the company that led by the CEO descendants has a better performance than those led by CEO founders. Regarding the board of directors’ size and independent directors, Yeh [23] found that there was a negative and significant influence between board size and foreign institutional investment. Thus, the hypothesis is:

H3: CEO founder and CEO descendant affect foreign investment in family firms.

[24] One of the CEO’s characteristics is their educational background [24]. Some studies found that CEOs with post-graduate education tend to lessen the firm’s performance, due to the overconfidence of bias and too much R & D activity [25], [13], [1] in his study using fractional logistic regression found that R&D activity can reduce the value of foreign investment in the company. Conversely, one study found that firms with high CEO education levels have a positive
impression on the stock market that creating abnormal returns [26]. In addition, other study found that there is a positive influence of CEOs who have degrees from a prestigious university and CEO with MBA degrees on a firm’s financial performance [12] and therefore attract more foreign investment [1]. Therefore, the hypothesis is proposed as follows:

H4: CEO's education affects foreign investment in family firms.

Sitthipongpanich & Polsiri [13] also found that business expertise of the family CEO has a positive and significant influence on a firm’s value. In addition, firms with the higher value will attract more foreign investment [1]. Therefore, the hypothesis is:

H5: CEO with business expertise will increase foreign investment in a family firm

3. Research Methodology

This study collected data from 76 listed Indonesian family firms, excluded non-financial, non-utility, and non-stated owned family firms for the period of 2003 to 2016. All the data are taken from each companies’ annual report, Indonesian Capital Market Directory, and Thompson Reuters DataStream. In total, there is 882 observation that divided into two categories: group, and standalone firms. The empirical model of this study is as follows:

$$\text{ForeignInvestment}_t = \beta_0 + \beta_1 \text{familyOwnership}_t + \beta_2 \text{founder/Descendant} + \beta_3 \text{Education}_t + \beta_4 \text{Background}_t + \beta_5 \text{control variables} + \epsilon_t$$

Based on the Haussman test, we used random effect model to estimate the model and test the hypotheses. Table 1 summaries variables used in this study and their measures, as well as the references.

| Table 1: Variable specification |
4. Results
This section presents the results of this study that comprises descriptive statistics of the data in Table 1, and analysis of the findings in Table 3, and Table 4 respectively.

Table 2 shows the summary statistics of the data used in this study. It shows that PT Hero Supermarket, Tbk has the highest percentage of foreign investment in 2009 which is 95.82 percent due to the previous release of the company's shares to a Hong Kong-based company, Mulgrave Corporation B.V. Meanwhile, the largest family ownership is in PT Tempo Scan Pacific Tbk with a value of 95.14 percent. It soared from 71.35 percent in the previous year. The highest value of the CEO's level of education is 21 where the CEO is a professor from PT Berlina Tbk; PT Humpuss Intermoda Transportasi Tbk; CEO of PT Mustika Ratu Tbk. The minimum value of the CEO's level of education is 6 which means that the latest education of the CEO is Elementary School (SD) or equivalent of PT Alumindo Light Metal Industry Tbk and PT Indal Aluminium Industry Tbk.

Table 2: Summary Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Investment</td>
<td>0.1842</td>
<td>0.2484</td>
<td>0.9582</td>
<td>0.0000</td>
</tr>
<tr>
<td>Family Ownership</td>
<td>0.5638</td>
<td>0.1635</td>
<td>0.9514</td>
<td>0.2501</td>
</tr>
<tr>
<td>Founder</td>
<td>0.5539</td>
<td>0.4992</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Descendant</td>
<td>0.2074</td>
<td>0.4077</td>
<td>1.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Education</td>
<td>16.2506</td>
<td>2.5897</td>
<td>21.0000</td>
<td>6.0000</td>
</tr>
<tr>
<td>Background</td>
<td>0.0231</td>
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<td>0.00</td>
</tr>
<tr>
<td>Size</td>
<td>20.8988</td>
<td>1.6791</td>
<td>25.2988</td>
<td>17.1312</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.5157</td>
<td>0.2697</td>
<td>2.3929</td>
<td>0.0355</td>
</tr>
<tr>
<td>ROA</td>
<td>0.0633</td>
<td>0.0779</td>
<td>0.4344</td>
<td>-0.5918</td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>1.1985</td>
<td>0.7424</td>
<td>6.5072</td>
<td>0.1386</td>
</tr>
<tr>
<td>Dividend</td>
<td>6.66e-07</td>
<td>2.71e-08</td>
<td>5.60e-09</td>
<td>0.00</td>
</tr>
<tr>
<td>Current Ratio</td>
<td>2.2039</td>
<td>3.7721</td>
<td>85.4100</td>
<td>0.1600</td>
</tr>
<tr>
<td>Board Size</td>
<td>4.7041</td>
<td>1.9418</td>
<td>2.00</td>
<td>12.00</td>
</tr>
</tbody>
</table>

Table 3 presents the results of the hypotheses testing as regard to testing the effect of family ownership, CEO characteristics, CEO education, and CEO business expertise. The results in Table 3 shows that family ownership reduces foreign investment. This situation may cause due to a low transparency and less corporate disclosure thus, high monitoring costs [9] which cause foreign investors left the firms [4]. This finding also in line with Hammouda [27] This result supported the entrenchment effect where the greater the value of family ownership the lower the value of foreign investment in the firm [1] Foreign investors prefer companies with low control-ownership disparities, reflecting that foreign investors are sensitive to the corporate governance [7].

Table 3: The effect of family ownership, CEO characteristics, CEO education, and CEO business expertise

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Foreign Investment</th>
<th>Coef</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.4068371</td>
<td>0.037</td>
<td></td>
</tr>
<tr>
<td>Family Ownership</td>
<td>-0.6853562&quot;&quot;&quot;&quot;</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Founder</td>
<td>-0.0161295</td>
<td>0.508</td>
<td></td>
</tr>
<tr>
<td>Descendant</td>
<td>0.0369373</td>
<td>0.132</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>0.0147838&quot;&quot;&quot;&quot;</td>
<td>0.020</td>
<td></td>
</tr>
<tr>
<td>Background</td>
<td>-0.0374999</td>
<td>0.271</td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.0014517</td>
<td>0.851</td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>-0.0240531</td>
<td>0.460</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-0.2074092&quot;&quot;&quot;&quot;</td>
<td>0.000</td>
<td></td>
</tr>
<tr>
<td>Tobin’s Q</td>
<td>0.0002436</td>
<td>0.979</td>
<td></td>
</tr>
<tr>
<td>Dividend</td>
<td>-5.17e-11</td>
<td>0.043</td>
<td></td>
</tr>
<tr>
<td>Current Ratio</td>
<td>-0.0010376</td>
<td>0.449</td>
<td></td>
</tr>
<tr>
<td>Board Size</td>
<td>-0.013344&quot;&quot;&quot;&quot;</td>
<td>0.013</td>
<td></td>
</tr>
<tr>
<td>CrisisYearDummy</td>
<td>0.0324114&quot;&quot;&quot;&quot;</td>
<td>0.002</td>
<td></td>
</tr>
</tbody>
</table>

R-squared - within 0.1892 - between 0.1855 - overall 0.1955
Prob (chi2) 0.000
No. Observation 882

*signifikan pada tingkat 10%
**signifikan pada tingkat 5%
***signifikan pada tingkat 1%
Table 4: The effect of family ownership of standalone and firms in a business group on foreign investment

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Foreign Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent Variable</td>
<td>Random Effect Model</td>
</tr>
<tr>
<td>Constant</td>
<td>0.5843985**</td>
</tr>
<tr>
<td>Family Ownership</td>
<td>-0.6217912***</td>
</tr>
<tr>
<td>Required</td>
<td></td>
</tr>
<tr>
<td>- within</td>
<td>0.166</td>
</tr>
<tr>
<td>- between</td>
<td>0.1896</td>
</tr>
<tr>
<td>- overall</td>
<td>0.2097</td>
</tr>
<tr>
<td>Prob (chi2)</td>
<td>0.000</td>
</tr>
<tr>
<td>No. Observation</td>
<td>522</td>
</tr>
</tbody>
</table>

*Signifikan pada tingkat 10%
**Signifikan pada tingkat 5%
***Signifikan pada tingkat 1%

The results in Table 3 also find that both founders and descendant have a weak effect on foreign investment. In contrast, the higher the CEO education level will increase foreign investment. This finding supports Hitt & Tyler [28] which found that top-level managers with a high level of education contribute positively to corporate innovation since they can develop a better strategy [12]. In fact, there are some family firms.

Hypothesis 2 aims to test the effect of family ownership of standalone and firms in a business group on foreign investment. The results in Table 4 indicate that family ownership which standalone firms has a greater impact compared to firms in a business group. This finding implies that there is a higher entrenchment effect felt by a standalone firms to that of the firm in a business group. The reason underlying this result is that companies in the business group have greater access to foreign capital, a better technology, and higher reputation [16]. For example, PT Tjiwi Kimia Tbk, a member of Sinar Mas Group grown rapidly and becoming a market leader in the domestic market and has also successfully internationally. In fact, there are some family firms lead by CEO with doctoral degrees. For example, PT Humpuss Intermoda Transportasi Tbk, with the percentage of foreign investment reaching 53 to 78 percent. On the other hand, PT Alumindo Light Metal Industry Tbk and PT Indal Aluminium Industry Tbk led by the CEO with elementary education, have only less than five percent of foreign investment. Therefore, it can be concluded that level of education have a positive and significant impact on foreign investment.

Finally, profitability (ROA), dividend, board size, and crisis year has a significant impact on foreign investment. The results indicate that the firm’s profitability will lessen foreign investment. Result regarding the negative effect of ROA can be attributed to one possible type of bias which is confirmation bias, where investors seek supporting information for their previous opinion about the firm [29]. In addition, a higher dividend tends to reduce foreign investment. This finding consistent with the signaling theory of dividends [30]. The theory suggests that firms that pay dividends will reduce the opportunity for investing in the profitable project, therefore cutback foreign investment. In addition, there is a negative and significant influence of board size on foreign investments due to the fact that the increasing number of directors will lead to poor communication problems and poor coordination problems [23]. Finally, there is a positive influence of the crisis year on foreign investment since the firms need additional capital from foreign investors to keep doing the business [31].

5. Conclusion
This study aims to investigate the effect of family ownership and CEO characteristics on foreign investment in Indonesian publicly listed family firms. This study finds that the higher the percentage of family ownership in the family firm, the lower foreign investors’ shares in the firm.
Some of the reasons are a greater expropriation risk and lack of information that foreign investors’ get. The negative effect is higher in standalone firms compared to a firm in a business group, due to the group's better reputation. For CEO characteristics, there is a positive and significant influence of the CEO's level of education on foreign investment in the family firms. Lastly, there is no influence of CEO founders and CEO descendants and CEO's business expertise on foreign investment.

References
The Analysis of Enterprise Risk Management and Earnings Volatility: Moderation of Audit Committee and Audit Quality

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Abstract: This study aims to analyze the impact of enterprise risk management (ERM) implementation on earnings volatility with audit committee effectiveness and audit quality as the moderating variables. The effectiveness of ERM implementation is assessed using a disclosure index developed based on guidance issued by COSO. Earnings volatility is measured using the standard deviation of the firm's net income before extraordinary items, divided by total assets of the company. The effectiveness of the audit committee was assessed using a checklist of audit committee effectiveness criteria, and the audit quality was measured by dummy variables (Big Four and non-Big Four). Data from a sample of companies listed on the Indonesia Stock Exchange was collected for the period 2012-2016. The results of this study indicate that the effectiveness of ERM implementation has a negative association with earnings volatility. The effectiveness of the audit committee is found to strengthen the association between the effectiveness of ERM implementation and earnings volatility, but audit quality was found not having a moderating effect. This research has a practical implication on improving the role of audit quality to complement the oversight function delivered by the audit committee.

Keywords: Enterprise Risk Management; Earnings Volatility; Audit Committee Effectiveness; Audit Quality

1. Introduction

Global economic conditions that continue to grow and cause complexity in the business world requires business people to know the various exposure of risks faced by their companies. Supervision and handling of risk exposure to business processes are one of the most basic requirements for the implementation of the risk management process [1]. Lack of monitoring and handling of risk exposure can have a negative impact on a company, one of which is demonstrated by the achievement of unstable earnings. Earnings volatility can affect the accuracy of earnings prediction for users of financial statements. Edmonds et al. [2] explain the higher level of earnings volatility indicates the higher the possibility of companies experiencing financial...
problems or financial distress. Akbari et al. [3] and Edmonds et al. [4] in his research explains that the proper handling and response to risk exposure through effective enterprise risk management (ERM) implementation can reduce the direct and indirect costs associated with the financial distress experienced by a company.

Implementation of ERM cannot be separated from the governance of an organization. A form of implementation of corporate governance principles according to Organization for Economic Co-operation and Development [5] especially the 5th principle and the 6th principle can be reflected through the implementation of ERM in the company [6]. In addition to risk reporting, the implementation of OECD's fifth principles of corporate governance on disclosure and transparency can also be realized through audit quality in the financial statements and the role of external auditors. Andarini and Fithri [7] researched the influence of external auditors' reputation on the existence of risk management functions. Inconsistent with the hypothesis, the results prove that the auditor's reputation is not significantly related to the effectiveness of corporate risk management functions. In addition to the implementation of OECD's fifth corporate governance principles, ERM implementation is also a form of implementation of the OECD's sixth corporate governance principles on the responsibilities and roles of councils and directors. Not only the role of directors through the implementation of ERM, the responsibilities and roles of committee councils are also required in implementing this principle, for example, the role of the audit committee within the company. Main research conducted in 2004 states that the audit committee can assist the board of commissioners in overseeing the company's financial performance and activities and ensuring risk-related and risk-control recommendations are implemented.

Previous research by Edmonds et al. [8] provides empirical evidence that a company can significantly achieve lower earnings volatility by improving the quality of ERM implementation. However, different results were obtained by Akbari et al. [3] found that the level of risk management effectiveness simultaneously did not affect earnings volatility. In addition, there are studies conducted by Chandra [9] to examine the possibility of a positive relationship between the effectiveness of audit committees on the relevance and predictability of earnings, but the results show that the effectiveness of audit committees does not provide additional relevance and an increase in the level of earnings predictability. From the review of the findings and results of previous research related to the effectiveness of ERM implementation, corporate governance mechanisms in terms of the audit committee and audit quality, and the measurement of earnings volatility, this research is conducted to test and analyze more deeply the effect of ERM implementation effectiveness on earnings volatility. This research is motivated by the mixed results in the previous studies. This study investigated the role of the audit committee's effectiveness and audit quality in influencing the relationship between ERM implementation and earnings volatility, which has not much studied in previous research. Previous studies conducted by Akbari et al. [10] and Edmonds et al. [11] does not include internal oversight factors from audit committees and external oversight factors from independent auditors in measuring the effect of ERM on earnings volatility.

Based on the above background, the research questions to be answered in this study are as follows:
1. Is there a negative association between the effectiveness of ERM implementation and earnings volatility?
2. Will the higher audit committees' effectiveness strengthen the negative association between the effectiveness of ERM implementation and earnings volatility?
3. Will higher audit quality strengthen the negative association between the effectiveness of ERM implementation and earnings volatility?
4. Will the higher audit committees' effectiveness and higher audit quality simultaneously strengthen the negative association between the effectiveness of ERM implementation and earnings volatility?

2. Theoretical Review
   
a. Stewardship Theory
   
   Davis and Donaldson [7] explain that the stewardship theory explains the executive or management behavior as the stewards of the company. Based on this theory, the executive or management will be motivated to act as best as possible to maximize the interest of the principal. Stewards will endeavor to protect and maximize the welfare of stakeholders through good corporate performance so that the management function of the company is considered to be optimal from the eye of stakeholders. Daniri [7] states philosophical assumptions that describe the stewardship theory as an effective theory to explain good corporate governance practices in the company, such as ERM implementation, audit committee role in supervising company, and examination of company financial report conducted by an independent auditor. It can also be concluded that the stewardship theory is one of the effective theories to explain the implementation of ERM in the company. The effective implementation of ERM within the company will assist the managers of the company or management in achieving the company's objectives, including the fulfillment of profit targets. Achieving profits that match their targets for each period indicates low levels of earnings volatility and good corporate performance.

   The implication of stewardship theory in this research is to explain the evidence of management responsibility as the manager of the company in fulfilling and protecting the stakeholder's interest, especially the shareholders as principal, through the effective implementation of ERM to achieve persistent earnings level and low earnings volatility. Stewardship theory can also be used as a basis to explain the role of audit committees in conducting oversight of the company. The composition of an independent audit committee members, committee activities, as well as the competence of the audit committee, will correlate with the financial performance [12]. Similarly, for external audit activities, stewardship theory is also able to explain the role of independent auditors in examining the company's financial statements. The independent auditor may provide guidance on appropriate good corporate governance practices to be applied, assisting internal auditors in evaluating and improving the effectiveness of risk management thereby enhancing the quality of risk assessment and monitoring of the company [12].

b. Development of Hypotheses

   Achieving good financial performance and steadily increasing profit levels is one of the company's key objectives. Good financial performance can be demonstrated through high levels of earnings persistence, or low earnings volatility. Low earnings volatility is also one of the main objectives of ERM implementation. This objective is related to the company's ability to reduce direct and indirect costs incurred to handle financial distress risks. Akbari et al. [3] found that the level of risk management effectiveness has no impact on earnings volatility. However, different results were obtained by Edmonds et al. 's [8] who found that changes in the quality of ERM implementation are strongly associated with changes in earnings volatility levels. Based on these reviews, the hypothesis developed in this study are as follows:

   H1: There is a negative relationship between the effectiveness of ERM implementation with earnings volatility.

   In performing its duties, members of the audit committee shall act independently and not attempt to represent the interests of one party in the enterprise. Previous research by Chandra [10]
proves that the effectiveness of the audit committee does not provide additional relevance and predictability of the net profit value of operating activities. Another research conducted by Syifa states that the audit committee can assist the board of commissioners in overseeing the company's financial performance and activities and ensuring risk-related and risk-control recommendations are implemented. Previous studies on the audit committee effectiveness can illustrate the increasing effectiveness of audit committees will strengthen the negative relationship between the effectiveness of ERM implementation and earnings volatility. Based on this, we developed the following hypotheses:

H2: Higher audit committee effectiveness reinforces the negative effect of ERM implementation effectiveness on earnings volatility.

As part of the monitoring function, a qualified external auditor will assist the oversight tasks performed by the audit committee, whether overseeing the company's financial activity, or control over the company's risk management. Companies or reputable public accounting firms can produce good audit quality, in accordance with the results of research conducted by Becker, DeFond, and California [13]. DeAngelo [9]. Van Caneghem [9]. Watts and Zimmerman[7] found that top auditing firms such as the Big Four can provide higher audit quality than non-Big Four auditing firms. Andarini and Januarti [14] researched the influence of external auditors' reputation on the existence of risk management functions within the company. But unlike the hypothesis developed, the results of his research prove that the auditor's reputation is not significantly related to the effectiveness of corporate risk management functions. Another study conducted by Mutmainah states that companies using big Four KAP have a positive effect on the persistence and predictability of earnings level. High-quality audits will strengthen the control and monitoring functions in managing corporate risk. The negative relationship between the effectiveness of ERM implementation and the earnings volatility of a company can be reinforced by high audit quality, which is proxied through KAP measures. Therefore, the formulation of hypotheses that can be developed is:

H3: Higher audit quality strengthens the negative effect of ERM implementation effectiveness on earnings volatility.

In accordance with the development of previous hypotheses regarding the effectiveness of the audit committee and audit quality in strengthening the negative relationship between ERM implementation and the level of earnings volatility, the effectiveness of the audit committee and audit quality simultaneously and simultaneously are expected to encourage the effectiveness of ERM implementation within the company. The effectiveness of audit committees proxied by the independence, size, activity, and competence of committee members; and the quality of audits proxied by the reputation or size of KAP, simultaneously is expected to also support improvements in the financial performance of the company, so that the profits derived by the company increase steadily from year to year. Related to this, the development of the proposed hypothesis is as follows:

H4: The effectiveness of audit committees and higher quality audits simultaneously can strengthen the negative impact of ERM implementation effectiveness on earnings volatility.

3. Research Methods

a. Regression Model

Some regression models used in this study can be described as follows:
Model 1: Regression model used to test hypothesis 1, i.e., the effectiveness of ERM implementation has a negative effect on earnings volatility:

\[ \text{EV}_{it} = \beta_0 + \beta_1 \text{ERM}_{it} + \beta_2 \text{Lev}_{it} + \beta_3 \text{PBV}_{it} + \beta_4 \text{Size}_{it} + \beta_5 \text{ROA}_{it} + \beta_6 \text{PER}_{it} + \epsilon_{it} \]  

(1)

Information:

<table>
<thead>
<tr>
<th>EV</th>
<th>Earnings volatility (profit volatility)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERM</td>
<td>The effectiveness of ERM implementation</td>
</tr>
<tr>
<td>Lev</td>
<td>Leverage ratio</td>
</tr>
<tr>
<td>PBV</td>
<td>Price to book value ratio</td>
</tr>
<tr>
<td>Size</td>
<td>Company size</td>
</tr>
<tr>
<td>ROA</td>
<td>Return on asset</td>
</tr>
<tr>
<td>PER</td>
<td>Price-earnings ratio</td>
</tr>
<tr>
<td>E</td>
<td>Error, i.e., the possibility of other variables affecting profit volatility but not considered in the study</td>
</tr>
</tbody>
</table>

Model 2: The regression model used to test hypothesis 2, i.e., the negative relationship between the effectiveness of ERM implementation and earnings volatility can be moderated by the effectiveness of the audit committee:

\[ \text{EV}_{it} = \beta_0 + \beta_7 \text{ERM}_{it} + \beta_8 \text{ACE}_{it} + \beta_9 \text{ERM}_i \times \text{ACE}_{it} + \beta_{10} \text{Lev}_{it} + \beta_{11} \text{PBV}_{it} + \beta_{12} \text{Size}_{it} + \beta_{13} \text{ROA}_{it} + \beta_{14} \text{PER}_{it} + \epsilon_{it} \]  

(2)

Information:

| ACE | Audit Committee effectiveness (effectiveness of the audit committee) |
| ERM * ACE | Interaction variable effectiveness of ERM implementation with effectiveness variable audit committee |

Model 3: Regression model used to test hypothesis 3, i.e., the negative relationship between the effectiveness of ERM implementation and earnings volatility can be moderated with audit quality:

\[ \text{EV}_{it} = \beta_0 + \beta_{15} \text{ERM}_{it} + \beta_{16} \text{AQ}_{it} + \beta_{17} \text{ERM}_i \times \text{AQ}_{it} + \beta_{18} \text{Lev}_{it} + \beta_{19} \text{PBV}_{it} + \beta_{20} \text{Size}_{it} + \beta_{21} \text{ROA}_{it} + \beta_{22} \text{PER}_{it} + \epsilon_{it} \]  

(3)

Information:

| AQ | Audit Quality (audit quality) |
| ERM * AQ | Interaction variable of the effectiveness of ERM implementation with audit quality variable |

Model 4: The regression model used to test hypothesis 4, i.e., the negative relationship between the effectiveness of ERM implementation and earnings volatility can be moderated by the effectiveness of the audit committee and audit qualities:

\[ \text{EV}_{it} = \beta_0 + \beta_{23} \text{ERM}_{it} + \beta_{24} \text{ACE}_{it} + \beta_{25} \text{AQ}_{it} + \beta_{26} \text{ERM}_i \times \text{ACE}_{it} + \beta_{27} \text{ERM}_i \times \text{AQ}_{it} + \beta_{28} \text{Lev}_{it} + \beta_{29} \text{PBV}_{it} + \beta_{30} \text{Size}_{it} + \beta_{31} \text{ROA}_{it} + \beta_{32} \text{PER}_{it} + \epsilon_{it} \]  

(4)
b. Sample Selection
The sample used for testing in this research is manufacturing companies listed on the BEI from 2012 until 2016. From 2012 to 2016, the total number of companies tested is the same in each year, which is 116 companies. From the initial data of 144 companies listed on the IDX during the period 2012-2016, there are 28 data companies with the availability of incomplete data, so issued as a sample. Details of the selected sample selection can be described as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing companies listed on the Stock Exchange 2012-2016</td>
<td>144</td>
</tr>
<tr>
<td>Manufacturing companies with incomplete data</td>
<td>28</td>
</tr>
<tr>
<td>Manufacturing companies used as samples</td>
<td>116</td>
</tr>
<tr>
<td>Research period (2012-2016)</td>
<td>5</td>
</tr>
<tr>
<td>Total observations (116 companies x 5 years)</td>
<td>580</td>
</tr>
</tbody>
</table>

c. Classic Assumption Test and Test of Statistical Criteria
The test of econometric criteria with the classical assumption is done in this research so that the research model used is avoided from the problems that can make the research inaccurate and inefficient. The data used in the study should be ensured free of violation of classical assumptions. Three problems that often cause the research model is not best, linear, unbiased, and efficient (BLUE) is multicollinearity, heteroscedasticity, and autocorrelation. Furthermore, to test the research hypothesis used some statistical criterion that is a significant test model (F-Test), partial test (t-Test) and goodness of fit test.

4. Results And Discussion
a. Descriptive Statistics
The description of descriptive statistic serves to give a general description of each variable tested. From the descriptive statistics, the table presented the average value, standard deviation, minimum value, and the maximum value of each variable. The main variables used in this research are EV and ERM. Descriptive statistical results of EV variables showed an average value of 0.048, the minimum value of -1.279, and a maximum value of 0.657. This means that the average volatility level of manufacturing companies in Indonesia in 2012-2016 amounted to 4.8%, and the highest profit volatility level was 6.57%. The minimum value at EV is negative -1.279 means that during that period there is a manufacturing company that suffers losses. EV standard deviation value greater than its mean value indicates that EV data varies widely or spreads. Furthermore, for the variable average value, ERM produced was 9.328, the value of a standard deviation of 1.347, a minimum value of 6 and a maximum value of 11. The average use values N ERM shows scores that exceed the value of the middle scores ERM (9.328 > 8) indicates that most manufacturing companies in Indonesia have implemented ERM quite well in accordance with most of the COSO set criteria.

The first moderation variable used in this study was ACE, i.e., the effectiveness level of the audit committee. The ACE value in the descriptive statistics table shows an average value of 27.4, a standard deviation value of 0.018, a minimum value of 23, and a maximum value of 30. In the table it can be seen that the average ACE value obtained exceeds the middle score of the ACE score (27.4 > 22), which indicates that most manufacturing firms in Indonesia have an audit
committee function that is quite effective in accordance with most of the audit committee effectiveness criteria developed by Hermawan (2009). The second moderating variable used in this study is audit quality measured using dummy size KAP. From the descriptive statistics, it can be seen that the minimum value of AUD is 0 and its maximum value is 1 indicating the dummy value of audit quality variable, i.e., one if audited by KAP Big Four and 0 if audited by KAP other than Big Four. From the table it can be seen if the average for AUD is 0.397 or equal to 39.7%, this result shows that from a sample of manufacturing company used in research 39.7% sample is audited by Big Four KAP and the rest equal to 60.3% audited by non-BigFour. Descriptive statistical results for four research models used each described as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Observation</th>
<th>Average</th>
<th>Standard Deviation</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EV</td>
<td>580</td>
<td>0.048</td>
<td>0.116</td>
<td>-1.279</td>
<td>0.657</td>
</tr>
<tr>
<td>ERM</td>
<td>580</td>
<td>9.238</td>
<td>1.347</td>
<td>6.000</td>
<td>11.000</td>
</tr>
<tr>
<td>ACE</td>
<td>580</td>
<td>0.274</td>
<td>0.018</td>
<td>0.230</td>
<td>0.300</td>
</tr>
<tr>
<td>AQ</td>
<td>580</td>
<td>0.397</td>
<td>0.486</td>
<td>0.000</td>
<td>1.000</td>
</tr>
<tr>
<td>ERMACE</td>
<td>580</td>
<td>2.813</td>
<td>0.271</td>
<td>1.320</td>
<td>3.300</td>
</tr>
<tr>
<td>ERMAQ</td>
<td>580</td>
<td>3.538</td>
<td>4.454</td>
<td>0.000</td>
<td>11.000</td>
</tr>
<tr>
<td>LEV</td>
<td>580</td>
<td>0.469</td>
<td>0.278</td>
<td>0.000</td>
<td>0.988</td>
</tr>
<tr>
<td>PBV</td>
<td>580</td>
<td>2.781</td>
<td>7.431</td>
<td>0.002</td>
<td>80.845</td>
</tr>
<tr>
<td>SIZE (Rp 000)</td>
<td>580</td>
<td>8.712.876.62</td>
<td>24.837.249.123</td>
<td>92.041.27</td>
<td>261.855.000.00</td>
</tr>
<tr>
<td>LNSIZE</td>
<td>580</td>
<td>0.489</td>
<td>1.310</td>
<td>-3.097</td>
<td>3.311</td>
</tr>
<tr>
<td>ROA</td>
<td>580</td>
<td>0.051</td>
<td>0.122</td>
<td>-1.279</td>
<td>0.657</td>
</tr>
<tr>
<td>PER</td>
<td>580</td>
<td>0.006</td>
<td>0.482</td>
<td>-7.284</td>
<td>2.880</td>
</tr>
</tbody>
</table>

### Dummy Variable

<table>
<thead>
<tr>
<th>% 1</th>
<th>% 0</th>
</tr>
</thead>
<tbody>
<tr>
<td>AQ</td>
<td>39.65%</td>
</tr>
</tbody>
</table>

### Description

- **EV**: Earnings volatility
- **ERM**: ERM effectiveness
- **ACE**: Audit Committee Effectiveness
- **AQ**: Audit Quality
- **ERMAE**: The interaction between ERM and ACE
- **ERMAQ**: The interaction between ERM and ACQ
- **LEV**: Leverage ratio
- **PBV**: Price to book value ratio
- **SIZE**: Company size
- **LNSIZE**: Natural logarithm of total assets
- **ROA**: Return on asset
- **PER**: Price-earnings ratio

### b. Hypothesis Testing Results

Test results from each hypothesis/model can be summarized and explained as follows:
Table 3. Table Results of Regression Testing Model 1

<table>
<thead>
<tr>
<th>Regression Model Results 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hypothesis1</strong>: The effectiveness of ERM implementation has a negative effect on earnings volatility</td>
</tr>
<tr>
<td><strong>Model 1</strong>: EV&lt;sub&gt;it&lt;/sub&gt; = β&lt;sub&gt;0&lt;/sub&gt; + β&lt;sub&gt;1&lt;/sub&gt; (ERM) &lt;sub&gt;it&lt;/sub&gt; + β&lt;sub&gt;2&lt;/sub&gt; (LEV) &lt;sub&gt;it&lt;/sub&gt; + β&lt;sub&gt;3&lt;/sub&gt; (PBV) &lt;sub&gt;it&lt;/sub&gt; + β&lt;sub&gt;4&lt;/sub&gt; (Size) &lt;sub&gt;it&lt;/sub&gt; + β&lt;sub&gt;5&lt;/sub&gt; (ROA) &lt;sub&gt;it&lt;/sub&gt; + β&lt;sub&gt;6&lt;/sub&gt; (PER) &lt;sub&gt;it&lt;/sub&gt; + ε&lt;sub&gt;it&lt;/sub&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results</th>
<th>Expectations</th>
<th>Coefficient</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERM</td>
<td>-</td>
<td>-0.559</td>
<td>0.003</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.205</td>
<td>0.014</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>PBV</td>
<td>-</td>
<td>-0.296</td>
<td>0.063</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>-0.865</td>
<td>0.013</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-</td>
<td>-0.032</td>
<td>0.065</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>-</td>
<td>-1.277</td>
<td>0.039</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Cons</td>
<td>-</td>
<td>-0.206</td>
<td>0.022</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>R Squared</strong></td>
<td>19.554%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj R Squared</td>
<td>18.402%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob&gt;F</td>
<td>0.002</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Significance at level 1% (one-tailed)
** Significance at level 5% (one-tailed)
* Significance at level 10% (one-tailed)

**Information:**

EV = earnings volatility, is the standard deviation of profit; ERM = Enterprise Risk Management, is the effectiveness of ERM implementation score; LEV = leverage ratio, proxied by the ratio of total debt per total asset; PBV = price to book value ratio; SIZE = firm size proxies with the natural logarithm of total assets; ROA = return on asset ratio; PER = price earnings ratio.

The result of regression test of model 1 shows that the independent variables used are ERM, LEV, PBV, SIZE, ROA, and PER have the ability of 18.402% to explain the dependent variable is EV. While the rest of 81.598% is explained by other factors outside the independent variable used in research, the value of the p-value generated from the regression performed is 0.003 which indicates the ERM variable has a significant effect on the level of 1% to the EV. The resulting direction for the relationship between ERM and EV is negative as expected. The results obtained from this test indicate that the effective implementation of ERM by the company has a negative effect on earnings volatility of the company. The results of this study are consistent with the results of research proposed by Edmonds et al. [2] who find that changes in the quality of ERM implementation have a strong negative relationship with changes in earnings volatility levels. From the translation for the results of the regression hypothesis 1 above, it can be concluded if hypothesis 1 in this research is accepted.

Furthermore, the results of testing the 2nd hypothesis can be seen in table 4. Based on the regression result of adjusted R<sup>2</sup> is produced is 19.017%. The result shows that independent variable that is used is ERM, moderate variables are ACE and ERMACE, and control variables are LEV, PBV, SIZE, ROA, and PER have ability equal to 19.017% to explain dependent variable EV. The result of regression model 2 for ERM and EV relationship gives almost the same result with the regression result that resulted from model 1 which has been described previously. In model 2, the test is emphasized to see if the high effectiveness of audit committees in
manufacturing companies will be able to weaken the negative relationship or moderate the relationship between ERM implementation and earnings volatility. When the ERM and EV variables are moderated with the effectiveness of the ERMACE audit committee, it can show stronger strong results with a p-value value of 0.048 lower than α 5% and 10%. The value can be seen in table 4 for ERMACE which is the interaction between ERM and ACE. The resulting direction is negative with a coefficient of -0.846, and the resulting direction in accordance with the expected. With these results, it can be concluded that the effectiveness of the audit committee is able to moderate the relationship between ERM implementation and earnings volatility.

Table 4: Results of Regression Testing Model 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results Expectations</th>
<th>Coefficient</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERM</td>
<td>-</td>
<td>-0.738</td>
<td>0.003</td>
<td>***</td>
</tr>
<tr>
<td>ACE</td>
<td>-</td>
<td>-0.475</td>
<td>0.057</td>
<td>*</td>
</tr>
<tr>
<td>ERMACE</td>
<td>-</td>
<td>-0.846</td>
<td>0.048</td>
<td>**</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.159</td>
<td>0.024</td>
<td>**</td>
</tr>
<tr>
<td>PBV</td>
<td>-</td>
<td>-0.219</td>
<td>0.069</td>
<td>*</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>-0.815</td>
<td>0.017</td>
<td>**</td>
</tr>
<tr>
<td>ROA</td>
<td>-</td>
<td>-0.016</td>
<td>0.095</td>
<td>*</td>
</tr>
<tr>
<td>PER</td>
<td>-</td>
<td>-1.139</td>
<td>0.036</td>
<td>**</td>
</tr>
<tr>
<td>Cons</td>
<td>-</td>
<td>-0.266</td>
<td>0.049</td>
<td></td>
</tr>
</tbody>
</table>

R Squared 21.536%
Adj R Squared 19.017%
Prob> F 0.001

*** Significance at level 1% (one-tailed)
** Significance at level 5% (one-tailed)
* Significance at level 10% (one-tailed)

Information:
EV = earnings volatility; ERM = Enterprise Risk Management, is the effectiveness of ERM implementation score; ACE = Audit Committee Effectiveness, is the effectiveness score of the audit committee; ERMACE = the interaction between the effectiveness of ERM implementation and the effectiveness of the audit committee; LEV = leverage ratio , proxied by the ratio of total debt per total asset ; PBV = price to book value ratio ; SIZE = firm size proxies with natural logarithm of total assets ; ROA = return on asset ratio ; PER = price earnings ratio

Meanwhile, the results of model 3 testing in Table 5 show that the independent variables used are ERM, the moderating variables AQ and ERMAQ, and the control variables are LEV, PBV, SIZE, ROA and PER have the ability of 16.807% to explain the dependent variable EV, slightly smaller than the percentage in both previous models. In this model 3 emphasis is given to see if the
audit quality proxied by using Big Four or non-Big Four KAP measures can weaken the negative relationship or moderate the relationship between ERM implementation and earnings volatility. The audit quality variables denoted by ERMAQ show no significant results with a p-value of 0.780. The results of this study consistently show that audit quality performed by independent auditors is also not able to moderate the negative relationship between the effectiveness of ERM implementation with earnings volatility. The results of this study are similar to the research conducted by Andarini and Januarti [14] which also proves that audit quality has no effect on ERM implementation in the company. The absence of correlation or influence of audit quality on earnings volatility and the inability of audit quality in moderating the negative relationship between the effectiveness of ERM implementation and earnings volatility level in this research is suspected due to the use of a proxy assessment of audit quality which is very simple. The audit quality assessment in this study only uses the Big Four and Non-Big Four KAP size proxies, which may not be relevant enough to assess the actual audit quality.

Table 5: Table Results of Regression Testing Model 3

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results Expectations</th>
<th>Coefficient</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERM</td>
<td>0.595</td>
<td>0.006</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>AQ</td>
<td>0.084</td>
<td>0.857</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERMAQ</td>
<td>0.036</td>
<td>0.780</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>0.299</td>
<td>0.025</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>PBV</td>
<td>-0.295</td>
<td>0.062</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>SIZE</td>
<td>-1.043</td>
<td>0.011</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>-0.020</td>
<td>0.092</td>
<td>*</td>
<td></td>
</tr>
<tr>
<td>PER</td>
<td>-1.046</td>
<td>0.039</td>
<td>**</td>
<td></td>
</tr>
<tr>
<td>Cons</td>
<td>-0.766</td>
<td>0.419</td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Squared</td>
<td>19.086%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adj R Squared</td>
<td>16,807%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td>0.006</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Significance at level 1% (one-tailed)
** Significance at level 5% (one-tailed)
* Significance at level 10% (one-tailed)

Information:

EV = earnings volatility, is the standard deviation of profit; ERM = Enterprise Risk Management, is the effectiveness of ERM implementation score; AQ = Audit Quality, is an audit quality score; ERMAQ = interaction between effectiveness of ERM implementation with audit quality; LEV = leverage ratio, proxied by the ratio of total debt per total asset; PBV = price to book value ratio; SIZE = firm size proxies with natural logarithm of total assets; ROA = return on asset ratio; PER = price earnings ratio
Table 6: Result of Regression Testing Model 4

Regression Result Model 4

Hypothesis 4: The negative relationship between the effectiveness of ERM implementation and earnings volatility can be moderated by the effectiveness of the audit committee and the quality audit

Model 4: \( EV_{it} = \beta_0 + \beta_{23} (ERM)_{it} + \beta_{24} (ACE)_{it} + \beta_{25} (AQ)_{it} + \beta_{26} (ERM*ACE)_{it} + \beta_{27} (ERM*AQ)_{it} + \beta_{28} (LEV)_{it} + \beta_{29} (PBV)_{it} + \beta_{30} (Size)_{it} + \beta_{31} (ROA)_{it} + \beta_{32} (PER)_{it} + \epsilon_{it} \)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Results Expectations</th>
<th>Coefficient</th>
<th>p-value</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>ERM</td>
<td>-</td>
<td>-0.562</td>
<td>0.003</td>
<td>***</td>
</tr>
<tr>
<td>ACE</td>
<td>-</td>
<td>-0.499</td>
<td>0.054</td>
<td>*</td>
</tr>
<tr>
<td>AQ</td>
<td>-</td>
<td>0.079</td>
<td>0.859</td>
<td></td>
</tr>
<tr>
<td>ERMACE</td>
<td>-</td>
<td>-0.853</td>
<td>0.046</td>
<td>**</td>
</tr>
<tr>
<td>ERMAQ</td>
<td>-</td>
<td>0.035</td>
<td>0.779</td>
<td></td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.250</td>
<td>0.016</td>
<td>**</td>
</tr>
<tr>
<td>PBV</td>
<td>-</td>
<td>-0.295</td>
<td>0.062</td>
<td>*</td>
</tr>
<tr>
<td>SIZE</td>
<td>-</td>
<td>-0.957</td>
<td>0.012</td>
<td>**</td>
</tr>
<tr>
<td>ROA</td>
<td>-</td>
<td>-0.035</td>
<td>0.064</td>
<td>*</td>
</tr>
<tr>
<td>PER</td>
<td>-</td>
<td>-1.164</td>
<td>0.038</td>
<td>**</td>
</tr>
<tr>
<td>Cons</td>
<td>-</td>
<td>-0.271</td>
<td>0.237</td>
<td></td>
</tr>
</tbody>
</table>

R Squared 20.082%
Adj R Squared 17.103%
Prob > F 0.000

*** Significance at level 1% (one-tailed)
** Significance at level 5% (one-tailed)
* Significance at level 10% (one-tailed)

Information:
EV = earnings volatility; ERM = Enterprise Risk Management, is the effectiveness of ERM implementation score; ACE = Audit Committee Effectiveness, is the effectiveness score of the audit committee; AQ = Audit Quality, is an audit quality score; ERMACE = the interaction between the effectiveness of ERM implementation and the effectiveness of the audit committee; ERMAQ = interaction between effectiveness of ERM implementation with audit quality; LEV = leverage ratio, proxied by the ratio of total debt per total asset; PBV = price to book value ratio; SIZE = firm size proxies with natural logarithm of total assets; ROA = return on asset ratio; PER = price earnings ratio

From the result of the 4th hypothesis test in research model 4 in table 6 on the relationship of each independent variable, moderation, and a control variable, simultaneously those variables have the ability to influence earnings volatility variable. Only partially, the effectiveness of the ERM implementation, the effectiveness of the audit committee (ACE and ERMACE), and the control variables LEV, PBV, SIZE, ROA, and PER alone are able to negatively affect the earnings volatility level. Audit quality is not able to weaken the negative relationship between the effectiveness of ERM implementation with earnings volatility. Audit quality does not have a significant effect on the relationship between the effectiveness of ERM implementation with earnings volatility, or in other words, a company with high audit quality may not necessarily apply
ERM effectively. Audit quality also may not affect the achievement of lower earnings volatility level. From the result, it can be concluded that hypothesis 4 in this research is a negative correlation between the effectiveness of ERM implementation with earnings volatility simultaneously can be moderated with audit committee effectivity, and high audit quality is rejected because the result of the research does not support the hypothesis.

5. Conclusion

From the results of the research that has been done, in general, it can be concluded that the effective implementation of ERM will have a negative effect on earnings volatility company, which is in line with prediction provided by the stewardship theory. These results are supported by the regression test performed on models 1 through 4 of this study which resulted in a significant negative coefficient direction of the ERM variable to the EV variable. The negative effect of ERM implementation on earnings volatility can be moderated by the role of the audit committee, but cannot be moderated by the company’s external supervision through independent external auditors. Internal oversight provided through the audit committees found to strengthen the negative relationship between ERM implementation and earnings volatility, but the external oversight provided by the company’s independent auditor is unable to moderate the negative relationship between ERM implementation and earnings volatility, even if the auditor is Big Four. The absence of the role of audit quality on earnings volatility and the inability of audit quality in moderating the negative relationship between the effectiveness of ERM implementation and earnings volatility level in this research might be caused by the use of proxy of audit quality which is very simple. The audit quality in this study is only measured by Big Four and Non-Big Four proxies, which may not be relevant enough to assess the actual audit quality. All control variables used in this study, namely leverage ratio (LEV), price to book value ratio (PBV), firm size (SIZE), return on assets (ROA), and price earnings ratio (PER) have a significant relationship to earnings volatility, with the direction in accordance with research expectation.

Some suggestions that the author may provide for further research include; 1) Subsequent research is expected to use broader proxies to measure audit quality, such as external auditor specialization, independence of external auditors, or other proxies, 2) Further research can use a broader sample for example by conducting research on all companies or performing comparison with other regions and other countries.

References


Engineering of Farmer Partnership Model Through Accounting Approach

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eka1225@gmail.com¹

Abstract. This research was conducted to determine the supply chain conditions carried out by onion farmer groups in Bima Regency. Further, this research also used as the evaluation tool so that it can design and improve supply chain management, especially those relate to institutional readiness of partners in utilizing information technology. The research approach used in this research is qualitative research. Bogdan and Taylor [1] define qualitative methodology as a research procedure that produces descriptive data in the form of written or oral words from people and observable behavior. This research produces an institutional model that utilizes information systems in the management process, so that supply chains that are too long can be more efficient and effective.

Keywords : Supply Chain, Accounting System Information, Management Accounting, Red Onion, Marketing Efficiency.

1. Introduction

According to Law Number 13 of 2010 concerning Horticulture aspect, Horticulture is a stretch of distribution of horticulture businesses which are united by certain binding factors, both natural, socio-cultural and physical infrastructure factors. Priority and superior commodities in horticulture agribusiness area development program refer to the criteria of market share, competitive advantage, economic value, distribution of production areas and suitability of agro-eco-systems. Nationally, prioritized horticultural commodities are: bananas, mangoes, mangosteen, oranges, durians, potatoes, red peppers, red onions, orchids, chrysanthemums and rhizomes. In horticultural agribusiness area development program, specific commodity determination will be taken through participatory rural appraisal (PRA)¹ and rapid rural appraisal (RRA)². One of the business activities in "regional development" is the structuring of the supply chain which focuses on developing innovative technologies. Problems that occur in the field in the process of developing innovative horticultural technology in Indonesia are generally carried out through direct introduction to users. One disadvantage is that there is no binding obligation from the government to maintain the continuity of technology adoption. Therefore, the development of innovative horticultural technology needs to be built through a more comprehensive partnership. It aims to encourage the development of innovation technology that has several advantages, namely the delineation of the roles of each party involved, integrated use of resources, and fair and balanced commitment. The definition is further elaborated by the Directorate General of Horticulture:
"Horticultural agribusiness area is a geographical space that has ecosystem similarity and is united by the same infrastructure facilities so as to form an area that contains various horticulture-based business activities including the provision of production facilities, cultivation, handling and processing of post-harvest, marketing, and various supporting activities".[2]

1Participatory Rural Appraisal (PPA) is a method of approach in the process of empowerment and increasing community participation, which stresses on community involvement in overall development activities.

2RRA (Rapid Rural Appraisal) is a method of assessing village conditions quickly, which in practice, RRA activities are mostly carried out by "outsiders" with little or no involvement of the local community.

The concept of "region" is the most appropriate approach in regional economic development. At present, regional development is increasingly being applied in various developing countries, this is naturally happening considering the development of "regions" can improve regional economic performance in order to build community welfare through sustainable use of resources. In addition, the "regional" economic development policy also uses the concept of economic growth that implements communal relations, economic activities and the environment in harmony.

In the development, despite the positive assumption that coordination between various parties involved in achieving the target of developing horticultural agribusiness areas has been done well, this has not been able to answer supply chain problems from Gapoktan which have an impact on farmer exchange rates (NTP). These problems can be overcome by improving several aspects: (1) Management Aspects especially those relating to supply chains (2) Information aspects, especially those related to the process of accounting information in the process of distribution of farmer groups (3) Financial aspects especially those related to financing processes and the purchase of both the private sector and the government through the institution appointed to the farmer, and (4) aspects of social behavior, especially the farmer groups, which are related to habits in the preparation of a cost allocation plan for each hectare of land managed.

Source: Agriculture Ministry
By reconstructing the functions and responsibilities of farmer groups in utilizing the existing information technology, it is hoped that a model of a farmer-oriented farmer group will be built and able to bridge the needs of farmers, especially in the process of financing and marketing of shallots. This is only able to be attempted by remodeling existing farmer groups to maximize managerial and accounting functions by utilizing information technology that is currently developing.

2. Research Methodology

In accordance with the objectives, this study belongs to the type of exploratory research. Exploratory is a study conducted to understand the nature of research problems well. Lack of understanding of the nature of research problems as a result of the limited research that has been done on the phenomena that want to be understood (Sekaran, 2003). Likewise with the limited research that has been carried out regarding institutional strengthening related to the development of farmer group partnerships. Thus, exploratory research is sufficient to get a more understanding of the right model in the effort to develop the area through farmer group partnerships.

This qualitative research is specifically directed to the use of case study methods. According to Lincoln and Guba[3] which states that qualitative approaches can also be called case studies or qualitative, namely in-depth and detailed research on everything related to the subject of research. The selection of case studies as a strategy for this research is also because research questions use the words "how and why", and do not require control of behavior and focus on contemporary events. This is in accordance with the criteria, the situation is relevant to the research strategy presented by Yin[4] Case studies are research strategies in which researchers carefully investigate a program, event, activity, process, or group of individuals [5].

The location of this study is located in Bima Regency, which is one of the autonomous regions in the province of West Nusa Tenggara, located at the eastern end of the island of Sumbawa adjacent to the city of Bima (a fragment of Bima District).

Farmer Exchange Rate (NTP) is an index of farmers' purchasing power in financing household needs, which is the ratio of the weighted prices of each commodity received by farmers to the weighted prices of food consumption, non-food consumption, production costs and additional capital goods paid by farmers.

Geographically, Bima district is at position 117 ° 40 "-119 ° 10" east longitude and 70 ° 30 "south latitude Topographically, the majority of the regencies in Bima (70%) are mountainous highlands while the rest (30%) are plains. About 14% of the lowland proportion is rice fields and more than half is dry land. The focus of this research is directed at improving supply chains through institutional engineering of farmer groups by utilizing information systems in Bima district, especially in Ngali village. The selection of the focus of this research is to remodel the onion farmer groups that run a horticulture area development program through a partnership pattern that has not been effective. The general focus is to obtain an overview of how local governments interpret the partnership process as part of the welfare process of farmer groups as well as an effort to encourage the modernization of farmer groups by utilizing existing technological developments, more specifically the modernization of farmer group performance that can cut the supply chain efforts to improve the welfare of farmers.

To answer the problems that will be examined, it used a purposive sampling technique to determine the informants. According to Sugiono [7] purposive sampling means that the informants determined by the researchers were people who had the information needed in this study and they were always in touch with the problems being examined. [8] states that purposive sampling is used because the information to be taken comes from sources that are deliberately chosen based on
predetermined criteria. The instrument used in this study is the researcher himself by placing himself as a participant observer (participant observer). The researcher as a research instrument is intended as a data collection tool. The researcher makes observations and listens carefully to the smallest possible. The position of the researcher is also a planner, executor, data collector, analyst, data interpreter, and ultimately becomes the reporter of the research results[1].

Because a research design is expected to present a series of logical statements, the analysis used in this study uses three relevant tests [4] namely: Construct Validity, External Validity, and Reliability. (1) The techniques used to test construct validity are: (a) by using multiple sources of evidence, by encouraging unified inquiry efforts. (b) by building a series of evidence. (c) ask the key informant to reread the results of the report. (2) For external validity is to establish the domain where the findings of a study can be visualized [4]. Regarding to the findings in this study can be generalized outside of the case under study. In analytic generalizations, the researcher seeks to generalize a series of specific results to a broader theory. (3) Reliability shows that the implementation of a study if using the same technique or procedure will produce the same findings. The purpose of this test is to get confidence if the next researcher follows the same methods and procedures as described by the researcher and holds the same case again, the latter researcher will arrive at the same findings and conclusions [4].

3. RESULTS AND DISCUSSION

Based on the results of observations of the conditions of the farmers and the existence of agricultural institutions in Ngalivillage, it found the fact that the most of Ngali villagers had not yet conducted business activities in a market-oriented group. The agribusiness activities carried out are still individual. Institutions of farmers such as farmer groups have not seriously sought to collect commodities and products to be marketed together in groups. This assumption arises because sales to middlemen are considered easier and more practical. This can be found from the results of interviews stating:

"... There are many farmer institutions in this village such as farmer group, but it is not use as its function. The institution is only used as tool of requisite of getting subsidy fertilizer (......similar to the farmer institution, there are agriculture institutions in this village, but the activities are not purchasing the red onion commodities or others. It only functions as the administration items of subsidy fertilizer proposal.

The condition of supply chain can be identified as follows:

In addition, the lack of collective marketing is also due to the lack of enthusiasm and entrepreneurial spirit of the institutional managers of farmers. Partnerships have also not developed because there are trauma factors in the failure of partnerships in the past to have an impact on producing commodities that have not been market oriented. In this regard, to ensure the welfare of farmers and to maintain the purchase price of commodity shallots at the farm level, it is necessary to make a supply chain design that is able to replace the existing supply chain. One of
the most appropriate models is by utilizing local institutions that exist today. Local institutions can be cooperatives or farmer groups that already exist in Ngali village. Strengthening this local institution must also be accompanied by an increase in managerial capabilities and partnerships built with large traders as partners. This chain modeling is an effort that utilizes technology that will be run as a commodity chain of shallots.

Source: research data collection

After the chain model is created, the next process is the creation of work designs and institutional schemes that are in line with managerial functions. In this stage, a planning master plan was created which functions as a control tool in the formation of a farmer group institutional framework. The master plan framework is also a work reference in research that consists of 3 aspects, namely: (1) Establishment of Institutions, (2) Formation of information flow, and (3) utilization of information systems.

Source: research data collection
a. Establishment of Institutions

It has been mentioned earlier that throughout Indonesia, especially in Ngali village, farmer institutions only act as administrative items, where farmers who are members of farmer groups do not have specific functions as part of developing farmer groups oriented to management accounting. This can be understood considering that the current form of farmer groups in Ngali village only consists of a chairman, secretary and treasurer and members consisting of ± 25 people. So to create a group that is oriented to managerial functions needs to be created a new institutional structure that has a specific division of functions and tasks. This farmer group was then given the name "Kabuju" which was taken from the name of a hamlet in the village of Ngali. In contrast to existing farmer groups, there are additional functions of buying and marketing that are useful as part of the function of purchasing commodity products to farmers and marketing as part of the sales function to traders and end consumers. Both of these parts are additions to treasurer functions but with different delegation of responsibilities so that the financial flow that occurs can make it easier in the process of preparing financial statements for farmer groups. strengthening local institutions to meet national food needs[9]. In addition, Deepak Shah also outlined the importance of strengthening local institutions as micro-economic drivers that can have an impact on improving people's welfare [10].

b. Information Flow

After the institutional structure along with the functions and tasks of each field are understood, the next process is to establish the framework and flow of information systems used in ‘Kabuju’ farmer groups. This process is the initial foundation in designing the flow of information which is expected to correlate with the external needs and information needed to build external cooperation and maintain the supply of shallots from farmers. The importance of this information flow is explained by Jie as an effort to create a competitive advantage in facing business competition[11].

The initial process in the preparation of flow and systematic information that will be carried out is to determine the input and output of the system that you want to develop. (1) Designing input or input, is part of the task of receiving input data that aims to streamline the flow of information in order to achieve high accuracy. (2) Output or output that is useful as a process of both management and accounting reports in the form of performance reports and financial statements.
c. Making Information Systems

After the framework of information flow involving farmers and traders is made, the next step is to create an information system that is used and implemented by information and technology-based program applications, the importance of this information system is explained by Surya as an integral part of accounting [12]. The information flow system that will be created in the information system application can be seen in the picture:
In the process of making the system, the use of information technology is directed as a catalyst in streamlining the flow of information so that "kabuju" farmer groups can use all information as a communication medium, both internally related to the process of purchasing group member harvests, as well as external ones red to traders. Strengthening managerial performance will be useful in the process of financing and purchasing by farmer groups to farmers who are members of farmer groups [13]

4. Conclusion

With the case study approach used, it was found that the length of the red onion supply chain in Bima District not only caused the failure of the horticulture development program, but it is also not able to maintain the production of red onion commodity which had implications for increasing farmers' welfare in Ngali village. This condition is compounded by the unpreparedness of agricultural institutions, especially farmer groups in modernizing themselves as part of efforts to strengthen local institutions. Therefore, strengthening local institutions is important. Strengthening local institutions is not only done through the introduction of machinery and technology related to on-farm processing and cultivation of onions but also group managerial strengthening.

In the process of managerial strengthening, the use of information technology was found to be able to effectively information and data used in coordination at the internal level of farmer groups. Modernization of farmer groups through the use of technology can cut the length of the red onion supply chain in Ngali village, besides that it can also provide solutions in the process of preparing financial reports and planning the allocation of planting costs as a reference in the financing process by external parties. With the 'Kabuju' farmer institution model that has utilized information technology, the application of accounting principles can be done effectively and a more market-oriented management system.

This research only directs one farmer group as an example model, so that it cannot be generalized whether the same model can work for other farmer groups and different commodities. In addition, the use of information technology that is still very simple causes some operations to be done manually.

References

Mediation Role of Cost of Debt and Intellectual Capital on Corporate Governance and Firm Value: Evidence from Indonesia

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Abstract. This Study aims to investigate the relationship between corporate governance and firm value using mediation variable intellectual capital and cost of debt. Firm value is measured by using financial performance indicator, which in proximated with ROA, ROE, PBV and NPM. Corporate governance is proximated with CGPI. The sample of this research are companies that follow CGPI and is listed in BEI in observation period 2011 to 2015. Data analysis using structural equation method. The results showed that corporate governance directly affect the firm value (NPM and PBV) and corporate governance did not directly affect the firm value (ROA and ROE). Furthermore, cost of debt and intellectual capital full mediates the relationship between corporate governance and firm value (ROA and ROE) and partial mediate the relationship between corporate governance and firm value (NPM and PBV). Good corporate governance increases investor confidence in the company so that it lowers cost of debt. Furthermore, the decline in cost of debt increases firm value. Furthermore, corporate governance increase actually decreases the intellectual capital and then increases the firm value. From the model proposed in this study cost of debt and intellectual capital perfect mediate relations corporate governance and financial performance (ROA and ROE).

Keywords: Corporate Governance, Cost of Debt, Firm Value, Intellectual Capital

1. Introduction
Firm value is the important thing to be noticed by the company to be able to maintain long term sustainability and meet the main obligation the company which is owner’s prosperity. Corporate Governance is very needed to reach this goal. It is expected with the application of good Corporate Governance will increase investor trust cause corporate investment managed with appropriate regulation and appropriate manner. Corporate Governance occured when the owner entrust the corporate governance to the management, it consequences on limit the interest conflict between shareholder and manager, and especially cost that occurs due to the conflict non-new phenomenon[1]. Berles and Means stated that manager has to be controlled to avoid loss [2]. The economic perspective, corporate governance plays important role in achieving invested funds efficiency to get high reimbursement and can be a vital determinant for the institutional investment[3].
Furthermore, the relationship between corporate governance and firm value has been widely discussed and become research topics in many developing and developed countries. Corporate collapses due to weak corporate governance system which implies needs to increase and reform corporate management structure that plays important role in the probability of accounting deception and companies that have weak governance will be more susceptible toward accounting fraud [4]. Failure in preventing this fraud has sparked a lot of debate about the effectiveness of the company's current governance rules, principles, structures and mechanisms [5]. Improved corporate governance will also improve corporate performance [3][6]. Implementation of good corporate governance is expected to increase investor confidence in the company, so investors do not demand high return on their investment. Corporate governance also plays an important role in explaining the variations in the cost of capital companies[7]. Cost of Capital have a significant effect on the profitability and value of the company[8].

Corporate governance though small impact on the intellectual capital in the banking companies [9]. The limitations on the financial statements in explaining the value of the company underscores the fact that the source of economic value is no longer the production of material goods, but the creation of intellectual capital. Intellectual capital, including human capital and structural capital encased in a customer, process, database, brand, and the system [10] an increasingly important role in creating a sustainable competitive advantage [11]. However, the intellectual capital can play an important role in improving financial performance [10].

Results of research corporate governance and firm value shows the result of inconsistencies, we examine the direct effect of the settings back in Indonesia and indirect influence of the variable cost of debt and intellectual capital as a mediating variable, in the period of 2011 – 2015 where in that period the results of implementation Bank Indonesia Circular Letter No. 12/13/DPbS, April, 30, 2010 as part of the institutional implementation of implementing good corporate governance is proclaimed by the government. The purpose of this study examines the influence of corporate governance on financial performance with cost of capital and intellectual capital as a mediation variable. Financial performance is measures with ROA, ROE, PBV, and NPM.

2. Method

2.1 Data Types and Source

The data used in this research is secondary data. Secondary data taken from Indonesian Capital Market Directory (ICMD), annual reports, and publications Corporate Governance Perception Index (CGPI) by the Indonesian Institute for Corporate Governance (IICG).

a. Research Population

The research population was based on some criterion: (1) publishing sustainability report (2) joining the corporate governance program perception index from Indonesia Institute Corporate Governance (IICG) (3) not experiencing negative profits during the research period. The observations are conducted for the period 2011 to 2015. Based on the above criterion, all of them were used as research samples. Observations were conducted for 5 years (2011 to 2015). From the population criteria, it is obtained 17 samples with 70 observations (presented in Table 1 and table 2).
Table 1. Sample Selection

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Companies that follow CGPI and listed on IDX (2011 – 2015)</td>
<td>22</td>
</tr>
<tr>
<td>Companies not follow CGPI for 2 years period research</td>
<td>(8)</td>
</tr>
<tr>
<td>The Company did not issue the financial statements in Rupiah</td>
<td>(3)</td>
</tr>
<tr>
<td>Companies with negative earnings for the year of research</td>
<td>(3)</td>
</tr>
<tr>
<td>Final sample</td>
<td>11</td>
</tr>
<tr>
<td>Data missing</td>
<td>(15)</td>
</tr>
<tr>
<td>Final observation</td>
<td>70</td>
</tr>
</tbody>
</table>

Table 2. List of Sample

<table>
<thead>
<tr>
<th>No</th>
<th>Company</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank BNI</td>
<td>BBNI</td>
</tr>
<tr>
<td>2</td>
<td>Bank BRI</td>
<td>BBRI</td>
</tr>
<tr>
<td>3</td>
<td>Bank BTN</td>
<td>BBTN</td>
</tr>
<tr>
<td>4</td>
<td>Bank CIMB</td>
<td>BNGA</td>
</tr>
<tr>
<td>5</td>
<td>Bank Mandiri</td>
<td>BMRI</td>
</tr>
<tr>
<td>6</td>
<td>PT Adhi Karya</td>
<td>ADHI</td>
</tr>
<tr>
<td>7</td>
<td>PT Adira Dinamika Multifinance</td>
<td>ADMF</td>
</tr>
<tr>
<td>8</td>
<td>PT Astra Otoparts</td>
<td>AUTO</td>
</tr>
<tr>
<td>9</td>
<td>PT Bukit Asam</td>
<td>PTBA</td>
</tr>
<tr>
<td>10</td>
<td>PT Panorama Transportasi</td>
<td>PANR</td>
</tr>
<tr>
<td>11</td>
<td>PT Telekomunikasi Indonesia</td>
<td>TLKM</td>
</tr>
<tr>
<td>12</td>
<td>PT Timah</td>
<td>TINS</td>
</tr>
<tr>
<td>13</td>
<td>PT United Tractors</td>
<td>UNTR</td>
</tr>
<tr>
<td>14</td>
<td>PT Wijaya Karya</td>
<td>WIKA</td>
</tr>
<tr>
<td>15</td>
<td>Jasa Marga</td>
<td>JSMR</td>
</tr>
<tr>
<td>16</td>
<td>OCBC NISP</td>
<td>NISP</td>
</tr>
<tr>
<td>17</td>
<td>Bank BCA</td>
<td>BBCA</td>
</tr>
</tbody>
</table>

2.3 Operational definitions and variable measurements

Corporate governance is the commitment, the rules and practice of conducting business in a healthy and ethical governing the relationship between shareholders and stakeholders to create value added (value added) for the company. This study uses a measurement CGPI (Corporate Governance Perception Index) which was held by Indonesian Institute for Corporate Governance (IICG).

