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ICE-BEES 2020

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Preface

The 3rd International Conference on Economics, Business and Economic Education Science (ICE-BEES) will be an annual event hosted by Faculty of Economics, Universitas Negeri Semarang, Indonesia. This year (2020) will be the third of ICE-BEES.

“Enhancing Environmental Quality Through Research on Economic, Business and Education” 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. Call for paper fields to be included in ICE-BEES 2020 are: Environmental Issues, Accounting, Management, Economics, Economics Education, etc.

The conference invites delegates from across Indonesian and South East Asian region and beyond and is usually attended by more than 100 participants from university academics, researchers, practitioners, and professionals across a wide range of industries. We select around 50 papers for proceedings. The conference itself is supported by Asosiasi Program Studi Ekonomi Pembangunan Indonesia (APSEPI).

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The Role of Environmental Learning to Improve Students' Entrepreneurial Intention

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Abstract. Entrepreneurship is a positive trend among young people including students. Higher education competes to create graduates who have an entrepreneurial spirit and become young business entrepreneurs. The learning environment is an appropriate instrument of higher education to enhance student entrepreneurship intentions. This study aims to examine the effect of the learning environment through the learning process to increase student entrepreneurial intentions. The design used in this study is the associative design used to analyze the relationships between variables. Collecting data in this study with documentation, observation and questionnaires. Data analysis techniques in this study consisted of (1) descriptive analysis, through the description of the percentage of each variable; (2) as well as statistical analysis through regression tests knowing the relationship between variables. So that it is hoped to be able to explore the findings of a new, more comprehensive and suitable causality path that can be used for proper interpretation of data. The results of this study indicate that the learning environment seen from the learning process as variant (X) has an influence on student entrepreneurial intentions (Y). This is shown by the enthusiasm of students in participating in learning, managing creativity to make innovative products that vary among students. These findings confirm that the learning environment greatly influences entrepreneurial intentions. Therefore, in addition to creativity in processing the learning process to create a pleasant learning environment, the role of universities in improving students' entrepreneurial competencies and skills is urgently needed. So that it can create graduates who have entrepreneurial intentions and have high competitiveness.

Keywords: Improve Students', Entrepreneurial, Environmental.

1 Introduction

The acceleration of economic growth in a country continues to be done to boost sustainable economic development. Pressure on various fields as a tool to contribute to the economic growth of a country. Entrepreneur and entrepreneurship are considered as important growth agents of a country to achieve economic, social, technological and organizational development [1][2][3]. Currently a positive trend is an effort to create new entrepreneurs who are creative and innovative and have high competitiveness. The effort was carried out by introducing entrepreneurship early on in primary and secondary education and higher education. The study of entrepreneurial intentions is a rapidly developing field of research [4]. The introduction of entrepreneurship is very important because entrepreneurship is one of the economic pillars of a country, especially in Indonesia. In addition, the development of
sustainable entrepreneurship with government programs namely the National Entrepreneurship Movement [5].

The introduction of entrepreneurship is done through entrepreneurship learning. The important role of entrepreneurship in helping to achieve economic development, competitiveness, job creation and national prosperity has led to real global interest in the development of business and entrepreneurship education, with the hope that this will lead to increased social, economic and organizational development [6]. In this regard, various previous studies mention that entrepreneurial learning has the potential to create one's intention to become an entrepreneur [7]. Entrepreneurial intention is defined as the state of mind of individuals who wish to have a business that leads to the development and application of new business concepts [8][9][10][11].

Efforts to equip students to have entrepreneurial intentions are so that students have additional skills and competencies in addition to academic abilities in higher education. In addition, as an effort to prepare graduates who are qualified and have perceptions of becoming entrepreneurs [12], namely by increasing entrepreneurial intentions that are sustainable. Thus, the orientation or perspective of students after graduating from college is not waiting or looking for work but how they can create jobs through the world of entrepreneurship. At the level of higher education, the effort made is to make the graduates have an entrepreneurial intention through the learning environment in this case the learning process. This can be done is through entrepreneurship lectures that have become compulsory subjects in tertiary education. Through these lectures' students can be given stimulus and motivation in order to have entrepreneurial intentions. So, we need strategies and methods that are creative and innovative in compiling the learning process.

Currently learning is designed to suit the needs of students and the progress of the times. Various platforms of learning media are growing so that students are now freer to choose the media or learning resources they want. Adjustment of the learning process aims to create a conducive learning environment so that learning objectives are achieved well. In general, definitions of the learning environment cover educational approaches, physical arrangements and the cultural context in which learning takes place [13]. Likewise Che Ahmad [14] says a peaceful and comfortable school atmosphere is very important for students and teachers to ensure effective teaching and learning. The learning process really determines the student's output based on his learning experience.

On the other hand, various disciplines combine learning strategies by utilizing conventional learning and digital technology known as blended learning, Roberts [15] mentioning that blended learning strategies have been successfully used in various disciplines of science. This is done so that students have a varied way of learning, namely through face-to-face learning and online learning. With these developments variations in learning and teaching become more creative and innovative. In an effort to improve quality education, the integration of adaptive technology and learning skills has shifted to online learning as trends and models in providing access to resources and information and collaborative learning with unlimited space [16][17][18]. Learning based on internet platforms is known as online learning as a form of educational development [19]. This change is certainly based on the development of science in the field of science and technology. Changes in the model of education from conventional/traditional to online-based affect every aspect of educational practice meaning that education can be done without going through face-to-face [20][21][22]. This happens in developed countries where the activities of students using digital technology and the internet in everyday life [23][24]. No exception to changes in the learning process that has changed since the modern or digital era changing the
education system globally [25]. The purpose of education is not only to teach textbooks and make students understand learning materials but also to add creative thinking, creative environments and independence [26]. Along with the advancement of digital learning media developed, the creativity of a teacher or lecturer in managing learning also influences changes in students’ behaviour and learning environment. So, it is necessary to increase the competence of an educator to adjust to the needs of current students. Thus, educators must master technology or in other words follow technological developments and changing times, because teachers have become contractors as a determinant of the quality of education [27].

Based on the description above, an understanding can be taken that to instill or increase entrepreneurial intentions can be through the learning environment at tertiary institutions. The effort made is to design a good learning process in entrepreneurship lectures. The learning process is planned by adjusting the needs of students in technological development and advancement of the times. In other words, providing innovation in learning both face to face and with online learning so that learning objectives are achieved. To find out the truth of the above-mentioned research conducted with a hypothesis whether there is an influence of the learning environment on student entrepreneurship intentions.

H1: Is there an influence of the learning environment on student entrepreneurship intentions.

2 Research Methods

This research is a type of quantitative research that aims to test the hypotheses that have been set using statistical data analysis. The design used in this study is the associative design used to analyse the relationships between variables. This research was conducted to strengthen the assumption that the learning environment influences the formation of student entrepreneurial intentions. This study answers the question of the importance of entrepreneurial intentions among students who aim to prepare graduates to have the skills and skills in entrepreneurship. The data collection in this study with documentation, observation and questionnaire. The steps in this study are (1) observing the research problem, (2) conducting an in-depth literature study, (3) collecting field data, (4) analyzing with numeric data or qualitative data that is framed (scoring) on the research variables, (5) interpreting and discussing the results of the analysis, (5) providing conclusions and suggestions. This research was conducted at Universitas Negeri Semarang involving students who have received entrepreneurship courses.

The research design used by the writer is associative design. Associative design is useful for analyzing the relationship between one variable with another variable or how a variable affects other variables. With this research a theory can be built that can serve to explain, predict, and control a phenomenon. The data obtained in this study will be processed, analyzed, and further processed with statistical testing, namely a regression test to determine the relationship between variables and assisted using SPSS 23 applications. Hypothesis testing is known by comparing the Sig. 0.05 and \( t_{\text{count}} \) with \( t_{\text{table}} \) so that the research hypothesis will be known.
3 Result and Discussion

3.1 Result

This study aims to determine the effect of the relationship of the learning environment on entrepreneurial intentions. The object of this research is students who have taken or are currently studying entrepreneurship at the Faculty of Economics, Semarang State University. Data is collected by giving questionnaires to students related to the learning environment and entrepreneurial intentions. Furthermore, testing is done using a simple regression test to determine whether there is an influence on each variable. The criteria used in drawing conclusions refer to the level of $\alpha = 0.05$. $H_0$ is rejected if the significance of the probability $(\text{sig}) < \alpha (0.05)$ or $t_{\text{count}} > t_{\text{table}}$ which means there is an influence between the two variables and if the significance level of the probability $(\text{sig}) > \alpha (0.05)$ or $t_{\text{count}} < t_{\text{table}}$ then $H_0$ is accepted which means there is no influence between the two variables. Based on a simple regression statistical test it can be seen the following test results.

<table>
<thead>
<tr>
<th>Table 1. Output ANOVA</th>
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<tbody>
<tr>
<td><strong>ANOVA</strong></td>
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<tr>
<td>Model</td>
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<tr>
<td>1 Regression</td>
</tr>
<tr>
<td>Residual</td>
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<tr>
<td>Total</td>
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<tr>
<td>a. Dependent Variable: IB</td>
</tr>
<tr>
<td>b. Predictors: (Constant), LB</td>
</tr>
</tbody>
</table>

Source: Data Processing in 2020.

Based on Table 1, above, it is known that the $F$ value of 8093 with a significance value of 0.006. Thus, it was concluded that the coefficient of the significant regression equation was seen from the significance value $> 0.05$.

<table>
<thead>
<tr>
<th>Table 2. Model Summary</th>
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<td><strong>Model Summary</strong></td>
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<tr>
<td>a. Predictors: (Constant), LB</td>
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</table>

Source: Data Processing in 2020.

Table 2 explains that the value of the correlation coefficient (model summary) value ($R$) $= 0.316$, this shows there is a relationship between the learning environment ($X$) and entrepreneurial intentions ($Y$). The coefficient of determination ($R^2$) $= 0.100$, this shows that the effect of all independent variables on the dependent variable is 10% while the remaining 90 or 90% is influenced by other variables other than those examined.

Based on table 3, it can be seen that the significance value of the regression test is 0.005. The significance value is smaller than 0.05 and the $t_{\text{value}} 2.906 > t_{\text{table}} 1.993$ which means that in accordance with the test criteria explain that $H_0$ is rejected. This shows that there is an influence between the learning environment on entrepreneurial intentions. These results
indicate that the learning environment influences the intentions of student entrepreneurship, especially in entrepreneurship courses. Based on this, a good learning environment will have an impact on learning objectives and learning outcomes. To need to create a conducive learning environment that includes class learning processes, teaching strategies, mastery of materials and entrepreneurial practices.

Table 3. Output Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>24.153</td>
<td>4.188</td>
<td>5.767</td>
<td>.000</td>
</tr>
<tr>
<td>LB</td>
<td>.313</td>
<td>.108</td>
<td>.324</td>
<td>2.906</td>
</tr>
</tbody>
</table>

a. Dependent Variable: IB

Source: Data Processing in 2020.

3.2 Discussion

Based on the test results above, it is known that the learning environment influences student entrepreneurship intentions. These results indicate that the role of the learning environment is very influential for student learning outcomes. The learning environment is one source of learning that affects student learning outcomes and in the learning process [28]. The development of learning is currently supported by technology as an effort to create an innovative and interactive learning environment so that learning resources can be easily obtained in accordance with the basis needed for teaching and learning [29][30]. This is in line with research conducted by Bognár et al. [31] which states that modern learning methods have changed the learning environment at tertiary institutions by increasing the success of learning outcomes. But what needs to be stressed is the effort to create and maintain a conducive learning environment that is sustainable. The learning environment has a big influence on learning success. In this study the learning environment has an influence on student entrepreneurship intentions. The intention of entrepreneurship is said to be the desire or unanimity of an individual to become an entrepreneur. In other words, entrepreneurial intentions are defined as the intention that individuals have to start their own businesses and are the main predictors of future entrepreneurs [11].

This study examines the variables of entrepreneurial intentions as an effort to develop knowledge and train student skills in the learning process, and provide stimulus and direct entrepreneurial practice supported by a learning environment [32]. In addition, the need for an experiential learning approach is available for all students by following a systematic review of the effects of entrepreneurship education [33]. In line with the opinion of Shagrir [34] that during the learning process the teacher supports students to prepare learning tools and systems according to their needs and is directed to increase greater entrepreneurial intentions. Furthermore Barba-Sánchez & Atienza-Sahuquillo [35] that entrepreneurial learning has a positive contribution in triggering student entrepreneurial intentions that are supported by a pattern of independent entrepreneurial activities. Furthermore aspects of entrepreneurial intentions depend on the extent to which students can utilize their personal abilities to develop effective learning processes [36].

Entrepreneurship learning that is supported by a good learning environment will provide a good stimulus to entrepreneurial intentions. This is supported by research conducted by
Moraes [37] which states there is a positive relationship between the context of entrepreneurship education and entrepreneurial intentions that are strengthened with entrepreneurial studies and evaluation of student entrepreneurial characteristics in the learning process. The stronger the entrepreneurial intentions of each individual, the more likely it is to become an entrepreneur [38]. In line with the above opinion, research Teixeira et al. [10] which states the main determinant of entrepreneurial intentions is the capacity felt by individuals, entrepreneurial intentions themselves which in fact will affect the birth of new entrepreneurs, financing for entrepreneurs, basic education and training as well as the influence of research and development. The main problem that must be solved is the design of an adequate learning process to motivate students to become entrepreneurs [39]. Thus, efforts to instill students’ entrepreneurial intentions through the learning environment will be easily implemented.

The high trend of entrepreneurship provides a new culture for educational institutions to compete in creating new entrepreneurs. As with research conducted by Sparkes et al. [40] where the demand for new entrepreneurs requires universities to develop through the creation of an entrepreneurial education platform whose contents are the entrepreneurial team, the provision of mentors, the provision of friends and learning resources, and creating social networks. This shows that the role of universities is very large in creating new entrepreneurs. In addition, the most important effort to develop student entrepreneurial intentions is the role of education and entrepreneurship in higher education cannot be separated. The identification and analysis is carried out through the development center and programs on entrepreneurship education [41]. Therefore, universities must fully support study programs and entrepreneurship courses into compulsory lectures so that students can be motivated to have entrepreneurial intentions and have high competitiveness after they graduate from college.

Besides going through the learning environment or the learning process of higher education, it can also provide entrepreneurship education and training. In accordance with research conducted by Gieure et al. [42] states students are more likely to acquire entrepreneurial skills through effective education and training. Entrepreneurial skills play an important role in explaining entrepreneurial intentions because it is assumed that knowledge and training make people very skilled. This raises the tendency for people to start a business. For the continued fulfillment of new entrepreneurs there must be research and development efforts as a reference to provide innovation in the sustainability of the entrepreneurship field. Future entrepreneurial research must focus on social cognitive categories (people, context, cognition and motivation). In recent years, concerns about understanding key elements involved in the entrepreneurial process have increased [4], much research focusing on entrepreneurial cognition as a knowledge structure that people use to make judgments, judgments or decisions involving evaluation opportunity, business creation and growth.