Firm value is a reflection of the company's performance. Firm value is measured by Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin (NPM), and Price to Book Value (PBV). Return on Assets (ROA) is the level of ability of the company in making the investment with formula Return on Assets = Net Income/Total Assets[12]. Return on Equity (ROE) is the level of ability of the company provide for the results, with formula Return on Equity = Net Income / Owners’ Equity[12]. Net Profit Margin (NPM) is the level of the company's ability to
generate profits, with formula NPM = Net Profit/Sales[12]. Price to Book Value is values that
describe the company, with formula PBV = price to book value/number of shares[13].

Intellectual Capital as defined in this study is the performance of the IC which is measured
based on the value added created by physical capital (VACA), human capital (VAHU), and
structural capital (STVA). The combination of these three value added symbolized by the name
VAIC™ developed by[14]. Cost of debt is the level of corporate debt. Counted with formula:
\[ kd = \frac{\text{interest} \times (1-t)}{\text{Total debt}} \] [15].

2.4 Hypothesis Testing Method

In this study, analysis of data used Partial Least Square (PLS) approach using software
WarpPLS 4.0, includes the outer test models (indicator test) and the inner test models (structural
test). This method of analysis is used because the sample size of the study is small.

3. Result

3.1 Descriptive Statistics

Based on Table 3, the average value for Corporate Governance Perception Index (CGPI)
is about 83.8714 approaching 100. It means that although it is not 100 percent of companies
implementing the principles of corporate governance, but it is already at almost-perfect
execution. It is different from the apparent value of financial performance varies by far the
average value of the maximum and minimum value.

<table>
<thead>
<tr>
<th>Table 3. Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>CG</td>
</tr>
<tr>
<td>CoD</td>
</tr>
<tr>
<td>IC</td>
</tr>
<tr>
<td>ROA</td>
</tr>
<tr>
<td>ROE</td>
</tr>
<tr>
<td>NPM</td>
</tr>
<tr>
<td>PBV</td>
</tr>
</tbody>
</table>

Valid N (listwise) 70

a. The results of testing the hypothesis

Hypothesis discussion consists of 4 research models, which distinguish each measurement
variable firm value (ROA, ROE, PBV, and NPM). The results of the path analysis are presented
in Table 4.
Table 4. Summary of Path Analysis

<table>
<thead>
<tr>
<th>Path</th>
<th>Direct Effect</th>
<th>Indirect Effect</th>
<th>Remark</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Coefficient</td>
<td>p-value</td>
<td>Coefficient</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CG → ROA</td>
<td>0.36</td>
<td>&lt;0.01</td>
<td></td>
</tr>
<tr>
<td>CE → ROA</td>
<td>0.31</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>IC → ROA</td>
<td>0.23</td>
<td>&lt;0.01</td>
<td></td>
</tr>
<tr>
<td>ROA → NPM</td>
<td>-0.15</td>
<td>0.05</td>
<td></td>
</tr>
<tr>
<td>ROA → PBV</td>
<td>-0.10</td>
<td>0.12</td>
<td></td>
</tr>
<tr>
<td>CG → NPM</td>
<td>0.19</td>
<td>0.07</td>
<td></td>
</tr>
<tr>
<td>CG → PBV</td>
<td>0.023</td>
<td>0.047</td>
<td></td>
</tr>
</tbody>
</table>

Indicator Model Fit
- Average Path Coefficient (APC): 0.231
- Average Rsquared (R^2): 0.802
- Average Variance Inflation Factor (AVIF): 3.3

Table 4 presents a summary of the path analysis. Based on Table 5, corporate governance has no direct influence on the firm value measured by ROA and ROE. Corporate governance effect directly to the firm value which is measured by NPM and PBV. These results showed that:

a. There was not impact of corporate governance on firm value which is measured by ROA and ROE.

b. There was positive impact of corporate governance on firm value which is measured by NPM and PBV.
c. **Cost of debt mediates the relationship corporate governance and firm value**

Cost of debt effect full mediates the relationship corporate governance and firm value which is measured by ROA and ROE. Different firm value which is measured by NPM and PBV, cost of debt effect partial mediates the relationship corporate governance and firm value.

d. **Intellectual capital mediates the relationship corporate governance and firm value**

Intellectual capital effect full mediates the relationship corporate governance and firm value which is measured by ROA and ROE. Different firm value which is measured by NPM and PBV intellectual capital effect partial mediates the relationship corporate governance and firm value.

4. **Discussion**

Among 3 proposed hypotheses and 2 analysis model there are four not proved, the direct effect of corporate governance on firm value (ROA and ROE). The results showed a direct effect on NPM and PBV are in line with research[3]. Corporate governance have no direct impact on NPM and PBV is not in line with research[3];[16];[17].

Implementation of companies corporate governance improve the firm value (NPM and PBV). However, this does not happen to firm value (ROA and PBV). It is possible that the application of corporate governance affects directly on the company's operational performance and will result in the company's assets in the long term, given the data used by the researcher only 5 years of observation.

The mediating variable test showed that the variable cost of debt mediates the relationship of corporate governance and firm value (ROA, ROE, NPM, and PBV). Moreover, the intellectual capital mediated the relationship of corporate governance and firm value (ROA, ROE, NPM, and PBV).

The results showed that with the implementation of management corporate governance manage investments well in accordance with the rules of proper governance and proper operation. Good corporate governance enhances investor confidence in the company so that it lowers cost of debt (expected rate of return on debt investor). Furthermore, the decrease in cost of debt increased firm value (ROA, ROE, NPM, and PBV). It is interesting to investigate further increase in corporate governance actually reduce Intellectual Debt and then improve the firm value (ROA, ROE, PBV, NPM). From the model proposed in this study, cost of debt and intellectual capital full mediate relationship of corporate governance and firm value (ROA and ROE) and partial mediate relationship of corporate governance and firm value (NPM and PBV).

5. **Conclusion**

Firm value is certainly an important topic for researchers, investors and company. This study aimed to investigate the relationship of corporate governance and firm value with mediating variables, intellectual capital and cost of debt. Firm value is proximated with ROA, ROE, NPM, and PBV. Corporate governance is proximated with the Corporate Governance Perception Index (CGPI). Samples are companies that follow CGPI program and a listing on the Stock Exchange with the observation period 2011 to 2015.

The main statistical methods used to test the study hypotheses were structural equation model with PLS. The results confirmed that there were direct effects corporate governance on firm value (NPM and PBV) and there were not direct effects corporate governance on firm value (ROA and ROE).

Moreover, the results demonstrated that cost of debt and intellectual capital full mediate the relationships among corporate governance and firm value (ROA and ROE) and partial
mediate the relationships among corporate governance and firm value (NPM and PBV). Therefore, the importance of this study stems from trying to interpret the controversial results for effecting corporate governance on firm value, with mediate variable cost of debt and intellectual capital.

Acknowledgements

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References

Corporate Governance, Earnings Management and Tax Avoidance: Indonesia Evidence

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Abstract. This study aims to investigate the empirical evidence on the impact of corporate governance on earnings management and tax evasion in public companies. The scope of this study is companies listed on the Indonesia Stock Exchange except those in financial, real estate, and telecommunication industries. Panel regression method was employed to run the data on samples for five-year-period (2012-2016). The results show that several corporate governance mechanisms play an important role in detecting earnings management, namely the institutional ownership, the percentage of independent commissioners, and percentage of audit committee members with finance/accounting background. For tax evasion, only the size of the board of commissioners that plays a role in detecting the practice. The results have practical implication on improving several corporate governance mechanisms to effectively tackle unethical practices such as earnings management and tax avoidance.

Keywords: Corporate Governance, Earnings Management, Tax Avoidance, Institutional Ownership, Independent Commissioners, Audit Committee

1. Introduction
One of the conflicts of interest between owners and management is represented in the manipulation of a company's financial statements; which can be in the form of earnings management. This can be detrimental to investors as the inappropriate financial statement information provided by management can bring difficulties to investors in making decisions.

Earnings management practices can also be used by companies to control their earnings that will impact taxes at the same time. Good corporate governance can play an important role in mitigating the problems of corporate earnings management and tax avoidance. This research discusses the issues of earnings management, tax evasion and corporate governance which is a development of previous research conducted by[1];[2];[3]. The objective of this research is to find empirical evidence using current data on the role of corporate governance mechanisms in mitigating earnings management and tax avoidance practices.
2. Method

3.1 Sample Selection

The samples taken in this research are public companies listed on the Indonesia Stock Exchange (BEI) from 2012-2016. To investigate earnings management, the companies in the banking industry, other financial services, telecommunications, and real estate are excluded as they have different regulations [4]. The other reason is that the Jones model to measure the earnings management cannot be applied to the financial industry. To investigate tax avoidance, companies in the banking industry and other financial services are excluded, as well as companies experiencing losses as it will bring different consequences on the applicable tax rate.

3.2 Research model

Model 1: To investigate the association between corporate governance mechanisms and earnings management where:

\[
\text{ADA} = \beta_0 \text{INST} + \beta_1 \text{KOMITE} + \beta_2 \text{RKOMITE} + \\
\beta_3 \text{PINDP} + \beta_4 \text{DK} + \beta_5 \text{PBKOMITE} + \beta_6 \text{SIZE} \\
\beta_7 \text{LEV} + \beta_8 \text{BIG4} + \beta_9 \text{CFFO} + \beta_{10} \text{LOSS} + \\
\beta_{11} \text{ROA} + \beta_{12} \text{ROA}^2 + \epsilon
\]

ADA : The absolute value of discretionary accruals
INST : Institutional Ownership
KOMITE : Number of audit committees
PBKOMITE : Percentage of audit committee meetings
PINDP : Percentage of the independent board of commissioners
DK : Number of boards of commissioners
SIZE : Control variable, measured by the natural logarithm of total sales.
LEV : Control variable, measured by the ratio of total debt to total assets
BIG4 : Control variable, measured by dummy variables, 1 for Big 4 and 0 otherwise
CFFO : Control variable, measured by the ratio of cash flow from operation to total assets
LOSS : Control variable, measured by a dummy variable, 1 when the company suffered loss for two years and 0 otherwise
ROA : Control variable, measured by the ratio of net income to total assets
ROA2 : Control variable, measured by the square of net income and total asset

Model 2: To investigate the association between corporate governance mechanisms and tax avoidance

\[
\text{ETR} = \beta_0 \text{INST} + \beta_1 \text{KOMITE} + \beta_2 \text{RKOMITE} + \\
\beta_3 \text{PINDP} + \beta_4 \text{DK} + \beta_5 \text{PBKOMITE} + \\
\beta_6 \text{ROA} + \beta_7 \text{BM} + \epsilon
\]

ETR : Effective Tax Rate
INST : Institutional Ownership
KOMITE : Number of audit committees
PBKOMITE : Percentage of audit committee meetings
PINDP : Percentage of the independent board of commissioners
DK : Number of boards of commissioners
DM : Data Mining
where:
ETR  : Effective Tax Rate
SIZE : Control variable, measured by the natural logarithm of total sales.
ROA  : Control variable, measured by the ratio of net income to total assets
BM   : Control variable, measured by the ratio of book value and market value of the stock.

3.2.1 Dependent Variables

a. Earnings management

Earnings management is measured by the modified Jones model:

\[ TA_{it} = NI_{it} - CFO_{it} \]

...............................(3)

where:
\( TA_{it} \): total accruals
\( NI_{it} \): net income before extraordinary item
\( CFO_{it} \): cash flow from operation

\[ TA_{it} = \alpha_1 \left( \frac{1}{A_{it-1}} \right) + \alpha_2 \left( \frac{\Delta REV_{it} + \Delta REC_{it}}{A_{it-1}} \right) + \alpha_3 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \alpha_4 \times ROA_{it-1} + \epsilon_{it} \]

.................................(4)

where:
\( \Delta REV_{it} \): income changes
\( \Delta REC_{it} \): change of receivables
\( A_{it-1} \): total assets
\( PPE_{it} \): net property, plant and equipment
\( ROA_{it-1} \): Return on Assets

Non-discretionary accrual (NDAC) is the fitted value of the above equations while the discretionary accrual (DAC) is the residual value. In accordance with [5], in this study, we use a cross-sectional model, where each model is estimated separately for each combination of years and industrial group of companies.

b. Tax evasion

The next dependent variable is tax evasion measured by ETR or effective tax rate calculated using the formula below:

\[ \frac{Current\ Tax}{Profit\ Before\ Interest\ and\ Tax} \]

...........................................(5)

3.2.2 Independent Variables

a. Institutional ownership

Institutional ownership is defined as financial institutions such as insurance company, bank, pension fund, and investment banking[4].

b. Audit Committee

Audit committee consists of at least a chairman who is also an independent commissioner and two independent external members.

c. Number of audit committee meetings

The frequency of meetings between members of the audit committee is measured by the number of audit meetings within one year.
d. Percentage of audit committees with a financial/accounting background
   The proportion of an audit committee with a financial/accounting background is calculated by dividing the total number of audit committees with a financial background to the total members of the audit committee.

e. Size of boards of commissioners
   The size of the board of commissioners is defined as the number of board of commissioners member in a company.

f. Percentage of the independent board of commissioners
   Based on the regulations of the Indonesia Stock Exchange (BEI) Number Kep305 / BEJ / 07 2004 any company that has an independent commissioner of at least 30% (thirty percent) of the total members of the board of commissioners has fulfilled the corporate governance guidelines. Information on the number of independent board of commissioners obtained from annual reports of each company.

3. Result
3.1 Descriptive statistics
   Descriptive statistics are used to look at the characteristics of each variable in the research model which is presented in the following table.

### Table 1. Descriptive Statistics of Earnings Management Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADA</td>
<td>635</td>
<td>0.0006</td>
<td>0.7651</td>
<td>0.0769797</td>
<td>0.0842453</td>
</tr>
<tr>
<td>INST</td>
<td>635</td>
<td>0</td>
<td>0.8104</td>
<td>0.1262</td>
<td>0.19766</td>
</tr>
<tr>
<td>KOMITE</td>
<td>635</td>
<td>1</td>
<td>6</td>
<td>3.143307</td>
<td>0.544864</td>
</tr>
<tr>
<td>RKOMITE</td>
<td>635</td>
<td>0</td>
<td>59</td>
<td>8.124409</td>
<td>8.03101</td>
</tr>
<tr>
<td>PINDP</td>
<td>635</td>
<td>0</td>
<td>0.8</td>
<td>0.3839802</td>
<td>0.1055993</td>
</tr>
<tr>
<td>DK</td>
<td>635</td>
<td>2</td>
<td>13</td>
<td>4.618898</td>
<td>1.737403</td>
</tr>
<tr>
<td>PBKOMITE</td>
<td>635</td>
<td>0</td>
<td>1</td>
<td>0.658609</td>
<td>0.226256</td>
</tr>
<tr>
<td>SIZE (LN)</td>
<td>635</td>
<td>24.81756</td>
<td>33.19881</td>
<td>29.04166</td>
<td>1.538987</td>
</tr>
<tr>
<td>SIZE (Rp '000.000.000)</td>
<td>635</td>
<td>59.99677</td>
<td>261855</td>
<td>12198.34</td>
<td>24984.82</td>
</tr>
<tr>
<td>LEV</td>
<td>635</td>
<td>0.000010116</td>
<td>0.7415355</td>
<td>0.2578602</td>
<td>0.1593993</td>
</tr>
<tr>
<td>BIG4</td>
<td>635</td>
<td>&quot;1&quot; = 49.375% &amp; &quot;0&quot; = 50.625%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFFO</td>
<td>635</td>
<td>-0.1037274</td>
<td>0.162899</td>
<td>0.0093942</td>
<td>0.0279947</td>
</tr>
<tr>
<td>LOSS</td>
<td>635</td>
<td>&quot;1&quot; = 2.97% &amp; &quot;0&quot; = 97.03%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>635</td>
<td>-0.0656</td>
<td>0.1261</td>
<td>0.0180446</td>
<td>0.0236261</td>
</tr>
<tr>
<td>ROA2</td>
<td>635</td>
<td>-0.2788</td>
<td>0.2691</td>
<td>0.0086457</td>
<td>0.0354059</td>
</tr>
</tbody>
</table>

**Keterangan:**
- ADA: Absolute Discretionary accruals
- INST: Kepemilikan Institusional
- KOMITE: Jumlah Komite Audit
- RKOMITE: Jumlah Rapat Komite Audit
- PINDP: Persentase Komisaris Independen
- DK: Jumlah Dewan Komisaris
- PBKOMITE: Hasil natural logaritma dari total asset
- SIZE (LN): Hasil total asset dalam miliar rupiah
- LEV: Hasil pembagian total debt dan total asset
- BIG4: dummy variabel, 1 ketika perusahaan mengalami kerugian selama 2 tahun dan 0 kebalikannya
- CFFO: Hasil pembagian cash flow from operation dan total asset
- LOSS: dummy variabel, 1 ketika diaudit oleh Big 4 dan 0 ketika diaudit oleh KAP non-Big 4
- ROA: Hasil pembagian net income dan total asset
- ROA2: kuadrat dari Hasil pembagian net income dan total asset

### Table 2. Descriptive Statistics of Tax Evasion Samples

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR</td>
<td>950</td>
<td>0.00000</td>
<td>0.9743</td>
<td>0.19521</td>
<td>0.1412516</td>
</tr>
<tr>
<td>INST</td>
<td>950</td>
<td>0</td>
<td>0.9201</td>
<td>0.134786</td>
<td>0.2255474</td>
</tr>
<tr>
<td>KOMITE</td>
<td>950</td>
<td>0</td>
<td>4</td>
<td>3.013684</td>
<td>0.4668371</td>
</tr>
<tr>
<td>RKOMITE</td>
<td>950</td>
<td>0</td>
<td>59</td>
<td>6.809474</td>
<td>7.6344650</td>
</tr>
<tr>
<td>PINDP</td>
<td>950</td>
<td>0.0000</td>
<td>0.8333</td>
<td>0.392533</td>
<td>0.1057107</td>
</tr>
<tr>
<td>DK</td>
<td>950</td>
<td>0</td>
<td>9</td>
<td>4.382105</td>
<td>1.7986930</td>
</tr>
<tr>
<td>PBKOMITE</td>
<td>950</td>
<td>0</td>
<td>1</td>
<td>0.665694</td>
<td>0.2370283</td>
</tr>
<tr>
<td>ROA</td>
<td>950</td>
<td>-1.322</td>
<td>0.9804</td>
<td>0.027387</td>
<td>0.0670897</td>
</tr>
<tr>
<td>BM</td>
<td>950</td>
<td>-3.8014</td>
<td>36.0007</td>
<td>2.654757</td>
<td>4.0531780</td>
</tr>
</tbody>
</table>
3.2 Regression results

Prior to conducting the regression test, the data has been checked for the classical assumptions and no multicollinearity and heteroscedasticity problems found.

Table 3. Hypothesis Testing on Earnings Management

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sign Expectations</th>
<th>Coeff.</th>
<th>p-value</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INST</td>
<td>+</td>
<td>0.0465948</td>
<td>0.025</td>
<td>**</td>
</tr>
<tr>
<td>KOMITE</td>
<td>−</td>
<td>-0.0092186</td>
<td>0.196</td>
<td></td>
</tr>
<tr>
<td>RKOMITE</td>
<td>+</td>
<td>0.0003759</td>
<td>0.467</td>
<td></td>
</tr>
<tr>
<td>PINDP</td>
<td>+</td>
<td>0.0975468</td>
<td>0.004</td>
<td>***</td>
</tr>
<tr>
<td>DK</td>
<td>−</td>
<td>-0.0032727</td>
<td>0.225</td>
<td></td>
</tr>
<tr>
<td>PBKOMITE</td>
<td>−</td>
<td>-0.0458764</td>
<td>0.008</td>
<td>***</td>
</tr>
<tr>
<td>SIZE (LN)</td>
<td>−</td>
<td>-0.0406978</td>
<td>0.087</td>
<td>*</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>0.0406978</td>
<td>0.139</td>
<td></td>
</tr>
<tr>
<td>BIG4</td>
<td>+</td>
<td>0.0034266</td>
<td>0.718</td>
<td></td>
</tr>
<tr>
<td>CFFO</td>
<td>−</td>
<td>-0.0971696</td>
<td>0.410</td>
<td></td>
</tr>
<tr>
<td>LOSS</td>
<td>−</td>
<td>-0.0345014</td>
<td>0.079</td>
<td>*</td>
</tr>
<tr>
<td>ROA</td>
<td>+</td>
<td>1.1007150</td>
<td>0.001</td>
<td>***</td>
</tr>
<tr>
<td>ROA2</td>
<td>−</td>
<td>-0.3223624</td>
<td>0.000</td>
<td>***</td>
</tr>
<tr>
<td>R Squared</td>
<td></td>
<td>0.1296</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td></td>
<td>0.0000</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*** Significant at level 1%; ** Significant at level 5%; * Significant at level 10%

Description

ADA        Absolute Discretionary accruals
INST       Institutional ownership
KOMITE     Audit committee size
RKOMITE    Meeting frequency of audit committee
PINDP      Percentage of independent commissioners
DK         Board of commissioners size
PBKOMITE   Percentage of audit committee member with finance/accounting
SIZE(LN)   Natural log of total asset
LEV        Total debt to total asset
BIG4       A dummy variable, 1 for Big 4 and 0 otherwise
CFFO       Cash flow from operation to total asset
The institutional ownership has a positive effect on earnings who states that earnings management can be efficient, not always opportunistic[4]. The size of boards of commissioners has no significant impact on earnings management, which can be seen from the p-value of 0.225 with coefficient -0.0032. This reflects the irrelevance of board of commissioners size in detecting earnings management.

4. Discussion

The percentage of the independent board of commissioners has a positive effect on earnings management, as seen from the p-value of 0.004 at a significant level of 1% with a coefficient of 0.0975. This result is in line who examined the relationship between the composition of the board of commissioners and the fraudulent financial reporting and found that the fraudulent company had a lower percentage of the independent board of commissioners than the non-fraudulent company[6].

The audit committee size negatively affects earnings management which is consistent [7]. The audit committee meeting has no significant effect which is consistent stating that audit committee members who meet at least four times a year cannot reduce fraud in the financial reporting process[7]. This might be because the meeting is conducted for the regulatory purpose only and hence is not able to carry out its duties and responsibilities to the maximum which causes its function and role is not effective[8].

The number of audit committees with a financial/accounting background has a negative effect on earnings management, which is consistent stating that audit committees with expertise in finance/accounting effectively oversee the possibility of earnings management[9];[7].

**Table 4. Tax Evasion Hypothesis Test**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sign expectations</th>
<th>Coeff.</th>
<th>p-value</th>
<th>Sign.</th>
</tr>
</thead>
<tbody>
<tr>
<td>INST</td>
<td>–</td>
<td>-0.02207</td>
<td>0.439</td>
<td></td>
</tr>
<tr>
<td>KOMITE</td>
<td>–</td>
<td>-0.00949</td>
<td>0.351</td>
<td></td>
</tr>
<tr>
<td>RKOMITE</td>
<td>+</td>
<td>0.001226</td>
<td>0.174</td>
<td></td>
</tr>
<tr>
<td>PINDP</td>
<td>+</td>
<td>0.069166</td>
<td>0.166</td>
<td></td>
</tr>
<tr>
<td>DK</td>
<td>+</td>
<td>0.006657</td>
<td>0.063 **</td>
<td></td>
</tr>
<tr>
<td>PBKOMITE</td>
<td>–</td>
<td>-0.00715</td>
<td>0.246</td>
<td></td>
</tr>
<tr>
<td>ROA</td>
<td>+</td>
<td>0.095766</td>
<td>0.113</td>
<td></td>
</tr>
<tr>
<td>BM</td>
<td>+</td>
<td>0.001827</td>
<td>0.183</td>
<td></td>
</tr>
<tr>
<td>R Squared</td>
<td></td>
<td>0.0349</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prob &gt; F</td>
<td></td>
<td>0.0397</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

ETR = β1INST + β2KOMITE + β3RKOMITE + β4PINDP + β5DK + β6PBKOMITE + β7ROA + β8BM + ε
<table>
<thead>
<tr>
<th>Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ETR</td>
<td>Effective Tax</td>
</tr>
<tr>
<td>INST</td>
<td>Institutional ownership</td>
</tr>
<tr>
<td>KOMITE</td>
<td>Audit committee size</td>
</tr>
<tr>
<td>RKOMITE</td>
<td>Meeting frequency of audit</td>
</tr>
<tr>
<td>PINDP</td>
<td>Percentage of independent</td>
</tr>
<tr>
<td>DK</td>
<td>Board of commissioners size</td>
</tr>
<tr>
<td>PBKOMITE</td>
<td>Percentage of audit committee members with finance/accounting</td>
</tr>
<tr>
<td>ROA</td>
<td>Net income to total asset</td>
</tr>
<tr>
<td>BM</td>
<td>Square of net income to total asset</td>
</tr>
</tbody>
</table>

The results show that only board of commissioner size that has a significant positive effect on tax evasion, reflecting that other corporate governance mechanisms are not able to prevent tax evasion.

5. Conclusion
This research is conducted with the aim to investigate the role of corporate governance on earnings management and tax evasion. Based on the result of the empirical test, several corporate governance mechanisms play an important role in detecting earnings management, namely the institutional ownership, the percentage of independent commissioners, and percentage of audit committee members with finance/accounting background. As for tax evasion, only the size of the board of commissioners that plays a role in detecting the practice. The results bring practical implications on the need to improve several corporate governance mechanisms to help resolve unethical practices in the form of earnings management and tax evasion.

References


A Conceptual Model Of Entrepreneurship: From Perspective To Opportunity

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Abstract. This study discusses the activities in two major parts, namely the entrepreneurial perspective and from ideas to opportunities with literature search methods. Contains definitions and their effects about entrepreneurship, which contribute to the research area of entrepreneurship to reinforce previous studies, and are useful for future entrepreneurial research and the academic world who want to teach about understanding or definition. Using Literature Review approach taken from journals and books on entrepreneurship.

Keywords: Entrepreneurship, Entrepreneurial Perspective, Entrepreneurial Opportunity.

1. Introduction

Today, research on entrepreneurship (Entrepreneurship) is widely discussed both in management journals, marketing journals, social journals, and entrepreneurial journals. Not only in the form of journals, but many books on entrepreneurship are discussed starting from textbook books, to popular books containing practical entrepreneurship as a guide to becoming entrepreneurs.

The various contexts discussed begin entrepreneurship for beginners (start-up) [1];[2];[3];[4], entrepreneurship for MSMEs to entrepreneurship for large companies[5];[4]. The scale also varies from local entrepreneurship[6] to entrepreneurship that is global or international [7];[8];[9]. It is not only diverse contexts and scales but the activities carried out in entrepreneurship should be discussed a lot before starting from making ideas to how the efforts made can survive.

Entrepreneurship is divided into 5 parts, namely: 1) entrepreneurial perspective, 2) from ideas to opportunities, 3) from opportunities to business planning, 4 ) from planning to funding, 5) from funding to launching businesses, growing, and ending new businesses[10]. However, in this article discussing entrepreneurship in the literature study is limited to divided into 2 major parts, namely: entrepreneurial perspective and from ideas to opportunities, then discussing related content, its definition and its impact, which contribute to the research area of entrepreneurship to strengthen previous research conceptually.
2. Method

Entrepreneurship plays an important role in the creation and growth of a business. So it becomes important to know what activities are implemented in entrepreneurship. Starting from entrepreneurial activities upstream to downstream. But this paper does not discuss the overall entrepreneurial activities.

3. Result

In contrast to research [11] which divides entrepreneurship in 3 major parts, namely looking at entrepreneurship based on the organizational context, performance criteria and entrepreneurial behavior, in this paper discusses entrepreneurship divided into 2 (two) major parts of 4 (four) discussed[10], and each section discusses related entrepreneurial content. Where the description is explained in the following table.

<table>
<thead>
<tr>
<th>Table 1. Entrepreneurial Activities and Entrepreneurial Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entrepreneurial Activities</strong></td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>Entrepreneurial Perspective</td>
</tr>
<tr>
<td>Entrepreneurial Orientation</td>
</tr>
<tr>
<td>Corporate Entrepreneurship</td>
</tr>
<tr>
<td>Entreprenurial Intention and Cognition</td>
</tr>
<tr>
<td>--------------------------------------</td>
</tr>
<tr>
<td>From Ideas to Opportunities</td>
</tr>
<tr>
<td>The Culture that affects Entrepreneurship</td>
</tr>
</tbody>
</table>
Important attributes needed for important entrepreneurs by looking at the potential of individuals through perceptual, cultural, emotional and organizational factors.

Whereas culture related to entrepreneurship is the process of telling stories for an action that connects entrepreneurial capital resources and acquires further to acquire capital and create prosperity[29].

<table>
<thead>
<tr>
<th>View entrepreneurial opportunities in the domestic area and in the global area</th>
<th>Entrepreneurs conduct business until they exceed their citizenship limits not only within the country or the country, taking into account important factors such as political, economic, social and technological in the country where entrepreneurship is conducted[10].</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Entrepreneurship</td>
<td>Companies that aim to address important social problems, and aim to achieve maximum results for social influence[37].</td>
</tr>
<tr>
<td>Technological Development and Economic Development</td>
<td>The technopreneur is The combination of technology and entrepreneurship is an important way for the commercialization of technological innovation and offers opportunities for development [40]. The intersection between the area of Entrepreneurship and the area of economic development is a challenge</td>
</tr>
</tbody>
</table>

[31]–[36] [38], [39] [42]
4. Discussion

4.1 Entrepreneurship Perspective

Undergo entrepreneurship by becoming a different entrepreneur from non-entrepreneurs. One thing that makes a difference is that entrepreneurs must have an entrepreneurial perspective or entrepreneurial perspective that is not owned by non-entrepreneurs.

This perspective can be seen from a structured or systematic entrepreneurial mindset [51] related to ideas, management of resources owned, to the creation process. Then the perspective can be seen from entrepreneurial intentions or the motivation of an entrepreneur in carrying out entrepreneurial[52]. Then the intention is added by the presence of an innovative attitude, risk-taking, proactivity, autonomy, and others called entrepreneurial orientation [14],[53],[54],[55].

This perspective is an added value for an entrepreneur to succeed in his business. The measure of success is its performance in the form of financial and non-financial performance, the continuity of its business, and its efforts to become large, becoming a large and well-established company, called corporate entrepreneurship[10]. For this reason, an entrepreneurial strategy is needed where the strategy needed in this phase is a strategy to enter new markets to exploit new things for businesses to achieve competitive advantage [10].

4.2 From Ideas to Opportunity

In entrepreneurship, just having a good idea is not enough but must be developed through various ways with creativity, innovation and seeing opportunities that exist from various aspects.
The importance of creativity and innovation in a dynamic market, where the combination of production factors is the essence of innovation[56]. The impact of innovation on companies is diverse, including the impact on performance[57], the sustainability of a company[58] and create an advantage that competitive[59]. Creativity is also important for an entrepreneur because it is an important attribute that is needed, by looking at individual potential through perceptual, cultural, emotional and organizational factors[10]. Then a good creativity and innovation are creativity and innovation that are manifested in the form of entrepreneurial activities or activities. These activities will later create a new product and/or process and or enter a new market opportunity, with a newly formed or existing organization[10]. The activities or actions of entrepreneurs on what is believed are what are called opportunities. Because doing entrepreneurship is the same as carrying out activities filled with uncertainty or high risk.

As is already known entrepreneurial opportunities if, in terms of regional demographics, the scope can be local, national or can even extend to international so-called international entrepreneurship. International Entrepreneurship operates at the borders between groups, where most of its entrepreneurship cannot be seen in the creation of a new business, goods or services which previously did not exist.

And to better understand international entrepreneurship as well as an international entrepreneur, it can be more competitive to introduce a method to understand an entrepreneurial process through a framework of Comparative, Discovery, Evaluation, and Exploitation (CDEE) [60]. Several studies have discussed a lot about international entrepreneurship and several factors associated with it. Among other things, International entrepreneurship depends on its geographical location, relates it to the social ties of the company, and companies that have high social ties enhance experience internationally[61].

The company's opportunity to penetrate to international or global is not only a large company, but MSME businesses can also spread to the international through research[62];[63];[64]. Not only regional demographic factors that can be an opportunity in establishing an entrepreneur. But gender or gender factors can also be opportunities that can be seen to set up a business[45].

An opportunity can also come from the field of technology, becoming a technopreneur[40], or also establishing a social entrepreneurship[37] establishing a business that has a social impact, or can also establishing businesses with families as their main resource[65].

5. Conclusion

As stated above, there is a lot of research on entrepreneurship in the form of journals and written in books. Both conceptual and empirical research, both about theory, definitions, and their implications in the world of entrepreneurship. Predecessor theories that predominantly underlie entrepreneurial research. These theories are an economic theory, human resource theory, psychological theory, sociology theory, and anthropological theory[66].

Then there is divides entrepreneurship into 1) entrepreneurship as an organizational context, for example from size, age, individual ownership to family, 2) entrepreneurship based on its performance, which here is based on innovation or growth, 3) entrepreneurship based on behavior, see the behavior of entrepreneurial orientation based on entrepreneurial opportunities[11].

While this paper emphasizes content related to an entrepreneurial activity which is linked to two entrepreneurial activities in general, namely the entrepreneurial perspective and from ideas to opportunities. Which can strengthen previous entrepreneurial studies and be useful for academically in teaching the entrepreneurial material, because here describes the definition and implications in the world of entrepreneurship.
The writing of this paper only limits the content related to any activities carried out in two major parts of the entrepreneurial perspective and from ideas to opportunities by definition and its implications. So it is recommended that further research continue as stated in related content 1) from an opportunity to business planning, 2) from planning to funding, 3) from funding to launching the business, grow, and end new businesses by definition, their impact and implications[10]. And it is also expected that further research will discuss entrepreneurship in a whole process that involves the underlying theory associated with the content or variables involved.

References


The Role of Blockchain Technology as a Mediator between Knowledge Management and Sustainable Competitive Advantage

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Abstract. The advance of Information and Communication Technology (ICT) at Higher Education Institution (HEI) has moved beyond decision support system as it has now become an important intellectual capital asset that will determine the sustainable competitive advantage. The collection of information from internal resources through knowledge management (KM) has been regarded as one of the prominent sources to achieve sustainable competitive advantage. The implementation of KM was not substantial enough as it was expected, while precious information still scattered around the organization and yet organized and collected as it was supposed to be. Therefore, we surveyed HEI’s students and faculty members to obtain their perception on the role of Blockchain technology as well as for them to voluntarily share their knowledge freely but still regarded as rightful owner of the intellectual capital. Through the current study, we found that KM positively influences Sustainable Competitive Advantage and Blockchain is aptly proposed to become an intervening variable for sustainable competitive advantage.

Keywords: Blockchain, Knowledge Management, Sustainable Competitive Advantage, Higher Education Institution.

1. Introduction
The advance of information and communication technology (ICT) impacts our daily life and affects how information (e.g. voice, data, and video) is distributed and exchanged between parties regardless of geographical location and time. The Higher Education Institution (HEI), nevertheless, is one of the entities that can be affected by the advance of ICT. As a source of knowledge, HEI is seen as a warehouse of knowledge where valuable information from research is derived from. Thesis writing and teaching activities are grown along with the HEI’s age. HEI
management is consisted of three main pillars, i.e. Process, Content, and Resources[1]. Process can be seen as the core of learning activities where teaching, research and community services takes place. Content can be seen as methodology, teaching material, and results researches are stored. Resources is seen as sources of human capital, funding, teaching infrastructure and information system.

[2] noticed that Indonesia HEI’s goal sets by the Indonesian government to implement the Tri Dharma, a consensus of Indonesia’s HEI to prioritize teaching, research, and community development as main pillars. The Tri Dharma of higher education is the obligations that must be carried out and developed continuously by the entire academic community, including lecturers and students. With such high obligations given by the government, HEI must think of a way to comply with the government’s obligation as well as to sustain and to survive in a tight competition among other HEI. [3] argued that HEI must move forward from exploring its resource-based superiority to knowledge-based superiority as a source of competitive advantage. This knowledge-based superiority is known as competitiveness in managing its knowledge management within the organization itself[4].

Managing knowledge as source of competitive advantage is a relevant issue in HEI knowledge management and sustainable competitive advantage relationship. Knowledge borne from tacit and explicit activities like teaching and scientific research disciplines will surely enrich HEI’s competitive advantage. Hence, scattered and unmanaged knowledge will become knowledge waste and will never become source of HEI competitive advantage. Therefore, this study aims to investigate if HEI able to achieve sustainable competitive advantage with the use of ICT and its blockchain technology through their knowledge management efforts.

2. Method

The research was conducted at Indonesian higher education institutions in Jakarta in August 2018. Jakarta has more HEI’s compared to other provinces in Indonesia. There are 318 HEI’s spread throughout Jakarta and Greater Jakarta region [3]. The samples taken were from active faculty members and students. We distributed a questionnaire to active 45 HEI faculty members and students. The number of samples is justified using Partial Leased Square - Sequential Equation Model (PLS-SEM). The use of this model and its bootstrapping method does not require normality in distribution since it follows a non-parametric rule. Fig. 1 represents the proposed conceptual model for this study.

![Fig. 1. Framework model.](image-url)
3. Result

The number of female respondents is 72.7% male and 27.3% female, while 61% are active students and 38.6% faculty members of HEI. By using Smart PLS, two steps of test were conducted. One test is Confirmatory Factor Analysis (CFA) which tested the reliability and validity of the variable indicators.

![Fig. 2. Inner model method to test the indicator validity for its individual latent variable](image)

The CFA test can be seen in Figure 2. The indicator is considered as a valid variable when the rule of thumb all the indicator that construct the variable must be at least 0.7, and Average Variance Extracted (AVE) must be above 0.5. As for the indicator to be considered reliable, the indicator must meet the validity indicator of Cronbach alpha above 0.7 and composite reliability above 0.7 [5].

4. Discussion

From our finding, some indicators were not validity nor reliable. Hence, the removal of the indicators so that the construct can be said otherwise. The indicators that do not meet the validity criterion factors are PE1, SI2, EE1, EE2, PRO3, HC1.

<table>
<thead>
<tr>
<th>Var.</th>
<th>Cronbach’s Alpha</th>
<th>Rho A</th>
<th>CR</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>0.826</td>
<td>0.830</td>
<td>0.896</td>
<td>0.741</td>
</tr>
<tr>
<td>KM</td>
<td>0.953</td>
<td>0.956</td>
<td>0.959</td>
<td>0.703</td>
</tr>
<tr>
<td>SCA</td>
<td>0.888</td>
<td>0.896</td>
<td>0.918</td>
<td>0.692</td>
</tr>
</tbody>
</table>

The next step was to do the CFA test one more time to make sure that all the Loading Factor indicators are above 0.7, Cronbach Alpha at least 0.7, and Average Variance Extracted (AVE) are above 0.5 (see Table 1). Next step was the inner model test which measured the influence level between latent variables. The inner model path analysis (Fig. 3), must satisfy the t-value score of 1.96 and significance level below 0.05 with the confidence level of 99.5% [5].
From the inner model test, it was found that Knowledge Management positively influences Sustainable Competitive Advantage (t = 3.003, and P<0.005). The result satisfies Hypothesis 1, where KM positively influences and is a significant factor. From the inner testing model, it was found that KM positively influences Technology Orientation where t = 6.857, and P<0.005). This result, therefore, answers Hypothesis 2 where KM positively influences Technology Orientation. Then, the testing of the influence of Technology Orientation shows of SCA where t = 2.612 and P<0.005). This result also shows that Blockchain influences and is significant to SCA. The R Square scores (Table 2) can be seen that Blockchain and KM Variables contribute to 72.9% of in construction of SCA. Whilst KM only contributes 34.7% to the Blockchain variable.

<table>
<thead>
<tr>
<th>Var.</th>
<th>R²</th>
<th>R² adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>BC</td>
<td>0.729</td>
<td>0.715</td>
</tr>
<tr>
<td>SCA</td>
<td>0.347</td>
<td>0.332</td>
</tr>
</tbody>
</table>

5. Conclusion

Through our findings, it can be seen that KM positively influences and a significant factor to SCA. Therefore, it is known that to obtain a sustainable competitive advantage, HEI must apply KM in order to survive the competition, where knowledge must be collected, stored and disseminated over the students and faculty members for them to gain new knowledge as well as materializing all of the intangible asset, coming from a collection of knowledge to reshape or to invent new product/services, that would create innovation in teaching method.

Blockchain indeed can become a mediating variable to KM in achieving stronger sustainable competitive advantage. Although the works of KM may influence SCA, by using Blockchain, students and faculty members will have more confidence in sharing their knowledge as they believe that their shares of knowledge whose regarded as a precious source of personal Intellectual Capital (IC) can be regarded by anyone who use it. When this IC is materialized as new innovation in products/services, the IC owner will be honored for their contribution to the
organization. Only through this appreciation from HEI to the contributors will encourage them to work together hand in hand to contribute to sustainable competitive advantage of HEI.

From the R-square analysis, KM only contributes 34.7% of Blockchain variables, therefore, further study of this particular research would be to find other variables that may work as antecedents to Blockchain.

References
The Role of Innovation Characteristic Toward Adoption Intention of E-Paper Product

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Abstract. This paper examines factors that influence the innovation characteristic to intention to adopt Solopos e-paper. Nowadays, many newspaper companies in Indonesia offer the electronic paper (epaper) services. But not many studies that analyze the factors that might help the industry of e-paper for designing e-paper services. This research will to fill the lack of studies on the e-paper phenomena. This study investigated the factors that influence the intention to adopt Solopos e-paper. Using the Diffusion of Innovations and Technology Acceptance Model (TAM) as the baseline theory, this research involved 103 respondents from local newspaper readers. Research shows that relative advantage and observability have positive impact to intention to adopt e-paper. And then, compatibility, complexity, and trialability don’t have positive impact to intention to adopt e-paper. The result of this research is useful for developing electronic newspaper industry in Indonesia.

Keywords: Characteristic of Innovations, Diffusion of Innovations, Intention to Adopt, E-paper.

1. Introduction

Diffusion of innovation theory is developed by Everett M Rogers, reviews the innovation decisions. In Diffusion of Innovation (DOI) the diffusion of innovation concept along with the speed of a social system in accepting new ideas from an innovation[1]. Many researchers refer Roger’s theory to this day in particular to discuss the diffusion of innovation issues.

Rogers’ diffusion of innovation research is best known and widely respected[2]. Rogers studied nearly 4,000 diffusion publications to revise previous theories about the innovation decision process. This was a huge improvement in diffusion research at that time.

The researcher is interested in using the Rogers’ theory perspective on the characteristics of innovation to explain consumer intentions of Solopos print edition to adopt the Solopos e-paper[1]. Solopos is a local newspaper published in Solo City, Central Java, Indonesia.
There are three basic concepts on Rogers' DOI including innovation, diffusion and adoption. Innovation is a thought, implementation or perceived object as something new in the eyes of everyone. Diffusion is way toward imparting an innovation through a communication channel and within a certain time to members of the social system. Adoption happens on the grounds that individuals completely use an innovation into practice as the best choice [1]. defines the adoption of innovation as a mental process by individuals through the first stage in studying innovation toward final adoption[3].

With regards to the diffusion of innovation toward final adoption, offers attributes that reduce the uncertainty of innovation that affects a person's adoption rate of new products [1]. In Rogers' perspective the characteristics of this innovation affect the rate of adoption in individuals and consumers. Rate of adoption is the relative speed of an innovation to be adopted by members of the social system.

The first characteristic of innovation is the relative advantage or the level of an innovation perceived better than the previous innovation idea. Second is compatibility or the degree of perceived innovation in accordance with prevailing values, past experiences and conformity to the needs of potential potential adopters. Third, the complexity that constitutes the perceived level of innovation is difficult to understand or use. Fourth, trialability is the degree of innovation or experimented of an innovation on a limited scope. Fifth, observability that refers to degree of innovation visibility for others.

The five characteristics of innovation according to that 'persuasion stage' plays an important role in innovation decisions [1]. If an innovation simultaneously excels relatively, in accordance with previous values and habits, uncomplicated, pilottable and renewable, then the innovation will be quickly adopted by both individuals and social systems.

The theory of TAM by Fred D. Davis is useful for explaining the behavioral intention in this study. Behavioral intention is a tendency to react and an important factor for predicting consumer behavior[4]. Behavioral Intention describes a person's behavior and attitude in using a system influenced by two factors including percieved usefulness and percieved of use. Behavioral intention in this study is interpreted as a person's tendency to react in determining full adoption of an innovation as the best choice.

Researchers are interested in using a framework of innovation characteristics to predict the behavioral intention of readers of Solopos Daily print edition to adopt Solopos Epaper or Solopos electronics. Epaper is a newspaper with the same layout and content as the print edition but physically is a digital medium propagated over the internet network. This epaper product is unique because it has a conventional media content but in terms of products and ways of providing to consumers, epaper including new media. Epaper was first introduced in 1995 [5]. Solopos epaper itself was launched in 2015 through the site www.epaper.solopos.com, and this could be said as a new product.

Several previous studies have demonstrated Rogers' innovative characteristics that greatly influence consumers in adopting innovative products. The relative advantage positively influenced the decisions of war veteran members in adopting e-government services[6].

An influence on the intention of using groupware (group conversation to work) for the benefit of the organization[7]. Complexity positively affects the intention of adopting mobile marketing in Malaysia[3]. The trialability had an effect on the intention of using a groupware application to
support organizational work[7]. The observability had a positive effect on the intention of using an online learning system of company employees in Taiwan[4].

Currently, newspaper managers must think hard to keep their business line up. The new findings about information technology have influenced many things. Technological changes in the mass media industry not only change channels or mediums in disseminating information, but also change the way people consume news. During this time the dissemination of information is identical to paper, either through newspapers or magazines. The words "news" and "paper" seem to be two words that can not be separated. The idea of the newspaper itself is as old as the ancient Romans.

Daily events were published through scrolls called Acta Durna or "daily activities". That was the first newspaper anyone ever made. Newspapers gained popularity and grew rapidly after John Gutenberg invented the printing press in 1450. For more than 500 years the paper then became the most efficient medium of information dissemination, data and documents judged [8]. Technology in the virtual world is now transformed into a new channel of public information delivery. Not surprisingly, many newspapers now use internet technology to spread to consumers.

Transformation from print to digital by media companies is done in various ways. In addition to building news sites that are running news (news is always updated at any time), the newspaper company also launched a newspaper in digital version or electronic newspaper (epaper). This shows the potential market of internet users continue to rise.

In this connection the researchers wanted to analyze whether Rogers's innovation characteristics were influential in his intentions to adopt Solopos epaper among readers of the Solopos newspaper. In previous studies the characteristics of innovation had an effect on the intention of adopting a system, but was it also applicable in the case of the intention of adopting an electronic newspaper? Based on the exposure in the background of the problem, the problem formulation in this research is, whether the characteristics of innovation such as relative advantage, compatibility, complexity, trialbility, and observability have an effect on the intention to adopt Solopos epaper newspaper?

2. Method

This study uses a quantitative approach emphasizes on hypothesis testing of precise variables. This study looks for causal relationships or causal relationships. In this study there are independent and dependent variable or variable[9]. Data were collected through a structured questionnaire in which each variable was measured by a likert scale of 1-5. Number 5 indicates "very agree", 4 (agree), 3 (neutral), 2 disagree, 1 (very disagree).

2.1 Population and Samples

The population in this study covers all readers of local and national newspaper as well as internet accessers in several cities in Indonesia. Non-random samples were taken by purposive sampling or sampling technique based on certain considerations [9]. The consideration in this study is the Solopos reader sample who reads this newspaper on average three times a week in the past month during the study. Samples are also internet users at least three times a week in the last month.

The sample size is feasible in a study between 30-500 samples. While in the multivariate study (including multiple regression analysis) the sample size averaged 10 times or more from the number of variables used in the study [10]. There are two main characteristics of a research sample: efficiency and representation[10].
Based on that opinion, the researcher decided to take sample size as much as 20 times the number of variables \((20 \times 6) = 120\). While from 120 questionnaires only 103 can be analyzed because of various considerations. This amount has met the rules of representation and efficiency (time, effort and cost) in the implementation of this research.

The data used in this study is primary data collected through a questionnaire instrument. Data were collected from May to June 2016. Data analysis used to find the causality relationship using multiple linear regression. Regression is used to determine the effect of independent variables on the dependent variable.

2.2 Empirical Model

Characteristic of innovation is the characteristic that will determine the level of one's adoption of innovation, which consists of five characteristics including advantages, compatibility, complexity, triability, and observability. Each of these characteristics will be an independent variable in this study[1].

Relative Advantage: the refers to the degree or degree of an innovation perceived to be better than the idea of previous innovations or those of counter-ideas[1]. Relative advantage can be measured in economic terminology, but social prestige, convenience, and satisfaction factors are often equally important components. Stated that relative advantage can be measured through work more quickly, Job performance, Increase productivity, effectiveness, efficiency, and makes job easier [11].

Compatibility: compatibility is the degree of an innovation perceived consistently with existing values, past experiences, and according to the needs of potential people as adopters[1]. This concept refers to an innovative rate of innovative product innovation adoption if consumers feel the same values or beliefs offered by innovative products[11]. attributes of conformity include fit with existing ways of doing things, fit with prevailing value and fit experience, and fit with belief [11].

Complexity the degree to which an innovation is perceived as difficult to understand or use, and it is assumed to be negatively related to the adoption and implementation of innovation[1]. Instruments proposed indicators for measuring complexity including easy to learn, clear and understandable, easy to use, controllable and flexible[11].

Trialability refers to the degree to which an innovation can be experimented on a finite scope [1]. In theory, innovations that can be tried on a limited scope will be adopted and implemented more frequently and faster than less-implemented innovations[1]. Experiments can be measured using indicators to be able to try out a new product and to find out how it works under one's own condition[11].

Observability is the level of an innovation that makes it visible to others [1]. The result of an innovation that is increasingly easier to see by individuals, the more likely it is to adopt. Innovation will be high if consumers find it easy to find the benefits or attributes of innovative products offered [1];[11]. The measure the attributes of visibility with Easily observed and communicated to others and the other person models how to innovations works as well as the benefits of use[11].
Table 1. Independent Variable Indicators[11]

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Relatif Advantage</strong></td>
<td>Economic Benefits</td>
</tr>
<tr>
<td></td>
<td>Comfortable in Use</td>
</tr>
<tr>
<td></td>
<td>Prestige</td>
</tr>
<tr>
<td></td>
<td>Work Faster</td>
</tr>
<tr>
<td></td>
<td>Work Easier</td>
</tr>
<tr>
<td><strong>Compatibility</strong></td>
<td>Compatibility with the way people do things right now</td>
</tr>
<tr>
<td></td>
<td>Conformity with past values and experiences</td>
</tr>
<tr>
<td></td>
<td>Conformity with the belief of the adopter</td>
</tr>
<tr>
<td><strong>Complexity</strong></td>
<td>Easy to learn</td>
</tr>
<tr>
<td></td>
<td>Easy to understand</td>
</tr>
<tr>
<td></td>
<td>Easy to use</td>
</tr>
<tr>
<td></td>
<td>Flexible</td>
</tr>
<tr>
<td><strong>Trialability</strong></td>
<td>Can be tried</td>
</tr>
<tr>
<td></td>
<td>Easy to find how to use</td>
</tr>
<tr>
<td><strong>Observability</strong></td>
<td>Easy to observe</td>
</tr>
<tr>
<td></td>
<td>Ease to communicate to others</td>
</tr>
<tr>
<td></td>
<td>Other people can feel the benefits</td>
</tr>
</tbody>
</table>

Dependent variable in this research is intention to adopt. Behavioral intention is a person's tendency to act and becomes an important factor in predicting consumer behavior[4]. Adoption takes place when the individual has a positive evaluation of an innovation and then receives fully innovation as the best choice of the various options available[1]. The intention to adopt is a person's tendency to act in determining the adoption of epaper as the best option.

Table 2. Dependent Variable Indicators[1]

<table>
<thead>
<tr>
<th>Variable to Adopt</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention</td>
<td>Positive Perceptions</td>
</tr>
<tr>
<td></td>
<td>Intention to use</td>
</tr>
<tr>
<td></td>
<td>When to adopt</td>
</tr>
</tbody>
</table>

Source:[1],[4],[12]

The linear regression equation of the model as follows:
\[ Y = 4.329 + 0.182 \, X1 + 0.073 \, X2 + 0.127 \, X3 - 0.01 \, X4 + 0.246 \, X5 + e \]

1. The value of the constant is 4.239, which means that the performance of variable Y (intention to adopt) of 4,239 when the independent variable performance relative advantage, compatibility, complexity, trialability, and observability is zero (0).

2. The positive value coefficient of relative advantage (β1) value of 0.183 indicates that the relative advantage of high Solopos epaper will increase the behavior of the intention to adopt Solopos epaper.

3. Coefficient value of positive compatibility (β2) positive equal to 0.073 which indicate when value of variable compatibility Solopos epaper rise, hence will influence to increase of value at variable of intention to adopt Solopos epaper. If Solopos epaper is more in line with the values adopted as well as previous habits, it will increase the behavior of the intention to adopt the Solopos epaper.

4. The coefficient value of the complexity (β3) variable is positive value of 0.127 which indicates an increase in the value of the complexity variable -in this case the inelasticity-using Solopos epaper will increase the variable value of the intention of adopting the Solopos epaper. The simpler and easier Solopos epaper is used, the greater the behavior of the intention to adopt the Solopos epaper.

5. The value of variable coefficient of trialability (β4) is negative -0.001 which means that the value of trialability variable will decrease the behavior of the intention to adopt Solopos epaper.

6. The value of observability variable coefficient (β5) is positive value 0.246 which indicates the increase of observability variable value (visibility) how to use Solopos epaper will influence to increase behavior of intention to adopt Solopos epaper.

3. Result

The validity test of Corrected Item-Total Correlation to 24 question items in the questionnaire to measure the variables in this study has a correlation coefficient greater than the value of r table > 0.256, where n = 103 at the significance level of 1%, indicating the validity of all question items. The reliabilities test of 24 questionnaire items concluded the reliability due to the value of cronbach alpha > 0.6. The normality test using kolmogorov-smirnof shows 0.895 or above the p value of 0.05, indicating normal distributed data. The multicollinearity test can be seen from the variance inflation factor (VIF). The tolerance limit value <1 or the VIF value is greater than 10. The test results indicate that all independent variables of the VIF value are less than 10 and the tolerance value is greater than 1 so there is no deviation of classic multicolloniality assumptions between the variables in the model.

Heteroskedasticity test with glejser-test which is data test by regressing residual absolute value against independent variable. With significance of t value > 0.05, hence there is no heteroscedasticity. The test result shows the t test value of all independent variables is above 0.05, so it can be concluded there is no heteroscedasticity.

Multiple linear regression analysis is useful to find the influence of independent variables (relative advantage, compatibility, complexity, trialability, observability) to the dependent variable (intention to adopt).
Table 3. Result of Multiple Linear Regression Analisys

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Regression Coefficient</th>
<th>t statistic</th>
<th>Sig</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constants</td>
<td>4.329</td>
<td>2.478</td>
<td>0.015</td>
<td>-</td>
</tr>
<tr>
<td>Relative Advantage</td>
<td>0.182</td>
<td>2.192</td>
<td>0.031</td>
<td>Significant</td>
</tr>
<tr>
<td>Compatibility</td>
<td>0.073</td>
<td>0.880</td>
<td>0.381</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Complexity</td>
<td>0.127</td>
<td>1.121</td>
<td>0.265</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Trialability</td>
<td>-0.001</td>
<td>-0.012</td>
<td>0.991</td>
<td>Not Significant</td>
</tr>
<tr>
<td>Observability</td>
<td>0.246</td>
<td>2.021</td>
<td>0.046</td>
<td>Significant</td>
</tr>
</tbody>
</table>

R = 0.478  
R-Square = 0.229  
F-Count = 5.7

4. Discussion

2.3 The influence of relative advantage on the intention of adopting e paper

The test results showed the influence of the relative advantage variable on the intention to adopt epaper. This reality shows the relative advantage of Solopos epaper perceived better than previous innovation ideas, and has an effect on the intention of adopting Solopos epaper.

'Percieve relative advantage' on high Solopos epaper increases the chances of intending to adopt the epaper. The effect of the relative superiority to the intention of adopting this is because respondents perceive epaper to offer many advantages over print edition. Some advantages of using epaper instead of print, in this study, among others, using epaper is cheaper than the print edition, comfortable, and more prestigious than the printed edition.

These results show the hypothesis of the effect of relative advantage on the intention of adopting epaper. The results of this test are in harmony with Rogers's theory of the diffusion of innovation and the behavioral theory intention of Fred D. Davis used in this study. Study shows that relative advantage influences the intention of adopting mobile marketing in Malaysia[3].

2.4 The influence of compatibility on the intention of adopting e paper

The results of the tests in this study showed that compatibility had no significant effect on the intention of adopting epaper. Compatibility is the level of an innovation perceived consistently with existing values, past experiences, and according to the needs of potential people as adopters. An idea that is inconsistent with the values and norms within a social system, will not be adopted as quickly as such as appropriate innovation [1].

In this study the conformity factors are, among others, measured by the similarity of content between epaper and printed edition, the equality of information received by readers. There are also similar habitual factor between reading epaper with print, as well as the same habit between accessing epaper with the habit of accessing the internet. These results indicating the foregoing is not a factor affecting readers of printed newspapers to have intention to adopt the Solopos epaper. Not influencing variable suitability of intentions to adopt this is very likely because respondents rated Solopos epaper not in accordance with their customs in reading the contents of newspapers print edition.
The results of this hypothesis test show that it is not in accordance with or contrary to the results of previous research which states that the variable compatibility has an effect on the behavior of the intention to adopt the innovation. Compatibility to influence the intention of adopting groupware applications for the benefit of the organization [7]. Compatibility positively affected the intention of using online learning system in Taiwan [4].

2.5 The influence of complexity on the intention of adopting e paper

The hypothesis test of this research shows that the complexity variable has no significant effect on the intention to adopt Solopos epaper. Complexity is the degree to which an innovation is perceived as difficult to understand or use [1]. The more complex the results of innovation, the smaller the innovation will be adopted. Conversely easier and simpler results of innovation, the easier it is also accepted by consumers. In this study the complexity is measured from easy to learn clear and understandable, easy to use, and flexible. The easier an innovation to learn and use, the easier it is to adopt.

Some aspects of complexity measured in this study include the ease of using epaper, the content of Solopos epaper is easy to understand, easy to use, and the use of flexible Solopos epaper because it can be opened anywhere as long as there is internet network. However, the results of this study indicate the convenience factors, the simplicity of the use of Solopos epaper has no effect on Solopos customers to intend to adopt Solopos epaper.

Accessing the Solopos epaper is still seen as complicated rather than accessing Solopos print edition, thus preventing them from intending to adopt the Solopos epaper. The results of this hypothesis test are not aligned with the results of previous studies. Concluded that complexity influences the intention of adopting mobile marketing in Malaysia [3]. Complexity negatively affecting the intention of using e-government services of war veterans [6].

2.6 The influence of trialability on the intention of adopting e paper

The hypothesis test showed that the variable of trialability had no significant effect on the intention of adopting Solopos epaper. Trialability is the degree to which an innovation can be experimented or tested on a limited scope [1]. In theory, innovations that can be tried will be adopted and implemented more frequently and faster than less-implemented innovations [1].

In this study, trialability was measured by several indicators, including attempting previous Solopos epaper, Solopos epaper providing product samples, Solopos epaper providing information on how to use, as well as easy to learn instructions on using Solopos epaper.

From these indicators there is no effect on readers of Solopos print edition intending to adopt Solopos epaper. From some indicators of the experiment many respondents who do not know Solopos epaper can be tested. PT. The script of Solopos has not yet maximally promoted the Solopos epaper by giving the facility a wide range of prospective customers to try Solopos epaper.

The results of this hypothesis test contradict the results of previous research that became a reference in this study. Trialability had an effect on the intention of using a groupware application (technology designed to facilitate group work) for the benefit of the organization [7]. Trialability positively affected the intention of using an online learning system in Taiwan [4].
2.7 The influence of observability on the intention of adopting e-paper

Hypothesis test showed that the observability variable had an effect on the intention to adopt Solopos e-paper. Observability is the level at which an innovation is visible to others. The results of an innovation are easy to see, increasing the likelihood of individuals adopting the innovation [1].

In this study observability is measured from several indicators, including the ease of viewing the use of Solopos e-paper, easy-to-communicate Solopos e-paper usage instructions, and easy-to-see examples of Solopos e-paper products.

From these indicators, the results of the tests in this study, these factors have an effect on the intention of adopting Solopos print consumer to adopt Solopos e-paper. This means that some guidelines on the use of the Solopos e-paper are favorable, thus influencing them to intend to adopt the Solopos e-paper. The result of this hypothesis test is consistent with the previous researches used in this study which states that observability has an effect on the intention to adopt innovation. Observability to affect the intention of using online learning system in Taiwan[4].

5. Conclusion

The statistical tests of five independent variables include relative advantage, compatibility, complexity, trialability, observability of the dependent variable (intention to adopt: 1) Relative advantage variables affect the intention to adopt Solopos e-paper. This means that the relative advantages of Solopos e-paper resulted in the intention to adopt Solopos e-paper as a replacement reading of Solopos print edition. 2) Compatibility variable has no effect on the intention to adopt Solopos e-paper. Several indicators in conformity variables such as the content similarity between Solopos e-paper and Solopos print, the equality of information received, the same custom between accessing Solopos e-paper with Solopos print has no significant effect on people's intentions to adopt Solopos e-paper. 3) Complexity variable has no effect on the intention to adopt Solopos e-paper. This means that the ease factor for accessing Solopos e-paper has no effect on the intention of adopting Solopos e-paper. 4) Trialability variable has no effect on the intention to adopt Solopos e-paper. This means that the existing trials in Solopos e-paper can not immediately affect the intention to adopt the Solopos e-paper. 5) Observability variable gives influence to the intention to adopt Solopos e-paper. This means that the higher level of observability (visibility) will further increase the chances to grow the intention to adopt Solopos e-paper.

References


The Influences of Supplier Selection and Partnership Quality on Buyer-Supplier Relationship and Firm Performance on Small and Medium Restaurants in Greater Jakarta

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Abstract. All companies require all factors of production, including labour and raw materials, to provide goods and services to their customers. The raw materials are usually obtained from the suppliers, while labour and other services can be managed in-house or obtained through outsourcing activities. The objective of this research is specifically to investigate the influences of supplier selection on partnership quality, partnership quality and supplier selection on buyer-supplier relationship (BSR) and firm performance of small and medium restaurants in Greater Jakarta, Indonesia. A questionnaire is developed and distributed through a field survey to 96 respondents who are restaurant owners/managers in Greater Jakarta. Partial least squares structural equation modeling (PLS-SEM) is used to analyze the survey data. The results show that supplier selection has influences on partnership quality and BSR, while partnership quality does not affect BSR, and BSR has an influence on firm performance.

Keywords: Partnership Quality; Buyer-supplier relationship; Supplier selection; Firm performance.

1. Introduction

The restaurant sector is a part of the service industry that has a unique characteristic due to the strong relationship between services and facilities. Restaurants create tangible products in the form of food and beverages as well as intangible products, namely the services, which are immediately consumed by the customers.

Restaurants need raw materials and other services for their operational activities, which are usually purchased from suppliers. In order to find suitable suppliers, restaurants must conduct supplier selection, which process is very critical to product quality and customer satisfaction level [1]. Determination of suppliers is conducted based on the financial capability of the suppliers, as well as, stability, payment term and future order [2].

In order to have a successful relationship with suppliers, both restaurants and suppliers should pay attention on the partnership quality. Partnership as strategic relationship between
independent companies that share the same goals and profits, and are dependent on each other[3]. Partnership quality is positively influenced by participation, communication quality, information sharing and supports from the top management team[4].

Good supplier selection and partnership quality are elemental to achieve a successful buyer and supplier relationship. The advantages of having a successful buyer and supplier relationship at the operational level include increased quality, reduced cost, or a combination of both, while at the strategic level include continuous improvement of products and innovation that lead to improved competitive advantage, increased market share, and firm performance[2].

However, suppliers can cause problems. First, suppliers create dependency, and reducing or even eliminating company’s ability to purchase raw materials[5], as well as causing loss of control for quality and delivery [6]. Second, partnership with suppliers may not last in the long-term due to suppliers’ operational capability which is inadequate or not adjusted to the company’s changes [7]. Third, high suppliers’ bargaining power when the raw materials are unique [8]. Therefore, it is important to understand factors that affect the success of company’s relationship with their suppliers, and their firm performance.

In Indonesia, the restaurant and catering sector contributed about 2.4% of the country’s GDP or about IDR 326.1 trillion in 2017, and the sector grew at an average of about 5% in the period of 2014-2017 (see Fig. 1) [9]. In Jakarta, in particular, there were about 2009 small and medium restaurants in Jakarta in 2014, and 53% of the residents dined in restaurants with a frequency of 1 to 6 visits per person per month[10].

Fig. 1. The percentage of growth rate of restaurant and catering sector in 2014-2017[9].

The objective of this paper is to investigate the influences of partnership quality and supplier selection on the success buyer-supplier relationship and performance of small and medium restaurants in Greater Jakarta. This study is expected to contribute by providing insights on the role of suppliers and partnership in influencing the relationship between both parties and the performance of companies in the restaurant sector in the area.

2. Method

The research is conducted by using quantitative approach and the data is collected by using a survey. Concerning the partnership quality variable, as in [4], it has 5 dimensions, namely trust, business understanding, benefit and risk share, conflict, and commitment, with a total of 14 indicators. Regarding Buyer-Supplier Relationship variable, the indicators are six [11]. Lastly, the number of indicators for Firm Performance is three, and they are adopted from [12]. In total, the number of indicators is 30.

The unit of analysis in this research is restaurant. We use purposive sampling, whereby the restaurants are chosen based on information from the local government. If the restaurant is a part or the restaurant chain, we only have one respondent from the chain as we assume that the
entire chain will have similar suppliers. Our sample consists of 96 restaurants in the area of Jakarta, Depok and Bogor. The respondents are restaurant’s owners/managers/supervisors.

Pre-test is carried out to check whether the questions are understood by the respondents. The pre-test data is analyzed using SPSS 22 software. The results show that all variables are reliable, however, there are several indicators which factor loading are less than 0.5, thus, we rephrase the questions to improve the understanding. Field survey is then conducted, and the results are analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) with the SmartPLS 3 software. We use PLS-SEM, because it performs well with small sample sizes [13]. The recommended minimum sample size depends on the number of maximum arrows pointing at a construct, the intended statistical power and $R^2$ value, and the probability of error [13]. In this case, since the maximum number of arrows pointing at a construct is 2, it requires at least 52 observations to achieve a statistical power of 80% for detecting $R^2$ values of at least 0.25 (with a 5% probability of error).

3. Result

Profile of the respondents is presented in Table 1. It can be seen that most respondents are located in Bogor (satellite city of Jakarta), have revenue between IDR 300 million (around USD 21 thousand) and 2.5 billion (around USD 173 thousand) in 2017 or considered as small enterprises (based on the Government Regulation Number 20 Year 2008), the number of suppliers is up to 5, and use open tender in the process of selecting suppliers.

We perform CFA on Partnership Quality variable. Iteratively, we exclude indicators that have loading factor below 0.5 and dimensions that have average variance extracted (AVE) less than 0.50. We then test the convergent validity of the model, and further excluding indicators that have loading factor below 0.5. In the resulting model, all constructs have good validity and reliability, with Cronbach’s alpha higher than 0.7, composite reliability more than 0.70 dan AVE more than 0.50.

Hypothesis testing is then conducted, and the results can be seen in Table 2. The results indicate that out of four hypotheses, three hypotheses (H1, H3, and H4) are supported by data, and one hypothesis (H2) is not supported by data as the t-statistics is less than 1.96 and p-value is bigger than 0.05.

<table>
<thead>
<tr>
<th>Table 1. Respondents Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Descriptions</strong></td>
</tr>
<tr>
<td><strong>Current position</strong></td>
</tr>
<tr>
<td>Owner</td>
</tr>
<tr>
<td>Manager</td>
</tr>
<tr>
<td>Supervisor</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td><strong>he restaurant has been established for</strong></td>
</tr>
<tr>
<td>Less than 3 years</td>
</tr>
<tr>
<td>3 - 5 years</td>
</tr>
<tr>
<td>More than 5 years</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td><strong>Location of the restaurant</strong></td>
</tr>
<tr>
<td>Jakarta</td>
</tr>
<tr>
<td>Depok</td>
</tr>
<tr>
<td>Bogor</td>
</tr>
<tr>
<td>Total</td>
</tr>
<tr>
<td><strong>Number of outlets</strong></td>
</tr>
<tr>
<td>1 - 5</td>
</tr>
<tr>
<td>6 - 10</td>
</tr>
<tr>
<td>More than 10</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
The results show that for t-value for the path from Supplier Selection to Partnership Quality is 5.353 with p-value equals to 0.000. This indicates that SS has positive influence on Partnership Quality (Hypothesis 1 is supported by data)[14]. The importance of the relationship is particularly high after the supplier selection proses is completed. Good supplier selection will result in good and reliable suppliers that will lead to good quality of raw materials and reliable delivery. The requirements stated in supplier selection process will be realized in terms of contract between both parties that results in shared responsibility, risk and benefit. The relationship between suppliers and buyers changes from win-lose negotiation to partnership for
mutual benefit[15]. The survey results show that 29% of respondents state that supplier selection is done through direct appointment, indicating that trust has already been existed between restaurants and their suppliers that is further manifested in commitment between both parties.

The results also show that the t-value for the path from Partnership Quality to Buyer-Supplier Relationship is 1.207 with p-value that is higher than 0.05, or Hypothesis 2 is not supported by data (Partnership Quality has no positive influence on the BSR). Partnership is vulnerable to the dynamics of both parties[16]. When both parties have different expectations, the situation may affect the partnership quality. Furthermore, as can be seen in Table 2, 52% of the respondents, state that they select their suppliers through an open tender mechanism. This indicates a tight supplier selection process that results in formal relationship between buyers and suppliers. In the measurement model, Partnership Quality is represented by Trust and Commitment dimensions, while in the construct of BSR, communicating important issue with main supplier has the highest loading factor (0.819). Hence, the results can be interpreted that the restaurants will always communicate important issues with the main supplier to ensure smooth operations regardless of the level of trust and commitment between both parties.

The results also reveal that the t-value for the path from Supplier Selection to BSR is 3.989 with p-value equals to 0.000 or Supplier Selection has positive influence on BSR (Hypothesis 3 is supported by data). That state supplier selection can support buyer-supplier relationship[2]. In the context of restaurant industry, suppliers’ ability to provide goods and services that meet the required specifications (loading factor 0.827) plays an important role in ensuring the success operations of the restaurants. Thus, a good supplier selection process will result in good and reliable suppliers for the restaurants, leading to a successful buyer-supplier relationship.

This research also finds that the t-value for the path from BSR to Firm Performance is 5.353, with p-value of 0.000 or BSR has a positive influence on Firm Performance (Hypothesis 4 is supported by data)[17];[2]. They say that companies which have cooperative relationships with their suppliers expect benefit from the relationships. In the context of the restaurant industry, the good relationships between restaurants and their suppliers will result in good quality of raw materials and smooth restaurant operations that support the restaurants’ performances.

5. Conclusion

The study aims to analyze the influence of Supplier Selection and Partnership Quality on Buyer-Supplier Relationship and Firm Performance, with the context of small and medium restaurants in Greater Jakarta. We gather primary data from 96 restaurants owners/managers by distributing questionnaire and the results are analyzed using partial least squares structural equation method.

The results show that Supplier selection has positive influence on Partnership Quality and Buyer-Supplier Relationship, while Partnership Quality has no positive influence on Buyer-Supplier Relationship, and Buyer-Supplier Relationship has positive influence on Firm Performance. The results indicate that in the restaurant industry, a good supplier selection will result in reliable suppliers that can provide goods and services with specifications that meet the restaurants’ requirements, and in turn, this will result in a successful buyer-supplier relationship that lead to good firm performance.

This research has limitations. The firm performance is measured based on perception due to the difficulty of gathering financial data from the restaurants. In the future research, this construct may be measured using secondary data to allow comprehensive analysis of the results. Furthermore, the sample size can be enlarged with proportional ratio of respondents between
cities in Greater Jakarta, so that the results can better represent the restaurant industry in the area.

References


Green Banking Practice of Indonesia’s Islamic Banks

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Abstract. The banking sector is increasingly involved in environmental protection and management initiatives by introducing green banking practice. Green banking is very much in line with the principles of Islamic banks that underlie its practice on Islamic values, which among other things prohibit humans from making damage on earth. The purpose of this study is to determine the green banking practice in Indonesia’s Islamic Banks from 2014-2017 using environmental risk index. Environmental risk index uses 44 variables which are grouped into ten thematic vectors that relate to different aspects of environmental risk management. This study reveals that the green banking practice in Indonesia’s Islamic Banks is still quite low. In average, Indonesia’s Islamic Banks excellent in water management, paper management, employee involvement in environmental commitment and collaboration with NGOs while in terms of carbon neutrality, waste management, environmental due diligence, ESG specific funds, environmental training and involvement in initiatives recognized environment still needs improvement. The finding of this study provide a significant contribution in green banking practice of Indonesia’s Islamic Banks. They can find out how much green banking practice has so far been running and in what ways they need improvements to achieve the maximum Environmental Risk Index score.

Keywords: Green Banking, Islamic Bank, Environmental Risk Index

1. Introduction
Carbon intensity has declined substantially in most developing Asian countries over the past decade, with Bangladesh, Indonesia and Vietnam being prominent exceptions [1]. The adverse effects of floods, droughts, storms and heat all over the world today motivate various parties to think seriously in addressing environmental problems. More and more parties, including companies that have been known as profit oriented organization, have begun to show concern and take concrete actions to improve environmental performance. This issue is related to sustainability which consists of economic, social and environmental aspects [2].

Details of the fulfillment of 2015-2019 development funding in the Technocratic Design of the 2015-2019 National Medium Term Development Plan Bappenas [3] states that 71% of financing for development is carried out by Financial Services Institution and currently
Financial Services Institutions in Indonesia are dominated by the banking sector. Banking sector holds 74% of the total assets of all financial institutions in Indonesia as of June 2016. The dominance of the banking assets makes the financial system in Indonesia heavily dependent on the banking sector.

Banking sector as a business entity is increasingly involved in environmental protection and management initiatives to reduce carbon emissions and preserve the environment by introducing green banking practice [4]. Although not directly, banking sector contributes to high environmental pollution. The level of energy use (electricity and water), waste disposal and other activities may not have a direct impact, but the external impact of their customer activities is quite large. In Indonesia, the involvement of banking sector in managing environmental and social risks is regulated in Law No. 32 of 2009 concerning Environmental Protection and Management which among other things, regulates the obligation for the industry to protect nature and the environment[5]. This law was then implemented in the OJK Regulation Number 51 / POJK.03 / 2017 concerning the Implementation of Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies [6].

Literature study revealed that several national and international scientists have initiated various studies on green banking ([7]; [8]; [9]; [10]; [11]; [12]; [13]). Green banking is a concept that shows the bank's alignment with the environment. This concept is much in line with the principle of Islamic banks which underlies its practice on Islamic values, which among other things prohibits humans from doing damage on earth. Green banking values which are based on the determination to protect environment are contained in Alqur'an surah Al-Qasas verse 7, Surah Al Baqarah verse 60 and Surah ash-Syuara verse 183. from the survey result of Bank Indonesia regarding green financing carried out by 24 conventional banks and 5 Islamic banks in Indonesia between 2011-2013, found that the portion of green financing in Islamic banks doubled compared to conventional banks [14]. Proposed an environmental risk index (ERI) to show the relationship between "green" and financial performance in financial services companier[15]. ERI provides an overview to financial service companies regarding their environmental performance. This index is in accordance with the business landscape and current regulations of financial services companies. A universal approach to all organizations has been taken in numerical calculations from this index. These variables have been built in such a way as to suit various institutions, from banks and international asset managers to smaller domestic companies.

Based on the assumptions and results obtained from the previous findings, this paper will produce output namely obtaining the value of environmental risk index that describes green banking practice in Indonesia’s Islamic banks and the average score of vector environment risk index variable to find out the environmental performance excellence of Indonesia’s Islamic Banks and where they need area for improvement to overcome the shortcomings that arise.

2. Method

The data used is secondary data of annual reports, sustainability reports and additional information from each bank's website. Data were obtained from electronic publications through each bank's website and directly collected from banks that did not publish on the bank's website. Data collected and then cross-checked using primary data collected through questionnaires/interviews with relevant parts of each bank.

Population in this study are all Indonesia’s Islamic banks registered on Financial Services Authority (OJK) in 2014-2017 with a sample of Indonesia’s Islamic banks that publish annual report, sustainability report and / or provide corporate social responsibility activities on the company's website from 2014-2017 and are willing to do cross checking data / interviews. The
population are 13 Islamic Banks, but 1 of them, namely Sharia Aceh Bank is new comer in this industry so that it doesn’t fit the period criteria, 2 banks are not willing to cross checking data / interviews. Thus, research sample is 10 Islamic Banks. As requested by all banks, we do not mention the original name of banks and replace it with initial name.

This study uses Environmental Risk Index (ERI) analyzed using 44 variables grouped into ten thematic vectors related to different aspects of environmental risk management[16]. Summary of variables vectors presented as follow:

<table>
<thead>
<tr>
<th>Table 1. Variable Vectors Environmental Risk Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>$V_1$ - Carbon Neutrality</td>
</tr>
<tr>
<td>$V_2$ - Water Management</td>
</tr>
<tr>
<td>$V_3$ - Waste Management</td>
</tr>
<tr>
<td>$V_4$ - Paper Management</td>
</tr>
<tr>
<td>$V_5$ - Environmental Completion Test</td>
</tr>
<tr>
<td>$V_6$ - ESG Special Fund</td>
</tr>
<tr>
<td>$V_7$ - Employee Engagement</td>
</tr>
<tr>
<td>$V_8$ - Environmental Training</td>
</tr>
<tr>
<td>$V_9$ - Collaboration with NGOs</td>
</tr>
<tr>
<td>$V_{10}$ - Control Variable</td>
</tr>
</tbody>
</table>

Analysis method is content analysis that using to obtain ERI score based on information reported by banks in annual report, sustainability report, financial report and/or additional information from each bank’s website. To recognize index score of each bank, data from the content analysis then calculated using the following equation:

$$ERI = \sum_{n=1}^{10} V_n$$ .................................................(1)

Where:

$$V_1 = \sum_{i \in (1, \ldots, 5)} Z_i$$ .................................................(2)

$$V_2 = \sum_{i \in (6, \ldots, 9)} Z_i$$ .................................................(3)

$$V_3 = \min((WR_j + REC_j) + \sum Z_i, 100); i \in (10, \ldots, 12)$$ .................................................(4)

$WR_j$ - Waste reduction rate, $REC_j$ - Recycling rate

$$V_4 = \sum_{i \in (13, \ldots, 17)} Z_i$$ .................................................(5)

$$V_5 = \sum_{i \in (18, \ldots, 22)} Z_i$$ .................................................(6)

$$V_6 = \sum_{i \in (23, \ldots, 29)} Z_i$$ .................................................(7)

$$V_7 = \min((Z_{30} + Z_{31}) + \frac{EM_{L,j} + EM_{B,j}}{2}, 100);$$ .................................................(8)

$EM_{L,j}$ - Percentage of employees involved in local communities in 2014, 2015, 2016, 2017

$EM_{B,j}$ - Percentage of employees participating in the bank’s volunteer program in the year 2014, 2015, 2016, 2017

$$V_8 = \sum_{i \in (32, \ldots, 37)} Z_i$$ .................................................(9)
Furthermore, data cross-checked by interviewing the relevant parties of banks. Finally, score calculated to get total and average score of all vectors variable, to find out excellence/superior area in environmental performance of Indonesia’s Islamic Banks and where they need improvement.

3. Result
3.1 Green Banking Practice at Indonesia’s Islamic Banks in 2014-2017

Table 1. Environmental Risk Index (ERI) Indonesia’s Islamic Banks in 2014-2017.

<table>
<thead>
<tr>
<th>Name Bank</th>
<th>Environmental Risk Index (ERI)</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2014</td>
<td>2015</td>
</tr>
<tr>
<td>1</td>
<td>280</td>
<td>190</td>
</tr>
<tr>
<td>2</td>
<td>307</td>
<td>403</td>
</tr>
<tr>
<td>3</td>
<td>415</td>
<td>412</td>
</tr>
<tr>
<td>4</td>
<td>215</td>
<td>165</td>
</tr>
<tr>
<td>5</td>
<td>270</td>
<td>280</td>
</tr>
<tr>
<td>6</td>
<td>185</td>
<td>145</td>
</tr>
<tr>
<td>7</td>
<td>285</td>
<td>285</td>
</tr>
<tr>
<td>8</td>
<td>385</td>
<td>385</td>
</tr>
<tr>
<td>9</td>
<td>277</td>
<td>217</td>
</tr>
<tr>
<td>10</td>
<td>245</td>
<td>265</td>
</tr>
<tr>
<td>Mean</td>
<td>286.33</td>
<td>274.67</td>
</tr>
</tbody>
</table>

Table 1 presents Environmental Risk Index (ERI) which describes green banking practice by Indonesia’s Islamic Banks which analyzed using Environmental Risk Index according to [15]. The minimum score for this index is 0 points and the maximum score for this index is 1000 points. From Table 1, it can be seen that mean of Environmental Risk Index (ERI) for all banks from 2014 to 2017 is 304.42 points. Where the highest mean obtained by Bank 2 with score of 447.92 points and the lowest mean obtained by Bank 6 with score of 155 points. Score of 304.42 points from 1000 points means that green banking practice in Indonesia’s Islamic Banks is still quite low because the achievement is only 30.4%. In [15], more than 50 percent of banks included in the Global Systemically Important Banks (G-SIB) and international asset managers to smaller domestic companies from various countries showed mean of ERI is 633 points.

Green banking practice in Indonesia’s Islamic Banks from 2014 to 2017 increase almost every year. Although in 2015 it decreased from 286.33 points to 274.67 points but in 2016 and 2017 it increase to 319.83 and 336.83. The increase in 2016 and 2017 is possible due to the implementation of several initiatives from OJK to encourage sustainable finance, including the Indonesia First Movers on Sustainable Banking trial, the holding of the Sustainable Finance Award and implementation of International Sustainable Finance Forum (ISFF) in 2016 [3] and the issuance of OJK Regulation Number 51 / POJK.03 / 2017 concerning Implementation of
Sustainable Finance for Financial Service Institutions, Issuers, and Public Companies in 2017 [6].

4. Discussion
4.1 Excellence and Deficiency of Green Banking Practice in Indonesia’s Islamic Banks

Mean value of all vectors is calculated then analyzed to mark the areas where Indonesia’s Islamic Banks excellence in their environmental performance and where they need improvement to overcome emerging shortcomings [15].

Figure 1 shows that on average, Indonesia’s Islamic Banks in 2014-2017 excellence in water management, paper management, employee involvement in environmental commitment and collaboration with NGOs, showed by highest points. While in terms of carbon neutrality, waste management, environmental due diligence, ESG special funds, environmental training and involvement in recognized environmental initiatives are still needed improvements, showed by lowest points. It can be seen also that from 2014 to 2017 the majority of vectors have increased which means that green banking practice continues to be improved by Indonesia’s Islamic Banks.

5. Conclusion

Based on the results obtained, this study revealed that green banking practice of Indonesia’s Islamic Banks in is still quite low. With an average Environmental Risk Index (ERI) score of 304.42 points from a maximum score of 1000 the achievement of Indonesia’s Islamic banks is only 30.4%. On average, Indonesia’s Islamic banks in 2014-2017 excellent in water management, paper management, employee involvement in environmental commitments and collaboration with NGOs, while in terms of carbon neutrality, waste handling, environmental due diligence, ESG special funds, training environment and involvement in recognized environmental initiatives still need improvement. The findings of this study provide a significant contribution in the application of green banking to Indonesia’s Islamic banks. Indonesia’s Islamic banks can find out how much the implementation of green banking has so far been running and in what ways they need improvements to achieve the maximum Environmental Risk Index score. For further research, it is necessary to investigate green banking deeper from secondary data sources so that the possibility of bias when cross checking can be minimized.
References
A Crowdfunding Platform User Acceptance:
An Empirical Examination Of Performance
Expectancy, Effort Expectancy, Social Factors,
Facilitating Condition, Attitude, And Behavioral
Intention

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Abstract. Crowdfunding has been a valuable alternative source of funding, especially to
many initiated social projects. Despite using technology for effective and efficient
solutions, not many people are familiar with it. The main purpose of this study is to expand
earlier research by investigating the impact of the UTAUT model in creating a
crowdfunding project. In this context, data collected from 134 respondents were tested and
analysed. Implications are provided to assist crowdfunders in managing people’s attitude
and intention related to using the platform to participate in creating a crowdfunding project.
The result indicates that performance expectancy, effort expectancy, and facilitating
conditions significantly affected attitude towards creating a crowdfunding project.
Furthermore, attitude gives a significant effect on crowdfunding intention to create a
project, and the most dominant factor in this study is effort expectancy.

Keywords: Crowdfunding, Performance Expectancy, Effort Expectancy, Facilitating
Conditions, Social Influence.

1. Introduction

During crowdfunding’s early stages, capital came in the form of donations, but increasingly
it takes the form of debt or equity investments targeting for certain people [1]. In Indonesia
itself, the phenomenon of crowdfunding started by Koin Peduli Prita in 2009, in which she was
sued to court by Omni International Hospital on charges of defamation due to electronic mail
containing complaints of his dissatisfaction with the medical treatment at the hospital. The e-
mail she wrote spreads from one mailing to another. In this case, Prita was summoned to pay a
fine of IDR 204,000,000 by the civil court. The community then took the initiative to help Prita
to cover the cost by inviting all levels of society to donate coins[2].

The effort of expectancy from the technology in crowdfunding platform basically allows
the project initiator (crowdfunders) and donators to meet online and the funding from the
donators goes to those who need without much intervention. Therefore, the use of web-based
technology and the knowledge in crowdfunding have become purposeful for the communities
to determine their own social projects [1].
As crowdfunding grows in size and becomes widely accepted, crowdfunding is fundamentally open to everyone, hence the social factors around the communities indicate have significant effect to the successful project initiated in crowdfunding website. Moreover, crowdfunding emphasizes the digital divide (such as social-economic and age-based) and the social network endorsements that may go viral as crowdfunding attracts a certain type of crowdfunders networked[3].

In order for crowdfunding to work, individuals must have access to reliable broadband Internet or mobile data networks. Therefore, the crowdfunding platform becomes enabling tools that operate freely and facilitate the crowdfunders and investors meet and connected. The implementation of using technology in crowdfunding platform make the process more efficient and effective which may influence more active investors and open up wider audience to support and opens big opportunities. With the support from governments and development organizations, crowdfunding could become a useful tool in the developing world as well as in Indonesia. Crowdfunding is still largely a developed-world phenomenon but it has potential to stimulate innovation[1].

Governments and policy experts worldwide are considering the possible impact of crowdfunding by trying fashion new regulations, equip entrepreneurs with sufficient information, and empowering new technologies to decide if crowdfunding is a viable funding or investment vehicle for the social use[1]. The rate of growth of crowdfunding platform in Indonesia having a positive trends since 2013. It can be seen from the total donations collected by Kitabisa.com (the larger crowdfunding platform in Indonesia) where this platform can reach IDR 7.2 billion in 2015, then 2016 increased by a total of IDR 53.8 billion, and 2017 donations collected reached IDR 206 billion. Until 2017 there are approximately 8,584 campaigns funded and 563,448 total donors combined[4]. Crowdfunding has widely been adopted by various appropriate technology projects as a means of inter-personal fundraising.

As crowdfunding grows in size and becomes widely accepted, it has also been influenced by the emergence of technology. So, in this research the writer wanted to know about the influence of UTAUT (The Unified Theory of Acceptance and Use of Technology) model in crowdfunding phenomenon, hence the background to find out any relationship between the variables and how far the significances are.

2. Method

This research methodology use approach which called quantitative approach by conducting the survey through questionnaires. The aimed is to know all variables that have a significant influence on another variable. In this research, the four variables are performance expectancy (X1), effort expectancy (X2), facilitating conditions (X3), social factors (X4), attitude towards crowdfunding project (Y) and Intention to create a crowdfunding project (Z). Figure 1 represents the proposed conceptual model for this study.

The population of this research taken at Java was divided into several provinces, i.e. Jakarta (South Jakarta, East Jakarta, Central Jakarta, West Jakarta, North Jakarta, and Kepulauan Seribu), Banten (Tangerang, Serang), West Java (Bandung, Bekasi, Depok, Bogor), East Java (Surabaya, Malang, Bojonegoro), Central Java (Surakarta, Cilacap, Semarang), and Yogyakarta. Total samples collected were 134.

The data was collected by distributing the questionnaires on social media (Instagram, WhatsApp, Line, LinkedIn, and Facebook) using the 4-point Likert scale.
3. Result

Table 1 shows that all items on the questionnaire of all variables are valid (KMO higher than 0.5) and reliable (α higher than 0.8).

Table 1. Reliability and validity tests of the variables.

<table>
<thead>
<tr>
<th>Items</th>
<th>α</th>
<th>KMO</th>
<th>Anti-image correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Performance Expectancy</td>
<td>0.916</td>
<td>0.761</td>
<td></td>
</tr>
<tr>
<td>I am sure Crowdfunding Project (CP) is able to help me get funding sources</td>
<td></td>
<td></td>
<td>0.737</td>
</tr>
<tr>
<td>CP helps me to reach the fundraising target quickly</td>
<td></td>
<td></td>
<td>0.759</td>
</tr>
<tr>
<td>CP increases my productivity in obtaining funding sources</td>
<td></td>
<td></td>
<td>0.735</td>
</tr>
<tr>
<td>Using CP increases my chances of getting funding sources</td>
<td></td>
<td></td>
<td>0.819</td>
</tr>
<tr>
<td>Effort Expectancy</td>
<td>0.927</td>
<td>0.819</td>
<td></td>
</tr>
<tr>
<td>The website of CP is clear and easy to understand</td>
<td></td>
<td></td>
<td>0.805</td>
</tr>
<tr>
<td>The website of CP has structured content</td>
<td></td>
<td></td>
<td>0.828</td>
</tr>
<tr>
<td>The CP website helps me when I will create a fund account</td>
<td></td>
<td></td>
<td>0.811</td>
</tr>
<tr>
<td>The CP website can be accessed easily</td>
<td></td>
<td></td>
<td>0.835</td>
</tr>
<tr>
<td>Social Factors</td>
<td>0.870</td>
<td>0.707</td>
<td></td>
</tr>
<tr>
<td>People around me motivated me to initiate a fundraiser in the CP</td>
<td></td>
<td></td>
<td>0.695</td>
</tr>
<tr>
<td>Family, friends, and relatives influence me in initiating fundraising in the CP</td>
<td></td>
<td></td>
<td>0.707</td>
</tr>
<tr>
<td>The boss where I work has influenced me in initiating the fundraising in the CP</td>
<td></td>
<td></td>
<td>0.726</td>
</tr>
<tr>
<td>The institution where I go to supports me in initiating a fundraiser in the CP</td>
<td></td>
<td></td>
<td>0.698</td>
</tr>
<tr>
<td>Facilitating Conditions</td>
<td>0.929</td>
<td>0.855</td>
<td></td>
</tr>
<tr>
<td>Contact customer service on the CP provides the services I need</td>
<td></td>
<td></td>
<td>0.819</td>
</tr>
</tbody>
</table>
From the total of 134 respondents, 61 are males (45.5%) and 73 females (54.5%). In terms of age, 18-24 year olds (88.8%), 25-34 (9.7%), 35-44 (0.7%), and 45-54 (0.7%). For educational background, 79.1% holds Bachelor Degree, 11.9% Senior High School Students, 5.2% Associate Degree, and 3.7% Master Degree. For the religion of the respondents, 111 are Moslems (82.8%), 10 Christians (7.5%), 6 Hindus (4.5%), 5 Catholics (5%), 2 Buddhists (1.5%). For the places of residents, most people live in Jakarta (52.2%), followed by West Java (18.7%), East Java (11.2%), Banten (7.5%), Yogyakarta (7.5%), and Central Java (3.0%). The most dominant in social media used is Instagram (67.2%), followed by Line (12.7%), Twitter (12.7%), Facebook (6.7%), and WhatsApp (0.7%). For the project background of the respondents, “Individuals” is still dominant with the total of 72.4%, followed by “Community Non-profit” (22.4%), “Community for Profit” (2.2%), “Student Council” (1.5%), and “Student Clubs” (0.7%). For project category, the most is “Social” (51.5%), followed by “Education” (29.1%), “Environment” (9.7%), “Infrastructure” (6.7%), “Medical” (0.7%), “Religion” (0.7%), and “Art and Culture” (1.5%).

4. Discussion
4.1 F-Test
Table 2 shows that the sig. value is 0.000 which is less than α of 0.05 indicating that Model 1 is significant. F-test is 23.549 greater than F-table of 2.45, thus, H0 is rejected.

<table>
<thead>
<tr>
<th>Attitude</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer service on CP can be relied upon in handling the obstacles that I experience</td>
<td>0.855</td>
</tr>
<tr>
<td>Customer service on CP has a fast response</td>
<td>0.871</td>
</tr>
<tr>
<td>When experiencing problems, customer service on the CP provides appropriate feedback</td>
<td>0.907</td>
</tr>
<tr>
<td>Using CP is the right choice</td>
<td>0.833</td>
</tr>
<tr>
<td><strong>Behavioral Intention</strong></td>
<td>0.929 0.708</td>
</tr>
<tr>
<td>I want to use this CP someday</td>
<td>0.678</td>
</tr>
<tr>
<td>I want to recommend this CP to relatives, friends and people closest to me</td>
<td>0.871</td>
</tr>
<tr>
<td>I will say positive things about CP</td>
<td>0.639</td>
</tr>
</tbody>
</table>

Table 2. F-test result for model 1.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Sq.</th>
<th>df</th>
<th>Mean Sq.</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>23.146</td>
<td>4</td>
<td>5.786</td>
<td>23.549</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>54.697</td>
<td>130</td>
<td>0.246</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows that sig. value is 0.000 which is less than α of 0.05, indicating that Model 2 is significant. F-test is 110.147 greater than F-table of 3.92, thus, H0 is rejected.
### Table 3. F-test result for model 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Sq.</th>
<th>df</th>
<th>Mean Sq.</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>19.597</td>
<td>1</td>
<td>19.597</td>
<td>110.147</td>
<td>0.000</td>
</tr>
<tr>
<td>Residual</td>
<td>23.485</td>
<td>133</td>
<td>0.178</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### 4.2 T-Test

Based on the t-test for model 1, the constant value is 0.296. The three independent variables X1 (performance expectancy), X2 (effort expectancy), and X4 (facilitating condition) indicated to have positive relationship compared with X3 (social factors) with attitude towards crowdfunding projects. So, this indicates that if social factors increase, it will contribute a negative effect on the attitude towards crowdfunding project. Moreover, the variables that give positive relationship (performance expectancy, effort expectancy, and facilitating conditions), if every time the variables increase, they will give a positive effect on the attitude towards crowdfunding project. Effort expectancy is the most dominant variable that influences the attitude towards crowdfunding project with the total coefficient value of 0.292, otherwise the social factors are the lowest with the value of 0.118 which influences the attitude towards crowdfunding project.

### Table 4. T-test result for model 1.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.296</td>
<td>0.97</td>
<td>0.334</td>
</tr>
<tr>
<td>PE</td>
<td>0.233</td>
<td>2.396</td>
<td>0.018</td>
</tr>
<tr>
<td>EE</td>
<td>0.292</td>
<td>3.056</td>
<td>0.003</td>
</tr>
<tr>
<td>SI</td>
<td>0.118</td>
<td>1.899</td>
<td>0.060</td>
</tr>
<tr>
<td>FC</td>
<td>0.231</td>
<td>2.890</td>
<td>0.005</td>
</tr>
</tbody>
</table>

The independent variable in the model 2 is attitude towards crowdfunding project with the total coefficient value of 0.598. Every time the variable increase, it will give a positive effect on the attitude towards crowdfunding project.

### Table 5. T-test result for model 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>1.497</td>
<td>8.232</td>
<td>0.000</td>
</tr>
<tr>
<td>ACP</td>
<td>0.598</td>
<td>10.495</td>
<td>0.000</td>
</tr>
</tbody>
</table>

The two groups in “Social Factors” statistically yielded close difference between them. The students find that the teachers were helpful in promoting the use of animation and storytelling as means of unleashing their creativity in the classroom[5]. The students themselves did not perceive those teachers as being influential, nor did they consider others who are important to them (such as peers, academic supervisors, university managers, and academic administrators) as having an influence on their intention. The social factors had no impact on one’s intention to use e-journal [6]. They considered e-journal as important elements to support their study, so that in using e-journal, they had internal motivation instead of other’s persuasion, pressure or other external factors. Therefore, motivation in creating a project in crowdfunding platform comes...
from their internal factor which is their own desire without any persuasion, pressure or other external factors.

**Table 6.** Independent sample t-test for social factor.

<table>
<thead>
<tr>
<th>Category</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Sig. Levene's Test</th>
<th>Sig. 2-tailed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>61</td>
<td>2.77</td>
<td>0.79</td>
<td>0.62</td>
<td>0.96</td>
</tr>
<tr>
<td>Female</td>
<td>73</td>
<td>2.78</td>
<td>0.74</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>119</td>
<td>2.81</td>
<td>0.77</td>
<td>0.20</td>
<td>0.22</td>
</tr>
<tr>
<td>Others</td>
<td>15</td>
<td>2.55</td>
<td>0.64</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Undergrads</td>
<td>106</td>
<td>2.79</td>
<td>0.76</td>
<td>0.90</td>
<td>0.83</td>
</tr>
<tr>
<td>Others</td>
<td>28</td>
<td>2.75</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proj. Init.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>68</td>
<td>2.74</td>
<td>0.75</td>
<td>0.64</td>
<td>0.51</td>
</tr>
<tr>
<td>Others</td>
<td>66</td>
<td>2.82</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Domicile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jakarta</td>
<td>70</td>
<td>2.83</td>
<td>0.74</td>
<td>0.70</td>
<td>0.42</td>
</tr>
<tr>
<td>Others</td>
<td>64</td>
<td>2.72</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**4.3 Theoretical implications**

From Model 1 of this study, only one variable (Social Factors) that is not significant and does not have positive relationship to attitude towards crowdfunding project. Also, this result was in line with previous studies [7]. This is relevant due to the effort expectancy comes as the most variable that affect the attitude towards crowdfunding project, meaning that the respondents tend to strongly agree if crowdfunding platform is easy to use. Based on the findings, it shows that this research completely gives yet another evidence that the UTAUT Model can be utilized in understanding the intention to create project in the crowdfunding platform. The facilities also determine the intention in creating a project, e.g. reliable Internet connection for browsing and accessing the crowdfunding website. The influence of attitude towards crowdfunding project towards intention shows that the UTAUT Model is proven to have impact on the intention to create a crowdfunding project.

**4.4 Managerial implications**

Crowdfunding comes as the solution to gain funding in effective and efficient way. During crowdfunding’s early stages, capital came in the form of donations, but increasingly it takes the form of debt or equity investments targeting high-growth entrepreneurs - only one of many ways the model is evolving as awareness spreads [1]. This research provides an explanation in how some aspect has influence in people’s intention to create project in crowdfunding platform. Technology has helped crowdfunders to get a better understanding and good insight in the platform used. The crowdfunders tend to use crowdfunding platform to get funding rather than
through donation based. Thus, it opens great opportunities for successful crowdfunding platforms. Furthermore, since the research undertaken in Java, it gives new insight for college students, public figure, social activist, community profit or non-profit in this area to implement the crowdfunding idea as a solution to gain more funding to their project. The use of crowdfunding platform has indicated that the easier to use and more understandable a platform, the better it is to help people in initiating their own crowdfunding project.

Throughout 2017, funding and online donations are increasingly popular in Indonesia, and more than 12,000 online fundraising campaigns were created during this year. The most important highlights are how Internet penetration is in line with the public who are increasingly familiar with online fundraising activities as a solution to various funding problems. Kitabisa.com comes as an alternative solution in gaining more fund and well known as a crowdfunding platform that provides reliable services. Through Kitabisa.com, there have been at least 12,000 campaigns initiated, 72% of donations come from mobile, and a total donation of 193 billion rupiahs. This proves that if there is a lot of hope through crowdfunding platforms and through technology it will be increasingly evident with the large number of people participating in enlivening the campaign.

5. Conclusion

According to the results, Model 1 in this research indicates that effort expectancy comes as the most variable affecting the attitude towards crowdfunding project. Model 2 describes the attitude towards crowdfunding project having positive relationship to create project in the crowdfunding platform.

References

The Perspectives of a Global Information Technology Outsourcing Model

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Abstract. This paper discusses some major contributors to offshore Information Technology (IT) outsourcing risks and examines some key risk mitigation strategies. Offshore IT outsourcing risks emanating from service provider IT capabilities in terms of their communication networks and human resource assets quality and cultural climate are examined using literature drawn from the areas of resource-based theory and culture theory particularly the transaction cost economies. The role of service recipient risk mitigation strategies including strong contract construction and intelligence gathering in moderating the impact of risk drivers on offshore outsourcing risks is discussed. The role of some key service provider policies and practices including policies regarding employees’ acceptable use of client information, practices that seek to increase employee retention, and policies that do not allow employees to work on projects for multiple corporations that are competitors with each other in reducing offshore outsourcing risk is also examined.

Keywords: service recipient, service provider, global IT, outsourcing, risk

1. Introduction

TechNavio's analysts forecast the Global IT Outsourcing market to grow at a CAGR of 5.71 percent over the period 2013-2018 [1]. And along with this growth, a drive to achieve cost-effective operations to tackle high attrition rate remains as the company tries to save billion through global IT outsourcing to countries such as Indonesia, India, South Africa, and the former Soviet Union where skilled IT workers are plentiful and inexpensive [2]. Most of these outsourcing service providers produce software services, such as debugging existing code, and perform low-level software development tasks [3].

While most of these activities would fall under the category of “support” functions, with low strategic impact, there are several firms who are more closely enmeshed with their outsourcing service provider, and whose relationship with said service provider has a high impact on the success of the service recipient firm itself [4]. This access to skilled labor forces, coupled with the cost savings promised by service providers in developing countries, makes offshore outsourcing very attractive to US corporations. Particularly due to the recent recession,
corporations are attempting to cut costs wherever they can, with IT spending being near the top of the list.

There already exists a wide body of literature analyzing factors that influence a company’s decision to outsource [5];[3];[6] factors that affect success in outsourcing [7];[8];[9], as well as issues of trust between service providers and service recipients in outsourcing [10]. However, the existing body of literature fails to address the unique aspects of global IT outsourcing that make its needs different from other types of outsourcing relationships.

Specifically, offshore IT outsourcing (referred as offshore outsourcing from this point forward) has several characteristics that impact the risks of these transactions. Global outsourcing involves corporations whose IT capabilities differ vastly from those normally present in the United States, as well as employees whose culture and value systems may be quite dissimilar to those held by employees in the United States [11]. The costs involved in counteracting these issues through methods such as strong contracts and preemptive intelligence gathering need to be taken into account, since cost may prove to be a prohibitive factor for effective IT outsourcing [5].

The purpose of this paper is to bring together outsourcing variables from the literature in the context of outsourcing risk. The risks inherent in these variables are outlined and analyzed using resource-based theory, culture theory, and IT capabilities literature. The determinants discussed here include characteristics of the service provider organization.

The comprehensive global IT outsourcing model put forth in this paper (Fig. 1) should serve as a reference point for analysis of current global IT outsourcing efforts, as well as a basis for planning future global IT outsourcing efforts. The following sections outlines the research model based on theory and describes the constructs involved and the relationships they form within the model. Finally, the last section offers some concluding remarks and directions for future research.

2. Method

This research seeks to find evidence that the risks of offshore outsourcing are determined by the several variables inherent to the service provider and the service provider’s host nation. These variables include the service provider’s IT capabilities and the service provider’s cultural climate.

3. Result

This section defines and ties to literature the constructs involved in the research model (Fig 1). The constructs included in this research model are Offshore Outsourcing Risk, Service Provider IT Capabilities, Service Provider Culture Climate, existing Service Recipient Risk Mitigation Strategies, and existing Service Provider risk mitigation strategies.
Offshore outsourcing risk

There are several possible conceptualizations and definitions of the notion of risk. Risk as a function of the expected loss from undertaking a certain venture and the probability that said loss will occur[12]. Further, this notion of risk by adding an actor’s expected utility from undertaking a venture to the risk equation[13]. Thus, risk here is measured not only by the probability and value of loss, but by the value of what is to be gained. In this case, however, we define offshore outsourcing risk as an expected loss in offshore outsourcing contracts, following the perspective used in the context of IT outsourcing in [12]; that is, taking into consideration the magnitude of loss from an undesirable situation and the probability of occurrence of such loss. In the diagram above, two types of offshore outsourcing risk are mentioned. “Non-delivery of product to specifications” refers to a product that does not meet the specifications of the original contract, is flawed, or otherwise unacceptable to the service recipient[12]. “Loss of Intellectual Property” (Loss of IP) includes the sharing of a service recipient’s intellectual property, such as source code and personal company information, with other entities that do not have the right to access it [12].

Fig. 2 shows a brief graphical overview of which types of risk correspond to which risk determinants from previous literature. The following sections identify several determinants and moderators of risk in offshore outsourcing and their relationship to the risk inherent in offshore outsourcing.
4. Discussion

4.1 Service provider IT capabilities

The Service Provider IT Capabilities are defined in this research as the quality of reliable, secure communications and quality of human resource assets to the offshore outsourcing service provider. Since infrastructure can vary from service provider to service provider, this variable refers to infrastructure on a corporation level. An organization is comprised of its various tangible and intangible resources [14]. The resource-based view suggests that the usefulness, quality, and uniqueness of these resources together make up the value of the corporation. This is not to say that any resource that the firm possesses automatically gives it a competitive advantage.

RBV describes competitive advantage-generating resources as those which are not easily imitable, substituted for, or transferred to another party [15]. We see that the resource-based theory, when taken in the context of information systems research, identifies infrastructure variables such as communications networks and human resource assets as resources important to the success of an information systems operation. Firms with capabilities specifically in the IT area have an inherent advantage based on their ability to better acquire, develop, implement and manage IT resources [9].

Taking the above information concerning the resource-based theory and information systems capabilities into consideration, the conclusion can be made that the quality of infrastructure resources of the service recipient can either increase or decrease the propensity for loss on the side of the service provider. Since this will also mean a loss for the service recipient, any variables that may increase the chance for loss will increase risk as it is defined in [12].

Thus, we arrive at the following:

Proposition 1a: The quality of the service provider’s physical IT capabilities, such as communication networks, contributes to the risk associated with an offshore outsourcing relationship.
In the context of this research, the overall quality of human resource assets of the service provider are also being classified as service provider infrastructure variables. Human capital is important resources to the firm [16]. The overall quality of human resource assets, for the purpose of this research, will consist of the knowledge and skills of the Service Provider IT staff, as well as the capability of the Service Provider to retain this knowledge and skill through employee retention.

As evidenced by the preceding resource-based and capabilities literature, these human resource variables of employee skills, knowledge and retention can have an impact on the possibility of loss in an offshore outsourcing relationship. If these assets are not present and are not leveraged to provide value to the firm, it increases the likelihood that the service provider will fail and a loss will occur [12]. This is the basis for Proposition 1b:

Proposition 1b: The quality of a service provider’s human resource assets, taken as a part of their overall IT capabilities, will impact the offshore outsourcing risk for that service provider.

4.2 Service provider cultural climate
The service provider’s cultural climate refers here to the cultural norms and social mores of service provider’s nation and its employees, particularly collectivism and the ensuing level of respect for intellectual property ownership. Hofstede defines culture as “the collective programming of the mind which distinguishes members of one group from another” [17]. Although specific “cultures” can vary across organizations of individuals as small as teams within corporations [18], certain aspects of human behavior are apparent across most citizens in any particular nation [19]. Culture variables which are similar across a national or ethnic level greatly impact the culture of a particular service provider, since the employee base of that service provider is primarily drawn from members of this particular national and/or ethnic culture. Although cultural differences among individuals exist at every possible level of analysis (e.g. team, organization, region, nation), the scope of this research focuses on risk at a service provider level. Thus, we choose to analyze service provider cultural variables as they relate to offshore outsourcing risk.

Proposition 2: The level of collectivism inherent in the service provider’s culture, and the level of respect for intellectual property ownership inherent in that level of collectivism, will impact the offshore outsourcing risk for that service provider.

4.3 Service recipient risk mitigation strategies
Certain strategies that are put in place by the service recipient organization have the potential to moderate the impact of service provider’s IT capabilities and cultural climate on offshore outsourcing risk. These practices include any other corporate policies that, while not specifically aiming to protect assets, may be used for that purpose as well. Service recipient risk mitigation strategies that could moderate these impacts include establishing intelligence and strong contract construction. These strategies may moderate the service recipient’s vulnerability to the affects of the capabilities and cultural variables of the service provider [2]. Thus, with the probability of loss being reduced by the usage of these strategies, the overall risk would be lowered.

This brings us to the following proposition:

Proposition 3a: The contract put in place by an offshore outsourcing service recipient will
moderate the impact of an offshore outsourcing service provider’s cultural climate on the offshore outsourcing risk that may be attendant in dealing with this particular service provider.

Culture-driven behavior, in an offshore outsourcing relationship, takes place after the relationship has already been established. Thus it is temporally possible to direct and/or change this risk factor. The service provider’s IT capabilities, however, exist prior to the relationship formation. Although it is possible to change aspects of these capabilities through the updating of technology and addition or subtraction of employees, this would require significant time, effort and capital. Perhaps the most realistic control mechanism for the risks posed through the service provider’s infrastructure is for the service recipient to thoroughly familiarize itself with the service provider’s current capabilities climate before the relationship begins, so that it can prepare itself for any complications that may arise. This is known in the decision-making sciences as “intelligence” - the first step in the three-stage decision making model of intelligence, design and choice [20]. Thorough, on-site investigation of the facilities where work is to be done and their surrounding area are necessary to counteract properties of the service recipient that the service provider has no control over, such as communication network structure [2].

The service recipient’s use of intelligence gathering mitigates the probability that a loss will occur through selection of service providers with appropriate levels of IT capabilities needed for the task to be outsourced. Taking the above discussion into consideration, the following proposition is put forth:

Proposition 3b: The pre-emptive investigation undertaken by an offshore outsourcing service recipient will moderate the impact of an offshore outsourcing service provider’s capabilities on the offshore outsourcing risk that may be attendant in dealing with this particular service provider.

4.4 Service provider risk mitigation strategies

The existence of poorly developed infrastructures and cultural environments that do not protect the rights of intellectual property ownership can greatly impact the risks of an offshore outsourcing relationship. However, service providers may already possess risk mitigation strategies that counteract some of the affects that capabilities and social variables can have on the risks for offshore outsourcing relationships.

These service provider policies can reduce the chance that the service recipient may experience a loss due to inadequacies in service provider capabilities, or due to cultural variables such as levels of collectivism inherent in the service provider organization. This leads to the fourth proposition in this research:

Proposition 4: A service provider’s risk mitigation strategies will moderate the impact of an offshore outsourcing service provider’s cultural climate on the offshore outsourcing risk that may be attendant in dealing with this particular service provider.

5 Conclusion

The aim of this research is to expose determinants of the offshore outsourcing risks inherent in any offshore outsourcing transaction. Through review of the literature, several
determinants were found that exist from the perspective of the service provider or vendor. These determinants included service provider IT capabilities and service provider cultural variables. Through a better understanding of the determinants, service recipients can further secure their offshore outsourcing partnerships against risk.

The first step in mitigating any of the service provider risks associated with offshore outsourcing risk is to understand the risk inherent. Many of these risks are caused because the environment of the service provider, and thus the environment that the work will be taking place in, is vastly different from the environment of the service recipient. These differences need to be thoroughly investigated and understood prior to the selection of the service provider and the contracts being drawn up. This way, the service recipient will have a better understanding of the nature of the relationship they are about to enter, and thus will stand less of a chance for being blindsided by any potential hazards that they were unaware of.

Also, this understanding will allow for the service provider and service recipient to mitigate or reverse risk factors that they have control over. Understanding these service provider variables will also aid the service recipients in drawing up contracts and instituting other forms of controls (such as reward schedules, penalties, etc) that can mitigate some of the vendor risks that cannot be controlled by the service provider or service recipient. Cultural or social norms of the service provider’s employee base that run counter to the values of the service recipient can be addressed through clauses in the contract dealing with legal vs. illegal sharing of corporate data, work being done in the office only vs. being taken home, and other measures to combat cultural norms that may be hazardous to intellectual property rights.

This research also brings to light many areas for future study concerning the risks of offshore outsourcing relationships. While the cost of risk mitigation may in itself not be a determinant of the overall risk of a particular relationship, transaction cost can and does play a significant role in any risky situation, particularly one which has the potential to be as expensive as an offshore outsourcing partnership. The effects of transaction cost theories on offshore outsourcing risks offer a potentially interesting avenue of future research, especially considering the fact that many offshore outsourcing projects are undertaken specifically to reduce costs in the organization. It would be interesting to see if the costs saved by sending work overseas were proportionally larger than the costs involved in adequately mitigating the risks inherent in offshore outsourcing transactions.

Another area of research involves determinants of offshore outsourcing risks relative to the degree of cultural difference between nations. This research looks at the variables that determine risks to offshore outsourcing. However, it would be interesting to look at the degree of difference in each of these determinants for the service provider and service recipient as the true determinant of offshore outsourcing risk. For example, the difference in cultural environments between two developing countries, or two countries in the same geopolitical region of the world, might be very small if a difference even existed; for those countries, cultural climate may not be a determinant of offshore outsourcing risk because the difference in cultural climates was very small.

However, for a developing country such as Indonesia, the difference in our cultural system with that of a developed country such as Canada could make the cultural climate a determining factor of offshore outsourcing risk. In researching this it may be found that the degree of difference in these variables is the true determinant, rather than the variables themselves.

References


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Abstract. This research aimed to study the concept of human resource development in small and medium enterprises (SMEs) in Thailand and to study the guidelines of human resource development to achieve capability in sustainability leadership. This research was qualitative research. The instrument for research consisted of an interview forms for the qualitative research. The key informants for the study included 10 lectures in university and 10 entrepreneurs’ in SMEs in Songkhla Province, Thailand. Purposive sampling was used to find sample group and major data source. The data were analyzed using the content analysis. The results of the study indicated that the human resource development in Thailand need to focus on the attitude, leadership, using of technology and innovation, creativity, foreign languages, human relations, and administrative skills. The capability in sustainability leadership concept is the human resource development in the organization in order that individuals are aware of what they are doing in the organization. The guidelines of human resource development to achieve capability in sustainability leadership is required to make individuals understand and know more about themselves by practicing confidence and expression with the leadership.

Keywords: Human Resource Development, Small and Medium Enterprises, Sustainability Leadership

1. Introduction

Thailand has increasingly given priority to the development of small and medium enterprises (SMEs) of all types, as can be seen that from 2016 onwards, the government has fully moved forward in the business plan adjustment project and increase the capability of SMEs especially the development of main capability and capability in leadership of Business Entrepreneurs to create the strength that make the business be ready in the competition and be able to support the approaching of ASEAN Economic Community and continue to 2018 that all the government
agencies that are responsible for pushing and supporting SMEs will have to conduct the working plan for developing and assistance to empower SMEs to enhance their capabilities in every areas to be ready for the ASEAN Economic Community and lead the country onto stability, wealth, and sustainability in the future.

In Songkhla, Thailand, which is a hub of business, in many areas can strongly connect to other provinces in Thailand as well as Malaysia and Singapore in social perspective which is an important resource and infrastructure to support all aspects. Therefore, conducting the SMEs business is outstanding. The sector that economically succeed is rubber industry and rubber processing. The important sector that socially succeed is fisheries industry and fish market and the high important sector and culturally succeed by having a great variety as the presentation of the culture in the products and inherit the local wisdom such as the weaving industry, making dessert, and making Zebra dove cage[1].

From the data gathering related to the success to conduct SMEs in Thailand found that one of the factors is leadership. Especially, when businesses have to compete to each other to support the ASEAN Economic Community. Human resources in business organizations must have greater leadership capabilities than in the past and must have sustainability[2]. Therefore, we must urgently accelerate the development of human resources in SMEs. Researcher have found that the successfully way of human resource development in business organizations is to accelerate the development of capability in sustainability leadership must be successful, accelerating the development of sustainable leadership capabilities as the success in this issue will lead the businesses to competition that support the ASEAN Economic Community and find the success in the future.

Business executives strongly agreed that leadership should be applied in business management[3]. In particular, supportive leadership should be sued primarily in business management. In addition, leadership of business entrepreneurs was correlated with success in business management.

From all reasons and importance above, cause researcher to interest in doing research in the topic of "The guidelines of human resource development to achieving capability in sustainability leadership, a case study in Thailand". The results of the research will be benefits to human resource development in SMEs to ensure sustainability leadership, including private organizations that have to have capability in sustainability leadership development model so that the information will be used in human resource development and evaluate success of human resource development in the organization.

2. Method

This research is qualitative, data collection from SMEs entrepreneurs and academicians in Songkhla Province, Thailand. The data collected from interviews was analyzed using content analysis.

On the content of capability in sustainability leadership, consist of motivation ability to achieve in duty, the relationship in working, personal attributes, management and leadership[4];[5];[6].

The key informants were 10 SMEs entrepreneurs and staff working in SMEs in Songkhla province, Southern of Thailand that registered with the Department of Commercial Development office, Songkhla, Thailand, by using a specific sampling in the first stage and then select from one's own preference. Including academicians who are involved in leadership development in business organizations from higher education institutions, the amount of 10 people. The total key informants for the research were 20 people.
Tools in doing qualitative research is a Semi-structured interview. The researcher designed the interview to be relevant to human resource development, leadership capabilities, and leadership capabilities development techniques. The interview conducted by having conversations for understanding and obtaining the most truthful information by having the research assistant to take notes of the information from the interview, bring to content analysis, and summarize the overall by compiling into new information in written language that is readable and easy to understand, and contain of more clarity.

Primary data collected from interviewing the main informants and secondary data collected from compiling the documents, books, textbooks and related research.

3. Result

The results of the gathering of human resource development concepts in SMEs in Thailand, to be leading to create the success in competition to support the ASEAN Economic Community. The data analysis result from the main informants have given the opinion that owner has to develop employees' attitudes in order to accept the change in organizational processes, strengthen the process of recruiting people into the organization, develop creative thinking and innovation in the working, develop leadership to be having knowledge and skills in business, develop communication capabilities in using at least 2 languages, develop the ability to use technology or information in working, develop human relations and socialization at all levels, develop to be a business person with morals and ethics, and develop the capability to better manage the work in the organization.

In summary, the concept of human resource development in SMEs that lead to the success to support the ASEAN Economic Community, business entrepreneurs should develop human resources in the matter of attitude, leadership, using of technology and innovation, creativity, foreign languages, human relations, and administrative skills.

To compile capability in sustainability leadership concept of human resources in SMEs in Thailand. The results of the data analysis showed that the capability in sustainability leadership is the human resource development in the organization in order that individuals are aware of what they are doing in the organization and perform with the leadership behaviors in self-controlling to be able to work with the capabilities in themselves, adapting themselves to the organizational culture, be confident in creative expression. Have a proper self in the work. Use innovation in work. Have having confidence in expression with creativity, be yourself in the right perspective in working, use innovation in working, possess decision making skill, having morals, ethics, and responsibility, having service mind and good relationships with people around, motivate yourself and others, be able to manage the change in the organization, be a good coordinator, and work as a team and so on.

Guidelines for Human Resource Development to achieve capability in sustainability leadership in SMEs in Thailand. The results of the data analysis revealed that the practice is required to make individuals understand and know more about themselves by practicing confidence and expression with the leadership. After then, practice individuals to develop their capability in self-controlling to adapt themselves in the organization, to be able to use creativity and innovations in working and making decision, etc. Then practice to see the importance of the surrounding society by meeting with people who are involved with the organization, practice to be having public mind and conduct the social responsibility and so on, and practice to manage the relationship skills with others by motivating others, manage the changes in the organization, be assigned as a coordinator and be able to work as a team and so on. In summary,
4. Discussion
The results of the gathering of human resource development concept in SMEs in Thailand that lead to creating success in competition that support the ASEAN Economic Community. The business entrepreneurs should develop human resources in terms of attitude, leadership, usage of technology and innovation, creativity, and foreign languages, building the human relations, the research found that the human resource development in the 21st century of Thailand such as the development of capability, the development of creativity, foreign language communication skill, usage of information technology skills and good management skills[7].

The results of the gathering of capability in sustainability leadership concept of human resource in SMEs in Thailand is the expression of self-control behaviors, be able to adapt yourself to the change, have self-confidence, creativity, properly be yourself, apply innovation in working, possess decision making skill, having morals, ethics, and responsibility, having service mind and good relationships with people around, motivate yourself and others, be a good coordinator, and work as a team and so on. All be in the same direction has presented the concept of sustainable leadership capacity development through the practice of self-understanding, self-control, creative thought, see the importance of all people in the society, be a good coordinator and work as a team[6].

Human Resource Development approach to achieve capability in sustainability leadership in SMEs in Thailand is by practicing individuals to understanding and know themselves, practice individuals to have the capability in managing their thoughts, practice to see the importance of the society, and practice to be able to manage the relationship skills with others, the research found that the practice of Oishi Trading Co., Ltd. employees has the core competencies that are needed such as the ability to manage the work in their duty, in the perspective of human relations and working as a team, intelligence and thoughts, and leadership and so on[8].

5. Conclusion
The guideline that SMEs in Thailand should apply in human resource development to achieve success in capability in sustainability leadership, such as practice for individuals to be able to understand themselves and to know themselves, practice for individuals to have the capability in managing their thoughts, practice to see the importance of society and practice to manage the relationship skills with others

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References
Strategic Leadership toward Executive Influence on Innovation: A Case for Government Institution

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Abstract. The focus of this research is in the area of strategic leadership in government institution. The objective this study is to examine influence of strategic leadership toward executive influence on innovation in government institution. The research adopted quantitative approach. The result of this research provide evidence to the correlation between strategic leadership and executive influence on innovation. The main conclusion of this study also confirmed previous research that says strategic leadership are able to play an important role in influencing executive influence on innovation in government institution. This study recommends executives of government institution to improve their strategic leadership in order to achieve the maximum effect of innovation in their organization.

Keywords: Administration of Innovation; Culture Organization; Executive Influence; Government; Leadership; Strategic Management; Top Management Team.

1. Introduction
Government institutions are non-profit organizations that facilitate people in various affairs related to rights and obligations as citizens of the country. Although government institutions are not allowed to prioritize financial benefits but still they are required to always be able to change according to current developments so that they can sustain. Government is also required to be able to innovate. The innovations that are created can be in the form of more organized, clear, and simple administrative and bureaucratic processes, or more interesting theme government buildings, and so on. This can happen if the top management or upper echelons also have creative thoughts. What is happening in the field is government institution that is already carrying out bureaucratic reforms even though it has not optimal. While it is necessary to improve performance and achieve excellence, government institutions are also expected to improve their ability to innovate.

The author has not found a meaningful discovery regarding the relationship of leadership strategy, top management team tenure heterogeneity, and the organizational culture toward the executive influence on innovation. The researches which discussed strategic leadership, tenure heterogeneity of the Top Management Team (TMT), and organizational culture have not examined the extent of their influence in achieving bureaucratic reform seen from the executive influence on innovation. There is a positive relationship between strategic leadership and innovation, management and innovation teams, and also between strategic leadership, top management team, and innovation[1]. There is a positive relationship between leadership and
innovation, leadership and organizational culture, organizational culture and innovation, and also strategic leadership and organizational culture to innovation[2]. The relationship between organizational culture and innovation[3].