4 Conclusion

This study aims to determine the effect of the learning environment on student entrepreneurial intentions. Based on the results of the analysis and discussion it is known that the learning environment has an influence on student entrepreneurial intentions. This is evidenced by the statistical analysis of the regression test as the applicable provisions show a significance value that is, $0.005 < 0.05$ and $t_{\text{count}} = 2.906 > t_{\text{table}} = 1.993$, which means the learning environment variable ($X$) has an influence on the entrepreneurial intention variable.
The various factors that influence learning environment variables one of which is the process of learning and entrepreneurship courses. An interesting and enjoyable learning process becomes the main trigger for students to follow entrepreneurship learning well. In addition, learning with a student-centered learning approach is by involving students directly in learning. Furthermore, in learning students are given the opportunity to become an entrepreneur starting from making plans, making products, marketing, and competing with other students and evaluating their activities. This is what motivates students to take part in learning and have high entrepreneurial intentions.

The role of universities as a forum to create graduates who have an entrepreneurial spirit and become a young entrepreneur is very important. Efforts are being made to provide full support to study programs to provide the best service in the entrepreneurial learning process. The expected output is students have entrepreneurial skills and competencies and have high competitiveness. In addition, tertiary education graduates are not endlessly waiting for a job call or as a job seeker but are able to become an entrepreneur independently and open a job creator. Thus, a learning environment that includes a good learning process will influence student entrepreneurship intentions with the support of universities to create the best graduates.

References


Revealing the Sharia Accounting Practice at East Java MSMEs to Support Halal Business Climate

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Abstract. The essence of life in Islam is the condition of a person when he or she returns to God or we know as the statement of innaalillaahiwainnaailaihiraaji-un, which means that we belong to God, and to Him, we return. Sharia accounting does not only function as an earthly instrument but also as an instrument of prayer and dhikr to awaken divine awareness. With Sharia accounting, financial management is no longer a separate element from the spiritual concept so that its practice can help one to remain istiqomah until the time of return to Allah SWT. Sharia accounting is very important in business management because it makes someone always try to be honest and responsible in every decision making. Through sharia accounting, MSMEs owners have the motivation to maintain business quality, therefore they can maintain their business continuity. Therefore, the spirit of sharia accounting practices needs to be grounded in MSME actors. Through the data collected by interviews and focus group discussions, this study describes the understanding and practice of sharia accounting at MSMEs in East Java. By using the information obtained from this study, it is hoped that in the future appropriate strategies will emerge to encourage MSMEs to practice sharia accounting. In fact, MSMEs don’t understand much about what is sharia accounting and still find it difficult to practice it in financial management. This condition occurs because there are a very few guidelines that describe sharia accounting practices. The results of the study suggest the need for a sharia accounting practice model and guidelines according to the conditions of the MSME. The implementation of sharia accounting is believed to be able to improve the quality of MSME financial management because it is accompanied by divine awareness in every business decision.

Keywords: Sharia Accounting, Financial Management, MSMEs, Practice, Guidelines.

1 Introduction

Halal business receives positive responses from various parties. A study on non-muslim behavior towards halal food products shows good acceptance related to health, food safety, hygiene and food quality aspects [1]. The same results are also found in halal tourism and halal pharmaceuticals [2][3]. Aziz and Chok [4] assert that halal awareness, halal certification, marketing promotion, and brand positively affect the purchase intention of non-muslim consumers. Based on the data compiled by Thomson Reuters [5], the spending value for halal food reached US$2.1 trillion in 2017 and it is estimated to increase to US$3 trillion by 2023. Indonesia is responsible for 10% in the expenses at that corresponding year (Indonesia Halal Lifestyle Center, 2018). This phenomenon implies that halal business can become a new
economic weapon. The interesting point does not only lie on the fantastic amount, but also divine awareness beyond these figures. Business is not only about profit but also the fulfillment of halal or sharia aspect.

Biancone and Radwan [6] noted the importance of Italian SME to participate in sharia industry through changes in business or industrial sector as well as changes in financial structure. MSME participation into this sector is one of the main strategies of Indonesian government in dealing with halal business climate (The Ministry of National Development Planning, 43). From accounting perspective, the use of Syariah accounting is relevant to the entities involved in Sharia transactions. It is because the paradigm, principle, and characteristics underlying Sharia transactions is different from conventional transactions. The characteristics exclude riba, zulim, maysir, gharar, and haram practices. With these characteristics, the business activities are aimed at meeting the essential welfare both in material and spiritual. The same opinion is suggested by Alim [7] who refers maqhasid sharia as the conception of Sharia accounting. Triyuwono [8] states that Sharia accounting is an art in conveying information as a mean of prayer and dhikr to meet economic, psychological, and spiritual needs as well as rising divine awareness. In line with those ideas, Pratama et al. [9] describes two versions of sharia accounting reviewed from its fundamental purpose of financial statements. The first version is that financial statements provide information (financial and nonfinancial) and accountability (horizontal and vertical). The second version is that financial statements provide information, peacefulness, love and caring, as well as stimulating divine awareness. In brief, for MSMEs, Sharia accounting is a business instrument and supporting the search for the self-essence and life goals. Sharia accounting allows the financial management to integrate with the spiritual concept, so that its practice can help one to remain istiqomah until the time of return to Allah SWT as essentially, we belong to God, and to God, we return. As taught, it is innaalillaahiwainnaailaihiraaji-un.

Unfortunately, the discussion about Sharia accounting practice in MSMEs only revolves around financial management which most of the time materialistic [6]. This study explores the integration of financial management and spiritual concept that becomes the spirit of Sharia accounting practice. This study is not limited to the procedure in making financial statements, but also search for Sharia accounting as an instrument of prayer and dhikr to awaken divine awareness. This occurs since the structure and attitude of an organization is influenced by external and internal factors [10][11]. The existence of Sharia accounting is expected to improve the quality of MSMEs' financial management because it is accompanied by divine awareness in every business decision. MSMEs in East Java were chosen as the research object as it is a province with the greatest number of MSMEs [12].

2 Research Method

This research was conducted with a qualitative approach through case studies. The type of data used is secondary data and primary data. Secondary data is obtained from literature studies, books, research, and other sources related to this research, while primary data is collected through interviews and FGD (Forum Group Discussion) to informants who are owners of MSMEs in East Java. This research was conducted through direct interviews and FGDs with MSME owners in East Java, in order to answer the research objectives in-depth, namely collecting information related to the Islamic accounting perspective they know. In
addition, the results of the interviews can be used as a guide in making sharia accounting records needed by MSME owners in East Java to support the creation of a halal climate.

This research was conducted during a pandemic, so the data collection through interviews and FGDs was done online. Due to the limitations of the current COVID-19 situation, personal interviews were not possible, so online interviews were conducted in FGD with informants. The online interview is a research method that uses computer-mediated communication. Just like personal interviews, online interviews usually ask participants to describe what they think or feel about an aspect [13]. Several informants who acted as informants were selected by purposive sampling from each region in East Java and adjusted to the type of business, namely MSMEs in the fields of Service, Trade, and Manufacture. There were 6 selected informants in each region of East Java in the fields of Service, Trade, and Manufacture. The criteria chosen are business owners in the field of Service, Trade, and Manufacture represented by 2 resource persons in each field. This selection is made with the hope that the information obtained can be linear in accordance with the objectives and needs of the study.

3 Literature Review

3.1 MSMEs and Social Structure of Rural and Urban Communities

Micro, Small, Medium enterprise is one of the economic activities that are quite popular in the community as the grassroots support of welfare. Some call this type of economic activity as the shadow economy [14], as it is not legally registered [15], but positively contributes to the national economic [16]. Other also refer to it as informal economic sector. This economic sector is growing in urban and rural communities [17]. Typology and geographical features of the community do not hinder the Micro, Small, Medium Enterprises (MSMEs) to root among them [18]. The informal economic activity is proven sustainable amidst economic crisis in Indonesia [19], as for some reasons it is not significantly affected by global economic issues.

The strength of informal economic sector in the form of MSMEs has gained attention from experts to further investigate the essence of this economic activity. The characteristic mentioned above, that informal economic sector is the shadow economic [14], not registered [15], but able to support the public economic [16], are included in the general conception. This activity, in fact, can provide job opportunities for the community, not only for the owners, but also for the worker class who do not own capital [20]. Many of them are vulnerable since they do not have any access to capital [21]. So, the only way to save their financial conditions is through this informal sector along with all its consequences.

Like the two sides of the same coin, the informal economic sector comes with benefits and impacts. The benefit of informal sector is clearly to encourage the economics of the people [16]. While the impact arising from this economic activity may differ from one community to another depending on the anatomy of society. Rural community does not significantly take the advantage of informal sector. Conversely, it is growing with minimum impacts. Informal sector can bring about self-employment, and strengthen community relationship [22]. However, informal sector in rural areas has brought problems to the municipality [23], and they have to formulate the resolution such as relocation, compensation, while maintaining the city order, etc. [24][25]. In the past, rural community were likely to maintain their traditional production through agriculture, but it is now fading away [26]. In
addition to the decreasing agricultural productivity [27], rural industrialization requires green space in agriculture [28], so it makes them prefer other income alternatives, for instance the informal sector. As the result, a great flow of urbanization could occur [29]. Villagers will flock to cities to search for formal or informal jobs [30] which leads to other dilemmatic problems [25]. The municipality has to think how they can maintain the beauty of the city while protecting the economic lives of the informal economic actors.

3.2 Religion-Based Accounting Practice for MSMEs

Today, there are only a few MSME actors who are able to professionally manage their business financial [31]. Accounting practice may sound strange to these MSMEs actors. The implementation of professional financial accounting is typically performed by big and formal business management. Unlike the informal MSMEs, big businesses are registered, so their financial records through accounting practice is very crucial. Besides for the accountability of the business financial, accounting practice makes the tax paid to the state accountable as well. Actually, informal business registration into the formal one has been facilitated by the government. In its practice, many informal sector actors in Indonesia do not register their business formally even though the bureaucracy is easier now [32].

4 Results and Discussion

As an instrument or tool, Islamic accounting can be interpreted as an art in describing financial information obtained from the transaction process. In modern accounting, transactions are recognized as physical exchanges involving goods and services. The exchange process is then expressed in monetary terms so it becomes accounting information. On the other hand, sharia accounting not only recognizes physical transactions but also mental and spiritual transactions. In Islamic accounting, every monetary exchange that occurs must be based and fenced in by the provisions of the Islamic religion. The condition of goods, location, and situation when the transaction takes place is the main thing considered in sharia accounting. Islamic accounting functions not only as an earthly instrument but also as an instrument of prayer and dhikr to awaken divine awareness. With Islamic accounting, financial management is no longer a separate element from the spiritual concept so that its practice can help one to remain steadfast until the time of returning to Allah SWT. Because the essence of life is how a person is when he returns to God.

The utilization of sharia accounting is proven to improve the performance of business entities. This is because when managing a business, the owner is always reminded of Allah SWT in every decision making. By remembering Allah SWT, organizational decisions become more focused and future-oriented. Furthermore, by applying sharia accounting business entities will always strive to maintain its quality through honest and trustworthy recording. Based on these thoughts, this study tries to examine how the sharia accounting practices of MSMEs in East Java. The research aims to reveal how the implementation of Islamic accounting and the problems that accompany it. With this research, it is expected that the pattern of the use of Islamic accounting can be interpreted comprehensively.

4.1 The Pattern of the Use of Sharia Accounting at MSMEs in East Java

This research was carried out by conducting a Focus Group Discussion (FGD) as well as in-depth interviews with representatives of the East Java Muslim MSME Association. Each
representative is in charge of approximately 60 MSMEs in each regional cluster. The results of the study concluded that not many MSMEs, especially in East Java understood the nature of sharia accounting. Most only have heard but never carried out Islamic accounting. This is certainly an interesting fact because even Muslim entrepreneurs do not understand what sharia accounting is.

"We are trying to obey the rule of the Qur'an in business management, even though it's not enough to be called as an Islamic accounting practice" (N1)

"Islamic accounting is basically just ordinary accounting, right? But given additional zakat?" (N2)

"To be honest, the concept of Islamic accounting is interesting, but we lack knowledge" (N3)

Several things that cause sharia accounting are not grounded among East Java Muslim entrepreneurs are (1) lack of knowledge and information related to sharia accounting; (2) the absence of specific guidelines related to the application of special MSME sharia accounting; and (3) there are still many Muslim entrepreneurs who do not understand the urgency and benefits of sharia accounting.

We often hear what is Islamic accounting is, but the practice is difficult, most of the training from the government is about conventional accounting" (N4)

"I am a graduate of accounting; at the time I was in college I often studied PSAK and SAK ETAP for MSMEs but never knew there were specific sharia accounting guidelines for MSMEs" (N1)

"Our discussion regarding sharia accounting is interesting, but unfortunately there are not many fellow Muslim entrepreneurs who understand the urgency and benefits" (N2)

4.2 Grounding Islamic Accounting

Based on the results of the FGD with representatives of Muslim business associations in East Java, it can be concluded that there is a need for a media to ground the use of sharia accounting. One such media is the guidelines for the implementation of sharia accounting specifically for MSMEs. Before preparing the guidelines, observations will be made of accounting transactions that occur in the daily MSME business processes. Transactions are then used as a basis for making sharia accounting guidelines. This is done so that the guidelines are right on target and in accordance with the needs of MSMEs.

"I think if there is a sharia accounting module or manual it will be easier for us to practice" (N3)

"If there really are such guidelines, of course, I welcome it. I am very enthusiastic about studying sharia accounting "(N1)

The accounting shariah guideline contains rules and examples of MSME transactions presented in the Islamic accounting standard. In these guidelines, also explained the terms in Islamic accounting and the time of its use. As a complement, sharia accounting guidelines specifically for MSMEs also contain verses of the Qur'an related to transactions that occur. This guideline is expected to be a window of knowledge and information for SMEs related to the comprehensive implementation of Islamic accounting. In addition, this guideline will also be socialized to MSMEs by means of regular training and assistance both online and offline. In this assistance, MSMEs will be guided to be able to understand and practice the contents of
the guidelines. Through this preparation and assistance, it is expected that MSMEs can improve the quality of financial management through sharia accounting that is oriented towards Divine values.