The main objectives of this study are to examine how strategic leadership improve executive influence on innovation and how they are moderated by organizational culture and tenure heterogeneity of the Top Management Team (TMT). We conducted the study in Ministry of Education and Culture in Indonesia. Hopefully, the result will give us strategies on how to achieve bureaucratic reform within government institutions.

2. Method

Strategic leadership, tenure heterogeneity of Top Management Team (TMT), and organizational culture have a very important relationship in increasing government institution’s innovation and can help achieve bureaucratic reform. Government institutions need the right organizational change throughout bureaucratic reform. Innovation is an element of this change. Government institutions are required to be able to innovate in order to provide comfort and trust to the society. One element that influences innovation is strategic leadership. Organizational leaders help define and shape work contexts that contribute to organizational innovation [4].

Strategic leadership also has an important role in innovation. Similar with tenure heterogeneity of top management team (TMT), The members of the top management team (TMT) also play an important role in the innovation process[5]. Thus, tenure heterogeneity of top management team (TMT) can moderate the relationship of strategic leadership and executive influence of innovation. Furthermore, organizational culture is one of the elements in achieving innovation as well. Top managers’ style of management, and their communication style, and incentive systems that being used are some of the determinants of proinnovation organizational culture. A good culture will create an atmosphere that supports employees to be creative while also being assisted by their superiors. It indicates organizational culture can moderate the relationship of strategic leadership and the executive influence of innovation.

In this study, the first independent variable (X1) is strategic leadership. The first moderating variable (M1) is the tenure heterogeneity of the Top Management Team. The second moderating variable (M2) is the organizational culture, and the dependent variable (Y) is executive influence on innovation. The model of this study can be seen in the picture below.

![Research Model](image)

Strategic leadership is one element that plays an important role in organizational change. Organizational change occurs one of them is because innovation. One of the main factors repeatedly suggested to influence innovation is leadership [6],[7],[8]. Strategic leaders have been repeatedly recognized for their critical role in identifying opportunities and making decisions that affects innovation process[9]. Today, companies are competing to maintain their market share and their good reputation in the public’s eye. Strategic leadership and strategic innovation are very important to achieve and maintain strategic competitiveness in 21st century.
Leaders also help define and shape work contexts that contribute to organizational innovation [4]. A good work context and support for innovation will produce good performance for the organization. The executive decisions and organizational actions related to innovation have important strategic implications[11]. Componental theory has provided a model in which 'positive' leadership behaviour influences subordinates' perceptions of leader support, which in turn stimulates creativity, a key factor in the innovation process [12]. There are several ways for leaders to increase the creativity of their subordinates, one of them is by giving promotions and awards, so that employees will always be eager to make something new that can benefit the organization. So the hypothesis that arises is:

Hypothesis 1: Strategic leadership behaviour has a positive effect on executive influence on administrative innovation.

Empirical research and theoretical discussion have indicated that promotion and innovation require top management involvement and support that members of the top management team (TMT) play an important role in the innovation process[10];[13];[5]. The strategic decisions and organizational innovation are strongly influenced by top managers and the external environment context[14]. Thus, the tenure heterogeneity of the Top Management Team (TMT) moderates the effectiveness of innovation strategies[15]:

Hypothesis 2: The relationship between strategic leadership behavior and executive influence on administrative innovation is moderated by the tenure heterogeneity of TMT.

Organizational culture is one of the factors related to leadership and innovation. Leaders can create and manage an organizational culture that promotes innovation, can be a champion of heroic products or innovators who support innovation during the implementation process, and can create organizational structures needed to support innovation [16]. The strategic leadership researches show that top managers influence organizational outcomes by building organizational culture, influencing organizational climate, and building capacity for change and innovation[8]. Previous researches also said that innovation is associated with strong and visionary leadership and a supportive culture [17]. So the next hypothesis is:

Hypothesis 3: The relationship between strategic leadership behavior and executive influence on administrative innovation is moderated by organizational culture.

The research design in this study uses quantitative research that is useful for analyzing the relationships between one variable and another. The data for this study consisted of two sources: primary data such as interviews about innovation and secondary data such as the results of questionnaires and data on employee tenure. Our participants are echelon 2 and 3 officials within the Ministry of Education and Culture in Indonesia who represented their work units. We got samples from 37 work units with 146 respondents. This study used structural equation modeling with Lisrel 8.8 as the tool to analyze the fitness of the model with the data.

3. Result
3.1 Measurements Strategic Leadership

The Multifactor Leadership Questionnaire (MLQ) is found as one of the best and the most instrument in leadership studies[18]. This MLQ instrument is divided into seven factors, namely ideal influence, inspirational motivation, intellectual stimulation, individual consideration, contingent award, exception management, and laissez faire. Ideal influence factors, inspirational motivation, intellectual stimulation, and individual consideration are the elements of transformational leadership. The contingent and management factors by exceptions represent transactional leadership behavior. Whereas laissez faire is a behavior that is contrary to the core of strategic leadership so that the author does not include it in the instrument of strategic leadership assessment. In this study the author takes three dimensions in strategic leadership
namely the influence of idealism or charismatic, inspirational motivation, and intellectual stimulation.

a. **Top Management Team Tenure Heterogeneity**

In our study, each unit is led by echelon II, which means that the top management team tenure heterogeneity is the tenure of echelon II. This data is obtained from self-reported employment information provided by respondents.

b. **Organizational Culture**

There are four cultural characteristics of an effective organization, namely involvement, consistency, adaptation, and mission [19]. Organizations that effectively empower people, organize around teams, and develop human abilities are definitions of the dimensions of engagement [20]. Everyone at the organizational level feels a strong bond in the organization, they feel they have the leadership and advice that can also influence the organization. The second characteristic is consistency where effective organizations tend to have a "strong" culture that is very consistent, well coordinated, and well integrated [21]. Leaders and followers have the same understanding and are jointly responsible for maintaining stability and integration. One of the characteristics of an adaptive organizational culture is they are driven by their customers, take risks and learn from their mistakes, and have the ability and experience in creating change [22]. The last characteristic is mission: an effective organization has clear goals and direction, defines strategic goals and objectives, and expresses the vision of the future [23], [24], [25].

c. **Executive Influence on Innovation**

One source of innovation is the development of new product markets. Other sources of innovation comes from the development of new and more efficient administrative mechanisms: new systems for strategic planning and control, new systems for training, developing managers, and new departments or managerial positions to improve intraorganizational coordination [26]. In this study the author only examined administrative innovations carried out by the public organization of the Ministry of Education and Culture in Indonesia. Administrative innovations have three dimensions, namely the new planning process (new control and planning system), new structures or departments (permanent positions), and new training programs or systems for manager training, development, or promotion.

4. **Discussion**

Based on the questionnaire distributed the respondents' data are obtained as follows from the data above, it can be seen that the number of echelon III male respondents is 81 people (74.3%) and echelon III female respondents is 28 people (25.7%), most of them aged over 46 years old (79.8%) with undergraduate education as many as 23 respondents (21.1%) and postgraduate as many as 86 respondents (78.9%). Golongan for echelon III respondents are mostly in group IV/b-IV/c with a percentage of 51.4%.

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<th>Table 1. Correspondent Data</th>
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The working period of echelon III respondents is mostly in the range of 26-30 years (27.5%) and above 31 years (27.5%). While the tenure for echelon III is at most three years (34%) and five years (34%).

Whereas for echelon II respondents the number of male respondents is 29 people (78.4%) and female respondents is 8 people (21.6%) who were all above the age of 46 years old (100%). All echelon II respondents have a postgraduate education level (100%) with golongan in the range IV/b-IV/c of 73% and IV/d-IV/b of 27%. The working period of echelon II respondents is mostly in the range of over 31 years (56.8%). While the term of echelon II is mostly three years (51.4%).

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The working period of echelon III respondents is mostly in the range of 26-30 years (27.5%) and above 31 years (27.5%). While the tenure for echelon III is at most three years (34%) and five years (34%).

Whereas for echelon II respondents the number of male respondents is 29 people (78.4%) and female respondents is 8 people (21.6%) who were all above the age of 46 years old (100%). All echelon II respondents have a postgraduate education level (100%) with golongan in the range IV/b-IV/c of 73% and IV/d-IV/b of 27%. The working period of echelon II respondents is mostly in the range of over 31 years (56.8%). While the term of echelon II is mostly three years (51.4%).
Measurement of the model for each construct tested is called the Confirmatory Factor Analysis (CFA) model. This analysis is useful for testing the suitability of the latent variable with the indicator.

Analysis of the CFA model produces a model validity analysis and model reliability analysis. Standardized Factor Loading (SFL) of all observed variables (indicators) shows values above 0.5 in accordance with Igbaria et al. (1997)'s suggestion. Thus it can be concluded that the observed variable and indicators are valid. Then, we calculate the value of construct reliability (CR) and Variance Extracted from each dimension, which in overall results in CR values above 0.70 and VE above 0.5 so that all indicators can be said to be reliable or significant. The model and data have a good fit where GOFI has met the requirements, so it can also be said that the structural model has conformity with some statistical criteria that show good fit (p-value = 1.00 > 0.005, RMSEA = 0.00 < 0.08).

Strategic leadership has a significant effect to executive influence on innovation (H1 is accepted with a t-value of 4.03) indicating that strategic leadership significantly and positively influence the impact of innovation from the leader. So that it will make it easier for organization to achieve organizational changes where a lot of innovation will be born. Regarding the first moderation variable, H2 is rejected (t-value = -0.46). It shows that tenure heterogeneity of TMT does not moderate the relationship between strategic leadership and executive influence on administrative innovation. The term of office of each unit leader does not give direct influence, which means that the strategic leadership relationship to administrative innovation is not affected based on how long the leadership period of the unit.

The second moderating variable is also rejected (H3 is rejected, t-value = -1.37). Demonstrate that the relationship between strategic leadership behavior and executive influence on administrative innovation is not moderated by organizational culture. The organizational culture in each work unit does not moderating the influence of strategic leadership to the administrative innovation.

5. Conclusion

Our study illustrates that the idealized influence from strategic leadership of unit leaders is in a good category, meaning that the leadership of the unit has an idealistic influence on its employees. Inspirational motivation and intellectual stimulation from the leaders of the unit also gives the meaning that the leadership has provided good inspirational motivation to its employees and leaders has also provided intellectual encouragement to its employees. Furthermore, our study also provides an overview that leaders who encourage innovation in the planning process or new control system, new structure, and employee development programs are good for the organization. Organizational culture in each unit also illustrates that the involvement, consistency, and adaptation that occurs is good.

The main objective of this research is to see how strategic leadership can influence executive influence on innovation. We found that the top management team tenure of heterogeneity and organizational culture did not have a significant and negative effect which meant that the two variables could not moderate the relationship of strategic leadership and executive influence on innovation. From this study, we learned that in term of government institutions from top management teams and organizational cultures can not have the effect of strengthening or weakening the relationship of strategic leadership and executive influence on innovation. But strategic leadership must be owned by the leader in order to have a positive effect on innovation.

Our research indicates the importance of strategic leadership owned by each unit leader in government institutions in order to achieve organizational change in the field of innovation. Leaders will have a good influence in innovating so that a culture of innovation is created. For
further research, it is hoped that it can further deepen executive influence on innovation in government institutions.

References


The Perception of Lectures and Working Students Toward English Proficiency

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Abstract. The growing of University is counted on the successfulness of its alumni to sail through different levels of their career. Generally, English is viewed as a subject imposed on the University curriculum for the students’ future career. This study is considered as preliminary findings of English proficiency of the student worker. The primary objective is to elaborate the lecturers’ and students’ perceptions towards students’ English proficiency. The interview and questionnaire were conducted in Batam, Indonesia. This reports the perceptions obtained from the lecturers and students based on the following themes: their general knowledge in English as foreign language subject, strength, weakness and overall achievement. There were 9 English lecturers and 39 students participated on the semi structure questionnaire based in the four universities in Batam. The research revealed various phenomena of students’ weakness and strength in learning English in the context of Batam. The motivation and vocabulary are the two-major variable need more attention on the English subject among student worker.

Keywords: Perception, English Proficiency, Working student, Strength, Weakness.

1. Introduction

We are in globalization era in which the need for a common language is deeply and strongly felt more than ever before. Nothing else to say, the language is English, with an unprecedented spread all around the world and in many domains and parties. Yet, it is a truism that English fulfills the task of bridging people who have nothing in common to be part of global knowledge. One of the domains where English widely prevails, beyond doubt, is the tertiary level students. In this level, English as a foreign language subject is expected can play role through students’ proficiency in various sector soon they graduate.

Globally, [1] rightly points out that English has long been the language in university, particularly in those universities that are outward looking for establishing international ties. Naturally, many universities, also through the effects of rapid process of internationalization, have worried about their students’ English proficiency and motivation since this subject offered. The process of integrating of the international dimension into the teaching, research and service functions of the universities is to switch to English as the language of instruction, either wholly or partly on campus [2]. Yet, in the context of Indonesian where English is as
foreign language, the phase still needs to consider some aspects, such as lecturers’ readiness and students’ capability. All the target way of English teaching is to synchronize the teaching instruction and learner capability. Student proficiency in the English language is important in this era of communication as it is the language of scientific and technological papers, and this situation will continue to on demand.

In the current work and education landscape, sometimes it becomes increasingly difficult to see where work starts and study begins. In Batam, more than 50% of students are worker. A huge fraction of persons describing themselves as “students who work” work fulltime or more, and likewise a large proportion of those self-reporting as “workers who study” work part-time and go to school on a full-time basis [3]. This phenomenon could be linked to the handicap of English as a foreign language learners face in all four English skills, including their sub-skills have been a very hot topic for research since English Language proficiency is currently a requirement in many aspects of work and study [4]-[10]

Elaborating the perceptions of English lecturer about their students’ English proficiency, strength and weakness are important, as that could be the base of further investigation need. The students’ perception about their capability in English as the subject in their University could strengthen the finding. [11] emphasize that English lecturers’ perception upon their students may influence how well their student perform toward the subject. The lecturer perception upon their students’ English proficiency is considered as the base information to describe the real phenomenon of English learning among tertiary level students before further investigation to be done. As the English increasingly plays an important role to students who work, which through communication processes and influences labor productivity as argued by [12]. Workers’ language capability could facilitate their communication with superiors and colleagues, leading to better coordination in the workplace. On the contrary, the lack of English skill could force individuals to work in positions below their productivities, [13]. Since English language acquisition is an integral part of human capital building up, Batam student workers whose proficiency is unfortunately at a low level could thus face the competitive challenge from other labors in this zone.

The important of English could also be seen not only from the practicality of the proficiency in their job site for the student worker. The important role of English subject was pointed out by Indonesian government through the current laws of National education system in Indonesia (the 1989 Education law No.2 and the 1999 Government Regulation on Higher Education No.60). Education at the tertiary level is mainly designed for profession building. The students in higher education prepared to take specific and major subjects to support their future profession. However, they are still required to take the mandatory subjects called general education courses and English is one of them. In some campuses in Batam, the subject graded 1 and 2, or overall four credits or two separated subjects. English that is to be functioned not only as effective and efficient means of interaction but also as the medium of instruction. Moreover, English is included to develop and disseminate the technology and arts that would uplift the quality of life enhanced by the national cultures. The English as a subject is General English that basically aiming at students’ competency.

The question that has the paramount importance are how the perception of English lecturers and students upon the students’ English proficiency. The students’ English proficiency has been unheard of number, and this is the benefit of doing initial research and finding in this foreign language context. The perceptions of individuals about language learning, their strength and weakness in learning the language, and the feelings they have of themselves may influence how well they will eventually learn the language [11]. Moreover, It is important to seize the unavailability of empirical data phenomenon of Batam tertiary level
student, which mostly the students characteristic as worker. The results of this study would give some information for lecturer, researcher, and university management bodies on the attention aspect of English learning on the student worker context.

2. Method

This study adopts the qualitative approach to data collection and analysis. Quantitative statistics is utilized to describe the percentile of the perception. The first phase the researcher interviewed the English lecturers about their perception upon the students’ English proficiency. The next phase was to get students’ perception on their English proficiency. A simple set of questionnaire were distributed to the students.

The researchers started a semi-structure interview to probe the lecturers’ perception on their student English proficiency. Mentioned that the mainly used of finding out what is in and on someone else's mind is through interview. The interview has been found to be widely used in needs analysis particularly as it is more flexible in the sense that the order and wording of the questions. In this, type of interview can be changed based on the direction of the interview and the interviewer’s discretion. This indicates that there are more reliable in valid responses about the participants’ perception, experiences and real life [14].

The researcher followed the following interview protocol: the interviewees were assured that the interview data would be kept confidential and used only for the purpose of this research study. Therefore as per the overall requirement, the name of campuses and interviewee were to be hided, but coded. They were asked to provide some general information to make them feel relaxed. They were informed that interview contains questions regarding their perception and opinion about their students’ English learning situation. The lecturer as participants can stop the recorder anytime they want and refuse to answer any of the interview questions if they were not comfortable responding to it. They were able to direct any questions related to this research. The interviews were audio-recorded and transcribed and their content, then to be grouped accordingly.

The interviews were conducted during the beginning of first semester 2017. All English lecturers from 4 universities in Batam were encouraged to participate, and there were 9 lecturers participated on the interview.

The researcher used semi-interview questionnaire to the lecturer with four questions: 1. What do you think about your students’ English proficiency? 2. Which aspects of English learning do you think of student’s strength? 3. Which aspects of English learning do you think of student’s weakness? 4. If you score your student in the range of 1 to 10, in which level of your student’s English ability is on average?

Table 1 specify the participant performance from lecturer. The lecturers participated in the study were from four universities in Batam. The experience of the lecturer range from 1.5 to 7 years. The experience of the lecturer counted on the campus life in Batam only started in the last seven years.

<table>
<thead>
<tr>
<th>University</th>
<th>Number of lecturer</th>
<th>Respondent code</th>
<th>Participant lecturers’ teaching experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
<td>A1</td>
<td>1.5 year</td>
</tr>
<tr>
<td></td>
<td></td>
<td>A2</td>
<td>2 years</td>
</tr>
<tr>
<td>B</td>
<td>3</td>
<td>B3</td>
<td>5 years</td>
</tr>
<tr>
<td></td>
<td></td>
<td>B4</td>
<td>5 years</td>
</tr>
</tbody>
</table>
The researcher delivered the four questions to students in written text and they were to choose the perception as per the feeling they were. Questionnaire to the students:

1. My knowledge in English, 3= high, 2=medium, 1=low
2. I have strength in English, 3=Agree, 2=neutral, 1=do not agree
3. I have weakness in English, 3=Agree, 2=neutral, 1=do not agree
4. Overall score in English subject

The students were also requested to specify their strength and weakness, the most.

3. Discussion

The findings from this study are further elaborated in four main parts, first related Lecturers’ and students’ perception on students’ English proficiency. The second was about the lecturers’ and students’ perception toward student’s strength in learning English. The third was about their perception toward the students’ weakness in learning English. The fourth was their overall scoring toward the students’ ability in English. Each part of the findings were further discussed in reference to what theories and previous related studies have said.

3.1. Lecturers’ Perception on Their Students’ English Proficiency

Researchers interviewed one by one of the 9 lecturers and then record their voice. The questions were asked to the lecturers to get their perception upon their students’ English proficiency. There were six lecturers considered that their students have issue in their English proficiency. E.g. lecturer A1 stated “most of them didn’t even have much English classes before, so as consequence, they were struggling in my class...”. The six lecturers stated their students have low English proficiency in term of grammar and vocabulary. However, there were three lecturers commented that their students’ English proficiency were good and had no issue.

The second question was to know the students’ strength from lecturers’ perception. Almost all of the lecturer perceived that their students were good in motivation, unless one lecture stated that he did not see the strength. As quoted from the A1 “I cannot really see what are their strong points at the moment because we are still working at the basic”.

The lecturer’s perception upon students’ weakness varied but overall they concerned on the students vocabulary, got tired during the class subject, writing ability, anxiety, and grammar. There were three lecturers commented that their students’ weakness were in vocabulary. E.g., one of the lecturer stated “They just don’t have enough words to allow them to speak and as well as to write in English”.

The lecturer perception upon the students’ score were figured out on the figure 1. The perception is based on the lecturer overall performance during the teaching and learning process in English subject. The lecturer perception was based on their observation and experience deal with students overall performance. All the perception score from the lecturer placed their students below the minimum target.
3.2. Students’ perception on their strength and weakness

Students’ perception on their own strength and weakness are summarized on table 2. The students’ perception grouped and rated per university (coded A, B, C, and D). The table contains the summary of students’ statement in term of their strength and weakness.

Table 2. Students Perception on Their English Proficiency

<table>
<thead>
<tr>
<th>Participant</th>
<th>Strength</th>
<th>Weakness</th>
<th>Statement 1</th>
<th>Statement 2</th>
<th>Statement 3</th>
<th>Statement 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>University A 10 students</td>
<td>High motivation, never fail English subject, &amp; speaking</td>
<td>Limited vocabulary, grammar, &amp; reading</td>
<td>1.7</td>
<td>2</td>
<td>2.2</td>
<td>2</td>
</tr>
<tr>
<td>University B 10 students</td>
<td>High motivation &amp; never fail English subject</td>
<td>Limited vocabulary, reading, grammar, listening, &amp; writing</td>
<td>1.7</td>
<td>1.2</td>
<td>2.1</td>
<td>1.9</td>
</tr>
<tr>
<td>University C 10 students</td>
<td>High motivation &amp; never fail English subject</td>
<td>Grammar, listening, &amp; writing</td>
<td>1.8</td>
<td>1.8</td>
<td>1.9</td>
<td>2</td>
</tr>
<tr>
<td>University D 9 students</td>
<td>High motivation &amp; speaking</td>
<td>limited vocabulary, grammar, speaking, listening, &amp; reading</td>
<td>1.3</td>
<td>2.1</td>
<td>2.4</td>
<td>2</td>
</tr>
</tbody>
</table>

Mean score ➔ 1.6 1.7 2.1 1.9

4. Summary

The research finding and discussion have given an account of lecturers’ and students’ perception on the students’ English proficiency. From the lecturers’ perception on the
students’ English proficiency, six from nine lecturers have concern on their students’ English proficiency. The disadvantages were indicated from their performance during the English subject taken.

The Lecturers’ perception on the strength contemplate the level of students’ motivation. The students’ working experience indicated the positive impression to the lecturer. As student worker, the productive skill of them more or less help them during the learning process. The lecturers’ perception on the weakness center around on the recognition of the complexities in assessing English skills, the main one is vocabulary, and the students’ time management between working and studying. Lecturer expressed confidence in assessing clinical skills and tasks but from the students’ part, the lacked time and anxiety in assessing language learning process are domain.

Students’ perception on their performance indicated the weakness of their English subject. It is worth to mention that the students’ perception on English matched with Lecturers’ perception. Hence, although the perception categorized as lower achievers based on data obtained, the lecturer and student statement on their strength was mostly on motivation.

5. Conclusion
A lot more investigation needs to be carried out, so these notes of this small research should be seen as an invitation, and perhaps the beginning of a framework within which to begin recognize the student-workers inquiries in English proficiency. Looking at from 39 students responded majority had weakness in English subject. Preceded by their lecturers’ respond the students’ English proficiency are weak. The respond were limited vocabulary, speaking, writing, reading, listening and grammar. Limited vocabulary was the most frequent responded.

5.1 Motivation is Strength Point
Majority of lecturers believed that their students were having positive motivation about English subject, meant a significant positive role to play in their future development and were committed to taking up the challenge to become proficient in it. Furthermore, the role of the teaching approach in raising motivation cannot be ignored. This approach was preliminary exploration on the students phenomena in particular city named Batam in the fact that there was a deliberate effort to ‘teach’ the importance of English to development and a conscious use of various activities often ignored by lecturers due to difficult teaching conditions. Mostly the students were worker and in fact the perception from either lecturer or among the students, English was the subject that they have high willingness to achieve as well as they are weak on it.

5.2 Vocabulary is the Weakness
Student worker is the phenomena in this city. One can say that, in many cases, the teaching and learning of English in University participated by mostly students worker has been viewed mainly as a means of immediate academic advancement. Lecturers are aware that their students are worker. The purpose of studying English should go beyond success in examinations. In comparison of Lecturers’ perception on students general knowledge of English versus students. Further research can be conducted to identify the students’ English progress academically, this will lead to good jobs (even at the local level) and improved standards of teaching and learning.

5.3 Student-worker
Student worker have positive impact as well as negative. Mostly those who spent the time on the job task the whole day get slowly at the rest of the day. If the job leads them to international environment the impact is positive. Those who can use English to acquire more knowledge and information and to relate with others all over the world become personally and socially empowered. But if mostly the job involve the physical activities, the students tend to get tired at the end of office hour coming to the class session.

References
Game Learning to Optimize Learning and Trauma Healing in Children After Disaster in Banyumas

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Abstract. The purpose of this study was to determine the effectiveness of learning games to improve learning and reduce trauma to children affected by post-disaster disasters. The research method used was Rn D. The results of the study showed that the utilization of learning games to optimize post-disaster learning in disaster areas. Where from 17 children who were victims of the disaster, they were very fond of game-based learning. On the other hand, the use of learning games can also reduce trauma to children affected by disasters after the disaster.

Keywords: Game Learning, Optimize Learning, Reduce Trauma for Children, Disaster Area.

1. Introduction

Indonesia is a country located on a ring of fire that stretches along the Pacific plate which is the most active tectonic plates in the world. This zone contributes almost 90% of the occurrence of earthquakes that occur. According to data from the Indonesian Disaster Information Database (DIBI) -BNPB, out of 1,800 disasters over the period 2005-2015 over 78% (11,648) disaster events are hydro meteorological disasters and 22% (3,810) are geological disasters.

As for the frequent groups of geological disasters are earthquakes, tsunamis, volcanic eruptions, and landslides. This condition causes the destruction of various facilities including infrastructure in the world of education so that often hinder the learning process. Though education is a very valuable investment in human life. Therefore, various developments continue to be made to create various learning alternatives in supporting the education process.

The use of technology will help the implementation of the learning process although facilities and infrastructure are minimal. This technology-based learning alternative is expected to answer the problem of limited educational facilities and infrastructure and reduce trauma in children after the disaster.

One of the technologies used is the use of smartphones for learning. In addition, there are many game features that not only as entertainment to play, but there are many games to hone the power of thought and logic that can introduce the material to be more interesting to be accepted and understood especially by the child.
By using Android-based learning game is expected to be an alternative model of education that is effective, interesting, interactive and fun.

2. Literature Review

Learning is the development of knowledge, skills, or attitude as an individual interacts with information and environment. Furthermore, Kusumandari & Istyarini says that learning is defined as a deliberate effort by educators to support student learning activities. Instructional was viewed as the transmission of information. The role of the student was to respond to the stimuli effectively. The role of instructor was to design and present the correct and appropriate stimuli to elicit the appropriate behavior.

The use of appropriate learning strategies can improve the quality of learning. Quality learning can achieve learning objectives optimally.

2.1. Learning Game

Game are a multimedia platform, not a single medium of delivering the experience [1]. In an educational context games have the ability to make learning more entertaining and motivate students without compromising the learning [2].

Game-based learning is a type of game play with defined learning outcomes [3] Salen & Zimmerman defines a game as a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome. We argue that for games to achieve their potential for learning, all these perspectives have to be taken into account, with specific emphases depending upon the intention and design of the learning game [4].

A major reason for educators to combine gaming with education is the high motivational capacity of games. Activating this potential of enjoyment for education promises effortless learning, even of contents most students do not like to learn (Boeker, et al. 2013). Bradsaw & [5] the use of games for learning is a rather ancient technique, for example, games were used to coach soldiers for war. If education can be fostered through such a highly motivational media, it will be a win-win situation for everyone involved in the field of education [6].

Games can be designed such that students are presented with problems in an environment that allows them to make mistakes and reflect upon them [7]. [8] says that games could be a useful tool for building a learning space in which learners could test experiential learning paths. One of the requirements for the game to be a source of learning and development is time. Every game must have a certain duration to make the child acquire those previously mentioned skills [9].

Games meet the fundamental needs of learning by providing us with enjoyment, passionate involvement, structure, motivation, ego gratification, adrenaline, creativity, social interaction and emotion [10]. Cojocariu & Boghian says that game is specially conceived for the instructive-educational context, integrated and fully exploited inside it, under careful supervision and monitoring of teachers. [11] says that take advantage of game characteristics to arouse student interest; enable students to enjoy learning while they take control of learning; and periodically assess learning effectiveness and improve teaching.

2.2. Learning Game

For the past decade, Indonesia, a disaster-prone country, has been struck by natural disasters that have produced huge numbers of casualties, direct losses, and damaged infrastructure [12]. The causes of natural disasters such as flooding, changes in sea level, wildfires (and associated deforestation) are being associated with climate change [13]
Crises and disasters cannot be avoided, but their consequences can be mitigated by planning, exercises and preparedness [14].

Bright, et al reported that games generate enthusiasm, excitement, total involvement and enjoyment. Booker (2014) has stated that one of the advantages of playing games with peers is the quick feedback primary children receive.

3. Method

The research method used is the R N D research method. Research and development methods are research methods used to produce certain products, and test the effectiveness of these products. Educational Research and Development is a process used to develop and validate educational [15]. Developmental research, as opposed to simple instructional development, has been defined as the systematic study of designing, developing, and evaluating instructional programs, processes, and products that must meet criteria of internal consistency and effectiveness [16].

In the development process using qualitative descriptive methods, [17] says that inquirer seeks to examine an issue related to oppression of individuals. To this study, stories are collected of individual oppression using a narrative approach. Individuals are interviewed at some length to determine how they have personally experienced oppressions. As a qualitative researcher, it is vital for the interviewees to trust you. Overcoming the lack of trust with many of the interviewees took time and effort, including providing my resume, my detailed background information, IRB paperwork, overview of the study, and rescheduling the interviews [18]. Furthermore [19] argued that base in qualitative methods; its practices blur the boundaries of aesthetics and experience in an effort to capture and reflect the complex dynamics involved in the phenomenology of artistic practice.

To overcome this tension the phenomenographic research method was used in a manner that was unusual in several respects. A key feature was that the qualitative phenomenographic process was combined with a before-and-after quantitative frequency analysis of the number of student responses falling into each category of description, which were part of the outcome from the phenomenographical study [20].

Thus, this qualitative method can be used to describe the results of research on the application of android-based learning games to optimize learning and reduce trauma to post-disaster children in disaster areas.

For the testing process, researchers compiled a grid of research instruments, from the research instruments then compiled research instruments and interview guidelines. As for products, researchers design product designs by first outlining program content and program scripts.

4. Result and Discussion

4.1. Result of Research

The research activity began with the management of research permits to BPBD Banyumas Regency, from BPBD Banyumas Regency.

After getting a recommendation for the location of the study then contacting the Village Chief of Cihonje to request permission to collect data. For the implementation of learning, researchers are assisted by two volunteers, who are also teachers and are victims of the disaster. The activity is held for 7 meetings every Friday, Saturday and Sunday every week. This is done to see the development of learning outcomes and decrease trauma in post-disaster children. To make it easier to describe the results of the study, the results of activities per day are presented starting from the first day to the seventh day.
The study was conducted at the Baiturahman Mosque in Gumelar District, Banyumas Regency. To assist in the implementation of the activity, it was assisted by Ms. Rom and Mrs. Ida. From the field test carried out during 7 times meetings where the results are as follows.

The table above shows that the increase in student learning outcomes is shown by the increasing value scores that students achieve. Whereas for the reduction of trauma in children is shown by the faster the time needed by students to complete the game.

The activity was held in TK Pertiwi Ciwaras hall. There were 17 children who were respondents to the study. The location of the hall is 300 meters from the location of the landslide so it is safe. The children came with their mother. The researcher was helped by two volunteers who were indigenous Ciwaras, TK Pertiwi teachers and were victims of the disaster. When the activity starts, the children sit near their mothers. The activity begins with volunteers to introduce who the researcher is and provide an opportunity for researchers to introduce themselves. The researcher introduces himself and conveys the purpose of the activity. After the researchers introduced themselves, children and their mothers were asked to introduce themselves. It seems that children tend to be closed and prefer to be near their mother. Even if they want to mingle, they tend to be not far from their mothers.

The researchers approached the children by greeting them one by one, stroking their heads and backs. Trying to give a sense of security and comfort because it was the first time you met. Volunteers help to convince children that researchers are not bad people. Children's voices tend to be small when introducing themselves. They still don't want to be open. The researcher asked who had the cellphone, all the children answered. Their mother helped convince her children to get closer to the researcher when delivering information related to the learning game that would be used for learning. Then the researchers examined one by one HP owned by children, where it was found out of 17 children there was only 1 child who had a cellphone not based on Android. For this reason, the researcher lent the cellphone to the child so that when his friends were playing a game, he also played the same game.

First of all, the researchers asked the children to write HP numbers on paper which were circulated because they would be filled with internet pulses. After all the children write their cellphone numbers, the researchers fill each number with the packet internet pulse for the purpose of downloading the Airbnb program so that the learning game program can be downloaded on each child's cellphone. After the Airbnb program is downloaded, the researcher sends the game learning program through the Shareit program so that in a short time all children can receive the program. After the program is divided, the children download it on each cellphone. The learning game program is ready to use.

To facilitate making observations, researchers divided into 6 groups, where each group contained 3 people as many as 5 groups and 2 people as many as 1 group. To observe the extent to which learning can be optimized and at the same time reduce trauma to children affected by post-disaster disasters, researchers were assisted by 6 volunteers namely Yunita, Anisa, Aris, Nurhasanah, Taufik, and Dedi who were S1 students and joined volunteer victims. Each volunteer is tasked with calculating how quickly the children can complete the game and how much score they have achieved and what the behavior of the child victims of the disaster is. The speed of completing the game and the number of scores they achieved can be used as a reference to see how effective the program can be to help students learn while reducing their trauma by playing learning games.

4.2. Discussion

Effective learning games are used to improve learning in disaster areas and to reduce trauma to children affected by disasters in disaster areas. reducing trauma in children after
they play the learning game can be seen from the changes in attitudes and behavior of children from the first meeting to the last meeting. At the first and second meetings, they still need support from their parents to accompany them. The second meeting was about to sit alone even though there were their mothers around the activity site. The third meeting, really wanted to be alone even though they still had to be delivered by their mother. At the fourth to last meeting, they were truly independent. They also look cheerful and want to blend in with volunteers.

5. Conclusion

To optimize learning in disaster areas post-disaster can use learning games. Learning games can also be used to reduce trauma to post-disaster children.

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References

The Strategic Entrepreneurship Impact of Performance on Indonesian E-Commerce

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Abstract. This study aims to empirically examine the effect of strategic entrepreneurship in relation to dynamic capabilities and innovation in the achievement of performance in the E-Commerce sector. The results of the study have been proved that strategic entrepreneurship in relation to dynamic capabilities and innovation can impact performance. This research includes survey research using Structural Equation Modelling (SEM) analysis with Partial Least Square (PLS) method to test the research hypothesis.

Keywords: Strategic Entrepreneurship; Dynamic Capabilities; Innovation; E-Commerce Performance.

1. Introduction
E-commerce is integral parts of today’s modern society. The rapid development of technology allows online shopping to become faster and easier. The [1] revealed that Indonesia has one of the fastest growing online markets in Asia. In 2020, Indonesian e-commerce projections at $130 billion (number 3 after China and India). Google projected by 2025, Indonesia will dominate 52 percent of all e-commerce activity in Southeast Asia [2]. With a population of over 250 million and rapidly growing internet adoption, Indonesia could offer a booming market for online shopping [3]. Indonesian Ecommerce Association projected to triple between 2014 and 2016 to reach $20.8 billion (MENA Report, 2016). With those huge business prospect, Indonesian government altered regulations to allow 100-percent foreign ownership for investments in e-commerce company in the country [3]. To keep in mind, e-commerce companies in Indonesia also have high intensity in terms of competitions in dynamic environment.

Dynamic environment reflect uncertainty in the business environment [4]. According to [5], the survival of e-commerce is becoming increasingly uncertain in dynamic environments. This happened because the digital revolution had changed the ways business fundamentals became digital [6]. Changes in business concepts will make every e-commerce enter a tight competition that causes the product life cycle and business model to be shorter. So that requires e-commerce to quickly adapt to the dynamics of the business environment such as trying new strategic approaches, finding new opportunities [7]and revising routines that form the foundation of a new resource base [8] and compete in environmental turbulence [9].

In environmental turbulence, external pressure will damage the value of company resources resulting in short-term competitive advantage [10]. Strategic entrepreneurship is needed for companies to adapt to the dynamics of the environment. The concept of strategic
entrepreneurship is simultaneous integration between two behaviors, namely opportunity seeking behavior (i.e. entrepreneurship) and competitive advantage creation behavior (i.e. strategic management) [11]. In an effort to create prosperity and sustainable competitive advantage, e-commerce needs to balance these two behaviors. Implementation of strategic entrepreneurship occurs when companies combine the search for opportunities with a strategic perspective [11]. So that company activities become more balanced and not only focus on one side. In this study, strategic entrepreneurship is viewed from the standpoint of environmental dynamics in changing business in the e-commerce sector.

Dynamic capabilities are important for companies to support strategic entrepreneurship in the face of changing business environments. Companies that have dynamic capabilities will be better in strategic entrepreneurship [12]. Dynamic capabilities have been seen as a means of changing the company's resource base and modifying a company's capabilities into new capabilities that are suitable for competing in changing business environments [13] that depend on company knowledge [14] through four dimensions, namely sensing, learning, integrating and coordinating [15].

In addition, value creation for customers in strategic entrepreneurship is creating new products and services through innovation [6]. [5] argue that the key dimension of strategic entrepreneurship is the emphasis on innovation. The context of innovation in this research is innovation in e-commerce. Innovation can also represent the company's resource base that will distinguish it from its competitors [16], [17]. Innovation in e-commerce will have a significant impact on enhancing strategic entrepreneurial capabilities through business models and core components owned by e-commerce [18].

The interesting research context, because dynamic environment in Indonesian ecommerce. Changes in the dynamic environment demand the founders or entrepreneurs of Indonesian e-commerce to adopt strategic entrepreneurship to survive on an ongoing basis. Finally, strategic entrepreneurship on Indonesian e-commerce is still regarded as a new research topic and the research that has been done so far are largely [11], [19], [20]. A well-implemented strategic entrepreneurship should make e-commerce experience performance improvements and success that can ensure their survival. This problem becomes interesting to investigate about how strategic entrepreneurship implementation in e-commerce is.

2. Literature Review
2.1. Research Model

In this study, the research model can be seen in Figure 2.1 below which designed to deep investigate the strategic entrepreneurship implementation in Indonesian e-commerce. This model relates three concepts which are strategic entrepreneurship, dynamic capabilities and innovation. Finally, it examines the impact on performance of e-commerce.
2.2. Hypothesis Development

According to research model in the section above, the formulated hypothesis needs to be tested. The formulation of the hypothesis is divided into five sections. First one is about the relationship of strategic entrepreneurship with dynamic capabilities. Second hypothesis are the relationship of strategic entrepreneurship and innovation. Third is talking about relationship of dynamic capabilities and innovation. Next, the hypothesis analyses dynamic capabilities and performance. Finally, the hypothesis relates among innovation and performance.

2.2.1 Research Model

Companies that are successful passed by the dynamic environment depends on dynamic capabilities in forming strategic entrepreneurial activities [12]. Strategic entrepreneurial activities especially in seizing opportunities can be stimulated by dynamic [21], sensing ability, learning ability, integrating ability and coordinating ability [15]. Based on these four capabilities: sensing, learning, integrating, and coordinating [15], companies will be ready to carry out strategic entrepreneurial activities. Therefore, first hypotheses which need to be tested can be formulated as follows:

Hypothesis 1: In the strategic entrepreneurship in e-commerce, strategic entrepreneurship has a positive effect on dynamic capabilities.

2.2.2 Strategic Entrepreneurship and Innovation

The main motivation behind strategic entrepreneurship stated by [11] that the firm is hard to identify and to explore new opportunities while simultaneously maintain and exploit competitive advantages. The presence of opportunities is very important as it can support strategic entrepreneurship to the process of performance. Then, [19] added emphasis that new opportunities can be utilized to make innovations as the foundation of future competitive advantages.

Innovation analysed by [18] provides a better understanding of how innovation will affect the capabilities of E-commerce’s stakeholders to grab the opportunities in certain technological components. Innovation take a much broader view of the emerging technology and market opportunities to rethink the value and opportunity. The opportunity is congruent with current capabilities. Market niches should be identified with the unique features of these
innovations which also supported by strategic entrepreneurship. To keep in mind, innovation are the cornerstones of the wealth creation [22].

Thus, several hypotheses which need to be tested can be formulated as follows:

Hypothesis 2: In the strategic entrepreneurship in e-commerce, strategic entrepreneurship has a positive effect on innovation.

2.2.3 Dynamic Capabilities and Innovation

The time when companies are faced with dynamic environmental (resulting in uncertainty, rapidly changing and complex environmental conditions) often as supported factor in many organizations to innovate [23]. On the one hand, dynamic capabilities is the ability to integrate, build and reconfigure internal and external competencies to cope with rapid environmental change [24]. Meanwhile, innovation will have significant impact on the capabilities and assets of existing stakeholders and result in many novel change management issues [18]. Innovation is characterized by enhancement of quality, efficiency, accuracy and flexibility while dynamic capability enhances a company's ability to adapt to environmental change. So, innovation in rapidly changing environments has an impact on the formation of dynamic capabilities (Jiao et al., 2011; Lawson and Samson, 2001). Dynamic capabilities positively impact e-commerce innovation, both product and process innovation (Parthasarathy et al., 2011).

So, hypotheses which need to be tested can be formulated as follows:

Hypothesis 3: In the strategic entrepreneurship in e-commerce, dynamic capabilities have a positive effect on innovation.

2.2.4 Dynamic Capabilities and Performance

Companies that have dynamic capabilities can sense new market trends, capture opportunities and recognize threats (sensing ability), understand customer needs, and perform tasks effectively and efficiently by implementing new knowledge (learning ability) before competitors [15]. In addition, it can combine knowledge (integrating ability) (Pavlou & el Savy, 2011), assets and resources [9] to develop new capabilities then coordinating the resource base to differentiate their products and services from competitors [15]. So, the company can pursue and achieve predetermined targets that will have an impact on performance. Therefore, hypotheses which need to be tested can be formulated as follows:

Hypothesis 4: In the strategic entrepreneurship implementation in e-commerce, dynamic capabilities have a positive effect on performance.

2.2.5 Innovation and Performance

In the globalization and digitalization era, innovation can be said to be a tool for corporate adaptation to its environment [25] by creating products and services to customers [26]. The company acts in the dynamics environment through innovation to maintain competitive advantage [27]. [28] told companies were currently encouraged to compete in order to create competitive advantage through innovation. Innovation helps e-commerce in designing to create product/service specifications and applied business models which combined with technology infrastructure. Innovation in the context of e-commerce has two criteria according to [18], namely business models and core components including technology infrastructure. Technology infrastructure facilitates e-commerce in making business models that are suitable and needed by e-commerce. Thus, innovation is needed to maintain competitive advantage [29]. Thus, the hypothesis which need to be tested can be formulated as follows:
Hypothesis 5: In the strategic entrepreneurship implementation in e-commerce, ecommerce has a positive effect on performance.

2.3. Measurement
This model relates five concepts. First one, the concept of strategic entrepreneurship which are entrepreneurial culture, entrepreneurial leadership and entrepreneurial mindset. Each variable has several indicators which can be used for measurement.

The elements of strategic entrepreneurship will deserve as the input at different level for further process to next variables dynamic capabilities (sensing, learning, integrating and coordinating), innovation (model business and core components), then will impact performance as the output. Finally, the comprehensive research model can be seen in Figure 2.3 on below.

![Diagram of Measurement](image)

**Fig. 2. Measurement**

2.4. Operationalized Variables
Several prior studies have conducted the measurements of operationalized variables. So the questionnaire will be adopted from it in accordance with the context of e-commerce in Indonesia. All of the items were evaluated by a six-point Likert scale where 1 represents “strongly disagree” and 6 represents “strongly agree”.

2.4.1. Strategic Entrepreneurship Construct
According to Ireland, [30] conducted the model of strategic entrepreneurship to several dimensions: (1) Entrepreneurial Mindset; (2) Entrepreneurial Culture and (3) Entrepreneurial Leadership.
Entrepreneurial mindset refers to Ireland, Hitt & Simon (2003) divided into: (1) Recognize Opportunity, (2) Entrepreneurial Awareness, (3) Real Choice Logic, and (4) Entrepreneurial Framework. The questioner used in this research adapted and validated from [31].

Entrepreneurial culture refers to [11] divided into: (1) Openness communication, (2) Proactive innovation, (3) Cooperation, and (4) Risk taking. The questioner used in this research adapted and validated from [32].

Entrepreneurial Leadership are divided by: (1) Strategy, (2) Communication, (3) Motivation, and (4) Personal and/or organization. The questioner used in this research adapted and validated from [11].

Table 1. Operationalization for Strategic Entrepreneurship

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dimensions</th>
<th>Indicators</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. Entrepreneurial Awareness</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Real Choice Logic</td>
<td></td>
<td>Li et al. (2016)</td>
</tr>
<tr>
<td></td>
<td>4. Entrepreneurial Framework</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Entrepreneurial Culture</td>
<td>1. Openness communication</td>
<td></td>
<td>Ireland, Hitt &amp; Simon (2005)</td>
</tr>
<tr>
<td></td>
<td>2. Proactive innovation in products, processes and administration</td>
<td></td>
<td>McQuinn, B.L. (2001)</td>
</tr>
<tr>
<td></td>
<td>3. Cooperation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Risk taking</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. New Innovation</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Available Opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Evaluates and Review Market</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>5. Manage Resource Effectively</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2.4.2. Dynamic Capabilities Construct

The dynamic capabilities framework is the company’s ability to integrate, build and reconfigure

include internal and external competences to compete in rapid environment change [24], the dimension namely sensing, sizing, and reconfiguring. Sensing is firm’s ability to identify the opportunities in uncertain environment which affected the firm’s performance [33]. Once new opportunities even technology or market are sensed, the opportunities must be pushed into new product, processes or service. This phrase requires investment in development and commercialization called seizing [33]. Capability can be developed on the internal firm through the transformation of existing capabilities then transformed into new capabilities [33]. It capabilities must be integrated into the existing configuration [33], [34] In this research, the questioner used to adapt and validated from Kyrgidou, 2010.

Table 2. Operationalization for Dynamic Capabilities
2.4.3. Innovation Construct

An innovation, such as a system or a product, can be seen as a historical change in the way a “thing is done” and as “creative destruction” [27]. Thus, following Afuah and [35] which has been tested of the study by [18], to examine ECommerce innovation includes three dimensions: (1) Business models, and (2) Core components. The questioner used in this research adapted and validated from [18].

Table 3. Operationalization for innovation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dimensions</th>
<th>Indicators</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic Capability</td>
<td></td>
<td>1. Scanning external conditions in terms of creating new products.</td>
<td>Tsoukas et al., 2007</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Encourage learning and discussion processes of creating new products.</td>
<td>Kogut, 2000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. 1. Transforming information that has become new knowledge</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Assimilate internal knowledge through knowledge sharing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reconfiguring</td>
<td>1. Reconfigures resources to build productive and effective new assets</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Combining resources and assets owned to achieve the target</td>
<td></td>
</tr>
</tbody>
</table>

2.4.4. Performance Construct

[36] has defined wealth creation as perception of owners or decision makers regarding the growth of company performance. In this research, the questioner used to adapt and validated from [37].

Table 4. Operationalization for Performance

<table>
<thead>
<tr>
<th>Variables</th>
<th>Dimensions</th>
<th>Indicators</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Core Components</td>
<td>1. Technological Infrastructure</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Content</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Services</td>
<td></td>
</tr>
<tr>
<td>WEALTH CREATION</td>
<td></td>
<td>1. Profits increase</td>
<td>Wiklund &amp; Shepherd, 2003</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Product/service innovation increases</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Product/service quality increases</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Customer satisfaction increases</td>
<td></td>
</tr>
</tbody>
</table>

2.5. Population, Sample and Unit Analysis

The population is known from e-commerce registered in the Indonesian E-Commerce Association (IdEa). IdEa is a communication forum between Indonesian E-Commerce industry players. The e-commerce category in IDEa consists of classified ads, infrastructure, logistics, marketplace, online retail, and travel. While e-commerce researched in this study only focused on the category of marketplace and travel as many as 106 e-commerce. Because, the majority of e-commerce registered in the idea are in the category of marketplace and travel, while other ecommerce minorities are in another category.

The research sample was taken from the e-commerce population registered in the Indonesian E-Commerce Association (IDEa). The sample size of this study are 61 samples of 106 population. The number of representative samples for the PLS SEM method according to [38] are 30 to 100, because PLS SEM is based on variance so the number of samples used does not need to be large. The unit of analysis that will be observed is growth-oriented.
ecommerce. The sampling technique uses nonprobability sampling techniques where sampling is intended for members of the population not to get the same opportunity to be selected as a sample [39]. Because the e-commerce population studied in this study only focused on marketplace and travel. The researcher used purposive sampling to be used because only respondents were members of the Indonesian E-Commerce Association (IDEa) and were categorized as marketplace and travel.

2.6. Data Analysis Method

SEM is a multivariate statistical technique that is popular in business research. SEM explains the relationship between several variables [40]. SEM can simply estimate a large set of regression equations but is interdependent at the same time by identifying the similarity of the structural model [40].

There are 2 approaches in SEM, namely SEM with covariance (covariance based SEM, CBSEM) and SEM with a variant approach (partial least square path modeling –PLS-SEM). This study uses partial least squares (PLS). Because it analysis performed to test the research model using SmartPLS software. This study used PLS analysis because of the following considerations:

1) PLS analysis is component-based approach and doesn’t have strict requirements for sample size [41];
2) PLS is also a powerful analytical method because it is not based on many assumptions and it is possible to analyze from various indicators of latent variables;
3) PLS analysis can evaluate theoretical structural models and measurement models simultaneously [42];
4) PLS can accommodate the indicator variable either indicator is formative or reflective.

Variable reliability is analyzed using alpha and Cronbach composite reliability. Alpha Cronbach at least 0.5 or higher to form composite measurement [43]. AVE presents the number of variance in the measurement item recorded by the latent construct, and the AVE value limit must be a minimum of 0.5 [44].

This study seeks to investigate the implement of strategic entrepreneurship to e-commerce in Indonesia. This study will be conduct from the background of the problems, theoretical background, research model and hypotheses then the operationalization of the variables. The concept and operationalization developed in this paper is ongoing to be finished for further empirical research.

3. Method

Based on the questionnaire distributed the respondents' data are obtained as follows:

<table>
<thead>
<tr>
<th>No</th>
<th>Category</th>
<th>Total</th>
<th>Persentase</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DKI</td>
<td>56</td>
<td>91.5%</td>
</tr>
<tr>
<td></td>
<td>Jakarta</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jawa Barat</td>
<td>2</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>Banten</td>
<td>3</td>
<td>4.9%</td>
</tr>
</tbody>
</table>
The location of e-commerce is centered only in Jakarta but has a broad business reach covering Indonesia and even globally. The centralization of locations in Jakarta is due to the availability of adequate infrastructure, competent human resources, diverse modes of transportation, a business environment that supports and closeness to the market.

Furthermore, the dominant market for e-commerce developing in Indonesia is B2C. B2C is seen to be the most suitable for customer needs because services are carried out directly to customers so that there is cost savings, making it easier to break the sales chain (intermediary). From the business side, the need for working capital will be lower compared to conventional business cases so that prices can be reduced to cheaper customers, direct access to global markets, and business activities that live 24 hours / 7 days.

For the age of e-commerce, it can be concluded that the business environment in Indonesia can support the sustainability of e-commerce businesses. Although competition tends to be tight, e-commerce can survive in capturing opportunities and maintaining competitive advantage.

### Table 6. Respondents' demographics

<table>
<thead>
<tr>
<th>No</th>
<th>Category</th>
<th>Total</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>21</td>
<td>47.5%</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>32</td>
<td>52.5%</td>
</tr>
<tr>
<td>2</td>
<td>Age of Respondent</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>21 - 30 yo</td>
<td>50</td>
<td>81.9%</td>
</tr>
<tr>
<td></td>
<td>31 - 40 yo</td>
<td>9</td>
<td>18.1%</td>
</tr>
<tr>
<td></td>
<td>≥ 40 yo</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>3</td>
<td>Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>D1/D2/D3</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>S1</td>
<td>52</td>
<td>85.3%</td>
</tr>
</tbody>
</table>
Based on Table 3.2 if sorted from the majority, there are 32 male respondents (52.5%) and 29 (47.5%) women. So, it can be concluded that the results of this study do not reflect gender differences. Because the difference in number between the two sexes is small. Another conclusion is that there is an even distribution in terms of gender in e-commerce.

The age of the respondents if sorted from the majority has the following details: 50 people aged 21-30 years (81.9%), 11 people aged 31-40 years (18.1%), and no respondents aged > 40. Based on these data it can be concluded that most respondents ranged in age from 21-30 years, namely productive age where they are responsive or sensitive to opportunities and know how to pursue it, have creative ideas, have a good understanding of technology and can work together on teams and individuals. This can support the competitive landscape of the e-commerce environment.

Respondent education if sorted from the majority has the following details: 52 people with S1 education (85.3%), 9 people with S2 education (14.7%), no respondents with education from D1 / D2 / D3 or S3. So that it can be concluded that most respondents have a good educational background (S1 and S2), so they are considered competent in answering this research questionnaire. The results of the study are expected to approach reasonableness because they present the answers of respondents who have good competencies.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>t-value</th>
<th>Significant</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Strategic entrepreneurship has a positive effect on dynamic capabilities</td>
<td>11.226</td>
<td>Significant</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2 Strategic entrepreneurship has a positive effect on innovation</td>
<td>3.345</td>
<td>Significant</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3 Dynamic capabilities have a positive effect on innovation</td>
<td>1.317</td>
<td>Not Significant</td>
<td>Rejected</td>
</tr>
<tr>
<td>H4 Dynamic capabilities have a positive effect on performance</td>
<td>5.268</td>
<td>Significant</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Table 7 Hypothesis Test Results
The results of the study show that the majority of B2C e-commerce has implemented strategic entrepreneurship in business operations which also affects dynamic capabilities and innovations to improve company performance. In the discussion of the results analysis will be explained through three paths, namely the dynamic capability path and the innovation path to performance. And the last path that will discuss the relationship of dynamic capabilities to innovation.

The first path to be discussed is the influence of strategic entrepreneurship in relation to dynamic capabilities to the performance of B2C e-commerce. In B2C e-commerce, strategic entrepreneurship has a positive influence on dynamic capabilities. Most of the e-commerce B2C often scan conditions outside, seek information about technological developments which then become new knowledge material for companies that can be managed through Sharing Knowledge. This new information, knowledge and capability has an influence on the entrepreneurial mindset of the company. So that B2C e-commerce is encouraged to continue to look for opportunities and take risks.

Furthermore, the results of information and knowledge processes obtained from outside are transformed into new capabilities and incorporated into the company's current activities. This process will affect the culture of entrepreneurship. Companies will be better at listening to opinions or capturing information, more competent in taking measured risks. The existence of fault tolerance is then used as learning material. The company can also create open communication, so that proactive innovations will be created for new products or processes. The company will encourage each employee to cooperate with each other. Thus, the process of seeking knowledge, transforming knowledge into new capabilities and incorporating into company activities, will encourage the formation of an entrepreneurial culture on B2C e-commerce.

Then the search for information and knowledge will instill that knowledge into new capabilities that will create leadership patterns oriented to the search for opportunities and competitive advantage. From this process, leaders in B2C e-commerce can determine organizational systems, spread vision, be flexible, be able to see opportunities in the future, build good guesses and test them efficiently in a complex and changing business environment. B2C ecommerce leaders are also able to communicate, influence organizational members,
understand others and develop knowledge. So that it can be concluded that strategic entrepreneurship possessed by B2C e-commerce can be used to enhance dynamic capabilities.

In relation to performance, dynamic capabilities have a positive influence. The ability of B2C e-commerce to maintain, modify and reconfigure its current capabilities into new capabilities influences improving e-commerce performance. Dynamic capability is needed by e-commerce to create new capabilities so that new resource bases can be created. E-commerce researched states that they can develop and combine resources (HR and technology) to be better and superior, besides using strategies and capabilities in accordance with market conditions. So, they can experience increased sales and profits. Dynamic capability is also able to improve the quality of products / services and get customer satisfaction. But it is necessary to have routine activities to trigger the development of innovation in products / services.

Fig. 4. Second Path

The second path to be discussed is the influence of strategic entrepreneurship in relation to innovation on the performance of B2C e-commerce. In B2C e-commerce pay attention to opportunity search behavior and the creation of competitive advantages over time, even in difficult financial situations. Although in e-commerce, entrepreneurs place more emphasis on opportunity search behavior while management places more emphasis on creating competitive advantage behaviors. This shows that the focus between entrepreneurs and management in e-commerce must be understood. The balance between the two behaviors in e-commerce can be achieved by using innovation, especially parallel business models in which opportunity seeking behavior and the creation of competitive advantage go together and complement each other over time. At present, parallel business models have been widely applied by B2C e-commerce. This business model is also supported by core components as input in the business model that includes application platforms and mobile devices and provides content and services. The purpose of supporting the core component in the business model is to maintain the security and trust of customers in making transactions. Security and trust are important in reducing consumer concerns in online transactions. Security and trust will trigger the creation of loyalty to customers. With customer loyalty, e-commerce has reached a target which is also followed by an increase in technology infrastructure.

In relation to performance, innovation helps e-commerce in designing to create product / service specifications and applied business models combined with technology infrastructure.
Technology infrastructure facilitates e-commerce in creating business models to create value propositions for customers such as mobility, localization (removing location or geographic boundary constraints between sellers and buyers), and convenience (providing value-for-time to customers with ease of transaction so efficiency occurs time and energy in shopping). Technology infrastructure in e-commerce also makes it easy to collect user transaction information in various locations in real-time (that is, companies can track customer movements when shopping and make customer transaction information a new opportunity). In terms of information, innovation in ecommerce can eliminate information asymmetry between customers and sellers and thus create an almost 'friction-free' market where buyers and sellers are connected directly without having to face to face. The e-commerce business model allows managers to capture opportunities by segmenting customers and implementing different strategies based on customer segments. So that they are able to improve their performance in increasing sales and profits, improving product / service quality and customer satisfaction.

The third path to be discussed is the effect of dynamic capability on innovation. In B2C e-commerce, dynamic capabilities have no significant influence on innovation. The results of the study found that the majority of B2C e-commerce focused more on search behavior opportunities that were carried out continuously on the market. This B2C e-commerce activity will be dangerous for the company because it can be trapped in an endless opportunity search routine with inefficient use of resources. Given the limited resources of B2C e-commerce. This opinion is reinforced by the theory of Ireland & Webb (2007) who say that just looking for opportunities is not enough. Companies that are too focused on finding opportunities tend to get caught up in the ongoing search cycle and cycle of change (Raisch & Birkinshaw, 2008). This situation can make companies use their resources ineffectively because they are trapped in continuous search and change (March, 1991). In conjunction with innovation, it is better for e-commerce to directly focus on innovation without forming dynamic capabilities first.
In addition, opportunity identification and exploitation opportunities can be done quite well by decision makers, but they only create a temporary competitive advantage rather than sustainable competitive advantage [11]. This happens because decision makers in B2C e-commerce cannot manage their resources strategically, so that competitive advantages that have been developed are difficult to change into sustainable competitive advantage [6]. This is one problem that must be considered by decision makers or founders in B2C e-commerce.

E-commerce is difficult to develop dynamic capabilities because the development of dynamic capabilities requires time and funds that are not small. Investment in dynamic capabilities lies in knowledge-based human resources. Human resources have valuable, rare, difficult to imitate and irreplaceable characteristics (VRIN) so that it is an important resource in encouraging the creation of sustainable competitive advantage [11]. Development of dynamic capabilities always requires investment in development and commercialization [33].

So, obtaining funds, recruiting and training employees to run operations [45] are examples of developing dynamic capabilities that support the business models needed by e-commerce [46]. It is true that funding and employees are a much-needed resource especially for B2C e-commerce.

4. Conclusion

This study aims to examine empirically the influence of strategic entrepreneurship in relation to dynamic capabilities and innovation in achieving performance in the e-commerce sector. The entrepreneurial theory of strategy is an integration of opportunity-seeking behavior and advantage-seeking behavior. Both behaviors work simultaneously and not separately. The combination of these two behaviors will give maximum results on e-commerce performance if there is dynamic capability and innovation.

References

76.


Sex Appeal Ad and Materialism: A Comparison of Young Consumer Attitude and Purchase Intention in France and Indonesia

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Abstract. Although many studies already report on materialism or sexual appeal in advertising, this study tried to examine the direct effect and combination effect between materialism and sexual appeal to young consumers in Indonesia and France. The experimental research results showed a significant direct effect and interactions effect between sexual appeal and materialism, as well as between sexual appeal and the countries in this study. It is quite surprising to find, that the effect of high sexual appeal is greater among high materialism young consumers in Indonesia, a more religious country, compared to young consumer in more liberal France. This study explains why this kind of anomaly could happen.

Keywords Sexual Appeal, Advertising, Materialism, Attitude Toward the Ad, Attitude Toward the Brand, Purchase Intention, Indonesia, France.

1. Introduction
In a number of studies, sexual imagery in advertising is already considered a strong emotional appeal [1]. Sexual portrayals used in the advertising industry has been proven and tested to be provoking on how people form attitudes. It is used as powerful instrument to draw attention to a product or service.

For materialistic people, they assume the importance of possessions and acquisitions is depending as an essential prospect for the satisfaction and well-being in life. In this case, it is considered as a central place in a person's life, and is believed to be the biggest acumen of satisfaction and dissatisfaction [2].

Culturally, the appeal of sexual imagery to the audience is perceived differently in the world. In the US, some people do not like the sexy advertisements and would boycott products that have excessive sexuality in advertising [3]. However, in continental European countries (eg, Denmark, Germany, Italy, France) consumers are generally not too concerned against nudity or voluptuousness in advertisements [4]. In France, some sexual ads even have some sort of understanding that is not always negative and is referred only as "porno-chic" [5]. French women generally consider nudity and sexuality of women more as an aesthetic rather than sexist [6].

As [7] mention that attitude toward the ad and attitude toward the brand will positively affecting purchase intention, this study will seek what is the effect of sexual appeal advertising, materialism, and different culture, regarding attitude toward the advertising, attitude toward the brand and purchase intention. This study will involve young consumer in
Indonesia and French, two countries with different norms and culture, especially regarding sexual matters. Furthermore, this study contributes to the literature by demonstrating how sexual appeal and materialism as a cultural or structural variable together affecting young consumer in two different countries who have different norms and culture of consumption.