5 Conclusion

Islamic accounting basically does not only measure monetary value but also the value of spirituality. This makes sharia accounting very important in business management because it is able to encourage someone to be honest and trustworthy. Based on this, this study tries to map the pattern of the use of Islamic accounting at MSMEs, especially in East Java. Through data collected by interviews and focus group discussions, this study concludes that MSME Muslim entrepreneurs in East Java do not understand what sharia accounting is and it is still difficult to practice it in financial management. This condition occurs due to the absence of guidelines that are able to describe sharia accounting practices in real terms at MSMEs. The results of the study suggest that it is necessary to develop a guideline model of sharia accounting practices according to the conditions of MSMEs.

References


The Influential Factors in Creating Entrepreneurs at Thematic Villages in Semarang

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Abstract. Thematic Village is one of the programs to advance the economy in urban villages, including in Semarang. However; some good programs cannot be implemented well; as time goes by, they go down. Many factors are influencing the survival of Thematic Village, including the existence of entrepreneurs at Thematic Villages. The research objective is to analyze the factors influencing the existence of entrepreneurs at thematic villages at Semarang. It is a qualitative descriptive study conducted at 15 Thematic Villages in Semarang. There are three (3) key informants in each village; i.e. 1 thematic village administrator and 2 entrepreneurs at each thematic village. Data are collected through in-depth interviews, observation, and documentation. Data are analyzed with data triangulation, i.e. data reduction, data display, and conclusion drawing. The results show that the existence of entrepreneurs at thematic villages is strongly influenced by (1) individual motivation for self-development, motivation to advance the village, motivation for earning income; (2) the role of the government, both the city government and the village government for setting the policies and; (3) the role of tertiary institutions through research and service programs; (4) The role of financial institutions for soft loan programs and business training.

Keywords: Thematic Villages, Entrepreneurs, the Role of Higher Education Institution.

1 Introduction

There are many thematic villages at Semarang with their themes; such as colorful villages, 3D villages, and many more. They hold many programs or activities to attract tourists. The visitors are then expected to improve the tourism sector and the creative economy. The various activities are to introduce and to increase the competitiveness of thematic villages.

The thematic village has many programs to highlight its uniqueness. The potential uniqueness as an area icon is not only in the form of physical or environmental aspects, but also the values; such as culture, tradition, and local wisdom. The purpose of implementing thematic villages is to optimize all local potentials existing in a certain area to reduce poverty.

There are also other objectives of thematic villages; such as changing slum into non-slums regions, increasing the greening area, engaging the community involvement, improving environments, and raising the social and economic potential of the community.
Semarang is one of the cities implementing thematic villages since 2016. Thematic villages at Semarang are launched due to the poverty up to 20.82% of the population at Semarang in 2015 [1]. Thematic villages are created to reduce poverty and improve their local potentials.

Based on the official website of the Semarang Government, there are dozens of thematic villages at Semarang. Its village has its different themes, such as a kids-friendly village, milk dairy, hydroponics, Batik center, Presto-Milkfish center, traditional snacks, and many more.

Thematic villages at Semarang can be an alternative to boost tourist visits at Semarang. It does not only display neatly arranged villages that are concerned with the environment but also has the value of art and tourism. Its local products are expected to attract tourists to visit the village.

As a new tourism sector, thematic villages are expected to improve the economic welfare of the population. With the right government policy, the tourism sector from thematic villages can improve the welfare of the tourist area. The tourism sector can also open many jobs which leads to reducing unemployment in the community. The more visitors give more incomes and more profits for the entrepreneurs at the thematic village. Entrepreneurs can provide products or services for tourists or visitors. The ability to see this business opportunity is a manifestation of entrepreneurial literacy owned by the thematic village’s residents should be different from ordinary villages. The purpose of the study is to identify factors creating and influencing entrepreneurs at thematic villages at Semarang.

2 Literature Review

2.1 Thematic Village

The thematic village is one of the government programs to solve the problems; such as the bad quality of the environment, basic infrastructure of settlements, jobless, and many more. Thematic villages are for villages to change and improve bad environmental conditions, improve the greening area, engage more community participation to improve the social and economic potential local community.

Here they are some characteristics of thematic villages by involving the community and the related institution for making the good image;

a) Educational characters (culture, tradition, local wisdom)
b) Business Community
c) A healthy community and environment
d) Handmade for the Craft community
e) Environmentally friendly home industry
f) Other special characteristics are different from the other villages' characteristics.

According to Irhandayaningisih [2], the thematic villages should seek the potentials in the community. With a thematic village, it can create jobs to improve the community's economy. The development of thematic villages is also one of the solutions to increase participation and bring up community initiatives in development. The development of thematic villages generally presents a
different style and aesthetic value by both promoting environmental sustainability and also developing the creative economy [3].

The development of thematic villages is generally expected to be a solution to bad environmental problems. This thematic village development tends to develop the economic sector in a city or a region.

2.2 The Innovation of Thematic Villages at Semarang

One of the thematic villages that are reaping success in overcoming slums is happening in Semarang. In 2017 the city government of Semarang not only reaped success in changing slums to be more organized but also succeeded in encouraging social change and economic improvement in rural areas in the city of Semarang.

Thematic Village is one of the programs in the Great Gate (Joint Movement for Poverty Reduction and Unemployment through Economic Harmonization, Education, Ecosystems, and Community Ethos). It is called innovation because there has never been a program that highlights the potential of every village in the city of Semarang.

Thematic village relations in the Great Gate program cover several sectors such as education, ethos, ecosystems, and the economy. In terms of education, thematic villages educate the public to be able to understand the characteristics of the region, map potentials, and problems, and raise potential in a thematic. In terms of ethos, thematic villages strive to build attitudes, personalities, and character of the community to care for the environment. The spirit of cooperation to build and care for the environment is also increasingly high.

Furthermore; it can also be used to map and formulate solutions to problems and raise environmental potential by empowering residents. Thematic villages can be an alternative to fix and improve the quality of the environment (especially the environment in densely populated, slum, and poor areas) to be better and orderly. In terms of economy, thematic villages are formed as an effort by the government to improve the welfare of the community through the potential raised.

2.3 Entrepreneurial Literacy

Literacy culture makes a person literate in information and technology. Literacy in various fields will encourage understanding, creativity, and innovations. Not only renewing or improving the quality of old products but also can produce new products.

Literacy culture makes someone responsive to new opportunities. The emergence of a creative economy and new ventures are alternatives to creating jobs. Cultural literacy is not just reading or writing but can be the basis for building or fostering the entrepreneurial spirit of every person who called entrepreneurial literacy.

Entrepreneurial literacy is to assess individual achievements related to business development [4]. An in-depth understanding and professional ability regarding entrepreneurship can undeniably enhance business development managed by entrepreneurs. Entrepreneurial literacy is important for the community in running a business. They should know about financial management, taxation knowledge, credit management, and the development of business projections in the long run. A bad understanding of those fields may cause failure in the management of a business [5].
The role of entrepreneurial literacy is reflected in several aspects including on product, marketing, finance, and human resource management. The measurement of the level of entrepreneurial literacy in this study is based on several categories. According to Winarno & Wijijayanti [6], the category of understanding entrepreneurial literacy includes opportunities, risks, products, marketing, finance, and human resources.

3 Research Method

It is a qualitative descriptive study based on phenomenology. This approach is suitable to uncover the phenomena at the research locations. The study is located in 9 Thematic Villages in Semarang, with 27 business informants. The data are collected through observation and in-depth interviews. Data are analyzed with data triangulation which included data reduction, data display, and drawing conclusion.