2. Literature Review

2.1. Sexual Appeal in Advertising

Several previous studies have found that the number of sexually-themed advertisements continue to evolve over time. [8] states that the use of sexual content in the suggestive forms, nudity, sexual situations and behaviors are more frequently used to sell products to teenagers and young adults. Moreover, [9] also stated that during the last two decades, the use of sexual imagery in print advertising has become mundane. This happens because the advertisers are competing to break through the clutter, and they take the advantage of the unusual imaging techniques such as advertisements with sexual portrayals [7].

Representation of sexy and attractive models in advertising can also act as an intermediary in strengthening and reshaping the norms and beliefs in society, especially in appreciating that life will feel good and comfortable through the depiction of sexuality [10]. [11], [12] even found that sexual imagery can even lead to a superior attitude and purchase intention.

On the contrary, a number of relevant literatures [13], [14] showed that the sexual advertisements clearly contribute to gender inequality by promoting the creation of "sexism" and distorted body image as valid and acceptable. In this case, sexism refers to the portrayal of women and men who are relatively considered inferior than their abilities and potentials.

[15] found that women in the UK tend to be depicted in a decorative role, especially with "physical attractiveness" and "sex object". The same trend was also reflected in a study conducted in Germany, Greece, the Netherlands, Sweden and the United States, which reported an increase in the use of the portrayals of physical attractiveness and sexual object to illustrate women in print ads [16]. In Indonesia, [17] found that women in advertising pictured in five frames as beauty, feminine, sexual objects, domestic workers, and intermingle.

2.2. Sexuality among Cultures

Many cross-cultural studies have revealed that in a number of different countries the roles of women are also depicted differently in the advertisements (Nilaweera and Wijetunga 2005). Study of [18] compared the image of female nudity in advertising in Germany and the US magazine in 1986, 1989 and 1992. They found the shift of the image section which is applied from time to time, ranging from the use of clothing that openly and show parts of naked body, to a more suggestive image of dress, such as an open blouse or tight clothing. They have found that advertisements containing nudity in Germany turned out to be less than in US. [19] compared the use of sexual imagery in advertising in the United States and French print ads in news and women's magazines. They found the French advertising uses more sex imagery than American advertisements. Additionally, women also used more frequently than men in sexual advertisements in France compared to the United States.

The effect of culture or nationality on the sexual portrayals appears in advertising [20], who studied award winning advertising Clio Awards, found that the local norms are reflected in most of the advertising domestic product, while "Western" image or global norms are more dominant in international advertising products. [21] compared the image of women in women's magazines in India and reported that White model or Western models were more often placed as sex kitten/sensual role in advertising than were their Indian counterparts.
Similarly, in a comparison of Western and Asian models in Singapore, Taiwan, and the United States, [22] reported that the images of sensual or sexual beauty employed more Western models than Asian models. There is usually a restriction placed for the portrayal of indigenous women than foreign women. For example, in Malaysia, the rules are different for portrayal of Muslim women compared to White models or Western women [4]. However, ads in Thailand and France had showed the highest level of sexuality, regardless of whether the advertisements used domestic or non-domestic models, or whether the ad was promoting domestic or international products [23], despite a study that found the depiction of nudity has become similar to the Western model and the Chinese model in China [24].

2.3. Materialism

Materialism is raising in-line with real incomes and an abundance of consumer goods that have made materialism possible. [25] concluded, besides cultural and historical differences in the tendency toward materialism, there are also individual differences in the manifestations of materialism.

[26] explained that materialism refers to a "devotion to material needs and desires, to the neglect of spiritual matters; a way of life, opinion, or tendency based entirely upon material interests," as defined in the Oxford English Dictionary. [2] defines materialism as: "The importance a consumer attaches to worldly possessions. At the highest levels of materialism, such possessions assume a central place in a person's life and are believed to provide the greatest sources of satisfaction and dissatisfaction."

Materialism itself could become bad or good depending on the purpose of consumption. When people only act as an essential means for discovering and furthering personal values and goals of life, the materialism in this case is potentially a harmless form. This kind of materialism is labeled as "instrumental materialism." But consumption could further beyond possession itself, then the materialism is regarded as a more dangerous form and labeled "terminal." [27] found materialistic individuals form strong connections to their brands as a response to existential insecurity.

[25] explained about possessiveness, non-generosity and envy in measuring materialism. He defined possessiveness as "the inclination and tendency to retain control or ownership of one's possessions." Non-generosity is "an unwillingness to give possessions to or share possessions with others." Then envy has been defined as "displeasure and ill will at the superiority of another person in happiness, success, reputation, or the possession of anything desirable."

We could see materialism is mostly about acquisition and possession. Materialists place possessions and their acquisition at the center of their lives. More than that, possessions and their acquisition are so central to materialists because they view these as essential to their satisfaction and well-being in life. Materialists also tend to judge their own and others' success by the number and quality of possessions accumulated [28].

Study from [29] examines whether consumption increases the desired positive feelings among materialists in the short term. Their results suggest that consumption didn’t leads to more positive feelings among materialists than it does among consumers low in materialism. Furthermore, materialists experience stronger negative feelings after acquisition than do consumers low in materialism.

Development of materialism for young consumer is mainly based on socialization. The sources of socialization may be peers, mass media and the family [30]. [31] explains that the mass media like television is reported to be instrumental in socializing consumers into materialism. Heavy viewing of television can also foster the development of materialistic
values through TV advertisements’ consistent conveyances of messages that project products as solutions to problems. Some advertisements creatively persuade viewers to think that self-worth can be gained from possessions.

3. Method and Hypotheses

3.1. Hypotheses

Materialism is about possession and acquisition [28], and also involving non-generosity and envy [25]. Materialistic individual would make strong bonding to the brand because of insecurity [27].

**Hypothesis 1a:** Young consumer with high materialism will have more positive attitude toward the ad, attitude toward the brand, and purchase intention with high sexual appeal ad compared to young consumer with low materialism.

**Hypothesis 1b:** Young consumer with high materialism will have more positive attitude toward the ad, attitude toward the brand, and purchase intention with high sexual appeal ad compared to low sexual ad.

Sexual themed advertisements are common in the countries where the societies are more liberal [7], compared to more religious countries [4].

**Hypothesis 2:** Sexual appeal advertising will brings more positive attitude toward the ad, attitude toward the brand, and purchase intention for young consumer in French compared to young consumer in Indonesia.

3.2. Method

To test the hypotheses, this study utilize 2 sexual appeal ads (high, low) x 2 materialism scale (high, low) x 2 countries (Indonesia, France) between subject experimental design. The main study conducted in France, and Indonesia.

The sample for this study was a convenience sample for generating ideas, insight or hypothesis [32]. The sample consisted of undergraduate students from two universities in Greater Jakarta, Indonesia, and one university with campus in Paris and Lille, France. While this sampling method inevitably limits the external validity of the findings, careful selection of products specifically relevant to that population was deemed an appropriate means to maximize its internal validity.

Pilot test with 50 subjects similar with target sample was conducted in Jakarta to choose the product and high sexual appeal and low sexual appeal ad. Due to accessibility, the same pilot test is not done in France. The product chosen is a lollypop candy, a low involvement product that common for young consumer and easy for them to buy. To test sexual appeal and product congruence, subjects should made agreement (yes or no) about relevancy to use sexual appeal ad for lollypop candy. Agreement for this sexual appeal and product congruence is 88 percent. The candy brand name is fictitious to eliminate the brand effect in the experiment. To enlarge external validity to complement with realism and generalizability, the ad stimuli were actual full page, color print ads from an existing lollypop brand that available in internet. The ad only consists of sexual visualization and brand name, indefinitely will help to focus on sexual predictive effect without other extraneous bias.

Materialism scale was measured using 18 items scale of [28], then divided into high and low materialism consumer through median. Dependent variables are attitude toward the ad with six items [33], attitude toward the brand with three items (Chattopadhyay and Basu 1990), and purchase intention with two items [34]. All items measured with six Likert type scale.
All measurements have good reliability tests, with Cronbach Alpha for materialism 0.815; attitude toward the ad 0.839; attitude toward the brand 0.904; and purchase intention 0.729. Validity tests have same results with all items of measurement have KMO value and factor loading bigger than 0.5.

Subject of this study is young adult consumer in Indonesia and France between 18-30 years old. The sample consists of 272 male and female which live in Jakarta, Indonesia, and Paris and Lille, France. In this experiment 139 participants are young consumers in Indonesia, and another 133 subjects are young consumers in France. Although this study used convenience sampling to get the participants, all subjects were randomly allocate to each cells of the experiment to minimize extraneous bias. The researcher gave an introduction and the purpose of the study to measure subject opinion on a new brand of candy that in the process of production and launching. After explained on how to fill the questionnaire, the participants could see the ad based on their cells treatment, high or low sexual appeal ad. In the last part of the questionnaire, the respondents were pleased to fill questions about the demographical data. At the very end of questioner there is manipulation check to make sure subject understand what kind of ad that they are measured.

4. Result

Not less than 272 participants, divided equally among gender, involved in this research, 139 representing Indonesia and 133 from France. All of them like a candy: 74 subjects like a lot and the rest like fairly. Participants’ age in Indonesia is in 18-22 years old brackets (61%); 23-26 years (37%); and 27-30 years (2%); and in France is in 18-22 years (59%); 23-26 years (37%); and 27-30 years (4%). Manipulation check found that all participants correctly mention that the advertisement is for a lollypop candy with a brand name Candy Chup.

Table 1 shows the descriptive mean and standard deviation at every cells treatment.

<table>
<thead>
<tr>
<th></th>
<th>Materialism High</th>
<th>Materialism Low</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sexual Ad High</td>
<td>Sexual Ad Low</td>
</tr>
<tr>
<td>Indonesia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aad</td>
<td>3.69 (.187)</td>
<td>Aad 3.64 (.760)</td>
</tr>
<tr>
<td>AaB</td>
<td>4.44 (.769)</td>
<td>AaB 3.99 (.716)</td>
</tr>
<tr>
<td>PI</td>
<td>3.91 (.957)</td>
<td>PI 3.30 (.964)</td>
</tr>
<tr>
<td>France</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aad</td>
<td>3.56 (.584)</td>
<td>Aad 3.69 (.850)</td>
</tr>
<tr>
<td>AaB</td>
<td>4.17 (.526)</td>
<td>AaB 4.19 (.677)</td>
</tr>
<tr>
<td>PI</td>
<td>3.47 (.499)</td>
<td>PI 3.52 (.870)</td>
</tr>
</tbody>
</table>

One way Analysis of Variance (ANOVA) shows significant different results among cells treatment: attitude toward the ad (p< 0.1; F=1.897); attitude toward the brand (p< 0.01; F=3.383); and purchase intention (p< 0.01; F=3.452).

Regarding attitude toward the ad, there is a significant materialism effect when subjects seeing high sexual appeal ad. Indonesian high materialism subjects have more positive attitude toward the ad compared to low materialism subjects (p< 0.1; t=1.764), and also the same for France’s subjects (p<0.1; t=1.881). But there is no materialism effect for low sexual appeal ad in Indonesia or in France. Materialism effect also significantly affect attitude toward the brand. Indonesian high materialism subjects have more positive attitude toward the brand compared to low materialism subjects (p< 0.05; t=2.269). Also high materialism subject significantly prefer high sexual appeal ad than low sexual appeal ad (p<0.01; t=3.040). On the contrary, this finding is different for France subject that does not have any significant results.
The same materialism effect also happens in purchase intention. Indonesian high materialism subjects have more positive purchase intention compared to low materialism subjects ($p<0.05; t=2.162$), and high materialism subject significantly prefer to purchase product in high sexual appeal ad than low sexual appeal ad ($p<0.01; t=3.452$). This kind of difference also did not happen in France subjects. All of the means effects attitude toward the ad (AAD), attitude toward the brand (AAB) and purchase intention (PI) were presented at Figure-1. Based on this finding, hypothesis 1a and 1b only partially supported. The hypothesis only fully supported for Indonesian subjects but not for France subjects.

From Figure-1 we could see that all measured response to high sexual appeal ad is higher at the high materialism condition, with Indonesian subjects have more positive response. For Indonesian subjects all of materialism effect when seeing high sexual appeal ad is significant, but not for France subjects that only significant for attitude toward the ad. On the contrary, there is no significant effect of materialism for Indonesian subjects who seeing low sexual appeal ad, but all of measurements are significant for France subjects (AAD: $p<0.05$, $t=2.257$; AAB: $p<0.05$, $t=2.333$; PI: $p<0.05$, $t=2.174$). High materialism France subjects will response more positive to low sexual appeal compared to low materialism subjects.

This result shows that Indonesian high materialism would be more positive to response to high sexual appeal ad than low sexual appeal ad.

In low materialism consumer there is no different effect regarding high sexual appeal ad toward attitude toward the ad, attitude toward the brand and purchase intention among young consumer in Indonesia and France (AaD: $p=0.679$, $t=0.688$; AB: 0.948, $t=-0.065$; PI: $p=0.554$, $t=0.593$).
Fig. 2. Response toward high materialism consumer for attitude toward the ad (AAD), attitude toward the brand (AAB) and purchase intention (PI).

Furthermore, the result of comparing the young consumer from Indonesia with France in high materialism condition shows that young consumer in Indonesia have same attitude toward the ad with their colleagues in France (p=0.492, t=0.688). Although there is a significant different for attitude toward the brand (p<0.1; t=1.820), and purchase intention (p<0.01; t=2.807), with higher positive response for Indonesian subjects. This outcome is against the hypothesis 2 that stated young consumer in France will response more positive to high sexual appeal ad compare to Indonesian.

As we could see in Figure-2, Indonesian subjects in high materialism condition have higher positive response toward attitude toward the ad, attitude toward the brand, and purchase intention when seeing high sexual appeal ad compared to France subjects. On the contrary, Indonesian has lower response in low materialism condition.

Additionally, Multi Variate Analysis of Variance (MANOVA) is used to check the interaction effect among the independent variables. The results show significant level (p<0.01) with Pillay’s Trace; Wilks’ Lambda; Hotelling’s Trace and Roy’s Largest Root; for interaction effect of sexual appeal and country. The same significant interaction effect (p<0.01) also happen to sexual appeal and materialism. However, the interaction effect of country and materialism is only significant based on Roy’s Largest Root (p<0.05), but not for other measurements (p>0.1). This is the reason there is no interaction effect for all three variables: country, sexual appeal and materialism.

To conclude, the outcome of MANOVA is confirming that there is a significant support regarding the construct of this study about the combination effect of country, sexual appeal, and materialism.

As a final point, following Belch & Belch (2015), regression analysis also demonstrate that attitude toward the ad and attitude toward the brand is positively affecting the purchase intention (p<0.001, F=77.500, VIF=1.098).
The regression equation is: $PI = 0.275 + 0.118 \text{ AAD} + 0.613 \text{ AAB}$

(AAD: $p<0.001$, $t=3.988$; AAB: $p<0.001$, $t=10.065$). Regression analysis using each of country data also brings the same effect, in line with theory that attitude toward the brand has a bigger effect to purchase intention. Beside this multiple regression analysis result, together with ANOVA and MANOVA outcomes, this study passed the appropriate statistical test.

5. Discussion

Sexual appeal advertisement and materialism in two different countries that have different norms and culture, by investigating young consumer in Indonesia and France. It is found that there is a significant interaction effect of sexual appeal and country, as well as sexual appeal and materialism. This study concludes about materialism effect in favoring high sexual appeal advertisement. All measurements show higher response to high sexual appeal ad in high materialism condition. It is significantly different for Indonesian subjects, but this effect is not significant for attitude toward the brand and purchase intention for France subjects. In contrast, high materialism France subjects in this study prefers low sexual appeal ad compared to low materialism subjects. This result is against literatures that mention more liberal the country, more common the sexual themed advertisements [7] and as [6] elaborate, more permissive to sexual presentation. Especially when compared it to more religious countries [4].

The result becoming more interesting when Indonesia is more religious country compared to France, as in Indonesia 99 percent of the population considering religion is important, but only 29.5 percent population in France favor the same (www.nationmaster.com). Also as [35] explain, Hofstede masculinity/femininity dimension predictability has an impact on sex role. Both countries were in the same feminine countries in Hofstede Masculinity Cultural Dimension (Indonesia=46; France=43). A low score (below 50) on this Hofstede dimension means that the dominant values in society are caring for others and quality of life. A Feminine society is one where quality of life is the sign of success and standing out from the crowd is not admirable [36].

To explain this extra ordinary result we should see the history of sexual appeal presentation in these two countries. Many studies show that sexual advertising is becoming common and usual in France [4]–[6]. This is possibly the reason consumer in France did not give further response to sexual appeal advertisement. They feel much too common for sexual imagery because they had exposed to sexual theme much longer compared to the Indonesian.

In contrast, expose to sexual appeal in Indonesia only happened after the Indonesian reform in 1998 when management of media gradually more liberal. Prior to that year Indonesian government was strictly controlled the circulation and content of the media, and did not allow high sexual appeal ads. In line with reform, the Indonesia Press Law No. 40/1999 gives the possibility to publish print media without government permission. It was creating many prints media in the market, and some were competing to attract the reader's attention through sexually attractive news. Men's magazines such as Popular, FHM, and Maxim began to circulate in the market. Many popular magazines with sexual appeal portrayals like Cosmopolitan, Elle, Harper’s Bazaar, and Vogue were also flourishing in Indonesia [37].

Exposure to sexual appeal also happen in television that likewise flourished from only five national channels to 11, five cable/pay TV, plus hundreds of local broadcasters. With bigger penetration of internet on laptop or smartphone (Alif, 2014), exposure to sexual presentation becomes easier. Especially for teens and young adults who are digital natives.
This phenomenon is similar to what happened in Turkey, which has higher materialistic scale, compared to Europeans and Americans samples in [38]. Although in discussion of the study they do not really believe all of this happens because the economic affluence and Western culture; or that materialism is on the rise in the developing countries, we could say it is the explanation for what occurs in Indonesia.

With more freedom to behave after reform, the young consumer could choose whatever they like, from tattoo and piercing (both before reform are banned), as well as to consume sexual imagery in prints, television and mostly internet.

Within this condition, young consumer openly and secretly is starting to look for sexual presentation, especially in internet. As today’s youth are more mature, media-savvy, and culturally experienced than past generations, [39] found that the girls in their study had clearly defined conceptions of the models in the advertisement. The ability of these young females to read the cultural nuances of advertising (i.e. exotic or sexy) was quite developed.

As young consumer decisions are made automatically and unconsciously, judgments are also made quickly and automatically, driven by emotions and gut feelings. Studies show materialistic individuals have been found to have lower levels of satisfaction with their lives in general and with their standard of living in particular [40], [41] because they have high and unrealistic desires and thus expect more from the products. As [42] explain, individuals seek to alleviate existential anxiety by conforming to dominant cultural worldviews, which in advanced consumer societies includes the acquisition of material objects.

Considering this discussion, in the condition of materialism and sexual appeal we could conclude and explain why the high materialism young consumer in Indonesia behave differently with their peers in France, to positively prefer high sexual appeal ads.

5.1. Limitations and Future Research Directions

materialism and sexual appeal, this study naturally entails a variety of limitations, many of which point to interesting issues for future research.

Although pilot test and manipulation check was done carefully, possible misconduct still happens. This study used lollypop candy, a low involvement and easy to buy products. Albeit all of the subjects in the experiment like a candy a lot or fairly, unfortunately this research did not make a pilot test to check if there is any different preferential regarding lollypop candy among subjects. Arguably, this lollypop preference test possibly could bring different effect.

This study only made a single manipulation advertisement treatment in the experiment that equivocally will much better with more stimuli. Furthermore this study conducted at Greater Jakarta, Indonesia, and Paris and Lille in France. The result could also be different if the same experiment is done in small cities or rural areas in Indonesia. This would be an interesting study to thoroughly understand whether the results of this study can be generalized to the entire Indonesia.

To further test the effect of sexual appeal and materialism, supplementary studies on this subject could be completed with more variation of product category such as utilitarian or hedonic products, or for durable and high involvement products. In such a way we can truly understand the impact and interaction effect of sexual appeal and materialism in the mind of consumer.

References


Relationship Between Brand Jealousy And
Conspicuous Consumption

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Abstract. Brand Jealousy is one of the most important constructs in marketing yet it gains little attention from researchers. Previous research showed that this variable is the predictor of behavioral intention such as intention to buy a product. This research investigated whether brand jealousy affected conspicuous consumption. This research also found out the role of materialism in the relationship between brand jealousy and conspicuous consumption. Using regression analysis, this study revealed the positive and significant effect of brand jealousy on conspicuous consumption. On the other hand, moderation analysis showed that materialism did not moderate the relationship between brand jealousy and conspicuous consumption. The result of this research is expected to give a guideline for marketers in designing their marketing strategy.

Keywords: Brand jealousy, Conspicuous consumption, Materialism.

1. Introduction

The importance of branding as well as consumption has long been investigated. Researchers are interested to know the relationship between branding and consumption. They are keen to know whether branding aspects would predict consumer intention to buy a product. For instance, [1] investigated the effect of brand equity on repurchase intention in the hotel industry. [2] reported that brand’s features and benefit, as well as relational aspects of brand perception, are major factors of consumers’ attention. Consumer attitude towards a brand much relies on characteristics of a brand as well as consumers’ experience on it. How consumers feel and evaluate a brand would affect their behavior toward a brand.

In consumer consumption context, recently there has been a great interest in investigating consumer buying intention by employing theories from consumer psychology literature and interpersonal relationship [3]. They showed the importance of brand love and jealousy in consumer behavior as well its role in creating consumer engagement. More specifically, they demonstrated the effect of brand jealousy on consumer buying intention and consumer engagement. Additionally, [4] showed that women consumers tend to consume conspicuously especially for luxury products because of mate guarding motive such as jealousy. In other words, there is a relationship between jealousy and conspicuous consumption.

Conspicuous consumption itself is affected by many factors. [5] investigated antecedents and consequences of materialism. They said that materialism has an important role during the global economic crisis. People with materialistic values have strong inclination towards goods which project wealth and status. To satisfy their desire, they may engage in risky financial behaviors which increase chances for economic crisis. They supported the existence of the
dark side of materialism as reported before by [6] who showed some evidences regarding the impact of materialism (and overconsumption) on social and personal problems, among others are human exploitation, global poverty, environmental problems and reduced well-being and wellness. They also showed that materialism related to other negative consequences of consumption behavior, such as decreased life happiness, subjective well-being, life satisfaction, and environmental concerns. Their research model also showed that materialism has consequences on other shopping behaviors. They supported the findings of [7] who said that materialists tend to over-consume, thus, materialism leads consumers to overspending in shopping. Materialists also have positive attitude toward borrowing money which led them to easily purchasing non-essential items. The more consumers are materialistic, the more the tendency to engage in excessive shopping activities. It means that materialistic values will lead consumers to shop more than is necessary and we know that conspicuous consumption is a kind of overconsumption that aim to show others of what consumers have shopped.

This paper discusses the effect of brand jealousy on conspicuous consumption. Materialism as one of values will also be explored to reveal its role in enhancing the relationship between brand jealousy and conspicuous consumption. Using regression analysis, this paper discusses findings, research limitations, and recommendations for future research as well as developing marketing strategy by using brand jealousy construct.

2. Literature Review

2.1. Brand Jealousy

According to [3], jealousy is “arising from the potential, actual or imagined involvement of one’s loved one or mate in a relationship with an interloper.” Jealousy emerges as a defense mechanism in response to anticipated separation from one’s loved. In consumer behavior context, consumers can have emotional attachment with a product or service. [8] explained that consumers could fall in love with a brand or product. Therefore, it is predicted that consumers can be jealous when they see that a brand that they like has been purchased by others, and at present they do not have the brand due to some constraint. Brand jealousy thus occurs when a potential customer who has not yet purchased a specific brand perceives that another customer who already purchased a specific brand as a rival. On the other hand, unlike interpersonal relationships, brand jealousy does not have the reciprocity aspect and so do most brands.

[3] defined brand jealousy as “a complex of thoughts and feelings that follow threats to self-esteem generated by a romantically loved and esteemed brand in the mind of a romantic brand lover who does not possess the brand currently due to some constraint, after seeing another person (rival) using the same brand.”

Brand jealousy has consequences on consumption behavior such as customer engagement and purchase intention [3], [9]. So far, there is only very limited research on brand jealousy and its consequences on consumer behavior. This research tries to fill this gap by investigating the effect of brand jealousy on conspicuous consumption.

2.2. Conspicuous Consumption

[10] was among the first to discuss conspicuous consumption which he defined as “The acquisition and display of expensive items to suggest wealth and/or attract attention to one's wealth.” Conspicuous consumption is also known as a status consumption by which a person attempts to let others know his or her wealth by showing off his or her luxurious possessions. The product consumed is ranging from a small item like an expensive hand bag to a sport car.

How and why conspicuous consumption occurs attracts many researchers. Previous research showed that conspicuous consumption is triggered by many factors. Some
researchers proposed the relative consumption effects which explained that consumers’ satisfaction with their consumption depends on how much others are consuming. Other explanations are bandwagon effect (following others purchasing a product) and the snob effect (avoiding a popular good in order to be different with others) as signals of status, and thus as signals of conspicuous consumption. Reference group, education and materialism are reported to have been related to conspicuous consumption. Recently, the work of [4] showed that mate guarding motive which is triggered by jealousy lead women consumers to consume conspicuously especially for luxury products. In other words, brand jealousy can lead to conspicuous consumption.

H1: Brand Jealousy affects Conspicuous Consumption.

2.3. Materialism

Materialism occurs when consumers’ attitudes as well as behaviors are driven by worldly possessions. The higher the materialistic value the higher the intention to pursue wealth and worldly possessions. [11] defined materialism as the manifestation of psychological traits which stresses on the importance consumers attach to possessions. Studies on materialism generally examine its individual and social consequences. According to Mason (1981), consumers with high materialistic values are more prone to shop excessively in order to enhance their social status. They may purchase expensive products in order to avoid losing social prestige [12]. Therefore, materialism is mostly perceived to be negative as it places wealth and worldly possessions integral to one’s happiness [13]. Furthermore, [11] identifies three sub traits of materialism: possessiveness, non-generosity and envy. Possessiveness is the intention to maintain control and ownership of what one possesses. Non-generosity refers to unwillingness to release or share what one possesses with others. Envy is a feeling of discomfort at someone else’s possessions which are deemed desirable.

This article investigated how materialism affect the relationship between brand jealousy and conspicuous consumption. It is predicted that the effect of brand jealousy on conspicuous consumption will be stronger for consumers who have higher level of materialism.

H2: the effect of Brand Jealousy on Conspicuous Consumption is moderated by Materialism.

3. Method

This research investigated the influence of brand jealousy on conspicuous consumption. This quantitative study employed regression analysis to find out whether brand jealousy is a predictor of conspicuous consumption. This research also tried to reveal whether materialism is the moderator in the relationship between brand jealousy and conspicuous consumption.

Brand jealousy scale adopted the work of Sarkar and Sreejesh (2014) that consist of three item scales. Conspicuous consumption was measured by adopting the scale used by [14] which was developed by [15]. The level of materialism was measured by using Material Values Scale developed by [16], as used by [17]. This scale consists of 9-item short version form of Material Values Scale of [16].

The research model and variables operationalization are presented below:
Table 1 below showed the definition and item used to measure the research variables. All variables were measured using the five point Likert Scale. Before running the regression analysis, these three scales were tried out using 30 samples from the same population. Reliability test has resulted in acceptable scores as follow: 0.798 for Brand Jealousy, 0.881 for Conspicuous Consumption, and 0.892 for Materialism.

**Table 1. Operationalization of Variables**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Item</th>
<th>Measurement Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Jealousy</td>
<td>1 I feel really hurt when I see that others are using the brand and I don’t have it.</td>
<td>5 point Likert</td>
</tr>
<tr>
<td></td>
<td>2 I feel very possessive about the brand when I see that others are using the brand and I don’t have it</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 The thought that others are using the brand and I don’t have it always haunts me</td>
<td></td>
</tr>
</tbody>
</table>

(Bıçakçıoğlu, et al., 2017).

(Sarkar & Sreejesh, 2014)
Conspicuous Consumption

Spending money on goods in order to indicate wealth to other members of the society (Veblen, 1899; Richins & Dawson, 1992))

1. Before purchasing a product, it is important to know what friends think of different brands or products I am considering.
2. Before purchasing a certain product, it is important to know what kinds of people buy brands or products I am considering.
3. Before purchasing a product, it is important to know what others think of people who use certain brands or products I am considering.
4. Before purchasing a product, it is important to know what brands or products to buy to make a good impression on others. (Ismail, et al., 2018).

Materialism

The manifestation of psychological traits, i.e. the importance consumers attach to possessions (Belk, 1985; Richins, 2004; Lipovčan, Prizmić-Larsen & Brkljačić, 2015)

1. My life would be better if I own certain things I don’t have.
2. The things I own say a lot about how well I’m doing.
3. I’d be happier if I could afford to buy more things.
4. It bothers me that I can’t afford to buy things I’d like.
5. Buying things gives me a lot of pleasure.
6. I admire people who own expensive homes, cars, clothes.
7. I like to own things that impress people.
8. I like a lot of luxury in my life.
9. I try to keep my life simple, as far as possessions are concerned. (Segal & Podoshen, 2013)

4. Discussion

The aim of this study is to investigate the effect of brand jealousy on conspicuous consumption (H1). This study also tried to reveal the role of materialism in the relationship between brand jealousy and conspicuous consumption (H2). Based on the data drawn from 200 students of Tarumanagara University, the research findings are presented in Table 2 below:

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>t value</th>
<th>Sig</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Brand Jealousy →</td>
<td>2.809</td>
<td>.005</td>
<td>Supported</td>
</tr>
<tr>
<td>Conspicuous Consumption</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H2: Moderation Effect</td>
<td>-1.481</td>
<td>.140</td>
<td>Not Supported</td>
</tr>
</tbody>
</table>

As predicted, the first hypothesis is supported (t value = 2.809; p < 0.05), indicating that students who have a high brand jealousy will have a stronger inclination to consume conspicuously. This finding supports the previous research which showed a positive effect of brand jealousy on conspicuous consumption [3], [4], [9].
On the other hand, the second hypothesis is not supported by data (t value = -1.481; p > 0.05). This finding indicates that materialism does not moderate the effect of brand jealousy on conspicuous consumption. In other words, the effect of brand jealousy on conspicuous consumption will not be stronger or weaker when the materialism of consumer is high compared to when the materialism is low. Further, regression analysis showed that materialism directly affected conspicuous consumption. It means, the stronger the materialism score of students, the higher their inclination to consume conspicuously. Brand jealousy and materialism does not interact each other in affecting conspicuous consumption.

5. Conclusion

In today’s competitive environment, marketers need to develop effective marketing strategies to gain more market share. By understanding consumer behavior, it will be easier for marketer to fulfill customer need and want. On marketer side, conspicuous consumption is one of consumer behavior that gain marketers’ attention. By facilitating conspicuous consumption, marketer could get more sales revenue. The result of this research suggest that marketers need to arouse brand jealousy in order to generate more sales revenue through conspicuous consumption.

This research failed to show a moderation effect of materialism. The effect of brand jealousy on conspicuous consumption does not depend on how strong the materialism. On the other hand, materialism affected conspicuous consumption positively and significantly (t value = 3.940; sig < 0.05). Both, brand jealousy and materialism affected conspicuous consumption significantly. To succeed, marketers need to pay attention on the role of either brand jealousy or materialism or both of them simultaneously to boost sales revenue.

This research showed a significant effect of brand jealousy on conspicuous consumption. On the other hand, the prediction that materialism will moderate the effect of brand jealousy on conspicuous consumption was not supported. To enhance the generalizability, further research should consider exploring non student populations. Considering the vital role of brand jealousy on generating sales revenue, further research should also heavily investigate the antecedents of brand jealousy. Considering the result of this research shows materialism is not a moderator in this model, it will be fruitful to investigate further whether materialism is the mediator in this model.

References


How to Build Word of Mouth: The Role Brand Personality, Brand Love and Brand Loyalty

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Abstract. This research empirically tests the impact of five brand personality dimensions (sincerity, excitement, competence, sophistication and ruggedness) on brand love, store brand loyalty and positive word of mouth. We focused on online retailers in Indonesia. The proposed model is tested using structural equation modeling (SEM) from 398 collected respondents. +WOM is important to reduce marketing costs. The purpose of this study is to analyze whether the five dimensions of brand personality and brand love have a positive impact on store brand loyalty and positive word of mouth. The results demonstrated that three of five dimensions of brand personality namely ‘sincerity’, ‘competence’ and ‘sophistication’ have a positive impact on brand love and a mediated through store brand loyalty path to positive word of mouth. The effect of two dimensions brand personality on +WOM because brand love. So, this finding reinforces the importance of the brand love and brand personality construct to retail business.

Keywords: Word of Mouth, Brand Personality, Brand Love, Sincerity, Excitement, Competence, Sophistication, Ruggedness, Brand Loyalty.

1. Introduction

As a result of a survey conducted by the Indonesian Internet Service Provider Association, the growth of internet users from year to year experienced growth. In 2017 internet user penetration amounted to 143.26 millions of Indonesia's total population of 262 million people, namely 54.68 percent [1]. According to the internet usage data in the economic field, namely selling online at 16.83 percent, banking transactions at 17.04 percent, looking for employment at 26.19 percent, buying online at 32.19 percent, information buying 37.82 percent, helping jobs at 41.04 percent, and find a price of 45.14 percent. Related to the economic growth of the last 3 years that continues to experience growth, Gross Domestic Product in 2015 at 4.79 percent, in 2016 experienced a growth of 4.94 percent and in 2017 it reached 5.19 percent. This is a great opportunity for online retail entrepreneurs to develop online businesses [1].

The relationship between loyalty and profitability that has been studied theoretically stated that there is an important relationship, that is, i.e., developing and maintaining customer loyalty can affect the profitability of the company [2]. The study states that customer loyalty can affect profitability by increasing sales per customer and can reduce marketing costs [3].
Reduction in marketing costs can occur with the reason that the cost to maintain customer loyalty is less when compared to the cost of acquiring new customers. Customers can be said to be loyal not only by making repeat purchases but also actively involved in positive WOM towards the company [4].

The concept of branding in retail research has grown from "product as a brand" to "shop as a brand" (store brand), and then to "retailer as a brand" (retail brand) [5]. Furthermore, information technology that has experienced high progress has formed online retail (e-tailing) [6].

Consumers who have a love for a particular website / online store tend to buy substitute items if the items they are looking for are missing. This is what we can interpret as consumer loyalty. Consumer relations with brands that are built can affect the level of patronage and loyalty [7].

Previous research said that Positive Word of Mouth and Brand Loyalty could be generated from Brand Love [8]. Brand love is a relatively new conceptualization, has been considered as an antecedent of the desired post-purchase parameters such as positive word of mouth (+ WOM), brand loyalty, and active involvement [8], [9]. Brand love is also defined as the level of passionate, emotional attachment that consumers are satisfied with certain trade names [8].

2. Literature Review

2.1. Positive Word of Mouth (+WOM)

WOM is offline, and e-WOM is conceptualized as a consequence of brand love [8], [10]. Positive and negative statements made by customers either through offline or online channels can be understood as Word of Mouth (WOM).

There is a difference between offline and online eWOM; the difference is that offline WOM occurs more in the form of one-to-one, mostly spoken while e-WOM mostly occurs from written communication, and occurs in the form of one-to-one, one-to-many or many-to-many. E-WOM is more open to the ripple effect, and the control is easier for the company to do compared to offline WOM. In this research, the definition of Positive Word of Mouth is a good relation can provide a foundation for customers to communicate positive aspects of the brand to others.

2.2. Brand Personality

Brand personality is often used to measure intangible asset associations, proven to have benefits for academics and practitioners in explaining the consequences of the brand association [11].

The following are references in previous brand personality research called the Big 5 [12]. Identifies five dimensions of brand personality, namely sincerity, excitement, competence, sophistication, and ruggedness [12]. Sincerity is explained as an attribute that is simple, real and honest. Excitement is explained as an interesting, bold, imaginative and contemporary attribute. Competence is explained as a reliable, intelligent, safe and confident attribute. Sophistication is described as a glamorous, upscale, good-looking, and charming attribute. Ruggedness is explained as a hard, outdoorsy, and masculine attribute. This construct is defined as "the set of human characteristics associated with the brand".

There are only three comparable five-scale Aaker dimensions in the Big 5 namely (sincerity with agreeableness, excitement with extraversion, and competence with conscientiousness [12]. There are only three general dimensions, namely sincerity, excitement and sophistication that are universally relevant and generic for studies in Japan, Spain and the
United States [13]. In this study, the dimensions used are the five dimensions in order to learn the brand personality as a whole. In this research, the definition of brand personality is the human characteristics that have a relation to the brand.

2.3. Brand Love

Brand management considers brand love as one of the main goals because it is considered the most emotional relationship of consumer-brand relationships [14]. Consumer-brand relationship is a major change that occurs from transactional to relationship in the marketing paradigm [7].

Previous research states that there are several factors that makeup brand love. Involvement can function as a moderator [15]. Attitudes have a great effect on brand love, while affordability has little effect on brand love. Brand love for high-involved consumers is facilitated by subjective norms, while for consumers who are involved low the tendency of anthropomorphism will have a higher effect.

In some previous studies shows that brand love can truly be experienced by consumers [8], [10]. According to [7], [8], [10] many benefits resulting from consumer love for the brand, brand love can produce positive word of mouth, brand loyalty, an increase in the desire to pay premium prices. In this research, a definition of brand love is the emotionally bound and passionate level is found in the basic consumers of a particular trade name.

2.4. Store Brand Loyalty

Customer loyalty is related to internet shopping experience, this finding is consistent with several other studies which show that prices do not significantly influence online buyers and are more inclined to comfort [16].

In the loyalty literature, customer loyalty has two components, namely behavior and attitude [17]), which means repeated buying behavior can have a positive impact on the business. Consistent with other studies, loyalty does not only require repeated purchases but is positive about the company [4].

One of the goals of retailers is to have loyal customers. Customer satisfaction produces loyalty [18]. One important trend is the emergence of retailers as brands [19]. The company's reputation with a strong store image has its advantages which have an impact on customer satisfaction that produces store loyalty. In this research, the definition of store brand loyalty is the extent of consumer commitment to a brand [20].

3. Method

3.1. Hypothesis Development

The researcher tried to make a conceptual model regarding the relationship of the 5 dimensions of Brand Personality that could influence brand love, store brand loyalty and WOM.

The figure below shows the conceptual model of research.
The conceptual model described above is intended to explain that Brand Personality has five dimensions, namely sincerity, excitement, competence, sophistication, ruggedness as Independent Variables and brand love, +WOM, store brand loyalty as Dependent Variable. Most of the research related to brand love found brand loyalty and +WOM as a result of brand love [8].

In connection with the conceptual model of the study, this study will test 18 hypotheses. The following are the research hypotheses:

H1a: Sincerity positively affects Brand Love.
H1b: Sincerity positively affects + WOM.
H1c: Sincerity positively affects Store Brand Loyalty.
H2a: Excitement positively affects Brand Love.
H2b: Excitement positively affects + WOM.
H2c: Excitement positively affects Store Brand Loyalty.
H3a: Competence positively affects Brand Love.
H3b: Competence positively affects + WOM.
H3c: Competence positively affects Store Brand Loyalty.
H4a: Sophistication positively affects Brand Love.
H4b: Sophistication positively affects + WOM.
H4c: Sophistication positively affects Store Brand Loyalty.
H5a: Ruggedness positively affects Brand Love.
H5b: Ruggedness positively affects + WOM.
H5c: Ruggedness positively affects Store Brand Loyalty.
H6: Brand love positively affects Store Brand Loyalty.
H7: Brand love positively affects + WOM (Word of Mouth).
H8: Store brand loyalty affects + WOM (Word of Mouth).

3.2. Methodology

The method used to process the collected data is the Structural Equation Modeling (SEM) method with the Lisrel 8.70 program. In this research, to calculate each measurement model construct with factor analysis to measure each research construct by looking at indicators that
can be used. To see the compatibility and suitability of the results obtained in the previous stage, namely by using Confirmatory Factor Analysis. The significance in this study is $T$-Value $\geq 1.64$.

3.3. Measures and Instrument Design

In this study researchers used brand personalities from [12] as part of a large brand research. For brand love, researchers use a scale version of Roy et al. (2016) that adapted from [8]. Including two reasons in this election, the first was quite comprehensive in its investigation. Both [8] use brand loyalty constructs and + WOM in their research studies, which can be adjusted.

The item used as a store brand loyalty scale, researchers adapted from [21], as it was launched in Table 1. For + WOM using several versions adapted by [21] that adapted from [22].

The questionnaire question used by the researcher was a Likert scale in five level. Strength on a Likert scale is a questionnaire that is easily shared and understood [23]. The researcher designed a questionnaire given to respondents to meet the information needs needed. The questionnaire was compiled using a Likert scale structured question which had a very agreeable scale of choice until the scale strongly disagreed. Likert scale consisting of five points, ranging from “Strongly agree” to “Strongly disagree”.

To direct respondents to provide answers by choosing alternative answers provided, making it easier for respondents. The form of the question used is an open question. Survey and data collection questionnaire consist of five parts, namely: “Brand love”, “Store Brand loyalty”, “Positive word of mouth”, “Brand Personality”, “Demography”.

The method used in this study uses Maximum Likelihood. The lowest ratio of 5 respondents observed with a normal distribution where a latent variable has several indicators. Indicators in the study amounted to $44 \times 5 = 220$ [24]. So, the number of samples taken in this study at least 220 respondents. The number of respondents in this study were 398 respondents.

3.4. Results: Hypotheses testing using SEM

In order to test reliability and validity, the hypothesis shown in Figure 1 using SEM. The results of the analysis reported in Table 1 fit models are acceptable (CFI=0.99; GFI=0.87; RMSEA=0.053; SRMR = 0.043).

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Path</th>
<th>Std. estimation</th>
<th>$T$-Value</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1a</td>
<td>Sincerity $\rightarrow$ Brand Love</td>
<td>0.29</td>
<td>2.85</td>
<td>Hypothesis H1a is accepted.</td>
</tr>
<tr>
<td>H1b</td>
<td>Sincerity $\rightarrow$ +WOM</td>
<td>0.19</td>
<td>1.99</td>
<td>Hypothesis H1b is accepted.</td>
</tr>
<tr>
<td>H1c</td>
<td>Sincerity $\rightarrow$ Store Brand Loyalty</td>
<td>-0.055</td>
<td>-0.54</td>
<td>Hypothesis H1c is rejected.</td>
</tr>
<tr>
<td>H2a</td>
<td>Excitement $\rightarrow$ Brand Love</td>
<td>-0.15</td>
<td>-1.18</td>
<td>Hypothesis H2a is rejected.</td>
</tr>
<tr>
<td>Hypothesis</td>
<td>Direction</td>
<td>Coefficient</td>
<td>t-value</td>
<td>Conclusion</td>
</tr>
<tr>
<td>------------</td>
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<td>------------</td>
</tr>
<tr>
<td>H2b</td>
<td>Excitement $\rightarrow$ +WOM</td>
<td>0.20</td>
<td>1.79</td>
<td>Hypothesis H2b is accepted.</td>
</tr>
<tr>
<td>H2c</td>
<td>Excitement $\rightarrow$ Store Brand Loyalty</td>
<td>-0.056</td>
<td>-0.45</td>
<td>Hypothesis H2c is rejected.</td>
</tr>
<tr>
<td>H3a</td>
<td>Competence $\rightarrow$ Brand Love</td>
<td>0.3</td>
<td>3.37</td>
<td>Hypothesis H3a is accepted.</td>
</tr>
<tr>
<td>H3b</td>
<td>Competence $\rightarrow$ +WOM</td>
<td>-0.024</td>
<td>-0.28</td>
<td>Hypothesis H3b is rejected.</td>
</tr>
<tr>
<td>H3c</td>
<td>Competence $\rightarrow$ Store Brand Loyalty</td>
<td>0.24</td>
<td>2.7</td>
<td>Hypothesis H3c is accepted.</td>
</tr>
<tr>
<td>H4a</td>
<td>Sophistication $\rightarrow$ Brand Love</td>
<td>0.43</td>
<td>2.97</td>
<td>Hypothesis H4a is accepted.</td>
</tr>
<tr>
<td>H4b</td>
<td>Sophistication $\rightarrow$ +WOM</td>
<td>0.14</td>
<td>1.12</td>
<td>Hypothesis H4b is rejected.</td>
</tr>
<tr>
<td>H4c</td>
<td>Sophistication $\rightarrow$ Store Brand Loyalty</td>
<td>0.15</td>
<td>1.07</td>
<td>Hypothesis H4c is rejected.</td>
</tr>
<tr>
<td>H5a</td>
<td>Ruggedness $\rightarrow$ Brand Love</td>
<td>-0.12</td>
<td>-1.9</td>
<td>Hypothesis H5a is rejected.</td>
</tr>
<tr>
<td>H5b</td>
<td>Ruggedness $\rightarrow$ +WOM</td>
<td>0.0087</td>
<td>0.15</td>
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<tr>
<td>H5c</td>
<td>Ruggedness $\rightarrow$ Store Brand Loyalty</td>
<td>0.061</td>
<td>0.96</td>
<td>Hypothesis H5c is rejected.</td>
</tr>
<tr>
<td>H6</td>
<td>Brand Love $\rightarrow$ Store Brand Loyalty</td>
<td>0.51</td>
<td>7.37</td>
<td>Hypothesis H6 is accepted.</td>
</tr>
<tr>
<td>H7</td>
<td>Brand Love $\rightarrow$ +WOM</td>
<td>0.16</td>
<td>2.5</td>
<td>Hypothesis H7 is accepted.</td>
</tr>
<tr>
<td>H8</td>
<td>Store Brand Loyalty $\rightarrow$ +WOM</td>
<td>0.24</td>
<td>3.77</td>
<td>Hypothesis H8 is accepted.</td>
</tr>
</tbody>
</table>

4. Discussion

This study extends the application of brand personality and brand love to the online retail context and extents about the understanding of the ‘brand love’ and ‘brand personality’ construct. The first result in this study is to show that brand love can directly and indirectly positively effects to +WOM.

The second result, dimension of brand personality, namely sincerity, competence and sophistication have a positive effect on brand love, through brand store loyalty leads to +WOM. This shows that all three brand personality dimensions can have a positive effect on+WOM because of brand love. So, it is important to build brand love in retail businesses.

The third result is the brand personality dimension, namely sincerity and excitement, has a positive effect on +WOM directly. So that it can be concluded the importance of building a brand personality in the retail industry. This study shows that the brand personality dimension
can influence brand love, so it is important to be able to build a brand personality on a brand, related to the hedonic feeling that arises from the online shopping experience that consumers have so that it can lead to brand love.

This study tries to provide a basis for advancing the literature of ‘positive word of mouth’. This study tries to provide a basis for advancing the literature of ‘positive word of mouth’. Studies related to positive word of mouth have shown that store brand loyalty can build positive word of mouth [21]. The main theoretical implication of this research is the formation of a relationship between the two dimensions of brand personality and brand love. This extends the literature continued by Roy et al., (2016) which makes a call to test brand personality as an antecedent for brand love.

The results in this study indicate that the two dimensions of personality help in building positive word of mouth by passing path store loyalty to path to +WOM. However, the results also show that the presence of positive personality dimensions is not enough to produce +WOM and store brand loyalty directly. So that the presence of brand love is also needed in producing +WOM. Therefore, the desired parameters of consumer behavior can be influenced not only by developing a positive brand personality but also by equipping with the generation of emotions such as love of the brand.

4.1. Implication

The key managerial insight is that the dimensions of sincerity, competence and sophistication of brand personality are antecedents to brand love [21]. Previous studies have shown that brand relationships have used brand personality as a managerial tool [25]. This study studied five dimensions of brand personality, there are three dimensions that influence brand love, so the use of brand personalities is stronger because it demonstrates that the dimensions of brand personality are used to develop strong love-like relationships with customers. The store retailers can precisely project the personality of existing market leader retailers. This study suggests from the results of this fact, it is good for managers of online retail store brands to properly manage projectable personalities in order to achieve their business goals [26]. The finding of this study is the five brand personality dimensions given by [12] ruggedness do not affect positively to word of mouth, store brand loyalty and brand personality. The limitation of this study is the interpretation of indicator words from dimensions brand personality varies for each culture in each country. So, respondent has difficulty to understand the translation words in the dimensions of brand personality. Despite the fact that the interpretation of dimensional indicator words from brand personality varies among cultures in each country. Future studies should try to overcome this limitation by providing another indicator word that can be interpreted in the culture of each country to be studied.

References

Effectiveness of Strategic Learning to Improve Learning Outcomes

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Abstract. The learning outcomes of psychiatric nursing course is still low, it is caused by the difficulties of students to master the subjects of psychiatric nursing which commonly abstract or unclear. The aim of this study is to know the effectiveness of strategic learning to improve learning outcomes. This research uses quasi experimental method with nonequivalent-groups posttest-only design. The result of this research is Ho rejected which is proved by the students learning outcomes of psychiatric nursing who are taught by PBL learning strategy is higher.

Keywords: Learning strategic, PBL, CL, learning outcomes.

1. Introduction

One's success in education is determined by internal and external factors. Internal factors are factors that come from within the individual itself, such as the level of intelligence, emotion, psychological state, and others. External factors are factors that come from outside the individual, such as the environment, family environment, community environment, and school environment, educational infrastructure, and learning motivation. The success of learners in learning is shown by learning outcomes. Student learning outcomes are closely related to learning strategies used by educators in classroom learning activities. Learning outcomes are the outcomes that have been achieved by someone who has worked on a learning process. The success of learning is a change in the ability of learning activities that are increased in nature compared with previous capabilities. The success of learning or learning outcomes is the result achieved by someone who has worked on a series of teaching and learning processes or mastery of knowledge and skills that are usually manifested in the form of test.

There are many learning strategies that can be applied to manage good teaching and learning process such as Problem Based Learning (PBL) and Cooperative Learning (CL). PBL, is a learning strategy that uses real problems as a context so that learners can learn to think critically in performing problem solving shown to acquire knowledge or essential concepts from the subject matter. PBL learning strategies with a Student Center Learning approach that is suitable for use in Nursing learning, especially the Psychiatric Nursing course. In addition to achieve learning objectives, the learning strategy produces critical thinking competencies in problem solving, the ability to communicate, express opinions and respect the opinions of others, and be able to cooperate in teams. Cooperative learning (CL) is an instructional approach using small groups where the students work together to maximize their learning. Educators give the information in the same direction to the students and after the educators explain the learning materials, the students will be asked to discuss about the
materials by creating small groups. The information not only obtained from educators but from discussion with their own groups. Competence is an important competence to have by a nurse, especially nurses who will overcome mental health problems. The use of appropriate learning strategies is expected to improve student learning outcomes.

The learning outcomes of the subject of Psychiatric Nursing are still classified as low, this is because students' difficulties to master psychiatric nursing material that is considered abstract or unclear. The average value of the Middle Semester Test of Psychiatric Nursing subjects obtained by students of the fourth semester of academic year 2016/2017, is 52.33 in STIKes Yarsi Pontianak.

The use of learning strategies in some of the lessons of Psychiatric Nursing course still uses a strategy that focuses on how lecturers teach, although the Ners curriculum of AIPNI (Association of Indonesian Ners Education Institutions) has authorized the use of the Student Center Learning approach. The task of educators in this case, to develop appropriate learning strategies so that students can receive and understand the abstract lecture material becomes more real.

Nursing education is expected to answer the challenge to the demands of nurse professionalism, where the educational process seeks to utilize a variety of learning strategies. Based on the phenomenon that has been described above, it is necessary to do research about the effectiveness of strategic learning to improve learning outcomes.

2. Literature Review
2.1. Learning Outcomes

Being, with human learning acquiring skills, abilities so that an attitude is formed and knowledge increases. So learning outcomes are a tangible result achieved by students in an effort to master physical and spiritual skills in school which is realized in the form of report cards in each semester. To know the progress to where the results have been achieved by someone in learning, it must be evaluated. To determine the progress achieved, there must be a criterion (benchmark) that refers to the goals that have been determined so that it can be known how much influence the teaching and learning strategy on student learning success.

Learning outcomes is the achievement of learning achieved by students in the process of teaching and learning activities by bringing a change and the formation of a person's behavior. To state that a learning process can be said to succeed, every teacher has their respective views in line with his philosophy. But to equate perceptions we should be guided by the current curriculum that has been refined, among others, that a teaching and learning process of a learning material is declared successful if the purpose of learning in particular can be achieved.

To find out whether or not a specific learning goal is achieved, the teacher needs to hold a formative test in each of which presents a discussion to students. This formative assessment is to find out how far students have mastered the specific learning goals to be achieved. The function of this study is to provide feedback to teachers in order to improve teaching and learning process and implement remedial programs for students who have not succeeded. Therefore, a teaching and learning process is declared successful if the results meet the specific learning objectives of the material.

To find out whether or not a specific learning goal is achieved, the teacher needs to hold a formative test in each of which presents a discussion to students. This formative assessment is to find out how far students have mastered the specific learning goals to be achieved. The function of this study is to provide feedback to teachers in order to improve teaching and learning process and implement remedial programs for students who have not succeeded.
Learning outcomes are statements of what a learner is expected to know, understand and be able to demonstrate after completion of a process of learning. [1] says that: learning outcomes focus on what the student has achieved rather than merely focussing on the content of what has been taught. Cowan says: …as a term, learning outcome covers the desired outcomes that student expect from participating in any particular program of higher education [2].

Furthermore, [2]. There are multiple reasons for defining a learning outcome of a study program: (1) it shows to students what competencies they are expected to develop during their studies, (2) it shows to future employers what they can expect when they employ a graduate, (3) it shows to teachers what competence development they have to facilitate in their curriculum, (4) it shows to faculties on which dimensions they can measure student achievements in their study programs.

Learning outcomes specify behaviors and clarify what performance you are willing to accept as evidence that the student has achieved the objective [3]. Learning outcome could also be described as the transformation that happened to student as the result of learning progress. Learning outcome is an intact unit in student itself. In terms, learning outcome includes the result that wanted to be achieved by the student from their participation in joining certain learning program.

2.2. Learning Outcomes on Psychiatric Nursing Courses

Nurse profession education is a profession that produce professional nurse graduate, who has manner and ability in the nursing field that obtained through implementing education curriculum with variety of learning experience, such as learning experience in the classroom, laboratory, and clinical and field experience which are equipped by learning facilities that can support the goal of learning.

The nursing education program is a nursing higher education that produces skilled nursing graduates, has attitudes and abilities in the field of nursing obtained through the application of an educational curriculum with various forms of learning experience, including classroom, laboratory, clinical and field experience, equipped with learning facilities that support the achievement of learning objectives. Structuring the situation and learning conditions need to be optimized for learners to master the science and tips of nursing, fostering the attitude and ability to perform professional nursing care. To support the situation and conditions of learning, the nursing education should develop a curriculum oriented to science, technology and community needs, described in the form of competence.

The achievement of learning is achieved through studies arranged into courses. The course of psychiatric nursing as one of the subjects that support the achievement of the competence of nursing education graduate, discusses the concept of mental health, mental health problems in the mental health ranges to mental disorders, and emphasis on primary, secondary and tertiary mental health prevention efforts. The target of handling is aimed at the client with the problem of biopsychosocial-spiritual adaptation and mental disorder using nursing process approach through therapeutic communication as well as the mastery of information technology and various modalities therapy. According to [3], the graduate profile of nurse program are: 1) care provider, 2) communicator, 3) educator and health promotor, 4) manager and leader and 5) researcher. The learning experience of the psychiatric nursing course is gained through the experience of lecture study, case review, simulation, role play, individual assignment, and clinical practice aimed at improving students' understanding and clinical skills in providing mental nursing care. Moreover, individual characteristics such as intelligence, cognitive styles, and personality play an important role in learning and instruction.
as does the context of learning. Other research findings have shown that individual students’ characteristics variables such as motivational orientations, self-esteem and learning approaches are important factors influencing academic achievements [4]. It is essential that teachers continually assess how well students are understanding the material being taught and adjust subsequent instruction to better meet students’ needs [5]. Nowadays, nursing education is more likely to be focused on encouraging students who will become nurses to be able to think critically and they are expected to have the ability to solve problems by making decision efficiently. In nursing education, if outcomes are to be the qualifiers that define the curriculum design and ultimately the educational model for graduates, then the phase of defining outcomes within the curriculum is where the curriculum developers will ensure that the outcomes are clearly identified, defined, and integrated with the outcomes of the professional licensing body [6].

[7] also reveal that nursing students’ competency is the individual experiences, dynamic process, and positive interactive social and beneficial changes in the equality of one’s professional life which causes meta-cognitive abilities, touch reality, motivation, decision making, job involvement, professional authority, self-confidence, knowledge and professional skills, in which are included the five factors of “nursing process,” “caring,” “professionalism,” “communities,” and “diversity.” Besides, [8] states clinical competence is an important outcome in nursing education. Evaluating clinical eligibility and indicating factors affecting it may be helpful in promoting the quality and effectiveness of nursing education. Refer to [9], in nursing education, an environment should be created where students begin to operationalize a process of thinking that is derived from classroom learning, from practice experiences, and from what they think about when they care for patients.

The mastery of nursing care in variety of behavioral disruption that has been determined as the nurse competence in the AIPNI curriculum (2015), involving the ability to master nursing care to the patients with: 1) the risk of violent behavior, 2) hallucinatory, 3) social isolation, 4) chronic low self-esteem, 5) deficit of self-care, 6) delusion and 7) risk of suicide.

2.3. Problem Based Learning (PBL)

PBL is a cognitive strategy that begins by confronting learners on real, authentic or simulated problems. According to Barell, PBL can be defined as an inquiry that resolves question, curiosities, doubt and uncertainty that invite or needs some kinds of resolution [10]. [11] say that as… in PBL, cases and scenarios are used to promote problem solving through group interaction and analysis. The PBL model is one of the learning models born in 1966 in the medical faculty of McMaster University of Canada. Until now Problem Based Learning has spread especially in the world of nursing, construction, engineering, business and education. The PBL model is a learning that begins by confronting learners on a problem. Problem Based Learning focuses more on solving authentic problems such as problems that occur in everyday life [12]. According to [13], the characteristics of PBL are 5, namely: (1) the problem must be related to the curriculum, (2) the problem is unstructured, the solution is not single, and the process is gradual, (3) the problem-solving student and the teacher of the facilitator, (4) students are only given guidance to identify problems and are not formulated to solve problems, and (5) authentic performance-based assessments. In contrast to [14], who pointed out that PBL characteristics are 3 points, namely (1) lessons focus on solving problems, (2) responsibility for solving student-centered problems, and (3) teachers supporting the process as students work on problems.

[15], stated: Problem-based courses start with problems rather than with exposition of disciplinary knowledge. They move students towards the acquisition of knowledge and skills
through a staged sequence of problems presented in context, together with associated learning materials and support from teachers. [16] states: "we proposed eight principles from across 11 theories of teaching and learning that can inform how PBL is operationalised in university-based health professional education: 1) Adult learners are independent and self-directed; 2) Adult learners are goal oriented and internally motivated; 3) Learning is most effective when it is applicable to practice; 4) Cognitive processes support learning; 5) Learning is active and requires active engagement; 6) Interaction between learners supports learning; 7) Activation of prior knowledge and experience supports learning; and 8) Elaboration and reflection supports learning. These eight principles provide the foundation for curriculum design recommendations relevant to PBL within university-based education programs. Specifically, our findings suggest that active engagement and interactions should be encouraged, that students should be prompted to activate their prior knowledge and experiences, and that elaboration and reflection on learning is critical.”

2.4. Cooperative Learning

Cooperative learning is a learning strategy arranged in small groups by noticing the diversity of the students so that the students learn to work together and solve a problem by social interaction with their peers. It gives them chance to learn something better in the same time and she/he will become the informant. CL becomes a learning model that used to realizing the learning that centered on the students. CL is a strategy to overcome the problems that found to make the students who can not work with others become more active. This learning strategy can use in different subjects and different ages. Cooperative learning is an instructional approach that uses small groups in which students work together to maximize their own and others’ learning. Collaborative learning emphasizes teamwork and takes advantage of peer tutoring. Collaborative learning experiences can be added to many teaching units [17].

Furthermore, [18] say that cooperative learning is process driven, i.e. those involved in a social process and have to pay attention to that process in order for them to achieve their desired end point. The aim of cooperative learning strategy are: 1) to enhance academic learning outcome. Despite there are many aims in the cooperative learning method, but the main target is to create the learning process becomes more effective and efficient so that it can increase student learning outcome, 2) to teach students to accept distinctions and diversity. Cooperative learning train the students to give their ideas and think together so that bringing out variety of ideas that have to be concluded for mutual goal. Thereby, there is a dependence between one student and others, 3) to develop social skills. Cooperative learning involves the interaction between students so that it can enhance their social skills.

3. Method

This research use quasi experiment. This research aims to examine the effectiveness of independent variable (PBL and CL strategies) toward dependent variable (learning outcome on psychiatric nursing). This research use nonequivalent posttest only design, by comparing learning outcomes of two groups which has been given different treatments. The first group as the experiment group given problem-based learning strategy, and the second group as the control group given cooperative learning strategy as the treatment. The sample is selected by random sampling technique, with the total of 62 students, divided into 30 as the samples of experimental group and 32 as the control group.

This research is started by preparing the learning device program of psychiatric nursing using PBL and CL learning strategy approach. The instrument that must be prepared is
question to test the competence of the students. The activity in the preparation step is
continued with validity and reliability tests.

The activity in research implementation is giving the treatments to the experimental and
control groups. The treatment that were given is doing PBL and CL learning strategies in the
learning activities in psychiatric nursing. This treatments were given in two different
institutions, each of them gave 14 times of treatment. The evaluation is done to assess the
learning outcome of psychiatric nursing students who have been given the treatments. It was
conducted at the end of the learning. The evaluation tool used to assess the learning outcome
of psychiatric nursing course is multiple choice question consisting 36 questions. After the
data has been gathered, it analized to test data description, analysis requirement and
hypothesis.

4. Result

The data of the learning outcomes of the psychiatric nursing course on students who were
taught with PBL strategies were the test scores obtained by students after being taught with
PBL strategies. Based on the table above, of the 36 multiple choice questions given to
students, the highest score was 33 and the lowest score was 18. The average score of the data
was 24.37 and variance 16.77. Based on these data can be presented in the table of frequency
distribution list:

<table>
<thead>
<tr>
<th>Interval</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 -20</td>
<td>7</td>
</tr>
<tr>
<td>21 – 23</td>
<td>7</td>
</tr>
<tr>
<td>24 - 26</td>
<td>7</td>
</tr>
<tr>
<td>27 – 29</td>
<td>5</td>
</tr>
<tr>
<td>30 – 32</td>
<td>3</td>
</tr>
<tr>
<td>33 - 35</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>30</td>
</tr>
</tbody>
</table>

Based on the list of frequency distribution of student learning outcomes in table 1 above,
to clarify the distribution of data on student learning outcomes in psychiatric nursing courses
that are taught with PBL learning can be presented in the form of the following histogram:

![Histogram Data of Learning Outcomes of Course Psychiatric Nursing Students Who Are Taught by PBL Strategies.](image-url)
Based on the histogram above, it can be seen that the average data of 70% is located at intervals of 18-27. Thus there are 21 students or 70% of the number of students who obtain learning outcomes around the average and there is 1 student or 3.33% who get learning outcomes above average.

The data of the learning outcomes of the psychiatric nursing course on students who were taught with CL strategies were the test scores obtained by students after being taught with CL strategies. Based on the table below, of the 36 multiple choice questions given to students, the highest score was 28 and the lowest score was 18. The average score of the data was 22.53 and variance 7.56. Based on these data can be presented in the table of frequency distribution list:

<table>
<thead>
<tr>
<th>Interval</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 – 19</td>
<td>6</td>
</tr>
<tr>
<td>20 – 21</td>
<td>7</td>
</tr>
<tr>
<td>22 – 23</td>
<td>5</td>
</tr>
<tr>
<td>24 – 25</td>
<td>9</td>
</tr>
<tr>
<td>26 – 27</td>
<td>4</td>
</tr>
<tr>
<td>28 - 29</td>
<td>1</td>
</tr>
<tr>
<td>Jumlah</td>
<td>32</td>
</tr>
</tbody>
</table>

Based on the list of frequency distribution of student learning outcomes in table 2 above, to clarify the distribution of data on student learning outcomes in psychiatric nursing courses that are taught with CL learning can be presented in the form of the following histogram:

4.1. Normality Test

Normality test using Shapiro Wilk test with the significance level 5%, the significance score that obtained is > 0.05, 0.380 of experimental group and 0.123 of control group so that the data is normally distributed.

4.2. Hypothesis Test

The hypothesis test uses Independent T Test, with significance level 5%. The significance 2 tailed score is 0.045, so it can be concluded that the students learning outcome
of psychiatric nursing course who were taught by PBL strategy is higher than the students learning outcome who were taught by CL strategy.

5. Discussion

The result of data analysis represented that student learning outcome of psychiatric nursing course who were taught by PBL strategy is higher than students learning outcome who were taught by CL strategy, the PBL score is 23.83 and CL score is 21.84. Thereby, there is an influence using learning strategy toward learning outcome of psychiatric nursing. The distinction of PBL and CL strategies is not so many diverse because both are equal. Besides, the result is obtained by student’s test result which the test result will be associated with test questions. It is also stated by Barell, he defines PBL as an investigation that can accomplish question, curiosity, hesitation and uncertainty or something that invite or require some solutions.

Barrows also explained that PBL strategy is a learning strategy based on the principle that problems can be used as a starting point to get or integrate new knowledge. This means that in PBL learning strategies encourage students to know how to learn and work together in groups to find solutions to problems in the real world. By using the PBL approach students do not just receive information from the teacher, because in this case the teacher is a motivator and facilitator who directs students to be actively involved in the entire learning process by starting with problems related to the concepts learned. This is supported by Boud & Fetteli's statement that PBL brings students towards acquiring knowledge and skills through a series of gradual problems presented in context, together with learning material and support from teachers.

The results of Fan-Hao Chou and Chi-Chun Chin's research where PBL can foster critical thinking skills and lifelong learning in students. However, this is a challenge for the faculty of nursing and students, because this method focuses on integrating course content and emphasizing small group interaction. Teachers are the key to changing the curriculum. To understand the barriers and results of new teaching-learning methods, this study explores the perceptions and impacts of nursing nursing in applying PBL to undergraduate programs and nursing programs using qualitative research designs.

PBL is used to stimulate high-level thinking with problem-oriented situations, including learning how to learn. Boud & Fetteli stated that problem-based learning begins with problems and not by exposition of disciplinary knowledge. PBL brings students towards acquiring knowledge and skills through a series of gradual problems presented in context, along with learning material and teacher support. To support the ongoing interaction of students with the environment and / or with themselves, the new knowledge presented should be related to students' initial knowledge so that a meaningful understanding of students is built.

Hers and Sear state that cooperative learning is a learning approach that use small group where students work together to maximize their and others learning. Cooperative learning emphasizes team work and utilizes peer guidance. Collaborative learning experience can be added to variety of teaching units. Collaborative learning seems influencing better when the learning goals involving students analysis toward system problem. While Agarwal and Nagar declare that cooperative learning is encouraged by process, they who involve in social process and need to notice about the process in order to achieve their targets. Cooperative learning provides a chance for students who have different backgrounds and conditions to work dependently because of their tasks and using the structure of cooperative appreciation, learning to respect each other.
This statement is supported by a research of Nayereh Baghchelhi et all, with the result finding prove that cooperative learning is an effective method to enhance student’s communication skill particularly in interactive skill and follow up sub-scalla problem; thus it is recommended to increase the participation of nursing student to communicate their argument by applying active learning method that can provide opportunity to enhance communication skill.

Other relevant research is a research conducted by Hamdan, et all. The research finding indicates a significant distinction of all post and pre test score over three years of learning in nursing using PBL method. The application of PBL method can be more expanded by creative and innovative approach in the process of student learning. Positive experience of PBL method makes nursing education can utilize the value in the planning of teaching and learning activity particularly in nursing education.

6. Conclusion
The students learning outcome of psychiatric nursing course who were taught by PBL strategy is higher than the students learning outcome who were taught by CL strategy.

References


The Impact of ASEAN’s Rice Trade Barriers on Indonesian Food (Rice) Security

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Abstract. In this research, we analysis the impact of ASEAN’s rice trade barrier, through tariff and non-tariff measures (NTMs), on Indonesian food (rice) security. To assess whether tariff and NTMs of rice across countries in ASEAN region, Gravity Model and Global Trade Analysis Project (GTAP) Model were applied. All data came from World Bank, Comtrade, World Integrated Trade Solution (WITS), Centre d’Études Prospectives et d’Informations Internationales (CEPII), International Labor Organization (ILO), and GTAPAgg version 9.0. The result of NTMs calculation from Gravity Model and also data of ASEAN Trade in Goods Agreement (ATIGA) schedule as agreement were injected to GTAP Model, to examine the impact of ASEAN’s rice trade barrier on Indonesian food (rice) security. A standard GTAP Model was aggregated by 19 sectors and 16 countries/regions. This research showed that (a) imposing ASEAN’s rice trade barrier lead to negative effect on Indonesian food (rice) security, (b) comparing between ASEAN’s rice NTMs and ATIGA, previous one has higher negative effect on Indonesia food (rice) security, and (c) there is trade-off between ASEAN’s rice trade barrier and trade liberalization policy. The government should be careful to impose rice trade barrier as temporary policy to boost rice domestic production.

Keywords: Tariff, NTMs, ASEAN, Rice, Food Security.

1. Introduction

Food security is a complex issue connected with food trade. Food trade is a critical part of the food security. Food trade is seen as an opportunity to build and/or maintain national food security, through resource re-allocation efficiently and increasing food access [1]. But the other perspective sees it as a threat to stimulate food price fluctuation incident and high food dependency over another country. This debate has happened until today. Then, should we go on, that food trade is still a good option deal with national food security?

However, for trade to improve food security for the greatest number of people, greater international cooperation is necessary [2]. Negotiating trade deals is often difficult, include Doha Round of World Trade Organization (WTO) trade talks began in 2001. The goal is to lower trade barriers, but progress has been slow. There are major differences interesting between rich and developing nations. According to Bezuneh and Yiheyis (2014: 64), for three decades many developing countries have tried to liberalize their food trade but still have low food security level. Now, no wonder many countries still impose food trade barriers. If generally tariff policy is prohibited as WTO commitment, then non-tariff measures (NTMs) become new face as food trade barrier. WTO allows the application of NTMs in particular circumstances. Some expert said that NTMs may effect worse off than tariff barrier. And tariff elimination alone does not create an open market [3].
This research focuses in the ASEAN region as a representative of food trade dynamics when multilateral trade agreements are still difficult compared to regional ones. Under the goal of the ASEAN Economic Community (AEC), creating a single market and production base are the central themes of the free flow of goods, services, investment, skilled labour as well as freer flow of capital. The AEC’s most significant accomplishment to date lies with the removal of tariff barriers. Information sharing initiatives and the harmonisation of technical and regulatory standards have gained traction, whilst groundwork provided by the rules of origin (ROO) and NTMs has paved the way for future action. Whilst import duties between the ASEAN-6 have been virtually eliminated, it should be noted that tariff reductions for CLMV countries are still underway and have been given a deadline in 2018. ASEAN nations face issues with the common classification of NTMs, which in turn has impeded the rollback and halting of NTMs. Institutional fragmentation has also played a large part in hindering progress.

But the global food crisis in 2007/2008 has given evidence of how each ASEAN country deals with integration purposes as regional food solidarity and national food security, particularly rice. Rice is a major food staple because of 60 percent as calories intake in daily diet menu. Therefore, most of them, including Indonesia, have responded by retreat to autarchy over regional trade liberalization agenda.

Based on Food Act No. 18/2012 give mandate to Indonesia government that domestic food (rice) demand should be fulfilled by self-sufficiency as priority option and by import as third option. [6] warned that government intervenes national food security through rice self-sufficiency program with producer incentive bias. Until now, domestic rice price is still more expensive than other ASEAN countries and the other side rice import always makes “rowdy” year to year. This study tries to analyze the impact of ASEAN’s rice trade barrier on Indonesian food security.

2. Method

This research used two models, namely Gravity Model and Global Trade Analysis Project (GTAP) Model. For elaborating rice trade barriers, we employed ASEAN Trade in Goods Agreement (ATIGA) schedule for rice tariff as it is and rice NTMs with calculate it via residual approach. Pseudo Poisson Maximum Likelihood (PPML) method was used to handle zero trade flows and also in the presence of heteroscedasticity [7]. NTMs approach based on residual, as practiced by [8], [9]. It is assumed that difference between actual and potential trade flows of the country implies trade barriers. The potential trade flows can be obtained from Gravity estimation. The value of tariff equivalent is very sensitive to the value of elasticity of substitution (\( \sigma \)). This study uses value of elasticity from the GTAP database. This approach has been used in a number of estimations of Gravity equations, such as [10], [11].

And the final form of Gravity specification is presented in equation (1), where the sub-index i and j refer to the exporter and importer country, respectively, whilst t refers to the year:

\[
M_{ijt} = \alpha + \beta_1 \text{lngdpod}_{it} + \beta_2 \text{lnlmtro}_{it} \\
+ \beta_3 \text{lincm}_{ijt} + \beta_4 \text{lpo}_{it} + \beta_5 \text{lpd}_{jt} \\
+ \beta_6 \text{lslb}_{it} + \beta_7 \text{hsean} + \epsilon
\]  

Where:

- \( M_{ijt} \): imports of country j from country i (million USD).
- \( \text{lngdpod}_{it} \): ratio between GDP of origin with GDP of destination country (million USD)
- \( \text{lnlmtro}_{it} \): log of trade openness of the origin country.
- \( \text{lincm}_{ijt} \): log of the inverse of the distance between the countries.
dis_{it} : distance between the capital cities of the importing and exporting country (km), the data are obtained from CEPII.

mtro_{it} : import tariffs imposed by importing country j (percent).

incm_{it} : income per capita between origin and destination country.

po_{it}, pd_{it} : composite price indices in country i and j was proxied by consumer prices index (2000=100), the data are compiled from International Monetary Fund (IMF).

das_{it} : dummy ASEAN.

β : parameter estimation.

Ε : error term.

The second model is GTAP Model. GTAP Model represented regional trade level with its instrument. All specification is standard GTAP model with 19 sectors and 16 countries/regions and running with software RunGTAP 3.61. The basic of that countries/regions aggregation is related with this research topic in ASEAN region. Particularly, data of Myanmar and East Timor are not available in GTAPAgg data. Detail countries/regions aggregation is showed in Appendix 1 and 2. Result running data from Gravity Model was injected to GTAP Model.

Secondary data was used to adjust, construct, and also run those models. Data for running Gravity Model came from World Bank, Comtrade, World Integrated Trade Solution (WITS), International Monetary Fund (IMF), International Labor Organization (ILO), and Centre d'Études Prospectives et d'Informations Internationales (CEPII). And data for running GTAP Model come from GTAPAgg 9.0 [12].

3. Result

3.1. ASEAN Trade Barrier

Since 1967, several key agreements and actions were adopted in an effort to remove trade barriers and facilitate trade, namely (1) The ASEAN Free Trade Area (AFTA) was signed in 1992, the AFTA detailed the implementation of a Common Effective Preferential Tariff (CEPT) scheme. This applied a 0-5 percent tariff rate to goods traded between ASEAN member states, (2) the AEC Blueprint year 2015 was adopted in 2007, the blueprint outlined strategic measures and also delineated a definitive timeline for the CEPT scheme to be implemented, which further enhanced AFTA, and (3) ATIGA was ratified in 2009, ATIGA expanded on both the [3]. ATIGA also formalized the self-certification and ASEAN Single Window (ASW) concepts for trade facilitation and information sharing [4].
Significant progress has been made in tariff elimination. Pursuant to the commitments made in the AFTA in 1992, and later in the ATIGA in 2010, Member States have eliminated import duties among themselves by 2010 for the ASEAN-6 (Brunei Darussalam, Indonesia, Malaysia, Philippines, Singapore and Thailand), and by 2015 with flexibility to 2018, for the CLMV. To date (Figure 1), the ASEAN-6 has virtually eliminated their intra-regional tariffs with 99.2 percent of tariff lines at 0 percent. For the CLMV, the figure stands at 90.86 percent giving an ASEAN average of 95.99 percent[3].

ASEAN member countries have made significant progress in the lowering of intra-regional tariffs. The fact that tariff liberalisation alone has generally been proven insufficient in providing genuine regional economic integration for many developing countries has drawn further attention to NTMs, of which the WTO disciplines are comparatively weak. The use of NTMs, especially complex technical, sanitary and phytosanitary (SPS) measures, has increased significantly. As the average tariff rates of ASEAN countries decreased from 8.9 percent in 2000 to 4.5 percent in 2015, the number of NTMs had increased from 1,634 measures to 5,975 measures over the same period. The increase of NTMs was notable not only in ASEAN but also around the world, particularly, between 2008 and 2011. The total number of NTMs in the 10 ASEAN countries was 5,975 measures in 2015 of which 33.2 percent of total measures were in the form of SPS, 43.1 percent were Technical Barriers to Trade (TBT), 12.8 percent were export measures, and the rest of 10.9 percent were in the form of various measures [13].

Based on ASEAN.org data, we can see deeply the ASEAN’s rice NTMs, especially HS 1006 (rice in the husk, husked (brown) rice, semi-milled or wholly milled rice—whether or not polished, and broken rice). Those data are shown in Table 1, but some country has no enough complete data.

3.2. Gravity Model Estimation and Calculating NTMs

Table 1. ASEAN’s Rice NTMs

<table>
<thead>
<tr>
<th>No.</th>
<th>Country</th>
<th>NTMs Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Indonesia</td>
<td>Monopolistic measures-single</td>
<td>Imports of rice and other basic materials</td>
</tr>
<tr>
<td>Country</td>
<td>Import Licensing Type</td>
<td>Import Requirements</td>
<td></td>
</tr>
<tr>
<td>-------------------------</td>
<td>--------------------------------------------</td>
<td>--------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Brunei Darussalam</td>
<td>Technical regulation</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Cambodia</td>
<td>(No data)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Lao</td>
<td>Automatic import licensing</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Malaysia</td>
<td>Import control and single channel for import (only BERNAS which is State Trading Enterprise)</td>
<td>Products can only be imported by BERNAS which may from time to time impose some quantitative restriction measures for price stabilization purpose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Certificate of approval and Technical regulations</td>
<td>That the import is accompanied by a certificate</td>
<td></td>
</tr>
<tr>
<td>Myanmar</td>
<td>(No data)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Philippines</td>
<td>(No data)</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Singapore</td>
<td>Non-automatic licensing</td>
<td>Imports of rice are regulated through non automatic import licensing for price stability reasons. Licenses for importing rice are divided into 2 categories: Stockpile licenses to ensure that importers stockpile minimum quantities of certain types of rice, while ordinary licenses for other rice varieties</td>
<td></td>
</tr>
<tr>
<td>Thailand</td>
<td>TRQ and import license</td>
<td>Imports are subject to the TRQ that committed under the WTO, with an objective to secure local farmers’ income. Import license is required by the Department Foreign and Trade (DFT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Standard requirement and Inspection requirement</td>
<td>Imports should be accompanied with Phytosanitary certificate and are subject to inspect at the port of entry under Plant Quarantine Act. They must also meet required quality and standard</td>
<td></td>
</tr>
<tr>
<td>Vietnam</td>
<td>(No data)</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Based on RESET calculation, PPML method was robust for estimating Gravity Model. The RESET test value is 1.13 and it is higher than probability value of Chi2 (= 0.2874). Besides being consistent in the presence of heteroscedasticity, this method also provides a natural way to deal with zero values of the dependent variable [7]. Import as dependent variables have some zero value because of not all country occurs rice trade.

In order to see whether all variables can explain the model, the R2 value is needed. R2 value is 0.989 shows that overall model can be explained by its variables 98.9 percent. And in order to see whether each variable can influence the dependent variable, it is able to be checked from z value comparing with prob. value (significant level). There are 3 (three) variables statistically influence rice import, namely ratio GDP Indonesia and trading partner, distance, and dummy ASEAN as member country. Elaborate of its estimated parameter from Gravity equation didn’t do because of Gravity Model only as intermediate calculation process to get rice NTMs.
The result of tariff equivalents of rice NTMs is presented in Table 2. The country of being used as a benchmark in the tariff equivalence calculation is Singapore against rest of the world. They have the relative low difference value between trade actual and trade potential or we can say that both of them have the small trade barrier or trade restriction in rice.

The value of tariff equivalence on rice NTMs are vary between countries, from 3.43 percent until 41.76 percent. The highest value is Brunei Darussalam and the lowest value is Japan. In Brunei Darussalam, Elizabeth explain there are 58 NTMs regulations containing NTMs, but only 2 (two) that have been notified to the World Trade Organization (WTO), namely the Public Health (Food) Regulations and the Halal Meat Rules. The total number of coded NTMs is 516, affecting 5,613 products (HS code) or 56.6 percent of the total products traded in Brunei, included food.

Various types of NTMs and product specific NTMs are practiced by Japan, which are tariff quota, state trading, and state procurement which are imposed mainly on tobacco, raw sugar and cereal products. [14] said among the countries studied, NTMs coverage for agricultural products is highest in India and followed by Japan. But in this research, Japan relatively has low NTMs value, particular in rice. As reported from [15] research indeed Japan has low until moderate level of NTMs, namely in regulatory philosophy, TBT, SPS, state of information, transport infrastructure, administrative burdens, and consistency of enforcement, exception in level of protectionism. The result maybe is difference because the approach used is deference too.

The staple products, including rice, are some of the most contentious products traded across commodities. The presence of specific government agencies that oversee rice in some economies speaks to how critical grains are to national interests. Similar to fresh produce, the products often need to meet strict SPS and TBT regulations that may go beyond what is necessary to protect consumers. The risk of spoilage is typically lower. On the other hand, many grain traders are charged with purchasing buffer stock or acquiring special import licenses, which carry their own administrative and logistical burdens. While the risk might be comparatively lower, this category typically calls for additional procedures for a business to successfully trade [15].

<table>
<thead>
<tr>
<th>No.</th>
<th>Region</th>
<th>Country</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>ASEAN</td>
<td>Brunei Darussalam</td>
<td>41.76</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Indonesia</td>
<td>26.07</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cambodia</td>
<td>33.75</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lao</td>
<td>10.22</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Malaysia</td>
<td>11.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Philippines</td>
<td>20.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Singapore</td>
<td>8.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Thailand</td>
<td>34.09</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Viet Nam</td>
<td>33.24</td>
</tr>
<tr>
<td>2.</td>
<td>Middle and East Asia</td>
<td>China</td>
<td>21.39</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Japan</td>
<td>3.43</td>
</tr>
<tr>
<td></td>
<td></td>
<td>South Korea</td>
<td>33.63</td>
</tr>
<tr>
<td>3.</td>
<td>South Asia</td>
<td></td>
<td>25.03</td>
</tr>
<tr>
<td>4.</td>
<td>Sub-Saharan Africa</td>
<td></td>
<td>23.30</td>
</tr>
<tr>
<td>5.</td>
<td>Middle East Asia</td>
<td></td>
<td>26.48</td>
</tr>
</tbody>
</table>
Indonesian rice trade opened is relative low level and that value is average range where another ASEAN member country applied. Even Indonesia’s value is relatively lower then with rice NTMs of Thailand and Vietnam, as main rice exporter country. Thailand’s major NTMs are related to import license, technical measures, and quantity control.

3.3. Impact of ASEAN’s Rice Trade Barrier on Indonesian Food (Rice) Security

Table 3 presented the impact of ASEAN’s rice trade barriers on Indonesian food (rice) security. There is 3 (three) scenario simulations, namely imposing ASEAN’s rice NTMs, imposing ATIGA as tariff in rice, and fully rice trade liberalization as controlling scenario.

Table 3. The Impact of ASEAN’s Rice Trade Barrier on Indonesian Food (Rice) Security

<table>
<thead>
<tr>
<th>No.</th>
<th>Simulation</th>
<th>Availability</th>
<th>Utility</th>
<th>Accessibility</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Production</td>
<td>Export</td>
<td>Import</td>
</tr>
<tr>
<td>1.</td>
<td>Imposing NTMs</td>
<td>2.995</td>
<td>59.605</td>
<td>-32.808</td>
</tr>
<tr>
<td>2.</td>
<td>Imposing ATIGA</td>
<td>2.756</td>
<td>50.281</td>
<td>-29.116</td>
</tr>
<tr>
<td>3.</td>
<td>Trade Liberalization</td>
<td>-1.027</td>
<td>-13.184</td>
<td>12.430</td>
</tr>
</tbody>
</table>

When ASEAN’s rice NTMs is imposed, it will make Indonesian food (rice) security become worse off. Rice availability declines because of rice import goes down and a little bit raise in domestic rice production. In terms of rice utilization also declines when rice prices increases. Rice NTMs will add costs and stimulate increase in rice price, so finally rice accessibility will decline. If we compare with imposing ATIGA, then the impact on Indonesian food (rice) security is relatively better than imposing NTMs. It is happened because of NTMs are hard to assess. Different to tariff, which are transparent and accessible via each countries’ custom authority, NTMs are often much more hidden [16].

A country with a relatively higher number of measures does not mean it is relatively more protectionist than others. Even if a country has a relatively higher number of percentage of affected products to total products, it does not necessarily mean it will have relatively lower trade than the others. It doesn’t mean that all NTMs are benign. Many regulations are poorly designed, failing to protect the public while unnecessarily complicating business. There are several reasons for this. First, the governments know little about incentives and even less about how to design market-based regulations, confusing effective with cumbersome. Second, regulations are often enforced in punitive ways, reflecting the anti-business culture of many
administrations. Third, NTMs typically span the competencies of several ministries, with no coordination mechanisms to make the necessary trade-offs [13].

Beside both of ASEAN’s rice trade barrier, we have tried to compare it with control simulation, which is ASEAN’s rice trade fully liberalized. And the result showed that this scenario actually makes Indonesian food (rice) security will be better off that rice availability, rice utility, and rice accessibility improving. But, what needs to be noted here is that simulation 3 pushes to decrease domestic rice production. This is not surprising because Indonesian rice does not have comparative advantage in international market [17].

These conditions are becoming more complicated because of the divergent opinions. Some people views the success of food security is measured by the achievement food (rice) self-sufficiency only and others see the success should be assessed by the achievement food (rice) availability. This is in accordance with the basic explanation by Food and Agriculture Organization (FAO)[18], related to food policy each country in the world are faced with options, namely (1) food self-sufficiency and (2) food self-reliance or “food availability” or food trade.

4. Conclusion
ASEAN’s rice trade barrier, through tariff or NTMs, has negative effect on Indonesian food (rice) security. This result become an important point how to deal with the rice protectionism that precisely hurt who we protect. While imposing ATIGA and NTMs also stimulate increasing domestic rice production even though in minor.

When we compare it with ASEAN’s rice trade liberalization, it will make Indonesian food (rice) security better off. In the other hand, increasing rice availability as one of food security indicator, is supported by increasing rice import. So it will be a hot issue that can be neglected.

There is trade-off between imposing rice trade barrier and fully rice trade liberalization policy. The government should be careful when imposing rice trade barriers as temporary policy to stimulate rice self-sufficiency. However, rice trade liberalization in ASEAN has a potential option to support national food security.

References


Population, Unemployment and Poverty: A Population Analysis in East Java Indonesia

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Abstract. The aim of this study was to analyze (1) the influence of Population Growth Rate, Economic Growth, Inflation and Investment Rate on Open Unemployment Rate, (2) the effect of Population Growth Rate, Economic Growth, Inflation Rate, Investment on poverty level indirectly through Open Unemployment Rate. The analysis used is path analysis. The results of the study (1) The rate of population growth has a negative and significant effect on economic growth; (2) Economic growth has a positive and significant effect on the inflation rate; (3) The level of inflation has a negative and significant effect on investment; (4) The rate of population growth has a negative and significant effect on the Open Unemployment Rate; (5) Economic growth has a negative and significant effect on the Open Unemployment Rate; (6) Inflation rate has a positive and significant effect on the Open Unemployment Rate; (7) Investment has a positive and significant effect on the Open Unemployment Rate; (8) The number of Open Unemployment has a positive and significant effect on the Poverty Level.

Keywords: Rate of Population Growth, Economic Growth, Rate of Inflation, Investment, Unemployment, Poverty.

1. Introduction
Indonesia’s economic growth in general and especially East Java Province is influenced by several factors including investment and labor factors. Research on economics generally states that poverty reduction is closely related to economic growth. Basically, economic growth is the main requirement in alleviating poverty, and the second is that economic growth is pro-poor [1]; [2].

Development of an area can be seen from the level of economic growth in the region, income and level of welfare of the population of the area. The amount of unemployment in an area is a factor that indicates that the regional economic growth is not good [3]. One important indicator in economic growth is population growth. The greater the population, the more labor
is used. With the increasing population, it will also increase population problems that must be faced by a country or region [3].

The main problem that must be faced by a country or region that experiences rapid population growth is to increase the number of unemployed. Unemployment occurs because the labor force is more than the demand for labor [4]. The long-run elasticity and Granger causality were investigated under framework of VECM [5]. The result suggested a positive and statistically significant impact of energy consumption and population growth on unemployment. The Granger causality result suggested bidirectional causality between unemployment and FDI, and population and energy use. The study suggested some policy implications based on our empirical result [5].

Many reasons have been attributed as to why population growth is on the rise and how it proportionately affect unemployment. The major reason for a rise in population include increase in birth rate, socio-culture beliefs and improvement in welfare and medical facilities [6], [7]. Although the positive effects of population cannot be overlooked, it is also important to note that its negative effects highly outweigh its positives. When there is high population, the country tends to exceed its carrying capacity, which means that the country can no longer support its large population in term of resources as well as job opportunities [6]. The problem of unemployment is very alarming and demands urgent attention and solutions as its effects are very severe. Some of effect include; increasing in income inequality, rise in criminal activities like Boko-Haram and decline in the general standard of living [6].

Economic growth has a very small influence on the level of poverty directly [2]. This condition causes unemployment to arise. The problem of unemployment is very disturbing and requires important attention in the demand and the solutions that influence it. Some of the influences include: increasing income inequality, the emergence of criminal acts such as Booko-Haram, and decreasing living standards in general [6]. Poverty is a serious problem faced by countries in the world today. The number of poor people in Indonesia in 2007 in urban areas was 12.57% and in rural areas 20.37% [8]. Therefore, poverty is the main agenda in development in each country [9].

In Indonesia, the agricultural sector has an important role in reducing poverty compared to urban areas. The agricultural sector remains the key and the leading sector in reducing poverty in the aggregate, because the greatest poverty is in rural areas [10]. Poverty can also be linked to income distribution, substitution of effects, trade-offs [11]. Urban poverty reduction can be done through industrial sector empowerment, while in rural areas through the agricultural sector [10]. Another strategy in poverty alleviation is through the existence of the labor market implicitly, but also in general [12].

There is a close relationship between economic growth, population growth, inflation, investment and unemployment to the poverty rate in the world. The development of the Human Development Index (HDI) has increased with the medium HDI category during the period 2006-2009 in Central Java. Poverty has a negative influence on HDI, economic growth and capital expenditure have a positive effect on IPM [13].

This study attempts to analyze (1) the influence of population growth, economic growth, inflation and investment rates on open unemployment in East Java, (2) the influence of population growth, economic growth, inflation, investment and poverty levels through the rate of open unemployment in Java East.

2. Method

The data used in this study is secondary and the data analysis method used is path analysis, because this study focuses on the effect of population growth rates and
unemployment rates on poverty levels. The conceptual framework of this study is shown in figure 1 below:

Based on Figure 1, the purpose of this study is to analyze: 1. the influence of LPP, PE, TI and I on APT; 2. the influence of APT on TK; The path analysis modeling formula is as follows:

1. $X_2 = \beta_1 X_1$  
2. $X_3 = \beta_2 X_2$  
3. $X_4 = \beta_3 X_3$  
4. $Y_1 = \beta_4 X_1$  
5. $Y_1 = \beta_5 X_2$  
6. $Y_1 = \beta_6 X_3$  
7. $Y_1 = \beta_7 X_4$  
8. $Y_1 = \beta_8 X_1 + \beta_9 X_2 + \beta_10 X_3 + \beta_11 X_4$  
9. $Y_2 = \beta_12 Y_1$  

Fig. 1. Conceptual Framework.

Caption:
Hypothesis:
1. It is suspected that there is a positive and significant influence between the Population Growth Rate and Economic Growth.
2. It is suspected that there is a positive and significant influence between Economic Growth and Inflation Rate.
3. It is suspected that there is a positive and significant influence between the Inflation and Investment Levels.
4. It is assumed that there is a positive and significant influence between the Population Growth Rate and the Open Unemployment Rate,
5. It is suspected that there is a positive and significant influence between Economic Growth and the Open Unemployment Rate,
6. It is suspected that there is a positive and significant influence between the Inflation Rate and the Open Unemployment Rate,
7. It is suspected that there is a positive and significant influence between the Inflation Rate and the Open Unemployment Rate,
8. It is suspected that there is a positive and significant influence between the Open Unemployment Rate and the Poverty Level.

3. Result
The results of testing the linearity assumption of path analysis for Figure 1 are shown in Table 1 below:

Table 1. Testing of linearity assumptions.

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Test Result (α=0.05)</th>
<th>Inform</th>
</tr>
</thead>
<tbody>
<tr>
<td>LPP (X1)</td>
<td>PE (X2)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>PE (X2)</td>
<td>TI (X3)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>TI (X3)</td>
<td>I (X4)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>LPP (X1)</td>
<td>APT (Y1)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>PE (X2)</td>
<td>APT (Y1)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>TI (X3)</td>
<td>APT (Y1)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>I (X4)</td>
<td>APT (Y1)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
<tr>
<td>APT (Y1)</td>
<td>TK (Y2)</td>
<td>Semua model signifikan</td>
<td>Linear</td>
</tr>
</tbody>
</table>

Source: Secondary Data and Processed

Table 1 shows that all forms of relationships between the independent and dependent variables contained in the structural model are linear. Thus the assumption of linearity in the path analysis is fulfilled.

Based on the results of path analysis calculations, two indicators are used to determine the validity of the model, namely: 1. The total coefficient of determination shows the R2 value of 0.9370 or 93.70% of the diversity of data can be explained by the model and the remaining
6.30% by other variables not in the model. The result of theory trimming, the paths that are significant are discarded so that the model is supported by empirical data with the that the model is supported by empirical data with the results shown in Figure 2 below.

Figure 2 shows that of the six variables used in this study it turns out that all variables have a significant effect. This means that by using path analysis that the problem of population, unemployment and poverty in East Java can provide evidence of the influence both directly and indirectly.

Figure 2 also explains that of the 9 hypotheses proposed in this study, all were accepted. The accepted hypothesis is indicated by a path that has a coefficient number of 0.05.

Hypothesis testing is done by using the t test (t test) partially to the coefficient of direct influence. T test is used, want to know the effect of each independent variable in the form of Population Growth Rate (X1), Economic Growth (X2), Inflation Rate (X3), Investment (X4) and Open Unemployment Rate (Y1) on Poverty Rate (Y2). The results of the research hypothesis testing are shown in Table 2 below:

**Table 2. Path Coefficient and Hypothesis Testing Results**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
<th>Path Coef</th>
<th>P value</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population Growth Rate</td>
<td>Economic growth</td>
<td>-0.607</td>
<td>0.031</td>
<td>Significant</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Inflation rate</td>
<td>0.042</td>
<td>0.023</td>
<td>Significant</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>Investment</td>
<td>-0.383</td>
<td>0.045</td>
<td>Significant</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>Open Unemployment Rate</td>
<td>-0.177</td>
<td>0.034</td>
<td>Significant</td>
</tr>
<tr>
<td>------------------------</td>
<td>------------------------</td>
<td>--------</td>
<td>-------</td>
<td>-------------</td>
</tr>
<tr>
<td>Economic growth</td>
<td>Open Unemployment Rate</td>
<td>-0.141</td>
<td>0.049</td>
<td>Significant</td>
</tr>
<tr>
<td>Inflation rate</td>
<td>Open Unemployment Rate</td>
<td>0.204</td>
<td>0.041</td>
<td>Significant</td>
</tr>
<tr>
<td>Investment</td>
<td>Open Unemployment Rate</td>
<td>0.110</td>
<td>0.027</td>
<td>Significant</td>
</tr>
<tr>
<td>Open Unemployment Rate</td>
<td>Poverty level</td>
<td>0.891</td>
<td>0.001</td>
<td>Significant</td>
</tr>
</tbody>
</table>

Based on the results of path analysis as listed in Table 2, the results of hypothesis testing are obtained as follows:

1. The rate of population growth has a negative and significant effect on economic growth, with a coefficient value of -0.607 and a value of \( p = 0.031 \). This means rejecting hypothesis 1 which states that the rate of population growth has a positive and significant effect on economic growth.

2. Economic growth has a positive and significant effect on the inflation rate, with a coefficient of 0.042 and a value of \( p = 0.023 \). This means accepting hypothesis 2 which states that Economic Growth has a positive and significant effect on the Inflation Rate.

3. Inflation rate has a negative and significant effect on investment, with a coefficient value of -0.338 and a value of \( p = 0.045 \). This means that rejecting hypothesis 3 states that the inflation rate has a positive and significant effect on investment.

4. The rate of population growth has a negative and significant effect on the Open Unemployment Rate, with a coefficient value of -0.177 and a value of \( p = 0.034 \). This means rejecting hypothesis 4 which states that the rate of population growth has a positive and significant effect on the Open Unemployment Rate.

5. Economic growth has a negative and significant effect on the Open Unemployment Rate, with a coefficient value of -0.141 and \( p = 0.049 \). This means that rejecting hypothesis 5 states that Economic Growth has a positive and significant effect on the Open Unemployment Rate.

6. Inflation rate of 0.204 and a value of \( p = 0.041 \). This means that accepting hypothesis 6 which states that the Inflation Rate has a positive and significant effect on the Open Unemployment Rate.

7. Investment has a positive and significant effect on the Open Unemployment Rate, with a coefficient value of 0.110 and a value of \( p = 0.027 \). This means accepting hypothesis 7 which states that investment has a positive and significant effect on the Open Unemployment Rate.

8. The Open Unemployment Rate has a positive and significant effect on the Poverty Level, with a coefficient of 0.891 and a value of \( p = 0.001 \). This means that accepting hypothesis...
8 which states the Open Unemployment Rate has a positive and significant effect on the Poverty Level.

4. Discussion
The results of the study are as follows:
1. The population growth rate has a negative and significant effect on economic growth. The results of this study are not agree with the research [3], [5], [14], [15].
2. Economic growth has an effect on the inflation rate positively and significantly. The results of this study are agree with the research [13], [6]
3. Inflation rate has a negative and significant effect on investment. The results of this study are agree with the research [1], [2], [4]
4. The rate of population growth has a negative and significant effect on the unemployment rate (APT). The results of this study are agree with the research [4], [16].
5. Economic growth has a negative and significant effect on APT. The results of this study are agree with the research [5], [6], [17].
6. Inflation rate has a positive and significant effect on APT. The results of this study are agree with the research [13].
7. Investment has a positive and significant effect on APT. The results of this study are agree with the research [2], [4], [5].
8. Population Growth Rate, Economic Growth, Inflation Rate and Investment positively and significantly affect APT. The results of the study are agree with the research [1], [3], [6], [18], [19]
9. APT has a positive and significant effect on the Poverty Rate (TK). The results of this study are agree with the research [2], [6], [11], [12].

From the results of path analysis it can be concluded that the variables LPP, PE, TI, have a significant effect on APT, this means that in East Java there can be no problems with the increase in population, because increasing population will cause a reduction in open unemployment and this influence significant. The most important research result is the number of Open Unemployment has a positive and significant effect on the level of poverty.

This indicates that if the APT continues to increase each year, the poverty rate will continue to increase every year. This is what should be the main concern of the East Java Provincial Government. The policies issued by the East Java Provincial Government should be directly related to the reduction of open unemployment rates. One of the causes of increasing APT from year to year is the number of elementary, junior high, high school and PT graduates who have not worked, not to mention the termination of employment and work systems that use the contract system.

5. Conclusion
Population Growth Rate, Economic Growth, Inflation and Investment Levels directly significantly influence the Open Unemployment Rate (APT) and indirectly have a significant effect on the Poverty Rate (TK). Although the Population Growth Rate and Economic Growth negatively affect the Open Unemployment Rate. This indicates that the conditions of population, economic growth and employment in East Java in particular and in Indonesia are generally stable. This is evidenced by the results of research by other researchers [2], [13], [16], [17]. Whereas the Open Unemployment Rate directly has a significant effect on the Poverty Level, this condition generally applies in accordance with the prevailing theory that the unemployment rate will affect the poverty level [1], [15], [7].
The results of this study recommend to the government of East Java Province in particular and Indonesia in general (1) so as not only to pay attention to the rate of population growth, economic growth and open unemployment, but also to improve programs and controls on population growth, economic growth, inflation, investment problems of unemployment and poverty. (2) in policy making must be in favor of policies relating to employment (work system), abolition of the contract system, employment / business, and prices of basic necessities.

The limitation of this study is that this study 1) was only carried out in one province in Indonesia, 2) using time series secondary data which are not panel data, 3) time series data used for only 10 years.

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References


The Impact of IFRS Adoption on Relationship between Analyst Coverage and Earnings Management in ASEAN 5

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Abstract. This research aims to give empirical evidence to prove whether the adoption of IFRS affect the relationship between analyst coverage and earnings management. This research includes 4 years period data sample on companies in ASEAN 5 countries (Singapore, Malaysia, Philippines, Indonesia and Thailand). The result shows that (1) analyst coverage can curbs earnings management behavior in both types of earnings management. This demonstrates the ability of the analyst in the external mechanisms of corporate governance. (2) IFRS adoption can curbs earnings management through above-the-line items (ALIEM), but had no significant effect on earnings management through below-the-line items (BLIEM). (3) Contrary to expectations, there is no difference in the effect of analyst coverage on both types of earnings management in the period before and after the adoption of IFRS. This may be due to financial analysts have better skills and more resources, when compared to other users in the use of the financial statements. In conclusion, without the adoption of IFRS, the analyst can use their analysis capabilities in using and understanding the financial statements.

Keywords: IFRS Adoption; Analyst Coverage; Financial Analyst; Earnings Management; Corporate Governance

1. Introduction

Yu (2008) reveals that there are two effects that might occur from the influence of analyst coverage on earnings management, these effects are: monitoring effect (curbing earnings management) and pressure effect (stimulate earnings management). In monitoring effect, analyst coverage is believed to have been watching the movement of the performance of the company's financial statements. This will have an impact on the management of the limited opportunities to make profits on the company's management. The previous study had much to prove this[1][2][3] In addition, analysts also published an analysis of the business prospects of companies associated with corporate earnings that could lead management to meet or exceed the analysis published by the analysts[1][2][4] This will put pressure on management and lead
to earnings management behavior or referred to by pressure effect.

The effects arising from analyst coverage is highly dependent on the level of detection of the earnings management [5]. When an earnings management is easier to detect, the effects that tend to arise from analyst coverage is monitoring effect. Conversely, when earnings management is more difficult to detect, the effects that are likely to arise from the analyst coverage is the pressure effect.

Earnings management can be categorized into two types, namely ALIEM (Above-the-Line Items Earnings Management) and BLIEM (Below-the-Line Items Earnings Management). ALIEM is more difficult to detect because it is a reflection of the normal activities of the company's business with a number of related information are many and complex. While BLIEM is easier to detect, because it is a reflection of abnormal activity of business (exceptional items) of companies with related information, which are limited and easy to find.[5] found that analyst coverage is negatively related to BLIEM proving the monitoring effect and the effect was also found that analyst coverage is positively related to ALIEM proving the pressure effect. But in other studies, particularly for ALIEM, many found that analyst coverage has a negative impact on ALIEM [1][2][3][6] The emergence of these two effects, both monitoring or pressure, which occurs as a result of the level of analyst coverage on ALIEM, shows that there are other factors that can affect the level of earnings management detectability. [5] found that the level of earnings management detectability can be influenced by the information environment within the jurisdiction of the country where the company is located and the adoption of IFRS.[5] found that the adoption of IFRS may increase the detectability of earnings management in the enterprise by improving the quality and comparability of financial statements. Increased detectability of earnings management practices lead to increased scrutiny from analysts and analysts are becoming more capable in detecting earnings management practices, so that it can be concluded that the adoption of IFRS had a negative correlation with earnings management practices. Increased detectability of earnings management due to the adoption of IFRS will have an effect on improving the detection of financial analysts on earnings management that will strengthen or weaken the effect of monitoring pressure effect. However, [5] only found a negative relationship in BLIEM, where the adoption of IFRS may strengthen the monitoring effect of analyst coverage on earnings management. Instead, it was found that the adoption of IFRS can trigger ALIEM types of earnings management practices, or in other words increases the pressure effect especially in countries with unfavorable information environment.

This study refers to the study of [5] that is related with earnings management detectability, the level of analyst coverage, and the impact of the adoption of IFRS. Adoption of IFRS which became moderating variables of analyst coverage and the level of earnings management for the first time performed by [5] After all the literature study conducted, this study is the second study on the topic. ASEAN 5 (Singapore, Malaysia, the Philippines, Indonesia and Thailand) is chosen as the research object because of market developments and prospects of high investment will lead to increased earnings management in companies in the ASEAN 5, so it is necessary to study the things that will have an impact on the earnings management. The study period is a period of 2 years before and 2 years after the adoption of IFRS in each country. This study is expected to explain the differences in the conditions before and after the adoption of IFRS.

2. Hypothesis Development

Agency problem occurs because of differences in the interests between the principal (shareholders) and the agent (management). Because the preparation of financial statements
Conducted entirely by the management, they may undertake certain methods in financial reporting (earnings management) in order to achieve incentive and bonuses. Analysts proven capable of performing detection against the biased behavior of management and minimize the level of agency costs in the company through its role in the external mechanism of corporate governance and engagement of private information. Analysts’ activities that continuously carried out in making an evaluation and forecast of the company, making the analysts monitoring function on earnings management becomes more effective. So that when the number of analysts increased, monitoring function will become more effective and earnings management practices will decrease. Previous research has proved this and revealed that analyst coverage had monitoring the effect on earnings management in the company.

Recent studies in China found that the monitoring effect only occurs on the BLIEM type. While the effects on analyst coverage on ALIEM type is pressure effect. The argument of these studies is, when a country’s information environment is not good, has weak level of investor protection and lack of transparency in reporting, level of earnings management detectability will be reduced and analyst coverage will be less effective and may trigger profit management. This can happen through the analysis of earnings forecast which will add pressure to the management of the company to meet or exceed the earnings forecast issued by financial analysts and stimulate management to manage earnings in the company. All three of these conditions can increase the chances of the management to the accrual method or replacement method in applying accounting earnings management. Therefore, the impact of analyst coverage against ALIEM can be hypothesized two directions, both monitoring effect or pressure effect:

\[
H1a = \text{level of analyst coverage will affect ALIEM.}
\]

Besides through ALIEM, the company can also perform earnings management through BLIEM. BLIEM is more easily detected because it is associated with abnormal activity of the company's business information is slight and limited. Found that the high level of analyst coverage can reduce earnings management practices through BLIEM. This is due to the high level of earnings management detectability of BLIEM types that makes it easy to detect analyst practices related to BLIEM. This conclude the second (a) hypothesis of this study:

\[
H2a = \text{level of analyst coverage negatively affects BLIEM.}
\]

Information asymmetry occurs as a result of the agency relationship between management and shareholders and between management and investors. IASB created IFRS with the aim to improve the quality and comparability of financial reporting among countries so the quality is better when compared to local standards. Ball (2006) revealed that the adoption of IFRS is able to improve the transparency of information and minimize information asymmetry of information on financial accounting and reporting standards of a country. This is because IFRS requires the preparers of financial statements to give disclosures of accounting information is more informative and use of fair value measurements in financial statements. Found that it would reduce the earnings management behavior in the management of the company. Empirical studies related to the adoption of IFRS in some countries also found that the adoption of IFRS can improve the quality of financial reporting through reduced levels of discretionary accruals. Based on this literature exposure, the first (b) and second (b) hypothesis of
this study are:

**H1b** = Adoption of IFRS negatively affect the ALIEM.
**H2b** = Adoption of IFRS negatively affect the BLIEM.

Analyst coverage not only can suppress the behavior of earnings management, but can also increase earnings management behavior. The emergence of the effect of the analyst coverage is highly dependent on the environmental conditions of information in a country[5]. When transparency is low and lead to bad environmental information, management will get the opportunity to do a profit management. Adoption of IFRS conducted by the ASEAN 5 both gradual and direct, namely Indonesia (2011), Malaysia (2005), Singapore (2003), Philippines (2005), Thailand (2014), is expected to increase transparency and improve the information environment in the country. This will increase earnings management detectability in ASEAN and the level of earnings management both on ALIEM and BLIEM can be pressured [14][15] Adoption of IFRS will further enhance the ability of analyst coverage in detecting earnings management in the company. Improving the ability of analyst coverage in detecting earnings management can be in the form of an increase or decrease pressure monitoring effect. It can be presumed that the adoption of IFRS can strengthen or weaken the effect of monitoring and pressure effect of analyst coverage on the level of earnings management both on ALIEM and BLIEM. Therefore, the third and fourth hypothesis of this study are:

**H3** = Negative effect (positive) of analyst coverage on ALIEM are higher (lower) in the period after the adoption of IFRS compared with the period before the adoption of IFRS.

**H4** = Adoption of IFRS reinforce negative relationship between level of analyst coverage with level of BLIEM.

### 3. Research Design

The period of this research is two years before and two years after the adoption of IFRS in each country to explain the differences in the conditions between before and after IFRS adoption. The sample used in this study are all publicly held companies with the exception of the financial industry that is consistently registered in the capital markets (excluding financial industry) at the time of the research period in each of sampled country. The research data is secondary data collected from various sources, namely Thomson Reuters DataStream and Thomson Reuters Eikon contained in the Economics and Business Data Center FEB UI. There are 2 models in this study, model 1 is used to test the hypothesis 1a, 2a, 1b and 2b. While model 2 is used to test hypothesis 3 and 4. The models are shown below:

**Model 1**

\[
EM_{(1,2)} = \gamma_0 + \gamma_1 ACOV_{it} + \gamma_2 PB_{it} + \gamma_3 ROA_{it} + \gamma_4 GWTH_{it} + \gamma_5 CFVO_{it} + \gamma_6 EFAC_{it} + \gamma_7 MARV_{it} + \gamma_8 IFRS + \gamma_9 RGDP_{it} + \gamma_{10} CNTR_{it} + \epsilon_i
\]

**Model 2**

\[
EM_{(1,2)} = \delta_0 + \delta_1 ACOV_{it} + \delta_2 PB_{it} + \delta_3 ROA_{it} + \delta_4 GWTH_{it} + \delta_5 CFVO_{it} + \delta_6 EFAC_{it} + \delta_7 MARV_{it} + \delta_8 IFRS + \delta_9 RGDP_{it} + \delta_{10} IFRS*ACOV_{it} + \delta_{11} CNTR_{it} + \epsilon_i
\]

Where for company i: \( EM_1 = ALIEM \) = level of Above-the-Line Items Earnings
Management (ALIEM) with discretionary accruals using the model of Dechow, et al. (1995) to test hypothesis 1a, 2a and 3; EM2 = BLIEM = level of Below-the-Line Items Earnings Management (BLIEM) with Industry-median-adjusted using the model of Chen and Yuan (2004) to test hypothesis 1b, 2b and 4; ACOV = level of analyst coverage measured in three different ways; IFRS*ACOV = IFRS moderating variables multiplied by analyst coverage; PB = price-to-book ratio i in year t; ROA = return on asset i in year t; GWTH = growth rate of firm i in year t; CFVO = company’s cash volatility measured by the standard deviation of cash flow over three years and scaled by lagged assets; EFAC = funding of equity and debt scaled by total assets at year t; MARV = the natural logarithm of the market value i in year t; IFRS = dummy variable that is 1 for the years that have adopted IFRS, 0 for otherwise; RGDP = country level of real GDP growth rate i in year t; CNTR = country level dummy

ALIEM measures the value of discretionary accruals. While BLIEM measures industry-median-adjusted BLIEM. In the model, the values of discretionary accruals (ALIEM) were calculated using Jones Model that has been modified based on research [16][17] model will be used to measure industry-median-adjusted BLIEM, i.e. the absolute value of the profit before tax reduced by income from operating activities and scaled by lagged assets. Analyst coverage is the independent variable and will be calculated with three proxies. The first measurement is variable ACOV by calculating the natural logarithm of the total analysts who follow the company in a given year plus one. The second measurement (ARES) is measured by calculating the residual value of analyst coverage model[18]. The analyst coverage model shown below:

\[
\text{Analyst coverage} = \text{firm size} + \text{past performance} + \text{growth} + \text{external financing activities} + \text{cash flow volatilities} + \text{year dummies}
\]

Analyst Coverage is natural logarithm of the total analysts who follow the company plus one. Firm size measured by natural logarithm of company’s market value, past performance is measured from the lagged ROA, growth measured by growth of total assets, external financing activities measured by the cash flow from financing activities divided by total assets, cash flow volatilities calculated by the standard deviation of cash flows companies from all over the sample period divided by lagged assets. As for the third measurement is variable ADUM that measured by treating analyst coverage to be a dummy variable. Where the value of 1 (one) will be given if the company followed by one or more analysts in a given year and the value 0 (zero) will be provided on the opposite condition.

In the fourth model of the research hypotheses, moderating variables to be tested is IFRS. This variable is a dummy variable that indicates the year of adoption of IFRS in each country. This variable is 1 for the years that have adopted IFRS are mandatory, and 0 for the year has not been the adoption of IFRS.

4. Results

Regression result shows that variable ACOV in model 1, has a coefficient of -0.0032 indicates that the level of analyst coverage had a negative relationship with ALIEM. Variable ACOV has a p-value of 0.019 or less than \( \alpha = 5\% \), which indicates that the level of analyst coverage has a significant negative effect ALIEM. With these results, hypothesis 1a is accepted. It is proved that the effect on the level of analyst coverage on ALIEM. These results are consistent with previous studies about the negative influence the level of analyst coverage on earnings management of discretionary accruals [10][3][4] Existing literature states that high
level of analyst coverage makes the information environment to improve and reduce the information asymmetry [8] [19]. Better capability, when compared with the shareholders and the board of commissioners as the internal mechanisms of corporate governance, making the effects of the financial analysts as a watchdog of corporate performance more effective and capable of limiting the deviant behavior of management in financial reporting. These results remained consistent at another proxy level, ARES and ADUM.

Model 1 is also used to test the hypothesis 1b, namely adoption of IFRS negatively affect the ALIEM. Regression result shows that the IFRS has a coefficient of -0.0055. This shows that companies that have adopted IFRS have lower level of ALIEM, when compared to the period when company has not adopted IFRS. Variable IFRS has a p-value of 0.012 or less than $\alpha = 5\%$. This shows that the rate of adoption of IFRS have a negative influence significantly to the level of ALIEM. With these results, hypothesis 1b is accepted. Lower level of ALIEM when company adopted IFRS proves that IFRS adoption negatively affect ALIEM. These results are consistent with previous studies on the negative effects of adoption of IFRS on earnings management discretionary accruals [5] [12] [13]. IFRS is a principle-based standard. Extensive disclosure level in the adoption of IFRS on local accounting standards is a thing that could explain the negative impact of the adoption of IFRS to ALIEM. This led to increased level of transparency of information and increase the availability of information from the company in a country. These conditions will encourage the improvement of information environment in a country. [5] found that good information environment will improve detectability of earnings management. This earnings management becomes more detectable because adequate disclosure so that the evaluation of performance and financial companies were able to do better. In addition, the adoption of IFRS will lead to a limitation of alternative / choice of accounting methods and requires substantive economic reflection in accounting measurements. This would reduce the likelihood of earnings management practices undertaken by managers. These results remained consistent in other proxies, ARES and ADUM.

Regression result shows that ACOV variable in model 2 has a coefficient of -0.0015. This indicates that the level of analyst coverage had a negative relationship with BLIEM. Variable ACOV has a p-value of 0.055 or less than $\alpha = 10\%$. This indicates that the level of analyst coverage has a significant negative effect on BLIEM. With these results, hypothesis 2a cannot be rejected. This proves that the level of analyst coverage negatively affects BLIEM. These results are consistent with [5] about the negative influence of the level of analyst coverage on the real earnings management. In his research in China, [5] found that the effect of the financial analysts on BLIEM is monitoring effect. Wherein if the level of financial analysts increased, then the level of real earnings management or BLIEM will wane. BLIEM which is real earnings management, categorized as earnings management with a high level of detectability. Therefore, the analyst will easily detect their real earnings management. This simplicity will reduce the tendency of management to manage earnings in below the line item. These results remained consistent in other proxies, ARES and ADUM.

Hypothesis 1b testing result also shows that IFRS can reduce ALIEM through increased transparency of information and earnings management detectability, but this does not affect the relationship between the analyst and ALIEM. [5] found the same thing on China. Financial analysts have characteristics and a better ability to use financial statements when compared to other users. In addition, analysts have privileges than other users of financial statements, which interact with the management before they issue earnings forecasts. Analysts will be given the chance to ask company executives about large coverage information that related to the company,
such as abnormal changes in the sales and financial ratios crucial. In addition, analysts have many channels to disseminate information about the company that has their analysis. This excess can make the adoption of IFRS can be less influential on the analysis done by analysts. [8] argue that information intermediaries such as financial analysts and rating agencies was instrumental in producing private information and can detect biased behavior management in financial reporting. It also confirms that the financial analysts can reduce management behavior such as fraud and earnings management in financial reporting. In addition, the study only covers periods of 2 years subsequent to the adoption of IFRS could also be the cause of hypothesis 3 rejection. This is because this period is not long enough to see the effect of adopting IFRS on the users of the financial statements, which in this study is the financial analyst. Hypothesis test results are consistent with other proxy measurements of analyst coverage, ARES and ADUM.

Regression result also shows that the variable IFRS*ACOV on model 4 as a variable interaction between IFRS and ACOV of research has a coefficient of -0.0003. This shows that the adoption of IFRS reinforce the positive effects of analyst coverage against BLIEM. Variable IFRS*ACOV had a p-value of 0.425 which indicates that the adoption of IFRS are not significant in strengthening the positive effects of analyst coverage. This shows that the adoption of IFRS did not have a relationship between analyst coverage and BLIEM. With this result, hypothesis 4 is rejected. This result is consistent with the results of hypothesis 2b testing where the adoption of IFRS has no effect on BLIEM. This result is in accordance to the hypothesis 2b test result, that IFRS cannot increase BLIEM detectability. This is because BLIEM is an earnings management that has been easy to detect. The adoption of IFRS did not significantly increase BLIEM detectability, so it will not overly affect the process of analysis and detection of earnings management performed by financial analysts. Therefore, we can conclude that the adoption of IFRS has no effect on the relationship between analyst coverage and BLIEM.

5. Conclusions

This study provides empirical evidence that the IFRS adoption level does not impact the effect of the analyst coverage on earnings management. The adoption of IFRS did not significantly impact the financial analysts’ behavior in monitoring a company's earnings management practices. This happens due to financial analysts’ better understanding in the field of finance and the availability of information either directly or indirectly from the company compared to other users in the use of financial statements. Thus, qualified expertise of analysts makes the adoption of IFRS becomes insignificant in helping analysts to detect the presence of earnings management in the company.

References
The Effect of Modified Audit Opinion on Debt Contracts

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Abstract. The purpose of this study is to examine the effect of a modified audit opinion on the debt contract (interest spread, loan size, covenant, collateral, and loan maturity). Samples of this study are credit facilities obtained by listed firms in 2013-2016 with total observations of 660. Results of this study show that in general there is limited effect of modified audit opinion on debt contract. We do not find type of modified audit opinion causes higher interest rates. Modified audit opinion has significant effect on reducing the number of financial covenants. We only find evidence that material uncertainties type of modified audit opinion causes higher general covenant. We also only find evidence of the effect of modified audit opinion on loan maturity for going concern opinion type. Modified audit opinion does not affect loan size and the possibility of the need collateral in the debt contract. The insignificant results of modified audit opinion on debt contracts maybe due to lenders in Indonesia still use soft information (relationship lending) rather than hard information.

Keywords. Covenant, Debt Contract, Interest Spread, Loan Maturity, Modified Audit Opinion

1. Introduction

An audit report is the auditor's primary way of communicating with users of financial statements, of information found by the auditor when conducting the audit process[1]. In the process of assessing whether the financial statements have been presented fairly, the auditor has an important role which reflected in the form of an audit opinion.

In this study, audit opinion is divided into two, namely the unmodified audit opinion that the financial statements have been presented fairly and in accordance with existing accounting standards and modified audit opinion which consists of unqualified opinion with explanatory paragraph, qualified opinion, adverse opinion, and disclaimer opinion. The difference between unmodified audit opinion and modified audit opinion is that in the modified audit opinion there is a paragraph explaining why giving such opinion which is inconsistency in the use of accounting standards, the emphasis of material uncertainty, and opinion on the going concern[2].

Several previous studies[3] on modified audit opinion focus on market reaction to those opinions associated with equity investors. However, modified audit opinion also uses information from financial reports and audit reports. Financial institutions every day lend money to companies taking into account information from financial statements[4]. In that case the lenders become the primary financial statement user whose credibility is affected by the audit report, this is because lenders use financial statements as major factor in the credit decision[5].
According to Chen [2] the information in the financial statements is usually used in debt contracts. Contract terms often use a lot of accounting numbers in the financial statements that are used to monitor the performance of the company. Lenders should react with a modified audit opinion in determining and monitoring the provision of credit as the audit opinion provide additional information about the company’s financial condition [2].

Based on this background, this research will examine the effect of modified audit opinion on debt contracts. Debt contracts examined in this study consist of interest rates, loan size, covenant, collateral, and loan term. Modified audit opinion will be further grouped into two major groups that are caused by inconsistency and inadequacy. Inconsistency then also subdivided into two that are caused by changes in accounting standards and restatements. Inadequacy is divided into material uncertainty and going concern. This study conducts similar study with that of Chen [2] use listed companies in USA as samples, and this study examine listed firms in Indonesia. In USA where the characteristics is market-based financial system, Chen [2] find significant effect of modified audit opinion on debt contracts. Whereas in Indonesia has different characteristics, which is bank-based financial systems, Therefore it is interesting to examine whether the results also hold in market with bank-based financial systems. There is a study in Indonesia examining the effect of modified audit opinion on debt contract [6]. The difference is that this research not only examine loan size but also other contracts terms that is interest rate, covenant, collateral, and loan term. In addition, type of modified audit opinion used are also grouped into several types as explained before.

2. Literature Review and Hypotheses Development

Lenders incorporate covenants in the debt contracts to limit management decisions that will harm the lender [7]. When associated with monitoring, [8] suggest that debt financing can improve the monitoring mechanism that will reduce agency costs within the company. This is because monitoring is also done by the lender. Jensen and [7] suggest that a growing number of debt contracts that rely on accounting numbers will lead to demand for higher quality audits.

The audit report is a key way for the auditor to convey their degree of certainty, that the financial statements have reflected the company's economic activity [2]. Broadly speaking, audit opinion can be grouped into two types, namely unmodified audit opinion and modified audit opinion. In this study modified audit opinion is grouped into four types, that is, unqualified opinion with explanatory paragraph, qualified opinion, adverse opinion, and disclaimer.

Modified audit opinion then is divided into two: inconsistency and inadequacy. Opinion on inconsistencies reflects the difficulty of comparing the company's financial statements annually, which is one of the considerations for lenders. This is in accordance with Kent and Munro [9], the main thing that the lender is concerned about is reliable, useful and comparable information. Inconsistencies are then subdivided into two, which are caused by changes in the use of accounting principles and restatements. Changes in the use of accounting principles affect the comparability of financial statements. The restatement reflects that the information possessed by the previous lenders becomes inaccurate, making it necessary to do a risk assessment again [10]. Some restatements in financial statements relate to complex transactions or deliberate manipulation [11]. The restatement also provides a question of the credibility of the company's financial statements in the future [12]. According to Chen [2] although information relating to changes in the use of accounting principles and restatements is contained in the notes to the financial statements, the auditors have their own considerations as to why it should be presented in the audit report. This happens because not all changes in the use of accounting principles or restatements on the notes to the financial statements will be reported in the audit report. Opinion about inadequacy is subdivided into two components: going concern and material uncertainty.
Opinions about going concern reflect that key assumptions in an accounting model have been violated while material uncertainties illustrate future unknown economic decisions[2].

The purpose of the use of debt covenant is to tighten decision-making and investments that reduce the value of claims of debtors (DeFond and Jiambalvo, 1994). [13]Ball, Bushman, and Vasvari divides covenant into financial covenants and general covenants. Financial covenants identify the set ratios and figures contained in the financial statements. The general covenant usually deals with the activities of the company, such as tightened dividend payout policy and investment decisions [14].