4 Results and Discussion

The results showed that the existence of entrepreneurs at Thematic villages in Semarang is strongly influenced by (1) individual motivations; such as motivation for self-development, motivation to advance the village, motivation for earning income; (2) government institutions; including the city government and the village government, the foodservice agency, the health service center; (3) the universities through research programs and community service (village assistance, training, marketing, mentoring; (4) financial institutions by offering soft loans and business training.

Table 1 showing the factors that affect the existence of the entrepreneurs in at thematic villages.

<table>
<thead>
<tr>
<th>No</th>
<th>The Factors</th>
<th>Number of Entrepreneurs</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Individual Motivation</td>
<td>10 people</td>
<td>37%</td>
</tr>
<tr>
<td>2</td>
<td>The Role of Government</td>
<td>9 people</td>
<td>33.3%</td>
</tr>
<tr>
<td>3</td>
<td>The Role of Higher Education</td>
<td>5 people</td>
<td>18.5%</td>
</tr>
<tr>
<td>4</td>
<td>The Role of Financial Institutions</td>
<td>3 people</td>
<td>11.2%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>27 people</td>
<td>100%</td>
</tr>
</tbody>
</table>


Then, the detailed individual motivations affecting the existence of entrepreneurs at thematic villages can be seen in table 2.

Next, data on government roles influencing the existence of entrepreneurs at thematic villages in Semarang can be seen in Table 3.
Then, data on the role of universities in the existence of entrepreneurs at thematic villages in Semarang can be described in table 4.

**Table 2. The Priority of Individual Motivations Influencing the Existence of Entrepreneurs at Thematic Villages**

<table>
<thead>
<tr>
<th>No</th>
<th>Priority on Individual Motivation</th>
<th>Number of Informants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Self-Development Motivation</td>
<td>12 People</td>
<td>44.4%</td>
</tr>
<tr>
<td>2</td>
<td>Motivation to Advance the Village</td>
<td>10 People</td>
<td>37.0%</td>
</tr>
<tr>
<td>3</td>
<td>Motivation to Get Income</td>
<td>5 People</td>
<td>18.6%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>27 People</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>


**Table 3. Government Institutions Influencing the Existence of Entrepreneurs at Thematic Villages**

<table>
<thead>
<tr>
<th>No</th>
<th>Priority for the Role of Government</th>
<th>Number of Informants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>City Government</td>
<td>19 people</td>
<td>70.4%</td>
</tr>
<tr>
<td>2</td>
<td>Food and Health Service Agencies</td>
<td>5 people</td>
<td>18.5%</td>
</tr>
<tr>
<td>3</td>
<td>Village Government</td>
<td>3 people</td>
<td>11.1%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>27 people</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>


**Table 4. The Role of Universities Influencing the Existence of Entrepreneurs at Thematic Villages in Semarang**

<table>
<thead>
<tr>
<th>No</th>
<th>The Roles of Higher Education</th>
<th>Universities Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Research Programs</td>
<td>a. Research on and listen to obstacles happening at the thematic village.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Make a recommendation from a tertiary institution or related agency to find solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>to problems at thematic villages by providing service or assistance.</td>
</tr>
<tr>
<td>2</td>
<td>Community Service Program</td>
<td>a. Training in financial management, human resources, marketing, processing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Assistance for the formation of associations, cooperatives, marketing.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Making a better management village fostered by universities.</td>
</tr>
</tbody>
</table>


Data on the role of financial institutions on the existence of entrepreneurs at thematic villages in Semarang can be described in table 5.
Table 5. The Role of Financial Institutions Influencing the Existence of Entrepreneurs at Thematic Villages in Semarang

<table>
<thead>
<tr>
<th>No</th>
<th>The Role of Financial Institutions (CSR) Program</th>
<th>Financial Institution Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Corporate Social Responsibility</td>
<td>a. Providing equipment or infrastructure assistance to entrepreneurs at thematic villages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Provide financial management training and bookkeeping business activities</td>
</tr>
<tr>
<td>2</td>
<td>Education and Training Program</td>
<td>a. Providing entrepreneurship education, financial management, and bookkeeping, marketing management</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Assist in bookkeeping to meet the requirements for applying for loans to financial institutions</td>
</tr>
<tr>
<td>3</td>
<td>Soft Loan Program</td>
<td>a. Providing information on capital loan applications to financial institutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Provide loans with soft conditions to entrepreneurs at thematic villages</td>
</tr>
</tbody>
</table>


4.1 Discussion

4.1.1 Individual Motivation is the Biggest Factor Influencing the Existence of Entrepreneurs at Thematic Villages in Semarang

This research finds that individual motivation for creating businesses played the highest factor; it is 37% (10 people). Individual motivation factors influencing the existence of these entrepreneurs are divided into motivation for self-development by 44.4%, motivation for advancing villages by 37%, and motivation for earning 18.6%. These results illustrate that the majority of entrepreneurs at thematic villages in Semarang have the awareness to develop the skills they have. They always try to develop their expertise to continue to innovate with new products following the theme of the village.

Batik entrepreneurs do some innovations on making the natural coloring and motif motifs can be seen at Kampung Batik. Then, entrepreneurs at Kampung Kolang Kaling (Kokolaka) innovate in a variety of foods made from sugar palm fruit such as sprouts, fried tofu meatballs, sweet stuff. All products are made of natural ingredients. The entrepreneurs at Kampung Ketela (Cassava) also processed cassava into Gethuk but have innovated into more innovative snacks made from cassava.

Individual motivation to develop themselves as a form of awareness of each of these entrepreneurs can make them exist among the similar manufactured products that look more attractive, can be mass-produced, and have longer durability. However, local awareness and wisdom teach them to always innovate and not use chemicals so that it becomes a plus sought by consumers today. The motivation for the self-development of entrepreneurs at thematic villages is following the findings of Woldie et al. [7].
Furthermore, the motivation of individuals to advance their villages is also a significant factor in the existence of entrepreneurs at thematic villages Semarang for 37%. It means that entrepreneurs in thematic villages are very enthusiastic to advance their villages. Motivation to advance his village made the existence of entrepreneurs at thematic villages strong. It is done by forming business groups in each village. The existence of a business group at thematic villages can reinforce them be more independent [8][9].

Inviting and recruiting neighbors to become entrepreneurs are ways to create more jobs for more people in the village. It is following the findings of Khusna [9]; Woldie et al. [7] that the existence of MSMEs has opened more jobs. Another impact of the increase in employment as a result of the existence of entrepreneurs at the thematic village is that community income rises. It happens because if people work, they can get money as their incomes. It is following the research of Ihrhandayansih [2]; Hutoto [10], Sari [11] that the existence of Thematic Village has an impact on increasing people’s income. This additional income for the entrepreneur as financial motivation [7]. Thus; the motivation to get income is an indirect impact of the existence of entrepreneurs at thematic villages. Generally, entrepreneurs at thematic villages use workers around their homes. Therefore; the existence of businesses at thematic villages is also an effective way to tackle poverty [10].

4.1.2 The Role of the Government on the Existence of Entrepreneurs at Thematic Villages

The role of government in the existence of businesses at the thematic village is 33.3 %. The results show that the role of the government is vital in the existence of entrepreneurs in thematic villages. The role of the government is in terms of providing capital facilities, mentoring and training, and the provision of infrastructure. The orders of the government’s role in the existence of entrepreneurs are from the city government, government offices, and the village government.

The role of the city government is the initiator, the provider of infrastructure and facilities, and the capital stimulus for the formation of thematic villages. The role of the city government is very important because it becomes the spearhead of the stipulation of Thematic Village with all its facilities including capital and infrastructure. The roles of the government are in terms of bureaucracy and institutional [12][13]; policy, training, improvement of infrastructure [14]; assistance [10][13]; producing network [12], capital providers [16].