There are several studies examining the association of audit opinion on debt contracts. Firth[15] find that audit opinion related to going concern and asset valuation issues significantly affecting the decision in lending. Bamber and Stratton[16] show that when a company has a modified audit opinion, the loan officer will perform a more stringent risk assessment and demand a higher interest rate. In addition, the possibility to grant loans also decreased.

Graham, Li and Qiu[10], find that compared to the loans obtained before the restatement, the loans obtained after the restatement have a higher loan spreads, shorter loan terms, and more stringent terms of agreement. Sormunen [17] examines the usefulness of qualified audit opinion of small and medium entrepreneurs on lending decisions. The result shows that bank employees assume that the qualified audit reports have information, but in their use it is not the main input for decision making.

Another study by Gomez-Guillamon [18] concludes that audit reports play an important role in decision-making for investment as well as lending. In addition, audit reports also affect the amount of money provided for investment and loans. Guiral-Contreras [4] show that qualified audit report is a useful evidence for loan officers. They also concluded that the audit report is used as a warning sign for loan officers to be more critical in making loan decisions.

There are also studies that find different results. Lin, Jiang, and Xu [19] find that modified audit opinion has no effect to the loan size in 1998 until 2004, however modified audit opinion began to have significant influence in 2005 and 2006. Niemi and Sundgren[20] find that modified audit opinion has no effect on loan size.

Chen [2] examine the effect of audit opinion on the debt contract (interest spreads, loan size, covenants, collateral) in the United States. The results show that compared to loans obtained after unqualified audit opinion, loans obtained after a modified audit opinion have a relationship with higher interest spreads, less financial covenants, more general covenants, less loan size, and more needs of collateral.

In Indonesia, [6] Cahyaningrum and Fitriany find that audit opinion does not have an economic impact on the company because it is not used by banks and financial companies in lending decisions unless a company gets unqualified opinion with an explanation paragraph concerning going concern and disclaimer.

According to Blackwell [21] companies that have been through the audit process have a lower interest rate than the company that has not been audited. This is because the audited financial statements have better quality. If a modified audit opinion communicates the quality of a company's financial statements or credit risk, the lender should respond by providing a higher interest rate to reflect a higher credit risk.

**H1:** New loan obtained after modified audit opinion is issued have a higher loan spreads than new loans obtained after unqualified opinion is issued

Accounting information and ratio information in financial statements are widely used as a means of monitoring the performance of borrowers. This can be done if there is certainty that the financial information reflects the actual performance of the company. If the figures in the financial statements are not considered reliable then the borrower may use more general
covenants governing the activities of the borrower[2]. Moreover, according to Czerney[22], if
the opinion of inconsistency is an indicator to have the possibility of subsequent misstatement,
then the financial covenant cannot be used as a tool to monitor the borrower.

**H2:** New loan obtained after modified audit opinion is issued have a lower financial covenants
and higher general covenants compared to new loans after unqualified opinion is issued.

If the audit report indicates a risk in the company, then the borrower will provide a lower
loan amount, requires collateral, and shorter loan term [2].

**H3:** New loan obtained after modified audit opinion have lower loan size, require collateral,
and shorter loan term compared to new loans after unqualified opinion issued.

3. **Research Method**

The research model used in this study is based on Chen et al. (2016):

**InterestRate** = \( \alpha + \beta_1 \text{MAO} + \beta_2 \text{AFTERMAO} + \beta_3 \text{FINCOV} + \beta_4 \text{LOANSIZE} + \beta_5 \text{MTRY} \\
+ \beta_6 \text{COLLATERAL} + \beta_7 \text{NUMLDRS} + \beta_8 \text{INSTITOR} + \beta_9 \text{REVOLVER} \\
+ \beta_{10} \text{SIZE} + \beta_{11} \text{LEV} + \beta_{12} \text{PROF} + \beta_{13} \text{TANGIBILITY} + \beta_{14} \text{MTB} \\
+ \beta_{15} \text{ABACR} + \beta_{16} \text{CFVOL} + \beta_{17} \text{D2014} + \beta_{18} \text{D2015} + \beta_{19} \text{D2016} + \epsilon \)

**FinancialCovenant**

\[= \alpha + \beta_1 \text{MAO} + \beta_2 \text{AFTERMAO} + \beta_3 \text{INTRST} + \beta_4 \text{LOANSIZE} \\
+ \beta_5 \text{MTRY} + \beta_6 \text{COLLATERAL} + \beta_7 \text{NUMLDRS} + \beta_8 \text{INSTITOR} \\
+ \beta_9 \text{REVOLVER} + \beta_{10} \text{SIZE} + \beta_{11} \text{LEV} + \beta_{12} \text{PROF} + \beta_{13} \text{TANGIBILITY} \\
+ \beta_{14} \text{MTB} + \beta_{15} \text{ABACR} + \beta_{16} \text{CFVOL} + \beta_{17} \text{D2014} + \beta_{18} \text{D2015} \\
+ \beta_{19} \text{D2016} + \epsilon \]

**GeneralCovenant**

\[= \alpha + \beta_1 \text{MAO} + \beta_2 \text{AFTERMAO} + \beta_3 \text{INTRST} + \beta_4 \text{LOANSIZE} \\
+ \beta_5 \text{MTRY} + \beta_6 \text{COLLATERAL} + \beta_7 \text{NUMLDRS} + \beta_8 \text{INSTITOR} \\
+ \beta_9 \text{REVOLVER} + \beta_{10} \text{SIZE} + \beta_{11} \text{LEV} + \beta_{12} \text{PROF} + \beta_{13} \text{TANGIBILITY} \\
+ \beta_{14} \text{MTB} + \beta_{15} \text{ABACR} + \beta_{16} \text{CFVOL} + \beta_{17} \text{D2014} + \beta_{18} \text{D2015} \\
+ \beta_{19} \text{D2016} + \epsilon \]

**LoanSize** = \( \alpha + \beta_1 \text{MAO} + \beta_2 \text{AFTERMAO} + \beta_3 \text{INTRST} + \beta_4 \text{FINCOV} + \beta_5 \text{MTRY} \\
+ \beta_6 \text{COLLATERAL} + \beta_7 \text{NUMLDRS} + \beta_8 \text{INSTITOR} + \beta_9 \text{REVOLVER} \\
+ \beta_{10} \text{SIZE} + \beta_{11} \text{LEV} + \beta_{12} \text{PROF} + \beta_{13} \text{TANGIBILITY} + \beta_{14} \text{MTB} \\
+ \beta_{15} \text{ABACR} + \beta_{16} \text{CFVOL} + \beta_{17} \text{D2014} + \beta_{18} \text{D2015} + \beta_{19} \text{D2016} + \epsilon \)

**Maturity** = \( \alpha + \beta_1 \text{MAO} + \beta_2 \text{AFTERMAO} + \beta_3 \text{INTRST} + \beta_4 \text{LOANSIZE} + \beta_5 \text{FINCOV} \\
+ \beta_6 \text{COLLATERAL} + \beta_7 \text{NUMLDRS} + \beta_8 \text{INSTITOR} + \beta_9 \text{REVOLVER} \\
+ \beta_{10} \text{SIZE} + \beta_{11} \text{LEV} + \beta_{12} \text{PROF} + \beta_{13} \text{TANGIBILITY} + \beta_{14} \text{MTB} \\
+ \beta_{15} \text{ABACR} + \beta_{16} \text{CFVOL} + \beta_{17} \text{D2014} + \beta_{18} \text{D2015} + \beta_{19} \text{D2016} + \epsilon \)

Loan Terms represents a specific debt covenants, i.e. interest spread, number of financial
covenants, number of general covenants, loan size, collateral, and maturity. Interest spread is
the interest rate of each credit facility less the LIBOR rate. The company is said to have a
financial covenant if the company must comply with the requirements relating to the company’s
financial ratios in each credit facility. If the credit facility has financial covenant and not
explained the amount will be used financial covenant from other credit facilities with the same
lender. If the credit facility has financial covenant and not explained the amount and no other
credit facilities from the same lender will be assessed by having a financial covenant. The
company is said to have a general covenant if it has the requirements to be followed which
regulate the economic activities undertaken by the company. If the credit facility has a general
covenant and no information is available, the general covenant of another credit facility with the same lender will be used. If the credit facility has a general covenant and not explained the disclosure and no other credit facilities from the same lender, then it will be assessed as having a general covenant. Collateral is an indicator variable related to whether the credit facility requires a collateral, 1 if the loan requires collateral and 0 if otherwise. Maturity is the time span of the loan received until the due date of loan repayment. Loan size is calculated with natural logarithm of loan size.

MAO is an indicator variable of modified audit opinion where 1 if the company gets a modified audit opinion and 0 if otherwise. AfterMAO is an indicator variable of 1 if the company currently receives an unqualified opinion, but gets a modified audit opinion at least once in the previous three years and 0 if otherwise.

In addition, this study also examines the effect of type of MAO on the debt contract. MAO is group into Inconsistency (1 if described in the audit report that there is accounting change or restatement and 0 if otherwise), Inadequacy (1 if described in the audit report that there Material uncertainty or Going Concern issue and 0 if otherwise).

There are several control variables included in the research model. Number of lenders (NUMLDRS) in the syndicate loan is included because more parties participating in syndicate loan the higher the quality of the borrower [2]. Institutional Investor (INSTITOR) is an indicator variable (1 if credit facilities obtained from non-financial institutions and 1 if otherwise). REVOLVER is an indicator variable related to credit facilities received by companies of revolving type. SIZE represents company size, as smaller companies tend to have higher default risk. LOAN SIZE is also included for loan spread model because larger loans tend to have a smaller interest rate. Financial leverage (LEV) is Long term debt divided by total assets. PROF is measured from EBITDA divided by total assets. This is included because usually companies with high profitability will have a low risk of default and can get lower spread. TANGIBILITY is tangible assets divided by the total a set. MTB are the market capitalization divided by total equity. ABACR is the absolute value of discretionary accruals calculated using the Jones model[23]. CFVOL is the standard deviations from quarterly cash flow from operating activities divided by total assets.

This study uses a sample of new loans obtained by nonfinancial sector companies in the period 2013 to 2016. Sample selection criteria are as follow: (1) The company is listed on BEI in 2013 to 2016; (2) Nonfinancial institutions; (3) has audited financial statements from 2013 to 2016; (4) received modified audit opinion at least once in 2013 until 2016; (5) obtained credit facilities in 2013 to 2016; (6) Credit facility information is described in the notes to the financial statements. Based on sampling criteria, we have 660 total observations as shown in Table 1.

4. Results

Table 2 shows descriptive statistics of variables. Based on Table2, the average interest rate on the credit facility is 0.0822. The credit facility having an amount of general covenants maximum of 27 and financial covenants maximum of 6. Around 47.27% received modified audit opinion in the previous year before new loan. The proportion of MAO in this study is greater than that of Chen et al. (2016), which has a proportion of 37.8% MAO. Modified type of audit opinion that is most is ACCTCHG of 28.64%. While the least type of modified audit opinion is material uncertainty has a frequency of 2.88% of the 660 observations. The regression results are presented in Table 3 – Table 8. From those tables, MAO only has significant effect on financial covenant other dependent variable is not significant. It is different with the results of Chen [2]. However, these results are consistent with Houghton[24] and Miller and Smith[25] that the results of audit have no economic impact on the debt contract. Johnson [26] , also find that audit
report does not affect lending decisions. Carter (1984) also finds that audit services does not affect the interest rate lending.

This results maybe because some of the information described in an explanatory paragraph has been described in the notes to the financial statements and lenders use other data such as the characteristics of the loan and the characteristics of the company. Houghton [24] also explains that information from audit report is not able to compete with that from other resources. In this study the characteristics of the loan and companies are also included in the testing in control variables and most have a significant effect.

Variable INCONSISTENCY affect negatively for general covenants and interest rate in the negative. The same results also hold for ACCTCHG and RESTATEMENT variables that also affect general covenants negatively.

**Table 1. Sample Selection**

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<th>Criteria</th>
<th>Observations</th>
</tr>
</thead>
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</tr>
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</tr>
<tr>
<td>Listed after 31 December 2014</td>
<td>(71)</td>
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<tr>
<td>Did not received MAOs during the study period</td>
<td>(121)</td>
</tr>
<tr>
<td>Do not have and/or do not explain about credit facility in notes to the financial statements</td>
<td>(78)</td>
</tr>
<tr>
<td>Incomplete financial statements information</td>
<td>(39)</td>
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<tr>
<td>Total firms</td>
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<tr>
<td>Total firm-years</td>
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<tr>
<td>Number of credit facilities</td>
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</tr>
<tr>
<td>Number of credit facilities without information on covenant</td>
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</tr>
<tr>
<td>Total observations</td>
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</table>

**Table 2. Descriptive Statistics**

**Panel A: Continuous Variables**

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<th>Minimum</th>
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<td>0.9103</td>
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<td>NUMLDRS</td>
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<td>0.0000</td>
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<td>1.5670</td>
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<td>0.8910</td>
<td>0.2494</td>
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<tr>
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<td>0.0611</td>
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Panel B: Indicator Variables

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<td>43.48%</td>
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<tr>
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<td>INADQCY</td>
<td>10.00%</td>
<td>90.00%</td>
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<td>ACCTCHG</td>
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<tr>
<td>RESTATEMENT</td>
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<tr>
<td>MU</td>
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<td>97.13%</td>
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<tr>
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Table 3. Regression Results – Interest Spread

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<th>Coef.</th>
<th>P&gt; t</th>
<th>Coef.</th>
<th>P&gt; t</th>
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<td>0.095***</td>
<td>0.0073</td>
<td>0.095***</td>
</tr>
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<td>-0.0046</td>
<td>0.0115**</td>
<td>-0.0046</td>
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<td>-0.0073</td>
<td>0.0545*</td>
<td>-0.0073</td>
<td>0.0545*</td>
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<td>0.0060</td>
<td>0.0115**</td>
<td>0.0060</td>
<td>0.0115**</td>
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<td>-0.0055</td>
<td>0.0115**</td>
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<td>0.0115**</td>
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<td>0.0078</td>
<td>0.0115**</td>
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<td>0.0115**</td>
</tr>
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<td>-0.0020</td>
<td>0.0005***</td>
<td>-0.0020</td>
<td>0.0005***</td>
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<td>-0.0073</td>
<td>0.0545*</td>
<td>-0.0073</td>
<td>0.0545*</td>
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<td>0.0005***</td>
<td>0.00218</td>
<td>0.0005***</td>
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<td>0.0100***</td>
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<td>0.0010***</td>
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</tr>
<tr>
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<td>0.0105**</td>
<td>-0.0501</td>
<td>0.0105**</td>
<td>-0.0501</td>
<td>0.0105**</td>
</tr>
<tr>
<td>D2014</td>
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<td>0.0009</td>
<td>0.0390</td>
<td>0.0009</td>
<td>0.0390</td>
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<tr>
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<td>0.1770</td>
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<td>0.0000</td>
<td>0.2565</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

| Prob> f       | 0.0000 | 0.0000 | 0.0000 |
| R-squared     | 0.3410 | 0.3426 | 0.3435 |

*** = significant at 1%; ** = significant at 5%; * = significant at 10%

Table 4. Regression Results – Financial Covenant

<table>
<thead>
<tr>
<th>Variables</th>
<th>Coef.</th>
<th>P&gt; t</th>
<th>Coef.</th>
<th>P&gt; t</th>
<th>Coef.</th>
<th>P&gt; t</th>
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<td>-0.00060</td>
<td>0.115**</td>
<td>-0.00060</td>
<td>0.115**</td>
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<tr>
<td>INADQCY</td>
<td>0.0025</td>
<td>0.3525</td>
<td>0.0025</td>
<td>0.3525</td>
<td>0.0025</td>
<td>0.3525</td>
</tr>
<tr>
<td>ACCTCHG</td>
<td>-0.0046</td>
<td>0.0115**</td>
<td>-0.0046</td>
<td>0.0115**</td>
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<td>0.0115**</td>
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<td>-0.0073</td>
<td>0.0545*</td>
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<td>0.0545*</td>
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<td>MU</td>
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<td>0.0015</td>
<td>0.4200</td>
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<td>0.0028</td>
<td>0.3640</td>
<td>0.0028</td>
<td>0.3640</td>
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### Table 5. Regression Results – General Covenant

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<th>P &gt; t</th>
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<td>0.0865*</td>
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### Table 6. Regression Results – Loan Size

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*** = significant at 1%; ** = significant at 5%; * = significant at 10%
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Prob> f 0.0000 0.0000 0.0000
R-squared 0.2669 0.2680 0.2704

*** = significant at 1%; ** = significant at 5%; * = significant at 10%
Table 8. Regression Results – Collateral

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**R**-squared = 0.2035 0.2063 0.2077

*** = significant at 1%; ** = significant at 5%; * = significant at 10%

These results are contrary to the study of Chen [2]. For ACCTCHG, could be due to in Indonesia there are many new accounting standards which begin effective. In 2015, there are new and amendment of accounting standard effective for the year. This resulted in the type of modified audit opinion which is not the results of an aggressive accounting policy, but due to the need to comply with the standard. These circumstances make the use of general covenants decreased due to no evidence of less credibility of the information in the financial statements.

For variable RESTATEMENT also have a negative effect on the general covenants and interest rate. This means restatements interpreted as good news. Palmrose, Richardson, and Scholz [27] , suggest that, although uncommon, the effect of the restatement of financial statements interpreted as good news if the restatement is causing an increase in revenue.

MU variables also affect general covenants positively. This means that when companies get MAO caused by a material uncertainty in the business, the amount of general covenants in the credit facility will be increased. The company controls a potential loss due to uncertainty about the company's business through general covenants[2].

INADQCY affect the dependent variable only financial covenant and the effect is negative. MU variables that also affect financial covenant negatively. The results are in line with what was predicted that the decline in the quality of financial information reflected in the audit report, the lender will reduce the requirements of the agreement that rely on the numbers in the financial statements[2]. That is because the figures used in the financial covenants derived from the financial statements cannot be used by lenders to monitor and control the company due to the declining credibility of financial statements.

For GC variable, this variable only has negative association with loan maturity. This meant
that when the company gets MAO caused by going concern will affect in decreasing loan maturity. This is in accordance with Diamond [28]. A company that has a high risk, in this study who received gets going-concern opinion, will have a term of the loan is lower than the company that has a low risk.

Based on above results, we can conclude that hypothesis 1 is not supported because there is no significant evidence that modified audit opinion increase the interest spread. Hypothesis 2 is also only partially supported as modified audit opinion has significant on reducing the number of financial covenants. We only find significant effect of modified audit opinion on the number of general covenants in case material uncertainty. Hypothesis 3 is also only supported for going concern opinion on loan maturity. There is no significant evidence that modified audit opinion affect the collateral and loan size in the loan contract.

The possible explanation on these results may be due to lenders in Indonesia still relies heavily on soft information, instead of hard information. According to Baas and Schrooten [29], soft Information using relationship lending technique that is credit distribution based on belief system and relationship that has been built well between Bank and companies, so that information can be accessed more easily by bank. While for the hard information is based on: 1) Financial Statement Lending, i.e. by using financial statements, 2) Assets Based Lending i.e. by using information related to assets that are used as collateral, 3) Credit Scoring, using the available financial data assessed on the credit score.

As explained earlier that the possible cause of insignificant effect of modified audit opinion because lenders pay more attention to other data sources, namely the characteristics of the loan and the characteristics of the company. In this study, the control variables of the research model are the characteristic of the loan and the characteristics of the company.

Variable interest rates have a negative effect on the financial covenants and a positive influence on the general covenants, consistent with Costello [30]. This variable also negatively affects the loan amount, consistent with Beatty [31]. The interest rate has a positive effect on the term of the loan and the need for collateral. According to Karjalainen [32], high interest rates will increase the need for collateral. The interest rate also has a positive relationship with the term of the loan, because lenders require a liquidity premium for the loan period is longer, and thus higher interest rate [10].

LOANSIZE have a positive effect on the term of the loan. This result is consistent with Graham[10]. Regarding relations with financial covenants, the results are consistent with previous studies [2] [10]. Thus the need for collateral does not replace the need for financial covenants in the credit facility[30]. The longer loan term will require collateral[33].

NUMLDRS positively associated with financial covenants, the loan amount and term of the loan, and negatively with interest rate. These results are consistent with of Chen [2]. Increasing number of lenders in the syndicated loan will increase the number of financial covenants as more and more problems asymmetric information that should be monitored[30]. The loan amount and term of the loan increases if the number of lenders are higher, while the interest rate will be lower because of the risk of the spread of credit facilities to each lender. Variable INSTITOR positive effect on interest rates, this is because these loans have higher agency cost of debt than usual credit[30].

Company size and profitability positively effects financial covenants and negative to the general covenants. This means that information about the numbers in the financial statements in a large reliable company so that financial covenants can be used as a reference in monitoring the companies[30]. Company size and profitability negatively affect the interest rate and the need for collateral and positive relationship on the loan amount, consistent with Chen [2]. This is because lenders see a large company is a company that has a low risk [34].
LEV has a positive relationship with the financial covenants in support of Graham[10] and positively related to the term of the loan [35][36][37]. LEV variable is negatively related to the interest rate. According to Karjalainen [32] it can be due to the interest rate can be increased due to the level of leverage, but the company will also reduce the level of leverage in line with interest rate increases. Variable tangibility has a negative effect with the number of loans and a positive relationship with the term of the loan. Companies with low tangibility will make the loan amount obtained when the company went bankrupt low because only a company's assets that will be acquired lender[10]. This result is consistent with Graham [10] and Chen [2].

5. Conclusion

This study aims to examine at the effect of a modified audit opinion on the company's debt contractual arrangements. Results of this study show that in general there is limited effect of modified audit opinion on debt contract. We do not find evidence that type of modified audit opinion causes higher interest rates. Modified audit opinion has significant effect on reducing the number of financial covenants. We only find significant effect of modified audit opinion on the number of general covenants in material uncertainty case. We also only find supporting evidence on loan maturity for going concern opinion. Modified audit opinion does not affect the possibility of the need collateral and loan size in the debt contract. These results may be due to lenders relies on soft information rather than hard information.

This study has several limitations. First, we do not include variable related to auditor characteristics (such as audit tenure) that may affect lenders decision whether to incorporate audit report information in their lending decision. As lenders may rely on soft information, future studies may include variables that capture the soft information into research model.

Acknowledgement

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References


D. W. Diamond, “Monitoring and reputation: The choice between bank loans and


The Effect of Managerial Ability on Financial Reporting Quality: An Empirical Analysis of the Banking Industry

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Abstract. This study aims to examine the effect of managerial ability on financial reporting quality. The samples of this study are listed banks in the Indonesia Stock Exchange during the period of 2010 to 2016. with total observations are 210 firm-years. Managerial ability is measured using Data Envelopment Analysis (DEA). Earnings persistence and earnings predictability are used to measure financial reporting quality. By using panel data regression, the results show that managerial ability has a negative effect on financial reporting quality, for both measures. This may be due to when the manager has higher ability, he/she tends to be opportunistic and take actions (such as opportunistic earnings management) and thus earnings become less persistent as well as less predictable (low financial reporting quality).

Keywords: Banking, Financial Reporting Quality, Managerial Ability.

1. Introduction

Financial statements issued by companies are the results of accounting process and contains many useful financial information about firm performance, especially to external parties. Management is the party with the responsibility for the managing company operations. They also responsible for the preparation of financial statements, so that their ability or skill will affect the quality of the report. Financial statements should be able to provide information about management performance in running the business.

Management as insider always have information advantage over external parties. The presence of this information asymmetry provides opportunity for management to take opportunistic actions to conceal its bad performance by doing earnings management. Managers are the main actors in the companies, and so with better managerial ability it is expected the companies’ performance will also be better. Managerial ability should also play an important role in determining financial reporting quality because managers with high managerial ability would have better knowledge of their business and be able to make effective judgments and take appropriate actions, so that it could utilize company resources effectively and ultimately could achieve better company performance (Wang et al., 2017). Managers’ ability could also influence financial reporting quality with their attitudes toward internal control and through their role as information channels to directors, other managers, and auditors [1] In other words, managerial ability can affect financial reporting quality.

Garcia-Meca & Garcia-Sanchez [2] examine the effect of managerial ability on financial reporting quality. They find that higher managerial ability able to produce higher bank earnings
quality, which means that managerial ability plays an important role in shaping the financial reporting quality in banks. We extend their research by doing similar study in Indonesia. To the best of our knowledge, there have not been any studies examining the effect of managerial ability on financial reporting quality in the banking sector in Indonesia. Managerial ability is very relevant in the bank industry because of the information asymmetry, opacity and greater complexity in this sector [3]. Banking companies in Indonesia have grown rapidly which are stimulated by the development of information technology. Information technology-based banking innovation has an extraordinary impact on efficiency and effectiveness. Thus, managerial ability is expected to play more significant role in banking industry.

2. Literature Review and Hypotheses Development

According to Jensen and Meckling[4] agency relationship was a contract between manager (agent) and principal, in which there was an authority delegation in decision-making from the principal to the manager. The principal delegate the authority on decision-making to agent (manager) and expects that the manager will take certain actions that are in line with the interests of the principal.

Based on Arkerlof[5], agency theory was characterized by information asymmetry, which are moral hazard and adverse selection. Bouckova[6] suggests that information asymmetry could lead to moral hazard, in which one party with information advantage (i.e. management) exploited the information asymmetry for their own personal benefit. The principal has limitations in controlling agent behavior and can only evaluate manager performance based on reported results in financial report which are prepared by the management.

One theory that emphasizes the important role of managers is resource-based view theory Holcomb[7]. According to this theory, the ability of managers to utilize existing resources is a valuable resource to enhance the company's competitive advantage. The manager's ability is influenced by the accumulation of knowledge gained through education or work experience, which influences his/her ability to make decisions. Another related theory is upper echelons theory which states that the characteristics of each manager influence the ability of managers to analyze the situation so that it will affect the company's performance[8]

Demerjian [9] develop a measure of managerial ability by estimating how efficiently managers use company resources compared to companies in their industries. Further, Demerjian[10] stated that managers with higher ability have more knowledge about business conditions, have more persistent profits, and are more accurate in estimating accruals. They find that companies with high management skills had better quality financial reporting.

Garcia-Meca and Garcia-Sanchez[2] measured financial reporting quality by using three measurements, namely earnings persistence, predictability, and accounting conservatism. The measurements are in line with the earnings attributes[11] by Francis. Earnings persistence represents expected accounting earnings in the future which is reflected in current year earnings. Persistence is one measure of financial reporting quality, where higher persistence indicate a sustainable profit[12]. Earnings persistence is an attribute of earnings quality which shows the company's ability to maintain the current earnings to persist in the future. High earnings persistence is more useful in the decision making process[13]. Another measurement of financial reporting quality is predictability. Predictability is how the current profitability able to predict future operating cash flows[14]. Earnings are said to be unpredictable when earnings is volatile and unpredictable[15] (Graham et al., 2005). Increase earnings predictability can provide useful information as current year earnings can be informative in predicting future earnings.
Managers are important players in companies. so with better managerial capability, it is expected that the companies’ performance will be higher. The resource-based view theory argues that the ability of managers to effectively use the company resources are valuable and potential resources to produce certain conservative characteristics that affected reporting quality[16]. The more specific the managers’ capabilities which were embedded within them, the more possibilities that they could not be transferred to other companies and they were very difficult to be imitated by competitors. so that this made them a significant sources of high-performance companies[17].

There are several extant studies examining the effect of managerial ability on financial reporting quality. Wang et al. (2017) argued that more capable managers would have knowledge of their business and could make effective judgments and forecasts so as to that they could alter companies’ resources better and ultimately they could achieve better business performance. In addition, managers could also affect financial reporting quality with their attitudes toward internal controls and through their role as information channels to directors, other managers, and auditors[1]. Garcia-Meca and Garcia-Sanchez [2] find that managerial ability have significant positive effect on financial reporting quality. Based on the explanations above, the hypothesis is as follows.

H1: There is a positive effect of managerial ability on financial reporting quality.

3. Research Method

The population in this study are listed banks on Indonesia Stock Exchange (IDX) in the period 2010-2016. The sample selection criteria are: (1) bank listed on IDX during 2010-2016; (2) Published financial statements during 2010-2016. The selection of banking sector because banking companies have asymmetric information, opacity, and greater complexity compared to other sectors, so that this selection makes more relevant to research on managerial capability and quality of financial reporting. Based on those sample selection criteria, we have 30 banking companies in each year, with a total of 210 observations.

In this study, the dependent variable is financial reporting quality. Financial reporting quality is closely related to the performance of the company embodied in the company’s earnings. Higher earnings quality provides more information about the company's financial performance that is relevant to the decision made by the decision maker. Referring to Garcia-Meca & Garcia-Sanchez[2], this study measures the quality of earnings by using earnings persistence and predictability.

Earnings persistence is an attribute of earnings that demonstrates a company's ability to retain the amount of profit gained now to the future. Profit persistence can be the basis in the assessment of earnings quality, because high quality profits are more persistent and useful in the decision making process. The model used to measure the profit persistence is as follows.

\[
EBT_{it+1} = \sigma_0 + \sigma_1 EBT_{it} + \sigma_2 MA_{it} + \sigma_3 MA_{it} \times EBT_{it} + \sigma_4 SIZE_{it} \\
+ \sigma_5 SIZE_{it} \times EBT_{it} + \sigma_6 DEPOSITS_{it} + \sigma_7 DEPOSITS_{it} \\
* EBT_{it} + \sigma_8 LOANGROWTH_{it} + \sigma_9 LOANGROWTH_{it} \times EBT_{it} \\
+ YEAR_{it} + \epsilon_{it}
\]

Where:

\( EBT_{it+1} = \) earnings before tax scaled by total assets at the beginning of year \( t \)

\( MA_{it} = \) managerial ability

\( SIZE_{it} = \) company size (natural logarithm of total assets)

\( DEPOSITS_{it} = \) the amount of deposit scaled by total assets at the beginning of year \( t \)

\( LOANGROWTH_{it} = \) the difference between bank credit growth rate and the median of credit growth of all listed banks
In this study, the measurement used for earnings persistence is by looking at the coefficient of current period earnings (EBTt) or \( \varphi_1 \). Higher coefficient means higher earnings persistence (higher financial reporting quality). Whereas \( \varphi_3 \) shows the effect of managerial ability on earnings persistence.

Predictability is also a measurement of financial reporting quality. Predictability is the ability of current profitability to predict future cash flow. This is often used as one measurement of financial reporting quality since investors consider that cash flow as more relevant than profitability, and more useful in the predictability for liquidity and solvency (Garcia-Meca & Garcia-Sanchez, 2017).

\[
\text{EBTLLP}_{it+1} = \sigma_0 + \sigma_1 \text{EBT}_{it} + \sigma_2 M\text{A}_{it} + \sigma_3 M\text{A}_{it} \times \text{EBT}_{it} + \sigma_4 \text{SIZE}_{it} + \\
\sigma_5 \text{SIZE}_{it} \times \text{EBT}_{it} + \sigma_6 \text{DEPOSITS}_{it} + \sigma_7 \text{DEPOSITS}_{it} \times \text{EBT}_{it} + \\
\sigma_8 \text{LOANGROWTH}_{it} + \sigma_9 \text{LOANGROWTH}_{it} \times \text{EBT}_{it} + \text{YEAR}_{it} + \epsilon_{it}
\]

Where:
EBTLLP \(_{it+1}\) is EBT\(_{it+1}\) plus loan loss provision year \( t+1 \), scaled by total asset at the beginning of year \( t \).

To measure the ability of earning ability in predicting future cash flows or predictability, earnings regression and loan loss provisions are used one period ahead of current period earnings. Previous research in banking had done by using pre-tax profit and loan loss provision as a measure of predictability, since loan loss provision was the largest accrual on the bank [18]. Thus, variable of EBTLLP \(_{it+1}\) is used which is the amount of profit and loan loss provision one period ahead.

Managerial ability is measured using DEA (Data Envelopment Analysis). DEA is a method used to evaluate the efficiency of a responsible decision-making unit by using a number of inputs to obtain a targeted output. DEA is used to determine the firm's optimal weight on its inputs and outputs. The optimal weight of the company will describe the efficiency of the company. To measure managerial ability, this study used two-stage DEA. DEA approach used is Variable Returns to Scales (VRS). To calculate DEA, DEAP application is used. To measure efficiency with the DEA approach, the model is as follows:

\[
\text{Max} \theta = \frac{u_1 \text{Deposits} + u_2 \text{Loans} + u_3 \text{Investment} + u_4 \text{IntInco}}{v_1 \text{PPE} + v_2 \text{Int} + v_3 \text{Labor} + v_4 \text{IntExp} + v_5 \text{RentExp}}
\]

Where:
- \( \theta \) = Firm efficiency
- Deposits = Total deposit
- Loans = Loan or credit
- Investment = Investment
- IntInco = Interest income
- PPE = Net properties, plant, & equipment
- Int = Intangible assets
- Labor = Labor costs
- IntExp = Interest charges
- RentExp = Rental expenses
The results of this efficiency captures both firm efficiency and management efficiency. To separate the firm's effect from managerial ability. Following Garcia-Meca & Garcia-Sanchez (2017), we estimate following regression equation:

\[ \text{DEAScore} = \beta_0 + \beta_1 \text{Size} + \beta_2 \text{Market_Share} + \beta_3 \text{Cash_Flow} + \beta_4 \text{Age} + \text{Year} + \epsilon \]

Where:

- \( \text{DEAScore} \) = Company efficiency
- \( \text{Size} \) = Company size (natural logarithm of total assets)
- \( \text{Market_Share} \) = Market share of each bank (total assets divided with total assets from all banking companies)
- \( \text{Cash_Flow} \) = Free Cash Flow, 1 if company has positive free cash flow and 0 if otherwise
- \( \text{Age} \) = Number of years listed on the stock exchange
- \( \epsilon \) = Residual value

The residual value of the above regression reflects the efficiency level of the management and is used to measure managerial ability (MA).

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed banks on 31 December 2016</td>
<td>45</td>
</tr>
<tr>
<td>Banks listed after year 2010</td>
<td>(15)</td>
</tr>
<tr>
<td>Sample listed banks</td>
<td>30</td>
</tr>
<tr>
<td>Number of observations 2010-2016</td>
<td>210 rm years</td>
</tr>
</tbody>
</table>

### 4. Results and Discussion

Table 2 shows descriptive statistics of the variables. Based on table 1, the value of EBT, EBT1, and EBTLLP1 on average have a positive value. This indicates that the most of the sample companies have a positive profitability. Variable MA (managerial ability) has mean -0.0354. In average, thus, managerial ability in our samples are quite low. A lack of managerial ability may indicate that the company's managers have not been able to efficiently manage the company's resources or they do not have sufficient expertise. We use random effect (RE) approach and Generalized Least Square (GLS) technique to run our regressions. Random effect (RE) assumes that error has inter-time and cross-section relationships. Table 3 and Table 4 present the regression results.

Based on the results of the regression in Table 2, coefficient of MA*EBT is negative and significant at 1%. It means that managerial ability has negative influence on earnings persistence (and financial reporting quality). Higher managerial ability result in lower earnings persistence. Thus, H1 is not supported. This result is inconsistent with Garcia-Meca and Garcia-Sanchez [2] which find that managerial ability has positive and significant effect on earnings persistence. However, our result is consistent with Francis[19] and [20]. According to Francis[19] the higher the managerial ability, the manager will tend to take risks and choose challenging projects for the company. Therefore, although they have high managerial ability, it is uncertain that they can reduce uncertainty about earnings persistence as they tend to be risk seeker. Hassanzadeh [20] find that managerial ability has a significant negative effect on earnings persistence. They argue
that the manager with high managerial ability tend to report losses on financial reports due to
the opportunistic nature of managers to reduce company taxes. Manager’s opportunistic
behavior is closely related to earnings management. Adiati [21] suggests that companies that do
earnings management have lower earnings persistence than other companies.

SIZE has a significant negative effect on earnings persistence. which means the larger the
company the lower the earnings persistence (financial reporting quality). This result is
inconsistent with Setyawati[22]which suggest that the larger company has higher financial
reporting quality. DEPOSITS has a positive significant influence on earnings persistence. Thus,
higher third party funds has a significant positive effect on financial reporting quality. This result
is consistent with our expectation. The other control variable (LOANGROWTH) has
insignificant effect on earnings persistence.

Regression result on predictability also show managerial ability has negative association
with predictability, consistent with earnings persistence result. Again, the result indicates that
higher managerial ability result in lower financial reporting quality. Due to mean managerial
ability shows negative amount, which means that in average managerial ability in our samples
is quite low, it is possible that the negative association is drive by low managerial ability firms.
To examine this possibility, we divide our samples into sub sample of low managerial ability
and high managerial ability (based on median of managerial ability). The results are presented
in Table 5 for earnings persistence and Table 6 for earnings predictability.

From both tables we can see that in low managerial sub sample, we observe consistent results
with the main results, which are negative effect of managerial ability on financial reporting
quality. Whereas for high managerial ability sub samples, the results show insignificant effect
of managerial ability on financial reporting quality.

<table>
<thead>
<tr>
<th>Table 2: Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
</tr>
<tr>
<td>EBT1</td>
</tr>
<tr>
<td>EBTLLP</td>
</tr>
<tr>
<td>NIT</td>
</tr>
<tr>
<td>EBT</td>
</tr>
<tr>
<td>MA</td>
</tr>
<tr>
<td>SIZE</td>
</tr>
<tr>
<td>DEPOSIT</td>
</tr>
<tr>
<td>LOANGROWTH</td>
</tr>
<tr>
<td>DANI</td>
</tr>
<tr>
<td>NITT1</td>
</tr>
</tbody>
</table>
### Table 3: Regression Result of Model 1 – Earnings Persistence

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>6.92</td>
<td>0.000***</td>
</tr>
<tr>
<td>MA</td>
<td>0.016</td>
<td>0.006</td>
<td>2.56</td>
<td>0.005***</td>
</tr>
<tr>
<td>MA*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-3.14</td>
<td>0.001***</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.001</td>
<td>0.001</td>
<td>-1.33</td>
<td>0.092*</td>
</tr>
<tr>
<td>SIZE*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-6.71</td>
<td>0.000***</td>
</tr>
<tr>
<td>DEPOSITS</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.14</td>
<td>0.443</td>
</tr>
<tr>
<td>DEPOSITS*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>3.72</td>
<td>0.000***</td>
</tr>
<tr>
<td>LOAN GROWTH</td>
<td>0.003</td>
<td>0.001</td>
<td>6.50</td>
<td>0.000***</td>
</tr>
<tr>
<td>LOAN GROWTH*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>0.22</td>
<td>0.421</td>
</tr>
<tr>
<td>_cons</td>
<td>3.970</td>
<td>0.396</td>
<td>10.02</td>
<td>0.000***</td>
</tr>
</tbody>
</table>

***Significant at 1%
**Significant at 5%
*Significant at 10%

### Table 4: Regression Result of Model 2 – Earnings Predictability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>5.73</td>
<td>0.000****</td>
</tr>
<tr>
<td>MA</td>
<td>0.015</td>
<td>0.008</td>
<td>1.99</td>
<td>0.024**</td>
</tr>
<tr>
<td>MA*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-4.08</td>
<td>0.000***</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.001</td>
<td>0.001</td>
<td>1.31</td>
<td>0.095*</td>
</tr>
<tr>
<td>SIZE*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-5.57</td>
<td>0.000***</td>
</tr>
<tr>
<td>DEPOSITS</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.46</td>
<td>0.324</td>
</tr>
<tr>
<td>DEPOSITS*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>3.31</td>
<td>0.001***</td>
</tr>
<tr>
<td>LOANGROWTH</td>
<td>0.015</td>
<td>0.001</td>
<td>26.04</td>
<td>0.000***</td>
</tr>
<tr>
<td>LOANGROWTH*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-0.83</td>
<td>0.204</td>
</tr>
<tr>
<td>_cons</td>
<td>-0.202</td>
<td>0.029</td>
<td>-0.70</td>
<td>0.482*</td>
</tr>
</tbody>
</table>

***Significant at 1%
Table 5: Regression Result of Sub Sample – Earnings Persistence

**Significant at 5%
*Significant at 10%

Panel A: Low Managerial Ability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>5.06</td>
<td>0.000***</td>
</tr>
<tr>
<td>MA</td>
<td>0.017</td>
<td>0.013</td>
<td>1.37</td>
<td>0.085*</td>
</tr>
<tr>
<td>MA*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-1.72</td>
<td>0.043**</td>
</tr>
<tr>
<td>SIZE</td>
<td>-0.002</td>
<td>0.001</td>
<td>-1.23</td>
<td>0.110</td>
</tr>
<tr>
<td>SIZE*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>-8.7</td>
<td>0.000***</td>
</tr>
<tr>
<td>DEPOSITS</td>
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<td>0.000</td>
<td>0.41</td>
<td>0.341</td>
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<tr>
<td>DEPOSITS*EBT</td>
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<td>0.000</td>
<td>1.21</td>
<td>0.114</td>
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<tr>
<td>LOANGROWTH</td>
<td>-0.008</td>
<td>0.008</td>
<td>0.97</td>
<td>0.311</td>
</tr>
<tr>
<td>LOAN GROWTH*EBT</td>
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<td>0.000</td>
<td>0.03</td>
<td>0.486</td>
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<tr>
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<td>0.689</td>
<td>0.039</td>
<td>1.78</td>
<td>0.076*</td>
</tr>
</tbody>
</table>

Panel B: High Managerial Ability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>2.31</td>
<td>0.011**</td>
</tr>
<tr>
<td>MA</td>
<td>0.010</td>
<td>0.069</td>
<td>0.14</td>
<td>0.444</td>
</tr>
<tr>
<td>MA*EBT</td>
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<td>0.000</td>
<td>-0.49</td>
<td>0.311</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.001</td>
<td>0.002</td>
<td>0.20</td>
<td>0.422</td>
</tr>
<tr>
<td>SIZE*EBT</td>
<td>-0.000</td>
<td>0.000</td>
<td>-2.21</td>
<td>0.014**</td>
</tr>
<tr>
<td>DEPOSITS</td>
<td>-0.000</td>
<td>0.000</td>
<td>-0.87</td>
<td>0.193</td>
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<tr>
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<td>0.000</td>
<td>1.30</td>
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</tr>
<tr>
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<td>0.003</td>
<td>0.001</td>
<td>4.52</td>
<td>0.000***</td>
</tr>
<tr>
<td>LOAN GROWTH*EBT</td>
<td>0.000</td>
<td>0.000</td>
<td>0.08</td>
<td>0.470</td>
</tr>
<tr>
<td>_cons</td>
<td>0.004</td>
<td>0.071</td>
<td>0.06</td>
<td>0.955</td>
</tr>
</tbody>
</table>

***Significant at 1%
**Significant at 5%
*Significant at 10%
Table 6: Regression Result Sub Sample – Earnings Predictability

Panel A: Low Managerial Ability

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Std. Err.</th>
<th>t-stat</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBT</td>
<td>0.000</td>
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<td>4.20</td>
<td>0.000***</td>
</tr>
<tr>
<td>MA</td>
<td>0.003</td>
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</tr>
<tr>
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<td>0.024**</td>
</tr>
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<td>-0.000</td>
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<td>-0.23</td>
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</tr>
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<td>0.000</td>
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</tr>
<tr>
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<td>0.184</td>
</tr>
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<td>4.53</td>
<td>0.000***</td>
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<tr>
<td>LOANGROWTH*EBT</td>
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<tr>
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</table>

Panel B: High Managerial Ability

<table>
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<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
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<td>0.000</td>
<td>1.82</td>
<td>0.035**</td>
</tr>
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<td>1.63</td>
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</tr>
<tr>
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<td>-0.96</td>
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<tr>
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<td>0.001</td>
<td>0.003</td>
<td>0.43</td>
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</tr>
<tr>
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<td>0.000</td>
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</tr>
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<tr>
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</tbody>
</table>

***Significant at 1%
**Significant at 5%
*Significant at 10%
5. Conclusion

This study aims to find empirical evidence about the influence of managerial ability on financial reporting quality of listed banks in Indonesia. Based on our regression results, we find that managerial ability has a negative and significant effect on the financial reporting quality (measured by earnings persistence and earnings predictability). Higher managerial ability does not able to increase the financial reporting quality. These results are inconsistent with Garcia-Meca & Garcia-Sanchez [2] which find that managerial ability has a positive effect on the bank financial reporting quality. However, these results consistent with Francis [19] and Hassanzadeh [20] which find that managerial ability has a negative effect on financial reporting quality. This may be due to when the manager has higher ability, he/she tends to be opportunistic and take actions (such as opportunistic earnings management) and thus earnings become less persistent as well as less predictable (low financial reporting quality).

There are some limitations of our study. As we are only examining banking industry, our samples tend to limited. The results of this study also cannot be generalized to other industries. We also only use two measurements of financial reporting quality (earnings persistence and predictability). Further studies may extend the samples to non-listed banks and may use other proxies to measure financial reporting quality.

References


Do Tax Audit Increase Post-Audit Reported Income? 
Evidence from Indonesia

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\textbf{Abstract.} A tax audit is a tool for tax authorities to verify the accuracy of taxpayers' income and deductions. This research aims to measure the impact self-imposed or voluntary tax audit on individual taxpayer reported income using difference-in-differences (DiD). We compared the annual taxpayers' reported income before and after-tax audit in 2012. The results show while the effect of a voluntary tax audit is negative for the lowest income bracket, it is significantly positive for the higher income bracket. Also, the effect of the tax audit on reported income for the top bracket is nine to seventeen times higher than for the lower income brackets. Thus, with limited audit resource, we recommend the government to push audit for the top income bracket.

\textbf{Keywords:} Behavioral Response, Impact Evaluation, Reporting Disclosure, Tax Audit.

1. Introduction

In recent years, taxation revenue is Indonesia's primary source of state income. This is shown by the data from the Financial Report of Central Government and State Budget, that for the latest three years (2015-2017) tax revenue contributed to around 75% of the total state income. Unfortunately, this is not followed by the increase of tax ratio (ratio of tax revenue and Gross Domestic Product). Based on World Bank data, Indonesia’s tax ratio between 2014-2016 was struggling around 10%. Consequently, major efforts are needed to raise unexplored and untouched sources of state income through tax compliance.

An effort by tax authority in Indonesia (Directorate General of Taxes/DGT) to determine compliance of taxpayers is conducting Tax Audit. Conducting Tax Audits is one of the many ways the government can testify taxpayer's compliance in fulfilling the obligation stated in General Tax Provisions and Procedures Law. Tax audit is a corrective way in Indonesia's taxation system applying the self-assessment system \cite{1} The self-assessment system gives full trust to taxpayers to count, pay and report their tax compliance independently. Hence, taxpayers have full right and decision-making authority in fulfilling their tax compliance. The object of this research is taxpayers' response in stating/reporting their tax liability, particularly on the individual level, after having audited by the tax authority.

Self-assessment taxation system as described above surely has weaknesses. This system based on\cite{2} is vulnerable to potency of under-reporting which is reporting income or turnover under the exact number. As Slemrod\cite{2} said that rich people tend to avoid the tax (tax avoidance) and people in lower income tend to do tax evasion. Rich people tend to decrease their tax amount legally, meanwhile people in lower income tend to against law. This is related to the capability, cost and benefit from people in charge with. One of a kind of illegal things mostly done by taxpayer entire this state is tax evasion which defines as a decision to not reporting the whole profit and its effort to decrease tax payment (Sandmo, 2005). Taxpayer’s
decision to do tax evasion is affected by detected probability and punishment, number of penalty and level of individual risk aversion\[2\].

Tendency of tax evasion made the examination/audit function run by DGT clearer. Yet in fact, the number of audit done by DGT is too low seen from the number of Audit Coverage Ratio (ACR) data. Audit Coverage Ratio is the scope of tax audit counted from divide between audited taxpayers and number of taxpayers who have obligation to submit the Tax Return. ACR data for Individual Taxpayer in Indonesia for the latest three years described in Figure 1 below:

![Fig. 1. Individual Taxpayer Audit Coverage Ratio years of 2015-2017.](image)

The scope of tax audit for Individual Taxpayers remains under 1\% until 2017 making DGT reconsider further whether the implied audit has so far affected Taxpayers either implicitly or explicitly. Could the audit detect taxpayer attitude where they might report the tax compliance inappropriately? What is the impact of the tax audits done by DGT on taxpayer's attitude to be more compliant in the following period after the audit?

2. Literature Review
2.1 Problem Conceptualization

Economists explained that individual beings as economical agents tend to maximize their utility. However, this effort is constrained by limited resources (income). By this limitation, they have to use their highest capability/ purchasing power. Consequently, they tend to exert in maximizing the satisfaction based on the limited resources/budget [3].

Given the limited resources in terms of income gained by each person, the amount that will be reported also affects the decision of individual tax report/tax return. People tend to choose the optimal number to be reported even if they have to report under the actual income [4] underlined that the effect of a tax audit on the decision of reporting depends on audit probability and penalty/punishment from the authority. A person builds perception not only from the chance of being audited but also the probable condition when it does happen, in terms of probabilities of evasion and number of detected evasion. If an audit does not reveal tax evasion, the perception of the probability of being detected in the future becomes lower, decreasing the compliance of taxpayers themselves[5]. This is described by Gemmel and Ratto [5] as caused by taxpayers who have not formally received information related to the rules of audit implementation run by a tax authority, so taxpayers could not determine the actual number of audit probabilities. Furthermore, decisions in tax reporting and stating depend on taxpayers' perception in the time being audited and the number of unreported income which is intended to be concealed from an audit. Hence, based on Gemmel and Ratto[5] the experience of being audited changes taxpayers' future perception related to stating compliance report in the future.
2.2 Former Empirical Studies

There are many discussions about tax evasion and audit probabilities. Many research used Allingham and Sandmo [4] as a reference. Allingham and Sandmo [4] state that tax reporting is a decision that is full of uncertainty faced by taxpayers because the tax authority does not automatically give a penalty to the taxpayers. The uncertainty in penalty results in two options for taxpayers to either report the exact number of income (comply) or report lower income than before, namely underreporting. Impact (pay off) for the taxpayer if they choose the latter depends on the probability of tax authority to either audit or not (probability of audit). If it is not audited, taxpayers will gain a bigger benefit than the first option (comply). In short, based on Allingham and Sandmo, the attitude of taxpayer compliance is affected by the chance/probability of being audited by tax authority (audit probability) and the number of given penalty.

Based on Allingham and Sandmo’s research elaborated above, it is scalable to some other tax evasion discussions particularly related to the tax audit run by the authority. Empirical studies are done to testify Allingham and Sandmo’s portfolio which are mostly done in laboratory experimental studies. One of those studies was conducted by Spicer and Hero [6]. Based on the result of Spicer and Hero [6] experiment done to their students, level of individual tax compliance is affected by the awareness of other people's experiences around them. Moreover, another factor affects results from the experience of being audited once. The experience of being audited significantly increases tax compliance. This is because in their study there was no social stigma which exists in society but could not be captured in laboratory experiments.

On the other hand, the effect of an audit to the compliance decision increases because of availability effect, where people tend to feel the probability of a certain event by recalling the former similar event in the past. In this case, the event of being audited is expected to cause the concern of increased probability of being audited again. The result of Spicer and Hero study is supported by that of Webley [7]. Conducted the study on his students, Webley [7] stated that increasing audit probability (probability of being audited) made people increase their income reporting more. With a slight difference done by Webley [7] in his study, the subject of the experiment is directed to make financial decisions related to the business they have built to fill the tax report accordingly in the future.

This study underlines the increase in audit probability due to the experience of being audited. The difference is that this study used real data from Indonesia's individual tax report which is more realistic than the laboratory experimental environment.

Another approach used to measure taxpayer response after an audit was done through an experimental study by Slemrod [8]. Using taxpayer data in Minnesota, researchers gave treatments in the form of notifications about the upcoming audit for some randomly chosen taxpayers. The result of this study depended on how taxpayers understood or perceived the received notification letter of an audit. Overall results show that the treatment increases individual taxpayer income reporting, particularly those who are in the lower income group and middle class. However, it worked contradicting for individual taxpayers in the high-income level who decreased their income report instead. The decrease in income reporting, according to Slemrod [8], was probably because taxpayers in high-income groups have more complicated issues in taxation compared to the other income groups. Moreover, because of these complex tax affairs the high-income group individuals most probably use the help/assistance of tax consultants in tax reporting.

Another experimental study shows diverging results. As what has been done by Mittone [9] it shows that an individual tends to object after an audit. It is known as the bomb crater effect as in World War I when armies used bomb craters as a place to hide because they believed that
a previously bombed area would not be bombed twice. This also happens in audits, and individuals tended to believe they will not be audited again after being audited once before so in the next report they will decrease their level of compliance/reporting. This was supported by experiments done by Maciejovsky[10] and Kastlunger[11]. Maciejovsky[10] proved the bomb crater effect to be true and stated that it is caused by two mechanisms namely misperception of chance and loss repair. Misperception of chance is an assumption that a random event might happen again sooner if it has not happened for some time. However, the event has less probability if it just happened recently.

Meanwhile, loss repair mechanism is a condition where people cover unpredicted former loss, in this case, is a penalty because of tax evasion. A way to cover up is by doing risky activities in the following period namely underreporting in income revelation in the tax reporting. Results from Maciejovsky[10] stated that misperception of the chance mechanism is a more dominant determinant affecting bomb crater effect.

On the other hand, there are a few studies about taxpayer response after tax audit using real data of tax returns. One of them is by DeBacker[12] confirmed that audit impacts the increasing of audited taxpayer's income reporting. Different amounts depend on the variety/source of income and individual characteristics.

Another study by Gemmel and Ratto[5] used tax return data related to the change of attitude as the impact of a tax audit. The study used data of individual taxpayers in the United Kingdom (UK). In their study, Gemmel and Ratto[5] intended to identify preventive effects from the tax audit whether taxpayers tend to be more compliant for the next years after experienced an audit. The results show compliant taxpayers (no penalty from audit result) tend to decrease their compliance after being audited. The contrary result occurred in non-compliant taxpayers (got a penalty from audit) which are more compliant after being audited. Another result from this study was the stronger response from business individual taxpayers rather than the personal taxpayer.

Another perspective is from Mendoza[13] where they used aggregate data from countries both some participants of OECD and some non-OECD. According to Mendoza[13] in the hypothesis, it stated that compliance will increase to a certain level of audit and decreases beyond that. Result of the study supported the hypothesis whereby the audit did not always gave a positive impact for taxpayers because they will reduce the compliance in the taxation obligation. However, in the case of using aggregate data from different countries, Mendoza[13] did not explain to what extent audit level affected individual tendency to turn the attitude less compliant after a certain level of an audit was reached.

Different results and different methods related to the impact of tax audit toward taxpayer compliance makes the topic into an interesting one o be inspected with different kinds of taxpayers in Indonesia. Former studies done abroad mostly used laboratory experiments to describe the response of taxpayer after tax audit. According to Andreoni[14], the experimental study has weaknesses primarily the setting of a less realistic experimental environment, so it does not exactly reflect real decision making. This study is intended to use a direct measurement from tax return data by taxpayers. Data in the form of direct measurement based on Andreoni[14] would be more reliable and reflect individual condition related to the investigated matter so it could resolve weaknesses of former studies which used experimental data. The use of direct measurement data to identify taxpayer responses after being audited has been rarely explored so far. Some studies have used direct measurement data from annual tax return but mostly was done in developed countries with a higher gross domestic product than Indonesia's and low social gaps such as in the United States, UK, Italy, and Denmark. In Indonesia, there has not yet been a study using direct measurement data (tax return data) related to individual taxpayer response toward an audit.
2.3 Hypotheses

Based on theories and former empirical studies, the proposed hypotheses in this study tries to see whether there is an impact of experiencing an audit toward income reporting in taxpayer return. That is then compared with income reporting in a tax return from a taxpayer who never experienced a tax audit.

3. Research Methodology

3.1 Source of Data

Data used in this study is micro-data collected from the Directorate General Taxes that is individual tax return data (SPT WP OP). The data was used as a medium to explore individual taxpayers response within their reporting decision. Before using the tax return data, the authors identified the audited individual taxpayers from published notification to conduct a tax audit (Surat Perintah Pemeriksaan). The use of such data is to identify taxpayers samples listed in the treatment group. After accessing the audited taxpayers data, it is to be paired with the taxation reporting collected from annual tax return data.

Meanwhile, control group data only uses the taxation reporting data stated in the annual tax return. Sampling process of this study is described as follows: For analysis in this study, the authors used individual annual tax return data collected from DGT between 2009 to 2014. These data are sourced from the information recording system in DGT. According to DGT, data from this system after the year 2008 are accountable and valid. Based on this statement, this study chose to use data from the year 2009.

The data is divided into two groups namely treatment and control. For the treatment group, data was sourced from individual taxpayers who experienced a tax audit in 2012. Individuals in this group were listed from the notification to conduct a tax audit which was done in 2012. From audited taxpayer, the authors then traced the annual tax return reporting data between 2009 to 2014. Some extreme observations were excluded from the data. Beside the most extreme, tax return reporting data which happened before or after the treatment application were also excluded. For tax return reporting data listed in this treatment group, around 15 thousand tax returns were sourced as a sum between 2009 to 2014.

Meanwhile, the control group in this study was formed from a separate audited individual taxpayer tax return data and non-audited individual taxpayer. The formation of the control group was taken from individuals had non-audited tax at all between 2009 to 2014. After accessing the non-audited tax return data, outliers on the data sample were excluded. As it was in the treatment group, data appearing only once before or after treatment application were also excluded from this sampling as well. The objective was to end up with balanced data to form a data panel. Number of data for this control group came out to be around 2.88 million tax returns from the tax year of 2009 – 2014.

Samples used in this study were individual tax return reporting data from DGT after considering characteristics of the taxpayer's district/domicile representation. It was intended to represent the entirety of Indonesia from many regions. This sample chosen was randomly done considering things above (stratified random) and being suited to DGT authorized data.

This study used the difference-in-difference method, so it needed a base year (baseline) which was used as the time differ variable. The year chosen as the baseline or treatment is 2012 because of the limited data from data source, DGT. Individual tax return data derived from DGT were from 2009-2014. Thus, 2012 was chosen as the baseline to get the same range of time between before and after treatments (3 years in each). Hence, taxpayers listed in the treatment group were those who experienced tax audits in the year 2012. Furthermore, for the tax year of 2011 reported in 2012, authors used the assumption that taxpayers reported the tax return within
a maximum three months after the end of the year (2011). An audit which was done in 2012 was started and finished around March (after the 2011 tax return period is finished) so for the tax year of 2011 listed for the period before having an audit and for the year of 2012 listed to the year of after being audited.

3.2. Empirical Specification

As the authors have stated above, the objective of this study is to identify individual taxpayers responses as they change in the annual tax return. The change of attitude was compared between the audited taxpayers and non-audited ones. In other words, this study measures whether the applied policy by the regulator (DGT) has any impact of attitude change onto the individual taxpayer. According to Gertler et al. (2011), one of the methods used to evaluate policy impact was the difference-in-differences method. This method, based on Gertler et al. (2011) was used as a tool of policy impact comparing the results which are changes between the treatment and control group.

This study used difference-in-differences method in its regression analysis. The empirical specification in this study was suited to the model that Gemmel and Ratto[5] and DeBacker[12] used as follows:

\[ \gamma_{it} = \beta_0 + \beta_1 dummyT + \beta_2 dummyG + \beta_3 TG + \beta_4 Usia\_daft + \beta_5 Usia\_daft^2 + \beta_6 Regional + \epsilon_{it} \]  

with:

\[ \gamma \] = reported income in annual Tax Return,  
\[ dummyT \] = dummy time (year) treatment,  
\[ dummyG \] = dummy treated group,  
\[ TG \] = interaction between dummyT and dummyG,  
\[ Usia\_daft \] = length of time the taxpayer has been registered (in year),  
\[ Usia\_daft^2 \] = squared length of time taxpayer has been registered,  
\[ Regional \] = dummy region/ location of taxpayer is registered.

The notation, \( i \) in the equation above represents individual/ taxpayer, \( t \) represents tax year, \( \beta_0 \) represents constant intercept of estimated parameter, \( \beta_1 \) to \( \beta_6 \) represent slope from the estimated parameter, while \( \epsilon_{it} \) represents error term. Regional which is the dummy state/ location where the taxpayer is listed is categorized into 7, according to island group or province. DKI Jakarta was excluded from Java Island and turned into the baseline in this dummy regional. This is because DKI Jakarta is the center of the Indonesian and had the largest sample number in this sampling compared to other territories. Grouping of this dummy regional and region province is based on the paper in Appendix A.

Because the sample data combines both observations of individual and period of times, so the estimation of this research was done using panel data. However, because of the number of observation for each individual was different, it is called an unbalanced panel. Ekananda[15] stated that using panel data could consider the individual heterogeneity and control in each individual. Because of the use of dummy regional in this research, the applied approach in this research was the fixed effect model. Fixed effect model uses constants as a regressive parameter (intercept).
4. Findings

4.1 Statistic Descriptive Data

The number of observation in this sample was 2,895,055 taxpayer return data from 2009 until 2014. The audited taxpayer observations were 15,030 tax returns, and the non-audited tax return were 2,880,025 with the following details:

<table>
<thead>
<tr>
<th>Tax Year</th>
<th>Audited Taxpayer</th>
<th>Unaudited Taxpayer</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2,127</td>
<td>396,074</td>
</tr>
<tr>
<td>2010</td>
<td>2,807</td>
<td>462,853</td>
</tr>
<tr>
<td>2011</td>
<td>2,708</td>
<td>452,043</td>
</tr>
<tr>
<td>2012</td>
<td>2,468</td>
<td>513,284</td>
</tr>
<tr>
<td>2013</td>
<td>2,554</td>
<td>543,738</td>
</tr>
<tr>
<td>2014</td>
<td>2,366</td>
<td>512,033</td>
</tr>
<tr>
<td>Total</td>
<td>15,030</td>
<td>2,880,025</td>
</tr>
</tbody>
</table>

Meanwhile, the classification of the data based on the location of the registered taxpayer can be seen in table 2 below. These regions were classified according to the group of regional dummy variable that has been explained in the previous section. The table shows the range of samples over the region although still dominated by DKI Jakarta and Java Island.