The role of the government in this case is important for the existence of entrepreneurs at thematic villages in Semarang. But in fact, the role of government is more than just a program successor. It means that when the program is launched as if mushrooming throughout the region, but when changing years there is no follow-up from the government for assistance, as a result, many thematic villages in Semarang are inactive. Hutoto [10] stated that the role of government in the existence of thematic villages is very important. It is because many barriers may affect the existence of the entrepreneurs at the thematic village since they are not independent yet [2][8].

The role of the government is also for a regular promotion in the community [13]. Many entrepreneurs who are not provided with location facilities to market their products and even online information about Thematic Villages owned by the government have little information and minimal contact person in each thematic village. In fact, according to Andriani and Zain [17] that is a promotion in the marketing performance of a business organization becomes a major problem for SMEs. Thus; the desirable role of the government is to promote the product in its thematic villages regularly.
While the role of government is also significant are agencies of government such as; health department, department of industry, and commerce. The role of the health department is related to the hygiene and safety of products produced by businesses at the thematic village. The role of the health department (BPOM) makes the products produced by Thematic Villages businesses safe for consumption and environmentally friendly. It is consistent with Khusna's research [9] that the role of the government through the health service is carried out with hygienic processing training and BPOM provides chemical counseling.

Furthermore; related to the city government and related agencies, it turns out that entrepreneurs also lack the support and attention of the local village government. The role of the local village government is indispensable for the existence of entrepreneurs at thematic villages for 11.1%. The village government does not accommodate the desires of entrepreneurs; in terms of providing locations for promotion, motivating entrepreneurs, and the community to continue to exist. It is consistent with research is done by Syarifa and Wijaya [8] that the implementation at thematic villages is not ideal and needs drivers to motivate more people in the community. Then, Rahmawati, et.al. [15] do a research, they find that indispensable community empowerment is needed at thematic villages.

4.1.3 The Roles of Universities on the Existence of Entrepreneurs at Thematic Villages

The results showed that 18.5 % of entrepreneurs said that the universities affect the existence of the entrepreneurs in thematic villages. The roles of universities are for training in both on-line marketing (e-commerce) and offline, business management training, accounting training even produce more new product variants.

The existence of the intervention of universities in both research and dedication made the entrepreneurs have a stronger mentality to continue the existence of Thematic Village in their village. With the intervention of universities in management and financial training as well as in the promotion of significant influence to overcome obstacles faced by businesses at the thematic village in the City of Semarang. It is consistent with research that one of the barriers to thematic villages' existence is limited human resources and finance [18]. Thus; it is necessary to empower communities and to increase branding.

4.1.4 The Roles of Financial Institution on the Existence of Entrepreneurs at Thematic Villages

There are 11.2 % of entrepreneurs in thematic villages stated that financial institutions contribute to the existence of entrepreneurs in thematic villages. The role of financial institutions is felt among others provide training in financial and capital management software and even give the CSR to the village. With financial training, entrepreneurs are better able to manage their finances. Whereas the existence of soft capital loans makes the business capital of entrepreneurs stronger. A research done by Behera and Das [16] find that the existence of capital is more influential in MSMEs. The existence of the role of financial institutions has led to stronger capital for entrepreneurs and business groups. It is following Khusna’s study [9] that the capital fund led to the stronger capital business group in thematic villages.
5 Conclusion

It is concluded that there are four (4) factors influencing the existence of entrepreneurs at thematic villages in Semarang. The existence of entrepreneurs in Thematic villages is strongly influenced by (1) individual motivation for self-development, motivation to advance the village, motivation for earning income; It is in line with the results of this study by Woldie et al. [7] that the biggest factor influencing the existence of MSMEs is the financial motivation of their owners (2) the role of the government from the city government, the government offices and the village government for setting the policies and; (3) the role of tertiary institutions through research and service programs; (4) The role of financial institutions for soft loan programs and business training at thematic villages in Semarang.

References

Sumber: Sumbersari, Kelurahan Wonolopo, Kecamatan Mijen, Kota Semarang SKRIPSI. UNNES, 2019.


Financial Performance Analysis of Go-Public Company on Sector Agriculture in Indonesia

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Abstract. Agriculture consistently becomes an unfavorited sector in Indonesian public-traded. Investor’s interest in this sector is still very low, only 8,1% out of total investment in 2018. The fact has proven that the agriculture sector plays an important role in the Indonesian economy for labor forces. The Indonesian government has been trying many ways to improve the investment inflow to this sector. The financial performance of the agriculture sector is finally would be the spotlight. This paper aims to measure and analyst the financial performance of public-traded the agriculture sector in Indonesia for soon to be a reference to investors. The authors of this research using all listed company of the agriculture sector which published before 2018. The authors measure how is the financial performance of the agriculture sector from 2014-2018 using profitability ratio (ROA), liquidity ratio (CR), solvency ratio (DER), and firm value (PBV). All the ratios will be checked the effect on their each-price stocks. The agriculture sector has a good performance in overall, but we have to put much attentions in profitability ratio (ROA). The strong financial performance in the agriculture sectors in Indonesia are BISI, LSIP, and SSMS. From the t-test examination shows that ROA have positively significant effect to stock price. CR and DER are negatively affect significant to stock price. Meanwhile PBV is negatively insignificant effect to stock price.

Keywords: Financial Performance, Financial ratios, the agriculture sector, Public Trade

1 Introduction

The public-list companies of the agriculture sector in Indonesia seems not attractive enough for investors. The Investment Coordinating Board (BKPM in Indonesia-red) in January 2018 has released domestic investment data (PMDN in Indonesia-red) and foreign investment data (PMA in Indonesia-red) for the 4th Quarter 2017 whose figured out around IDR 692,8 trillion. That figure has risen to 13,05% from the investment of PMDN and PMA in 2016 for the same period. However, the agricultural sector only reached 8,1% out of the total investment or around IDR 14,6 trillion.

In term of the agriculture sector’s contribution to Gross Domestic Product (GDP) has shown a downward trend for thee three decades [1]. In 1990, the contribution of the agricultural sector to GDP was 22%. The GDP of Indonesia have been increased significantly over the next two decades. In 2000 the GDP of Indonesia was US$ 165,02 billion only. The number has jumped over four times to US$ 755,09 billion in 2010. Unfortunately, the contribution of the agricultural sector has been declined by 6% and 4% respectively from the previous two decades. In the end, in 2018 the agricultural sector continues a negative trend down to 13% of GDP.
Looking from the labor absorption side, the role of the agriculture sector in Indonesia has a quite big number and so strategic actually. During the period 1996-2002, for every 10 Indonesian workers, 4 to 5 among them worked in that business field on average [2]. On a regional scale, for example in Banten, the agricultural sector contributed the largest contribution to the labor force compared to other sectors [3]. The large contribution of employment in the agricultural sector will also affect on improving a country’s economic development [4][5].

Due to the important role of the agricultural sector, the government through the Ministry of Agriculture Indonesia keeps trying to increase investment flow into the public-traded agricultural sector. This is also in line with the statement of the Chairperson of the Indonesian Young Entrepreneurs (HIPMI-red) that the entry process for investors of the agricultural sector, should not get the obstacles or too complicates by the procedural issues [6]. Once again, it is because of the labor enforcement has contributed greatly to the agricultural sector. According to republika.co.id, the Director of Corporate Affair at the Asian Ministry of Agriculture said that the government will try to attract investors through the one single submission (OSS) and tax holiday programs. The Indonesian government hopes those programs will increase the investor interest and un-strict procedure, so it will ultimately be beneficial to this sector and in line with an increasing job vacancy for Indonesian.