<table>
<thead>
<tr>
<th>Region</th>
<th>Unaudited</th>
<th>Audited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Amount</td>
<td>Percentage</td>
</tr>
<tr>
<td>DKI Jakarta</td>
<td>723,397</td>
<td>25,12</td>
</tr>
<tr>
<td>Java and Madura</td>
<td>1,188,603</td>
<td>41,27</td>
</tr>
<tr>
<td>Sumatera, Riau Islands, and Bangka Belitung</td>
<td>473,513</td>
<td>16,44</td>
</tr>
<tr>
<td>Borneo</td>
<td>162,756</td>
<td>5,65</td>
</tr>
<tr>
<td>Sulawesi</td>
<td>103,113</td>
<td>3,58</td>
</tr>
<tr>
<td>Bali and Nusa Tenggara</td>
<td>164,547</td>
<td>5,71</td>
</tr>
<tr>
<td>Papua and Maluku</td>
<td>64,096</td>
<td>2,23</td>
</tr>
<tr>
<td>Total</td>
<td>2,880,025</td>
<td>100</td>
</tr>
</tbody>
</table>

Furthermore, the descriptive statistics of the variables in this research is are seen in table 3. This table adds three variables, not included in the dummy variables.
Table 3: Statistic descriptive of the variable.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>reported income</td>
<td>2.895.055</td>
<td>155.4</td>
<td>-4.85</td>
<td>485.2</td>
</tr>
<tr>
<td>umur daftar</td>
<td>2.895.055</td>
<td>11.53</td>
<td>1</td>
<td>38</td>
</tr>
<tr>
<td>umur daftar²</td>
<td>2.895.055</td>
<td>206.5</td>
<td>1</td>
<td>1444</td>
</tr>
</tbody>
</table>

From table 3, we can see that the mean in reported income is 155.4 million rupiahs. Whereas, the lowest in the reported income observation is -4.85 billion rupiahs and the maximum is 485 billion. The mean of taxpayer age is 11.5-year-old. The lowest number is one year, and the highest is 38 years.

4.2. Estimation Result

Based on the estimation results using Fixed Effect model in Table 4 is seen that there is a significant difference in result for difference-in-differences estimator (TG) where no explanatory variable was given and after the explanatory variable/control variable was given. The significance of result for difference-in-differences estimator in that without explanatory variable had a 10% significance level and became more significant at the 1% level when the explanatory variable was given in its estimated equation.

Coefficient value for difference-in-differences estimator in this research is also different in that without any explanatory variable or after given the explanatory variable treatment which is the characteristic of the taxpayer in the reporting data of individual tax return. The estimated differences value of this examination was significant at the 10% level with the value of about 9.9 million rupiahs when there are no explanatory variables such as age and region of the taxpayer that has been used. But, when considering the registered age (usia_daft), squared registered age (usia_daft²), and the dummy of the taxpayer's domicile area, then the value increased towards 34-35 million (in rupiah) with 1% significance level.

The positive influence that exists in the form of the increase in income reporting after this auditing is by the previous empirical research that has been done by De Backer[12] and D'Agosto et al. (2018). Both of them stated that doing the inspection/audit had a significant effect to the increase in reporting of further disclosure of tax liability seen through the increase in reporting of taxable income[12] or the increase in reported earnings base.

Meanwhile, there were slightly different results shown by Gemmel and Ratto[5]. In that empirical study, they stated that there were two effects of the tax audit depending on the taxpayer's status or condition that have been audited. If the audited taxpayer was assumed as compliant (without any accrued tax assessments), then the tax liability disclosure will tend to be lower than before. It is inversely true with the taxpayer who is assumed as non-compliant according to the previous inspection; then they will revise the tax liability disclosure in the next period. However, this research did not explore as far as measuring the taxpayer's audit result because of data limitation, and the validity level was inferior to the existing data. This different result may be caused by the use of the variable of audit result finding where the group of audited taxpayers was separated into two; compliant and non-compliant besides considering the experience of having been audited as so in Gemmel and Ratto's[5] research. Whereas, this research only considered the experience of having been audited as the proxy to improve the taxpayer's understanding of the probability of getting audited.
The regression result for the explanatory variable considers that taxpayer's age factor (in this term registered age) positively affecting the tax liability disclosure. But for the square age variable (usia_daft2), it showed the negative result in their income reporting. These opposite results imply that taxpayer's registered age will have a positive impact in their tax report until a certain point or certain age and as they grow older they will attempt to decrease their income reporting even more. It is in line with [16]Supriyadi findings.

The next dummy was the taxpayer’s regional/registered area based on their province. From 34 provinces, then classified into 7 regional with DKI Jakarta as its reference base (0 value). It can be seen that all of the area will have less value than DKI Jakarta because the value of that region was used as the base reference for the others. Even if there was any regional group which only half of them have significant value, and the other half were not. The significant regional group was group 1 (Java Islands except for the Special Capital Region of Jakarta), group 3 (the province in Borneo Islands), and group 4 (the province in Sulawesi Islands). This can show the

<table>
<thead>
<tr>
<th>Table 4: The Estimation Result of Fixed Effect Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependence Variable : reported income (in million rupiah)</td>
</tr>
<tr>
<td>Estimation (1)</td>
</tr>
<tr>
<td>dummyT (dT)</td>
</tr>
<tr>
<td>(1.56535)</td>
</tr>
<tr>
<td>TG</td>
</tr>
<tr>
<td>(5.37382)</td>
</tr>
<tr>
<td>Usia_daft</td>
</tr>
<tr>
<td>(0.96151)</td>
</tr>
<tr>
<td>Usia_daft2</td>
</tr>
<tr>
<td>(0.02355)</td>
</tr>
<tr>
<td>Regional.1</td>
</tr>
<tr>
<td>(173.69697)</td>
</tr>
<tr>
<td>Regional.2</td>
</tr>
<tr>
<td>(197.86104)</td>
</tr>
<tr>
<td>Regional.3</td>
</tr>
<tr>
<td>(137.90983)</td>
</tr>
<tr>
<td>(117.89531)</td>
</tr>
<tr>
<td>Regional.5</td>
</tr>
<tr>
<td>Regional.6</td>
</tr>
<tr>
<td>(123.54140)</td>
</tr>
<tr>
<td>Constants</td>
</tr>
<tr>
<td>(0.84849)</td>
</tr>
<tr>
<td>N</td>
</tr>
<tr>
<td>R Square</td>
</tr>
</tbody>
</table>

* p<0.1, ** p<0.05, *** p<0.01
fact that in Indonesia, the highest tax contributor until now is still dominated by taxpayers in Jakarta Province.

Based on the existing data structure, this research explores the response after the audit for each income group. This is to see which income group is the most responsive or less responsive to tax audit actions carried out by the tax authorities.

The classification of income groups is based on that of the Income Tax Law with a slight change to the income layer above 500 millions. Income groups above 500 millions are limited to the value of 10 billion rupiahs because from the sample in the treatment group, the maximum value of income from the existing observations only go up to five billion rupiahs. Thus, the income layer can be grouped into four groups as follows:

1. Reported income group from 0 to 50 million rupiahs;
2. Reported income group above 50 million rupiahs up to 250 million rupiahs;
3. Reported income group above 250 million rupiahs to 500 million rupiahs; and
4. Reported income group above 500 million rupiahs up to 10 billion rupiahs.

The estimation results for each income group are presented in Table 5 below. From the estimation results above, it can be seen that the response to audit/audit actions differs for each income group. We can see the response of each group from the coefficients in the TG variable. The results above show that the three groups, which are the second to fourth groups show a similar response: an increase in their reporting income after the examination/audit. But the magnitude of the increase is different with the increasing amount of income. For group 2 (the middle-income group) in this study, there is an increase in reporting income of around 21 million rupiahs for taxpayers who are audited compared to taxpayers who have not experienced an audit.

Similar results also occur in groups 3 and 4. Group 3 (the high-income group) responds to the audit action by the DGT by increasing the disclosure of income of approximately 44 million rupiahs for taxpayers who experienced an audit compared to WP who does not experience an audit. Greater results are shown by group 4 (the very high-income group) which responds to the audit action by increasing disclosure of income by 331 million rupiahs. The amount of this income increase is likely to depend on the income group. From the above, it can be shown that middle to high-income groups tend to respond positively after this audit action. This result is by the availability effect revealed by Spicer and Hero[6].

Different responses are shown by group 1 (low-income group). Group 1 responds to the audit action by decreasing the disclosure of income by around 7 million rupiah. This shows that for taxpayers who are audited in the low-income group, after experiencing an audit will tend to reduce the disclosure of the report.

Estimation results based on income groups that have been described above for the characteristics of taxpayers in Indonesia show the opposite result when compared to previous studies. In the study Slemrod[8], revealed that based on experimental results, an increase in the probability of audit would increase disclosure of reported income, especially for taxpayers with low and middle income groups. Taxpayers with high income tend to express lower income than before based on the perception that the audit will not automatically know and give punishment for tax evasion[8].

The results of this study also contradict the research of DeBacker[12]. They stated that based on taxpayer return data, taxpayers who are in the lowest income group (first quartile) respond the most among other income groups after experiencing an audit in terms of disclosure from their taxable income. And the opposite result happens for the highest income group. This result according to DeBacker[12] is likely because low-income groups may no longer have other sources of income that can be hidden so that they finally reveal the actual income after being audited. This is in contrast to high-income groups that may have multiple income sources so
that they still have the possibility of hiding the income and report only a small part of the reality.[12]

While the opposite results happen when using Indonesian taxpayers data, one of the reasons for this is probably due to a lot of overpayments audit made by DGT for low income group. This group (low income group) might still do not understand that when they declare overpayment they will be audited. So that after they have been audited, this low income group is likely to respond for the following year, one of which is by lowering their income reporting and hiding their tax credit so that they do not report overpayment and will not be audited. This different response from taxpayers in Indonesia can be used as a study for further research.

### Table 5. The Estimation Result Based on Income Group

<table>
<thead>
<tr>
<th>Variable</th>
<th>reported income (in million) Group 1</th>
<th>reported income (in million) Group 2</th>
<th>reported income (in million) Group 3</th>
<th>reported income (in million) Group 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>dummyT (dT)</td>
<td>6.58849*** (0.03693)</td>
<td>-0.85169*** (0.07376)</td>
<td>-0.26801 (0.43241)</td>
<td>0.33620 (5.55138)</td>
</tr>
<tr>
<td>TG</td>
<td>-7.07111*** (0.39271)</td>
<td>20.90597*** (1.32358)</td>
<td>44.34166*** (5.34032)</td>
<td>331.33462*** (77.47091)</td>
</tr>
<tr>
<td>Usia_daft</td>
<td>-1.74446*** (0.01980)</td>
<td>13.17008*** (0.04083)</td>
<td>31.24009*** (0.25826)</td>
<td>160.02077*** (3.43626)</td>
</tr>
<tr>
<td>Usia_daft²</td>
<td>-0.06234*** (0.00047)</td>
<td>-0.18932*** (0.00132)</td>
<td>-0.31448*** (0.00876)</td>
<td>-0.44628*** (0.12272)</td>
</tr>
<tr>
<td>Regional.1</td>
<td>-2.94146 (12.20510)</td>
<td>86.68933* (45.09391)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional.2</td>
<td>-4.43210 (13.43532)</td>
<td>112.62432** (50.71805)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional.3</td>
<td>10.34935 (11.80502)</td>
<td>89.92407 (58.28262)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional.4</td>
<td>-19.96234 (13.95107)</td>
<td>-55.25250 (53.05624)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional.5</td>
<td>-2.81186 (12.72834)</td>
<td>135.37715* (74.96158)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Regional.6</td>
<td>-</td>
<td>93.71173* (46.09998)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Constant</td>
<td>57.79900*** (8.88612)</td>
<td>-64.84776* (29.01532)</td>
<td>61.17624*** (1.77338)</td>
<td>-509.87838*** (23.68670)</td>
</tr>
<tr>
<td>N</td>
<td>1,229,913</td>
<td>1,324,139</td>
<td>200,380</td>
<td>135,360</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.12173</td>
<td>0.29784</td>
<td>0.37926</td>
<td>0.16572</td>
</tr>
</tbody>
</table>

* p<0.1, ** p<0.05, *** p<0.01
5. Conclusions

This research aims to see the different responses of individual's behavior after having been audited by using individual tax return as the micro data. This response was measured from the behavior of their income disclosure from audited taxpayers in the annual tax return compared to the income disclosure in unaudited taxpayers. From the measurement result by using the difference-in-differences method, it is revealed that the audited taxpayers tend to have higher income disclosure in their annual report of tax return than the unaudited taxpayers at all. With the higher disclosure values in their tax report, the audited taxpayers were relatively more compliant in disclosing their income than the unaudited ones.

This research aims to depict the significance of the audit by tax authority and the effect on the taxpayer's behavior. Therefore, with the lack of Directorate General of Taxes as the tax authority, it can improve either the audit's quality or quantity to have positive effects directly and indirectly to the taxpayer. The lack of DGT was the number of auditors and cost of audit either in terms of inspection or the payroll for the tax auditors (budget constraint). This can be taken into policy consideration as well as for the audit plan and strategy that will be conducted by Directorate General of Taxes to the individual tax return. This research also expected to give academic contribution in the form of empirical prove related to how the consideration of taxpayer’s behavior which audited and unaudited especially in the developing country. With method and another data resource, an academic debate toward the taxpayer’s response after have been audited or the increase in audit probability still can be explored.

References

APPENDIX

Appendix A. Table of regional dummy classification.

<table>
<thead>
<tr>
<th>Number</th>
<th>Dummy’s name</th>
<th>Regional Member (province)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Regional 0 /baseline</td>
<td>DKI Jakarta.</td>
</tr>
<tr>
<td>2.</td>
<td>Regional 1</td>
<td>Province in Java Islands except DKI Jakarta</td>
</tr>
<tr>
<td>3.</td>
<td>Regional 2</td>
<td>Province in Sumatera, Riau Islands and Bangka Belitung Islands</td>
</tr>
<tr>
<td>4.</td>
<td>Regional 3</td>
<td>Province in Borneo Island</td>
</tr>
<tr>
<td>5.</td>
<td>Regional 4</td>
<td>Province in Sulawesi Island</td>
</tr>
<tr>
<td>6.</td>
<td>Regional 5</td>
<td>Province in Bali Island and Nusa Tenggara</td>
</tr>
<tr>
<td>7.</td>
<td>Regional 6</td>
<td>Province in Maluku Islands and Papua</td>
</tr>
</tbody>
</table>
The Influence of the Social Media Recommendation System Against Polarization in the Views of User Politics: Experiments on Social Media Newsfeed on Social Media Users

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Abstract. The background of this research is based on 2019 election issues that spread massively in social media. From these issues comes the polarization and divides into two opposing sides. However, users are basically not presented with balanced information as a result of the recommendation system on social media. This research is expected to enrich the study of social media impact, especially on study of recommendation system with context in Indonesia. This thesis examines the recommendation system designed by social media operators tends to be uniform or aligned with the user's political views only. The phenomenon is The Filter Bubbles where the information circulating on our social media is filtered only in accordance with the user's own views. Polarization becomes an effect that can be influenced by the recommendation system because the acceptance of information from the user after going through a personalized curation system raises uniform news. This research uses quantitative approach with experiment method. The results of this study indicate that the recommendation system makes the polarization position of users more extreme. This is marked by increasingly persistent opinions and political views held by previous users.

Keywords: Recommended Systems, The Filter Bubbles, Social Media, Polarization, Extremity.

1. Introduction

People begin to get information depending on what they like or choose first and so on can be said to be determined by the recommendation system from search engines and social media used. For that reason, the working system of recommendations from search engines and social media can determine their opinions regarding the issues that are developing in the community.

Various kinds of information about politics are found on social media. The viral phenomenon of the 2019 presidential election issue was marked by the many supporters of the president's replacement in the 2019 presidential election as well as supporters of President Jokowi to continue his term. Both camps expressed their opinions and opinions and shared news links on social media to fellow users. The interesting thing is that the issue is spread through social media, making public opinion even stronger on the issue. In fact, there are many opinions that tend to be roughly conveyed by users on social media. The polarization between the two camps is marked by the extreme political views of the people regarding an issue that is influenced by a recommendation system that becomes the curator of information provided to users based on algorithms or calculations of user activities on social media.

Disseminated information often occurs in news that is shared through social media as a result of the recommendation system designed by the operator. Selected and presented information on social media platforms based on the preferences and interests of users[1]. When users surf and
interact in cyberspace, a system records abandoned tracks such as share, likes & comments features. These features form the basis of the system to then select information that is in accordance with user preferences.

Initially the user will feel happy about the information selected and presented by the social media, but there can be an impact that is biased towards the user's point of view in opinion. As a result, the decline in information quality and the reduced diversity of perspectives on an issue[2].

The recommendation system on the internet media can determine various kinds of information that we will receive. Like determining what news will appear on Yahoo's front page, video recommendations we need to watch on Youtube, and of course, fill in the newsfeed on Facebook's social media, the timeline on Twitter, and recommendations for exploring on Instagram. All available information is determined by a computer system based on who we interact most often on social media, what content we read most often and share with other users, the videos we watch most often, and what information we read most often.

Basically, the function of an algorithm is to provide options, based on the suitability of what we want. But algorithms keep us secret from things we don't like. Furthermore, according to Pariser[1], the negative effect of the bubble filter is to isolate the user's insight into narrowness because it is presented with information that is aligned with their preferences and avoids information with a different perspective. The available information options are limited by the system and unknowingly users are only given information about what they think they want to know but not what users need.

The recommendation system on social media is indeed based on one's interest. The system will display content that the user feels desired. However, these contents were not made to be able to distinguish whether the content displayed facts or not. Therefore, it is almost possible that someone will only see content that matches their interests even though it is false. Content displayed on social media pages according to the recommendation system will skip all information from different points of view. That according to some people certainly affects the opinion of someone because they are given the same information constantly.

The recommendation system with all its ability to select information that will be presented to users further fosters polarization in the community because it reinforces the opinions and political views of each camp. Each camp tends to reject a different perspective, even though it is reasonable or objective. News that is in line with the way of thinking can influence the polarization of political views held by social media users.

From the explanation of the formulation of the problem above, the question is formulated, "How does the social media recommendation system influence the polarization of the user's political views?"

2. Theoretical Review

The Filter Bubble [1] is an explanation of the performance of the algorithm system on search engines and social media. The algorithm system has the function of evaluating how well the results are filtered according to user needs. For example, algorithms might interpret 'clicks' or certain user activities, for example, the comments column or likes button on an item is then suggested as the accuracy of the recommendation system match for the information that will be provided to the user. However, such an evaluation process carries the risk of strengthening the user's self and reducing the diversity of information. Some experts claim that algorithmic curation that effectively filters users' online experiences has placed users in echo chambers on our own beliefs and these effects are a stronger cause of polarization.
The same theoretical construction aims to increase the likelihood of same-minded contacts ("echo chamber"; Sunstein 2009) and limited public space ("sphericules"; Gitlin 1998). Thus, there is a decrease in diversity of viewpoints rather than a good decline from sources or content. That said, especially the diversity of sources in diverse media systems horizontally in line with the diversity of perspectives because various media channels describe different political perspectives.

The choice of automatically filtered online information has the function of helping internet users to overcome the amount of information available on the internet[3]. This filter algorithm is often referred to as a recommendation algorithm, because they recommend personalized content based on information about each user. Thus, the recommendation algorithm usually uses information about users' interests, preferences, and search behavior as well as contextual information (for example, time, location) to get optimally adjusted results.

Personalization of the recommendation system on social media can be explicitly seen based on the personalization of social media that influences the content and diversity of political views. Basically in a recommendation system that is applied, in addition to operators and social media developers cannot know which parameters drive personalized results, because the algorithms that underlie online news aggregators are black boxes[4]. Therefore, researchers can only analyze the effects of personalization on the diversity of news based on input-output analysis (Haim, 2017). For example, by varying the history of user activity during internet activities (input) and comparing the news offer produced (output).

Researches related to previous political communication in Bennett[5], give the hypothesis that messages selected based on one's preferences in political reporting will have an impact on the tendency of one's bias towards politics. In other words, the community can avoid information that is not in accordance with their desires and preferences and will seek information that is consistent with their political attitudes (Mutz, 2006).

In ancient times, conventional news sources based on partisan preferences were relatively difficult to obtain. But during the campaign, voters can still be attracted to their chosen candidates, and some studies document partisan tendencies to report greater exposure to the comparison of candidates or parties they will choose[5].

In general, evidence of partisan bias in news consumption remains consistent with the argument that technology will narrow rather than broaden political horizons in society. Over time, unpleasant information avoidance can have the effect of being a habit so that users automatically switch to the source they choose no matter what the content material is. By relying on providers who are biased but preferred, consumers will be able to "close themselves from the topics and opinions they want to avoid" (Sunstein, in Bennett and Iyengar, 2008). The end result will be voters who are less informed and more polarized, with political communication games aimed at those who have made a lot of adjustments[5].

Bishop in Spohr[6] explains that the most relevant consequence of polarization is the loss of diversity in opinion and argument. Meanwhile, many of the benefits that can be gained from various views are the emergence of equality which is an ideal position for homogeneous groups. Bishop continued that the polarization that occurs is not only caused by alignments about politics but includes beliefs, lifestyles, and also called self-perpetuating and self-reinforcing where individual opinions can give way to group thinking.

The important issue that is the main factor of this polarization, Spohr[6] states that a group will be more convinced by echo chambers which contains views and prejudices that tend to be the same as their views. Meanwhile, they tend to be reluctant and refuse to exchange ideas with groups with different views. So that it can be said that they will survive with confidence and
accept positively if there is a view that is the same as the group, and will refuse if there are opposing views[7]

The general explanation of the polarization of political views in this study is that it is increasingly steadfast in its stance related to the position of political views in which individuals positively accept the same view as themselves. While self-reinforcing is increasingly convinced of the position related to the position of political views where the individual rejects negative sentiment towards the views that are opposite to him[7]

Wojcieszki[8] in his article explained that polarization is characterized by extremities from individuals. The science of communication and the study of politics that focus on the concept of extremism is always associated with partisanship, ideology, and certain socio-political topics. A research on public issues suggests that partisanship and ideological factors have limitations in explaining the cognition and behavior of society. Therefore, the determination of attitudes towards more specific issues must be examined. Because public issues indicate that some people who are very interested and very knowledgeable about specific issues do not have to show concern or understanding of political knowledge in general.

While a person's extremity in view of an issue according to Wojcieszak[8] is marked by several judgments. First, a discussion that contains the agreement of individuals responding to an issue. Second is opinion support which contains statements about whether or not an issue is circulating. Third, the self reported opinion which contains changes in one's opinion due to exposure to information on the issue. Fourth, perceived disagreement which contains an assessment of one's consideration of the issue. High scores indicate the high frequency of disagreement with opinions that are opposite to him. Low values indicate the low frequency of disagreement with opinions that are opposite to him.

In quantitative research on social media recommendation systems, so far researchers have not found a specific theory that explains their influence on polarization of political views. So the researcher determines the hypothesis used in this study are:

\[ H1: \text{There is an influence between the social media recommendation system and the user's political views.} \]

3. Research Methods

This study uses the positivism paradigm. According to Neuman[9], positivism is an organized method that combines deductive logic with proper empirical observations of individual behavior in order to find and confirm a set of probabilistic causal laws, which can be used to predict general patterns of human activity. Positivist science emphasizes the discovery of the law of cause and effect, careful observation, and value-free research. Then this fact can be used very efficiently to predict and control. Thus generalizations can be made, with predictable trust.

This study uses a quantitative approach that is deductive. Starting from theoretical frame work something that is abstract, then focused on a particular data collection technique, then the hypothesis is formulated to be tested and then analyzed or observed so that it gets empirical generalizations or concrete events. A quantitative approach is an approach that uses a measuring instrument against a social phenomenon. The quantitative approach is more concerned with measurement methods, because this approach uses deductive patterns that emphasize detailed priorities in data collection and analysis[9].

Quantitative research measures the variables used in the study (independent and dependent). The hypothesis predicts that these two variables relate to producing a positive or negative relationship. The hypothesis is a statement in which specific empirical results are predicted. The prediction is deduced logically from the theoretical framework [10].
Neuman [9] mentions the form of experimental research into two forms: laboratory experiments and field experiments. Field experiments are research studies in a real situation while laboratory experiments are research studies where all influential independent variables that are not relevant to the problem being investigated are minimized[11].

In this study the author uses the field experiment method by utilizing digital or online media. Digital systems create more possibilities for experiments such as fields. Specifically, the method of field experimentation using digital allows researchers to combine tight controls and process data related to laboratory experiments with more diverse participants and more natural settings than laboratory experiments[9] . Specifically this study uses online experimental research methods. The internet has revolutionized the way people communicate and retrieve information. Sophisticated communication tools transform many disciplines, including experimental research. The internet allows access to a wider population and populations that were previously difficult to reach in a cheap, fast and convenient way. There are many advantages in conducting experimental research online compared to laboratory experiments [12].

First, online experimental procedures can be carried out remotely, thereby reducing costs and the amount of time spent managing the experiment [12]. Second, online experiments can be carried out in a wider scope, not only in very limited laboratory settings and can include 24-hour access, this can increase the comfort of the participants. Third, online accessibility allows targeting more specific respondents (via mailing lists or newsgroups) and expanding participants in internet use, for example, undergraduate students at certain universities, which allows an increase in generalization of results [12].

Independent variables are variables that are not affected by other variables. In this study there is one independent variable represented by the treatment compiled by the researcher namely a social media recommendation system that has elements that are appropriate and inappropriate or contrary to the preferences of social media users where the preference is a system that exists on social media to guess what information will appeared on each individual's social media front page. Basically in a recommendation system that is applied, in addition to operators and social media developers cannot know which parameters drive personalized results, because the algorithms that underlie online news aggregators are black boxes[4]. Therefore, researchers can only analyze the effects of personalization on the diversity of news based on input-output analysis. For example, by varying the history of user activity during internet activities (input) and comparing the news offer produced (output).

The dependent variable is a variable that is influenced by other variables. In this experimental study the dependent variable is the polarization of the political view of society. Factors in ideological polarization that have been described in the previous chapter are the factors of the subject's point of view of the message it receives. There are four elements which become dimensions in this variable, namely opinion discussion, self-reported opinion, perceived disagreement which is related to one particular view.

The first dimension, which is the discussion which contains the approval of participants after being given treatment and answering statements on topics or issues related to the emergence of two opinions stating support for the president's replacement represented by the hashtag #2019antiPresiden with support for Jokowi to proceed to the second period represented by the hashtag #Jokowi2Periode.

The second dimension is opinion support which contains the statement of how well the message or information circulating is related to the emergence of issues around the upcoming 2019 presidential election.
The third dimension is self-reported opinion which contains changes in opinions held after being given treatment. High scores indicate that participants are increasingly firm in their opinions. While the low value indicates that there is a change in opinion.

The fourth dimension is perceived disagreement which contains an assessment of the participants' consideration of the issues after being given experimental treatment. High scores indicate the high frequency of disagreement with opinions that are opposite to him. Low values indicate the low frequency of disagreement with opinions that are opposite to him.

This study will use an experimental design factor P x E. According to Goodwin [13], the factorial design of P x E is an experimental design that considers the interaction between the type of person (P) in the research and the environment (E) that is manipulated. This design can also be called “Person by Environment Design” with the “environment” factor defined as independent variables manipulated. The existence of a causality relationship can be drawn if there is a significant main effect on the manipulated "Environment" factor, but cannot be withdrawn when the main effect occurs in the subject variable or "Person" factor, and also cannot be withdrawn if an interaction occurs. What will be seen in the P x E design is that independent recommendation system variables are manipulated as a tool to treat the subject. While the explanation of the subject or Person factor (P) is that two groups of personal characters that are opposite, among others, are

This study will divide the group of participants based on the issue of issues held by participants. The science of communication and the study of politics that focus on polarization with the concept of extremity is always associated with partisanship, ideology, and certain socio-political topics. A research on public issues becomes something that can be an alternative because partisanship and ideological factors have limitations in explaining the cognition and behavior of society. Therefore, the determination of attitudes towards more specific issues must be examined. Because public issues show that some people are very interested and very knowledgeable about specific issues do not have to show concern or understanding of political knowledge in general [8] Based on the explanation, the researchers took the political issue that was being discussed about the 2019 presidential election issue between the attitude of supporting these issues. So in this study divided into two major groups, each of which has a tendency towards the issue. The first group, namely supporters of the issue of replacing the president in the upcoming 2019 presidential election. This group will represent the subject and will be treated in the form of articles represented by # 2019 Represident. The second group, namely Jokowi's supporters to continue to the second period in the 2019 presidential election. The group that will represent the group of supporters of Jokowi who will be treated in the form of articles represented by # Jokowi2Periode.

<table>
<thead>
<tr>
<th>Table 1. Experiment Group Design</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>#2019GantiPresiden</td>
</tr>
<tr>
<td>#Jokowi2Periode</td>
</tr>
</tbody>
</table>

Group I #2019GantiPresiden with the Presidential Change Group
Group II #2019GantiPresiden with the Jokowi Support Group
Group III #Jokowi2Periode with the Presidential Change Group
Group IV #Jokowi2Periode with the Jokowi Support Group
Thus in this study has factorial design P x E. This design means that in experiments there are independent variables that are manipulated and subjects that are distinguished based on political views.

Participants or participants in this experiment are conducted by open recruitment (open recruitment) using poster advertisements distributed both online and offline. As an alternative to disseminating recruitment information if there is a problem in the middle of the process, the researchers conduct searches directly to campuses by offering students to become research participants. Recruitment will be carried out for 10 days to gather 60 participants. This study uses the design of PxE design experiments. [13] explains that the PxE design allows control of the research subject or Person (P) according to the personality, characteristics, and preferences needed by the researcher. So that in this study the selection of participants was based on different characteristics, namely the opposite political viewpoint.

Placement of participants into the experimental group. All participants involved will be placed in a controlled manner. This means that participants included in groups I, II, III, and IV will be carried out through the arrangement in accordance with the tendency towards the 2019 presidential issues that have been interviewed in advance by researchers. Thus, it is expected that this selection method for participants placed in their groups will increase the accuracy of hypothesis testing. For the purposes of this experimental study involving 60 participants.

The experimental tool used in this study was the manipulation (fabrication) of two viral hashtags. Researchers provide treatment in accordance with the recommendations system on social media in the form of two different articles of viewpoint. The first article contains news about content that supports the replacement of the President in the 2019 Presidential Election. The second article contains news about support for President Jokowi to continue to the next period. Of the four groups, two message content will be given different views and two content that are in line with the views of the research subject.

4. Results

This section will answer the hypothesis proposed by the researcher. Based on the results of the Kruskal Wallis test, it was found that the significance value is above 0.05. It can be concluded that there is no difference between the recommendation system on the polarization of political views of users. This means that the treatment (treatment) in the form of recommendation system manipulation has no influence on the polarization of the user's political views.

From the results of data collection participants gave values that tended to differ in each experimental group. However, when tested between the two groups of participants, there was an insignificant result indicated by a value of 0.214 or more than the 0.05 significance value. So that when further tested using Mann Whitney U between the two experimental groups there is no difference in the average between the system recommendation variables against the polarization of the user's political views. Thus it can be concluded as follows.

H0 is accepted and decided not to be proven or accepted which means that there is no influence of the recommendation system on the polarization of the user's political views.

This hypothesis shows that there is no influence from the recommendation system on social media can expand the distance of polarization of political views of social media users. The main influence of the results of this study is the predisposition to the individual who is a factor that contributes to the polarization of the political views of users. The results of this study reinforce personal predisposition in which social media users will still choose news that is in accordance with their political views and further strengthen their political views regardless of information with other perspectives they receive.
From the previous descriptive exposure, it was also seen, in the context of polarization of political views, that is from the difference in the average dimension of the polarization variable of political views which shows the results of the group given treatment contrary to their political views. Even though the treatment was carried out by presenting information that was different from the political views of the participants, it made even stronger polarization created among the experimental groups. This indicates that the belief in the previous opinion held by the participant can reject information or opinions that are contrary to his views and actually strengthen his self-views and strengthen the opinion (Self Perpetuating) held by each participant (Bishop in Spohr, 2017).

5. Discussion

This research focuses on two elements of social media and users. Social media with all its advantages in disseminating information that is very fast and massive but has weaknesses with no news filtering or gatekeeping like a highly structured mass media company. So that the information disseminated is not necessarily guaranteed truth. Social media in spreading the message to its users relies on a recommendation system that works predicting the information to be provided according to user preferences. In the algorithmic system that is the basis of the recommendation system, user activity is recorded by giving the value or score of each click the user chooses. So that the system can guess information that will be given to the next user.

In the era of internet-based media today various types of information can be obtained easily. Social media can provide information about what we want with the strength of its recommendation system. However, if the user is given continuously information that is in accordance with him, it will further strengthen the opinions and views of the user. In fact, there are other types of information that are suitable for consumption but are not recommended by the system on social media, namely information that is diverse not only in one perspective. This is actually what is needed by the community at this time.

Acceptance of information that is selected by someone in the news about politics on an ongoing basis will have an impact on the tendency of one's bias towards political views[5]. So the community can just avoid information that is not suitable for their preferences and tend to seek information that is in line with their political attitudes.

Through social media, people are only always provided with information in accordance with what they want but not information that is needed. Communities need to be presented with different perspectives so they can be more receptive to other views even though they do not always have to follow that view.

What needs to be known is the nature of the recommendation system itself. The recommendation system makes predictions based on someone's history in using internet media. The system records all our activities in cyberspace. As stated by Selnow (2000), the system can personalize internet users in several ways. First, through the questions that arise, consciously and unconsciously we provide all our information to the system, one of them is by registering our data to use certain social media.

Second, through the cookie jar. Cookie jar is likened to a container of a number of cookies as a personal identification of internet media user activities. Cookies are data files written into a storage location on a computer by a web server that is used to identify internet users on a site so that at any time the user can re-visit the site and can directly recognize visitors. This is the source of data for a recommendation system that very well gives information that suits our desires.

Personal predisposition, according to some experts can be explained such as existing attitudes and style of reasoning in the selection of individuals related to ideology and views.
Understanding of personal predisposition is important because researchers found predisposing meanings to influence cognitive dissonance theory[14] and cognitive reflection[15]. There have been no studies specifically studying models that include personal predispositions found to explain the occurrence of cognitive dissonance and cognitive reflection. Such a model broadens the understanding of the effects of personal tendencies on selective exposure.

Cognitive dissonance theory provides an explanation for this phenomenon: individuals experience situations that have a negative impact when they are confronted with information that does not resonate with their beliefs[14][16]. Therefore, individuals are motivated to avoid information that is contrary to existing attitudes and opinions and they have a desire to choose information from the sources they can to reach a more favorable conclusion [14][16]. Individuals rely on mind motivation strategies to reduce cognitive dissonance and seek information that confirms what they already believe [14][16].

The idea that attitudes affect selective exposure form the core argument of cognitive dissonance theory[14], because people can experience dissonance when they are confronted with information that does not resonate with existing beliefs. Many other studies have found additional evidence for the power of attitudes that influence ideological selectivity through the reduction of cognitive dissonance[17][18][16][19]. expanded the path of this study and found that the preference for consistent information increased due to stronger attitude factors held. [18] add that the selection of political information that consistently reinforces the individual's political self-concept, which in itself increases the preference for information that pleases individuals.

These discussions emphasize that existing political attitudes influence individual selective exposure habits [14][16] where increasing acceptance of content aligned with their preferences, can lead to increased attitudinal strength[19]. In avoiding cognitive dissonance, people engage in motivational thinking and choose information that they approve and further emphasize their attitude [14][16]. The occurrence of cognitive dissonance when confronted with information that is not aligned with its views is more pronounced as a reinforcement of attitudes held by the previous individual[19][14]. Therefore, the power of attitude is considered as the first personal predisposition to influence the selection of similar political information.

Subsequent predisposition said to influence cognitive dissonance was first noted by Albarracin and Mitchell[20]. They found that in some conditions, people with strong beliefs in their own opinion showed a decrease in preferences for consistent information. They conclude that individuals who believe that they can successfully defend their attitude from external attacks have greater acceptance of content that is not in line with their views[20]. In subsequent studies, Graf and Aday[21] show how a person's defense trust can be improved through strengthening their existing views. individuals free to choose information from the platform using both attitudinal support and opposing information, opening up to counter-attitude information after being exposed to consistent information [21]. They use similarly imagined content to create a frame by which they can contextualize content that is of different views[21]. Additional studies underscore these results and suggest that the confirmation bias is weakened among individuals whose attitudes are reinforced before exposure to different content views [22][23].

These studies show that cognitive dissonance can be reduced if confidence in one's own attitudes and opinions is strengthened. When people feel that they can successfully defend their ideas from external attacks, the threshold within the individual for cognitive dissonance is increased, therefore this is rarely the case with the selection of different articles with increased views[20][14][22][21][23][16].

Because a high level of defense confidence reduces the likelihood of cognitive dissonance.
6. Conclusions

The results of this study have concluded that the social media recommendation system does not affect the polarization of the user's political views. This research adds to the repertoire of research, especially the effects of the social media recommendation system on polarization of political views. This research is also expected to enrich the study of the impact of social media, one of which is the concept of The Filter Bubbles. The concept is the effect of social media that presents uniform information and is aligned with the preferences of each user and likened to a user who is surrounded by bubbles of information filters to get to the user. But the results of this study actually show that the effect does not affect the political views of users. Although users can receive balanced messages or information in real life, they do not change users' opinions and views on an issue.

The practical implication that can be taken from this research is the government's attention to democratic life which is increasingly eroded due to the influence of the recommendation system on social media. Opinion is really needed for the democratic life of a country. However, if there is an error in addressing the increasingly wide-ranging views and tend to blame other views of groups of people with other groups, then this is a serious problem that must be suppressed by the government.

In addition, attention is also directed to social media users themselves in addressing the differences, not with excessive cynicism at the views of others who are different. Then to managers and mass media developers to be able to design a recommendation system that is more observant in addressing the impact of the recommendation system that will be implemented. Social media is likened to a giant mass media that has various kinds of information. For this reason, it is necessary to have a curator so that balanced information dissemination to users can be regulated so as not to have a bad impact on users and society at large.

Acknowledgements

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References

Spiral of Silence on Social Media:
Study on Political Posting in Indonesia

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Abstract. This is a study about spiral of silence effect in social media, with the concentration to willingness to self censorship and political posting activity behaviour. The condition that showed social media has become a convenient medium to show political opinion of its users had pumped the curiosity of the authors to know about the modified model that impact to spiral of silence effect on social media. This study used quantitative research through the dissemination of cross sectional design online questionnaire to the daily board of the Student Council in Universitas Indonesia. The collected data then processed by statistical calculations. The result of this study is the spiral of silence effect had a modified model that make it shown among Indonesian social media users, such as Facebook, Twitter, Instagram, Line, and Whatsapp.

Keywords: Spiral of Silence, Willingness to Self Censorship, Political Posting Activity, Social Media.

1. Introduction

Internet access has indeed had a positive effect on several indicators of community involvement in a political context [1] Jennings and Zeitner states that the internet is an extraordinary tool for motivating and inviting people to be politically involved with the amount of public information that was once hard to come by or out of reach now accessible through the internet. Referring to these descriptions, it is not surprising that the internet has now become a tool that is able to actively encourage community involvement and political participation in various forms of participation, such as through political posts on social media.

Political posting is a form of individual reaction to addressing political issues circulating online on social media [2]. On social media Facebook, Twitter, Instagram, Line and Whatsapp political posts can be in the form of status (text upload), sharing news narrative links (uploading news texts that are generally connected to online news pages that are integrated directly with the main site), image sharing (upload pictures of their own or other social media users), share videos (upload their own videos or other social media users who are generally connected to video sharing sites Youtube.com or other video sharing sites), comments (uploaded text entered in the status, images, or videos shared by other social media users), or a combination of all of them considering the capabilities of social media Facebook, Twitter, Instagram, Line, and Whatsapp which are currently able to accommodate all forms of upload that the user wants.

The increasing political participation of people through political posts on social media makes us need to question the existence of the effects of spiral of silence on social media. Simply put,
mass media effect theory says that humans are afraid of experiencing social isolation, thus motivating them to observe and determine social standards in the social environment through adjusting their behavior in public in accordance with observed standards [3][2]. If in conventional media public information exposure is a key component that causes fear to be isolated so individuals need to make social adjustments[3]. So it needs to be realized that the boundaries that make the spiral of silence effect appear blurred on social media are the habits of fear of isolation, given that there has been an increase in political participation in the form of uploading political posts[2].

Based on the above problems, the purpose of this research is to examine whether the spiral of silence effect is still valid among social media users in Indonesia?

2. Theoretical Review

The study of the spiral of silence theory has become one of the studies that is popular in the communication science family[4][5][2]. Starting from the research of Noelle Elizabeth Neumann who examined the process of the formation of public opinion which turned out to show a spiral phenomenon of one's efforts in addressing public opinion to avoid social isolation and is one part of the study of mass media effects[4], to develop into the realm of digital media studies that are commonly used by people today.

In its development, found several factors forming the spiral effect in the online world that are different from the classical studies. Like research conducted by [5] where the feeling of atakut will experience social isolation is divided into two parts, namely the fear of experiencing isolation in the real world and in cyberspace, or involving a variable willingness to self-censor as done by Kwon[2].

So, how can the spiral of silence effect form on social media Facebook, Twitter, Instagram, Line, and WhatsApp? Referring to several previous studies that have been summarized, we found that there are several concepts that play an important role in shaping the spiral effect on social media. The research model that we proposed is as follows:

![Research model](attachment:research_model.png)
H1: The attachment to someone's intimate social network that is connected to social media influences a person's willingness to self-censor on social media[2].
H2: The attachment of an intimate social network to someone who is connected on social media influences the activity of posting one's politics on social media [2].
H3: Fear of experiencing isolation on social media affects one's willingness to self-censor social media[5].
H4: Fear of experiencing isolation on social media influences the activity of posting one's politics on social media[2].
H5: Perceptions of the diversity of political opinions on social media affect one's willingness to self-censor on social media[2].
H6: Perception of the diversity of political opinions on social media influences the activity of posting one's politics on social media[2].
H7: Perceptions of future political opinion trends on social media affect one's willingness to self-censor on social media[4].
H8: Perceptions of future political opinion trends on social media affect the activity of posting one's politics on social media[4].
H9: A person's willingness to self-censor on social media influences the activity of posting one's politics on social media[2].

3. Research Methods

This research is a research with quantitative approach and positivism paradigm. In conducting data collection, we conducted an online survey method with a questionnaire that contained the concepts of supporting spiral of silence that were associated with the "Zaadit Yellow Card" event. This event took the form of a "yellow card" action to President Joko Widodo conducted by Zaadit Taqwa when the President attended the University of Indonesia's 68th Anniversary (2/2/2018). The survey we proposed was cross sectional in design, or designed for research only once.

The population we are aiming for are students who are members of the Executive Board body of the faculty-level BEM organization in the UI campus, totaling 983 people. After determining the margin of error or tolerated allowance of inaccuracy of 6.4%, the number of ideal samples that we submitted is 190 people. Sampling in this study was conducted using non-probability sampling method with snowball technique. Where, the sample criteria that we set in this study were S1 and D3 students who joined the Executive Board of the BEM at the faculty level at the University of Indonesia and were active in the use of social media Facebook, Twitter, Instagram, Line, and Whatsapp with age demographics ranging from 18 for up to 22 years.

As shown through the research model that we proposed (Figure 1), it can be explained that we put: The Intimate Social Network Attachment in Social Media[2]; Fear Is Isolated in Social Media [5]; Perception of the Diversity of Political Opinions in Social Media[2]; and Perceptions of Future Political Opinion Trends in Social Media[4] as independent variables in this study. Meanwhile, for the concept of Willingness to Conduct Self Censorship in Social Media[2] we put it into two positions, namely as the dependent variable in Sub Structure I regression testing, and as an independent variable in Sub Structure II regression testing. The last concept that we proposed in this study was Political Posting Activities [2] positioned as the dependent variable. Later, we will measure the direct effects, indirect effects, and total effects generated by each concept on Political Posting Activities[2] using path analysis, where the analysis model is the development of a regression analysis model.
4. Results
The first test we did after the research data we successfully collected was the multivariate regression test in the Sub-Structure I of the study, namely: The Influence of Intimate Social Networking (X1); Fear of experiencing isolation on social media (X2); Perception of the Diversity of Political Opinions on Social Media (X3); and Perception in Future Trend of Political Opinion in Social Media (X4); on Willingness to Conduct Self Sensors in Social Media (Y1).

Table 1. Summary of Hypothesis Test Results Sub Structure I

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.410</td>
<td>.168</td>
<td>.150</td>
<td>.79743</td>
</tr>
</tbody>
</table>

Predictors: (Constant), X4, X3, X2, X1

Referring to the table above, it is shown that the R Square value of the five variables is 0.168, which means that 16.8% of a person's willingness to self-censor on social media is influenced by the attachment of intimate social networks; fear of experiencing isolation on social media; perception of the diversity of political opinions on social media; and perceptions of trends in the development of future political opinions on social media, while 83.2% of willingness to self-censor on social media is influenced by other factors outside of this study. Then, through the results shown in the table too, we can determine the error value 1 by using the formula: $e_1 = \sqrt{(1-R^2)}$, so the value of $e_1 = \sqrt{(1-0.168)} = 0.9121$.

To see how much the correlation coefficient between the independent variables and the dependent variable in this substructure can be seen in the R value contained in the table above, which is 0.410. Where, these values can be categorized into correlations being towards strong.

Table 2. Coefficient of Sub Structure I

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.898</td>
<td>.407</td>
<td>2.205</td>
<td>.029</td>
</tr>
<tr>
<td>Attachment to social networks</td>
<td>.276 (.150)</td>
<td>.135 (.354)</td>
<td>1.841</td>
<td>.067</td>
</tr>
<tr>
<td>Fear of isolation on social media</td>
<td>.507 (.103)</td>
<td>.354 (.4917)</td>
<td>.917</td>
<td>.000</td>
</tr>
<tr>
<td>Perception of the diversity of political opinions on social media</td>
<td>.101 (.116)</td>
<td>.064 (.872)</td>
<td>.827</td>
<td>.384</td>
</tr>
<tr>
<td>Perception of future opinion trends on social media</td>
<td>-.147 (.100)</td>
<td>-.104 (-1.470)</td>
<td>.143</td>
<td></td>
</tr>
</tbody>
</table>

Dependent Variable: Willingness to censor on social media
The next step, we can see the table above which shows the test results of the independent variables on the dependent variable in Sub Structure I. The level of significance we use is 5%, while the critical area to reject Ho is when the significance value (Pvalue) is less than 0.05. Referring to the table, the significance value generated by variable X1 (Intimate Social Network Attachment) to Y1 (Willingness to Conduct Self-Sensors in Social Media) is 0.067. Thus, it can be stated that there is no significant direct effect of intimate social network attachment on the willingness to self-censor on social media.

Then the significance value generated by variable X2 (Fear of Experiencing Social Isolation) to Y1 (Willingness to Conduct Self-Sensors in Social Media) is 0.000. So it can be concluded, there is a significant direct effect of fear of experiencing social isolation on the willingness to self-censor on social media.

Furthermore, the significance value generated by the variable X3 (Perception on Political Opinion Diversity in Social Media) to Y1 (Willingness to Conduct Self-Sensors in Social Media) is 0.384. Through these results, it can be stated that there is no significant direct effect of the perception on political opinion in social media on the willingness to self-censor on social media.

Finally, the significance value produced by the X4 variable (Perception in Future Trend of Political Opinion Development on Social Media) to Y1 (Willingness to Conduct Self-Sensors in Social Media) is 0.143. This value illustrates that there is no significant direct effect of perceptions on trends in the development of political opinions on social media on the willingness to self-censor on social media.

The next test we did was a multivariate regression test in Sub Structure II research by testing the variables: Intimate Social Network Attachment (X1); Fear of experiencing isolation on social media (X2); Perception of the Diversity of Political Opinions on Social Media (X3); Perception in the Future Trend of Political Opinion in Social Media (X4); and Willingness to Conduct Self-Sensors in Social Media (Y1) on Political Posting Activities on Social Media (Y2).

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.501*</td>
<td>.251</td>
<td>.230</td>
<td>.72523</td>
</tr>
</tbody>
</table>

Table 3. Summary of Hypothesis Test Results Sub Structure II

The table above shows that the R Square value of the six variables is 0.251, which means that 25.1% of a person's willingness to engage in political posting activities on social media is influenced by the attachment of intimate social networks; fear of experiencing isolation on social media; perception of the diversity of political opinions on social media; perception in the future trend of political opinions on social media; and willingness to self-censor on social media, while 74.9% of political posting activities on social media are influenced by other factors outside this research. Through the results shown in the table, we can determine the value of $e^2$ by using the formula:

$$e^2 = \sqrt{1 - \text{Rsquare}}$$

so the value of $e^2 = \sqrt{1 - 0.251} = 0. 8654$.

To see how much the correlation coefficient between independent variables and the dependent variable in this substructure can be seen in the R value, which is 0.501. This value can be categorized into strong towards very strong.
Multivariate regression test is then carried out on the independent variable on the dependent variable in Sub Structure II, where the results of the test are as described in the table below. The level of significance we use in this test is 5%, while the critical area to reject Ho is when the significance value (P value) is less than 0.05. Referring to the table, the significance value generated by variable X1 (Intimate Social Network Attachment) on Y2 (Political Post Activity on Social Media) is 0.024. These results illustrate that there is a significant direct effect of intimate social network attachments on political posting activities on social media.

Table 4. Coefficient of Sub Structure II

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>0.975</td>
<td>.375</td>
<td>2.598</td>
<td>.010</td>
</tr>
<tr>
<td>Attachment to social networks</td>
<td>.313</td>
<td>.161</td>
<td>2.278</td>
<td>.024</td>
</tr>
<tr>
<td>Fear of isolation on social media</td>
<td>-.216</td>
<td>-.157</td>
<td>-2.161</td>
<td>.032</td>
</tr>
<tr>
<td>Perception of the diversity of political opinions on social media</td>
<td>.191</td>
<td>.126</td>
<td>1.798</td>
<td>.074</td>
</tr>
<tr>
<td>Perception of future opinion trends on social media</td>
<td>.511</td>
<td>.379</td>
<td>5.585</td>
<td>.000</td>
</tr>
<tr>
<td>Willingness to censor on social media</td>
<td>-.209</td>
<td>-.218</td>
<td>-3.120</td>
<td>.002</td>
</tr>
</tbody>
</table>

Dependent Variable: Political post activity

Then, the significance value generated by variable X2 (Fear of Experiencing Social Isolation) to Y2 (Political Post Activity on Social Media) is 0.032. So it can be concluded, there is a significant direct effect of fear of experiencing social isolation on political posting activities on social media.

Furthermore, the significance value generated by the variable X3 (Perception on the Diversity of Political Opinions on Social Media) to Y2 (Political Post Activity on Social Media) is 0.074. This value explains that there is no significant direct effect of perceptions on political opinion in social media on political posting activities on social media.

For the significance value generated by variable X4 (Perception in Future Trend of Political Opinion Development on Social Media) to Y2 (Political Posting Activity on Social Media) is 0.000. This value illustrates that there is a significant direct effect of perceptions on trends in the development of political opinions on social media on the activity of political posting on social media.

Finally, the significance value generated by the variable Y1 (Willingness to Conduct Self Sensors in Social Media) to Y2 (Political Posting Activity on Social Media) is 0.002. Thus, it can be concluded that there is a significant direct effect of willingness to self-censor on social media on political posting activities on social media.

Testing of the fit coefficient model is done to find out which model among the basic models or models that have been adjusted better based on regression testing. The formula used to measure fit coefficients is:
\[ x^2 = - (N - df) \log Q \]

Where,
- \( x^2 \): fit coefficient for the adjusted model
- \( N \): number of samples
- \( df \): the number of traces that are modified in the adjusted model
- \( Q \): the size of the variation model that cannot be explained between the basic model and adjusted

Referring to the formulation, the model value of the fit coefficient in this study is:
\[
\begin{align*}
  x^2 &= - (N - df) \log Q \\
  &= - (190 - 4) \log 1,12100333 \\
  &= - (186) 0.04960690269 \\
  &= - 9.22688390034
\end{align*}
\]

Based on these calculations, for a significance level of 0.05 and a degree of freedom \( df = 4 \), a critical value of 0.705 is obtained. Comparison between critical values and \( x^2 \) values indicates that the \( x^2 \) value is greater than the critical value. Thus, it can be stated that the adjusted model has a better fit model than the base model. Therefore, the adjusted model is accepted.

5. Discussion

As we mentioned earlier, this research is intended to answer the research question "Does the spiral of silence effect still apply among Indonesian social media users?". The question is then broken down into 9 hypotheses that measure the relationship between these variables, where the hypotheses are divided into 2 sub-structures tested using multiple linear regression. The test is then conducted on the students who are members of the organization's daily management of the faculty level Student Executive Board at the University of Indonesia by using the case of "Zaadit Yellow Card" as the object, where the description of the hypotheses can be seen in the following table:

<table>
<thead>
<tr>
<th>HYPOTESIS</th>
<th>CONCLUSION</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Attachment to someone's intimate social network that is connected to social media influences a person's willingness to self-censor on social media</td>
<td>Not significant</td>
</tr>
<tr>
<td>H2 The attachment to an intimate social network of someone who is connected on social media influences the activity of posting one's politics on social media</td>
<td>Significant</td>
</tr>
<tr>
<td>H3 Fear of experiencing isolation on social media affects one's willingness to self-censor social media</td>
<td>Significant</td>
</tr>
<tr>
<td>H4 Fear of experiencing isolation on social media</td>
<td>Significant</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>----</td>
<td>----</td>
</tr>
<tr>
<td>H5</td>
<td>Perception of the diversity of political opinions on social media influences a person's willingness to self-censor on social media.</td>
</tr>
<tr>
<td>H6</td>
<td>Perception of the diversity of political opinions on social media influences the activity of posting one's politics on social media.</td>
</tr>
<tr>
<td>H7</td>
<td>Perceptions of future political opinion trends on social media affect a person's willingness to self-censor on social media.</td>
</tr>
<tr>
<td>H8</td>
<td>Perceptions of future political opinion trends on social media influence the activity of posting one's politics on social media.</td>
</tr>
<tr>
<td>H9</td>
<td>A person's willingness to self-censor on social media influences the activity of posting one's politics on social media.</td>
</tr>
</tbody>
</table>

The first multiple linear regression test conducted in the research sub-structure I which measures the influence of social network attachment, fear of experiencing isolation on social media, perceptions of the diversity of political opinions on social media, and perceptions of trends in the development of political opinions on social media on one's willingness to self-censor on social media. Measurement results show that only fear variables experience isolation on social media which has a direct influence on the willingness to self-censor on social media. Then, for the social network attachment variable, the perception of the diversity of political opinions on social media, and the perception of trends in the development of political opinions on social media did not significantly affect a person's willingness to self-censor on social media based on the results of statistical tests.

Through this test, it was proven statistically that the level of closeness of the relationship between respondents and their relatives connected in the real world and on social media represented by intimate social network attachment variables did not significantly influence the respondents' willingness to censor their opinions about the "Zaadit Yellow Card "To be poured on social media, with the significance value shown is 0.067 above the reference limit of 0.05. The results of this study are different from the findings from the study of Kwon[2] conducted in the United States. Thus, the research hypothesis (H1) which states that the attachment of intimate social networks influences the willingness to self-censor on social media is rejected.

Furthermore, it was statistically proven that respondents were willing not to share their opinions about the "Zaadit Yellow Card" event on social media so that they would not experience social isolation from their real-world relatives who were also connected with them through the medium, with the significance value indicated 0.000 below the reference limit of
Thus, the willingness to self-censor which is an attempt to adjust to the social environment in order to avoid social isolation which is the core of the spiral of silence theory is still undeniable in the scope of social media. The results of this test are similar to the findings from Kim[5] study which explained that fear of experiencing social isolation as a factor causing the effect of spiral of silence in South Korea is still valid. So, by referring to the results of this test the research hypothesis (H3) which states that fear of experiencing isolation on social media influences the willingness to self-censor on social media is accepted.

Other findings from this study indicate that respondents did not pay much attention to the opinions of their relatives about the various "Zaatid Yellow Card" events on social media as a factor that must make them silence their personal opinions about the incident. This is evidenced by the significance value of 0.384, the value is above the reference limit of 0.05. Referring to the test results, the research hypothesis (H5) which states that the perception of the diversity of political opinions on social media influences the willingness to self-censor on social media is rejected.

The relationship between the last variables measured in the research sub-structure I is the influence of perceptions on the development trend of future political opinions on social media on the willingness to self-censor on social media. Statistical test results show the significance value between perceptions on trends in the development of future political opinions on social media on one's willingness to censor is 0.143, above the reference limit of 0.05 so that the effect between these variables can be said to be insignificant. Referring to these results, the research hypothesis (H7) which states that the perception of trends in the development of political opinions on social media influences the willingness to self-censor on social media is rejected.

Subsequent multiple linear regression testing conducted in this study was carried out in the second sub-structure of research that measures the influence of social network attachment, fear of isolation on social media, perception on the diversity of political opinions on social media, perception of trends in the development of political opinions on social media on one's willingness, as well as willingness to self-censor on social media on political posting activities. The measurement results show that the variables of intimate social network attachment, fear of experiencing isolation on social media, perception of trends in the development of political opinions on social media, and willingness to self-censor on social media have a direct influence on political posting activities. Meanwhile, only the perception variable on the diversity of political opinions on social media does not significantly influence political posting activities on social media based on the results of statistical tests. Through the results of the multiple linear regression test, it was found that the fear variable experiencing isolation on social media was the only variable that fulfilled the requirements to measure indirect effects in this study, where these variables showed a significant influence on the willingness to self-censor and post political activity.

The first test result in sub-structure II proves that the linkage of social networks influences political posting activities, where this relationship shows the significance value of 0.024 below the reference limit of 0.05. These results prove that the level of closeness of the relationship between respondents and their relatives connected in the real world and on social media influences them to express their personal opinions about the "Zaatid Yellow Card" to upload on social media. The test results for this variable are the same as those of Kwon[2]. Thus, the research hypothesis (H2) which states that the attachment of intimate social networks affects political posting activities on social media is accepted.

Then for the relationship of fear of experiencing isolation on social media on political posting activities on social media also showed significant results. The significance value generated by the relationship between these variables is 0.032, below the reference limit of 0.05.
But it should be noted that the relationship between these two variables is a reversed relationship, in contrast to the relationships between other variables. The relationship that turns around here means that with increasing fear of isolation on social media, political posting activities will decrease, and vice versa. This reversal relationship is shown through the beta coefficient of \(-0.157\) which arises after the regression test, where the symbol \((-)\) in front of the beta coefficient describes the reversed relationship. Previously, Kim\([5]\) in his research conducted in South Korea also found the type of relationship reversed as in this study. Referring to these results, then (H4) which states that the fear of experiencing isolation on social media influences political posting activities on social media is accepted.

Subsequent tests were conducted to determine the effect of perceptions on the diversity of political opinions on social media on political posting activities on social media showing the significance value generated was \(0.074\). This value is above the reference limit of 0.05. Thus, the conclusion that can be drawn is (H6) which states that the perception of the diversity of political opinions on social media influences political posting activities on social media is rejected.

Tests are carried out on perceptual variables on future political development trends on social media with political posting activities. This influence is indicated by a significance value of 0.02 which is below the reference limit of 0.05. Thus, the research hypothesis (H8) which states that perceptions of trends in the development of future political opinions on social media influence political posting activities on social media are accepted.

The last stage in testing the second sub-structure of research is to examine the relationship between the variables of willingness to self-censor on social media with political posting activities on social media. Statistical test results show that the influence caused by the willingness to self-censor on social media on political posting activities on social media is a comparable inverse influence such as the relationship between fear of experiencing isolation on social media on political posting activities on social media, namely by significance of -0.218. This can mean that the higher a person's willingness to self-censor on social media, the smaller the level of political posting activity on social media, and vice versa. The relationship between these two variables has a significance value of 0.002, below the 0.05 limit. Thus, the research hypothesis

Then, based on the results of path analysis, a new path was found that was different from the path proposed through sub-structures I and II. The pathway is the pathway described in the adjusted sub-structure model. In this model, it can be seen that there is no perception variable on the diversity of political opinions on social media. This is because these variables do not have a significant influence on the willingness to self-censor and political posting activities related to "yellow card" events among members of the faculty-level BEM daily board on the UI campus.

Through this model, it can also be seen that the variables of attachment to intimate social networks and perceptions of trends in the development of future political opinions on social media only affect political posting activities on social media. This finding means that the two variables do not significantly influence the formation of a spiral effect on social media, where the two variables illustrate that the respondent is not too concerned about the opinion of his relatives regarding the "yellow card" event and suggests the desire for his opinion on the event to be a dominant opinion with posting political activities on social media. This model can also show that although social media users in Indonesia are not willing to do political posting activities to avoid social isolation which is portrayed through the indirect relationship that occurs between fear of experiencing isolation on social media in political posting activities through willingness to censor themselves on social media (0.012), as well as the direct effects generated
by fear of experiencing social isolation in political posting activities on social media (-0.025), it can be proved that research respondents were still willing to post political activities related to "yellow card" events in social media. Thus, it can be interpreted that the fear of experiencing isolation on social media is most likely to come from those who are outside the bond of intimate social networks, so that the resulting spiral effect may only apply to certain circles, not from intimate relatives.

6. Conclusions

The purpose of this research is to reveal whether the spiral of silence effect still applies to social media users Facebook, Twitter, Instagram, Line, and Whatsapp Indonesia. Since the emergence of digital media, one of the popular media effect theories is indeed very often attract the interest of researchers to test it again, especially in the context of social media. The main research question is then derived into 9 hypotheses which contain a causal relationship between variables that support the spiral of silence effect. Where, to answer these hypotheses the author conducted an online questionnaire on 190 students who joined as daily administrators of the faculty level Student Executive Board at the University of Indonesia campus. The results of the tests carried out in this study indicate that 5 of the 9 hypotheses proposed in this study proved to have a significant influence.

On the other hand, this study also proves that the fear of experiencing isolation is still a good predictor in the creation of a spiral of silence effect among social media users Facebook, Twitter, Instagram, Line, and Whatsapp in Indonesia. It can be seen that there is only one variable that affects a person's willingness to self-censor on social media, namely the fear of experiencing isolation on social media. On the other hand, this variable also influences the activities of someone's political posting on social media by showing the results of an inverse comparison. With these results, it is evident that social media users in Indonesia are willing to adjust to the social environment to avoid social isolation.

The results of this study that need to be considered also are the significant relationship between willingness to self-censor in social media on political posting activities by showing an inverse comparison. Where, with the increasing willingness of someone to self-censor on social media, the political posting activity will be lower. The results of the research as described also prove that the core of the spiral of silence theory which states that a person will make social adjustments to avoid social isolation is still undeniable or can still be said to be valid in the scope of Indonesian social media users. However, the model of the classic spiral of silence theory has now been modified because of the urge to self-censor from social users before they express their personal opinions online.

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