In 2018 the Ministry of Agriculture Indonesia make another effort to support and encourage investment flow. Through the Head of Agricultural Quarantine Agency reported by trubus.id, the government will strive to increase investment to encourage exports in the following sub-sectors: farms, horticulture, plantations, infrastructure, and crops. Four breakthroughs will be made are priority services, in-line inspection, quarantine protocol, and e-certificate.

2 Purpose

The authors want to support the government’s effort to increase the investment flow in the agriculture sector. This research interest is measuring the financial performance of the public-traded of the agriculture sectors. The authors hope this research soon be supporting data for the prospective investors to glance at the agriculture sectors once again. Most investors use financial statements as a consideration before they decide where should invest their money. However, financial statements that used as an indicator in assessing the success or failure of an organization (in all sectors) do not seem to provide precise information about company performance in a certain period or series [7]. The financial ratio, financial performance, and organizational sustainability have been widely discussed as agricultural financial literature [7]. The historical financial performance of public-listed companies in America examines the median of profitability, liquidity, operating effectiveness, and market ratio [8]. Another finding of the agriculture sector’s research was the relationships of liquidity ad solvency to cost efficiency from Kansas Farm [9].

3 Overview of Public-Traded Agricultural Sector in Indonesia

Public-trade companies are the companies that some of their stocks owned by the public. The stocks are traded in the stock exchange and its freely owned by the public. The public-trades companies have more advantages in term of financing since can issues more stocks, have
more access to finance, but also must comply with the rules of its stock exchange and taxation [8].

Indonesia is well known as an agrarian country. Unfortunately, the agriculture sector just starts to listed in the Indonesian Stock Exchange (IDX) in 1990. The first listed or Initial Public Offering (IPO) was PT Bakrie Sumatra Plantation. Two years later, in 1992, followed by PT Smart, it is also the plantation company. These two have the same background, which is palm plantation. Over three past decades, there are 22 companies listed on IDX now. Comparing to all sectors in IDX, this is the lowest number of stock sector categories [10].

There are five main sub-sectors qualification from the agricultural sector in IDX. The five sub-sectors show in figure 1.

![Fig. 1. Agriculture’s Sub-Sectors in Indonesia](source)

Sources: the authors (2020).

Plantation’s sub-sector is the largest sub-sectors with nineteen (19) companies there. Uniquely, none of the listed emiten from forestry sub-sectors even Indonesia have the large and wide of forestry land and some of them managed by a private company. The rest of another sub-sectors filled by at least one company each.

4 **Financial Literature**

There are many studies in various countries conducted on the measurement of the agriculture public sector performances, both for financial performances and business strategy. Paulson, Katchova and Enlow [8] found that the agribusiness sector outperformed the median sample of all companies listed in America in terms of profitability; liquidity; and market ratios, but slightly lower in liquidity and debt ratio. Another researcher, deepening the relationship between the agricultural sector with macroeconomic factors with farms companies’ financial health. The result found that variables at the sector level and farms had the most significant influence on the profitability of default (PD) migration of the credit farms in Mid-America [11].

In Indonesia, Kurniadi, Achsani and Sasongko [12] have examined the financial performance of the public-traded company of the agriculture sector using Economics Value Added (EVA), Market Value Added (MVA), and also Q-tobin. The results showed that most companies obtained negative EVA. While the measurement result using MVA showed most companies have positive results. Using Q-Tobin formula, the result also showed that most companies have value q<1.

The other researchers measure the risk mitigation of investing in agribusiness shares by creating a portfolio analysis. The result pointed out two best stock combinations in the public-traded agricultural sector companies. First is 30% of LSIP shares and 70% of AALI shares. The second one is 20% of LSIP shares and 80% AALI shares. Both of these stocks’ combinations are in the optimal portfolio [13].
Syamni [14] examined the effect of corporate social responsibility (CSR) on profitability in public-listed the agricultural sectors on the Indonesian Stock Exchange (IDX). The results showed that companies in which doing CSR get a better profitability index using return on equity (ROE) valuation method in plantation companies. Since the public-trade of the agriculture sector in Indonesia dominated by plantation companies, so this result indicates that CSR has a positive signal for investors when deciding to invest in the capital market.

The stock price movement of the agricultural sector because of macroeconomics influences in Indonesia has been researched too. The results showed that in the long term, the movement the agricultural sector’s stock price index was not influenced by the BI rate variable, but negatively influenced by the rupiah (IDR) exchange rate variables against the US$ dollar, the money supply, and the palm oil’s price. Whereas in the short term, it is only palm oil’s price that will affect the stock price of the agricultural sector’s movement index [15].

The authors focus on measuring the financial performance of public-traded the agriculture sector companies. As stated earlier, the agriculture sector has not received much attention or interest from the investors. The researchers will also measure how is the financial performance affecting the stock price in the agricultural sectors. There are few numbers of literacy in this sector, although it substantially demonstrates their economic strength as a market sector [8]. The results of this research are expected to be used as financial literacy for potential investors.

5 Data

The researchers use the financial performance data from the public-trade agriculture sector which lists on IDX. The agriculture sector is classified into five sub-sectors which consist of 22 companies. This research only used sixteen companies because the rest companies just listed on IDX in 2018 and thereafter. Therefore, time-series data for previous years are unavailable. Table 1 shows the following emiten list that will use in this study.

<table>
<thead>
<tr>
<th>No</th>
<th>Emiten's Code</th>
<th>Listed Companies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>AALI</td>
<td>Astra Agro Lestari, Tbk</td>
</tr>
<tr>
<td>2</td>
<td>ANJT</td>
<td>Austindo Nusantara Jaya, Tbk</td>
</tr>
<tr>
<td>3</td>
<td>BISI</td>
<td>BISI Internasional, Tbk</td>
</tr>
<tr>
<td>4</td>
<td>BWPT</td>
<td>Eagle High Plantations, Tbk</td>
</tr>
<tr>
<td>5</td>
<td>DSFI</td>
<td>Dharma Samudera Fishing Indust, Tbk</td>
</tr>
<tr>
<td>6</td>
<td>DSNF</td>
<td>Dharma Satya Nusantara, Tbk</td>
</tr>
<tr>
<td>7</td>
<td>GOLL</td>
<td>Golden Plantation, Tbk</td>
</tr>
<tr>
<td>8</td>
<td>GZCO</td>
<td>Gozco Plantation, Tbk</td>
</tr>
<tr>
<td>9</td>
<td>JAWA</td>
<td>Jaya Agra Wattie, Tbk</td>
</tr>
<tr>
<td>10</td>
<td>LSIP</td>
<td>PP London Sumatera Indonesia, Tbk</td>
</tr>
<tr>
<td>11</td>
<td>MAGP</td>
<td>Multi Agro Gemilang Plantations, Tbk</td>
</tr>
<tr>
<td>12</td>
<td>PALM</td>
<td>Provident Agro, Tbk</td>
</tr>
<tr>
<td>13</td>
<td>SGRO</td>
<td>Sampoerna Agro, Tbk</td>
</tr>
<tr>
<td>14</td>
<td>SIMP</td>
<td>Salim Ivomas Pratama, Tbk</td>
</tr>
<tr>
<td>15</td>
<td>SMAR</td>
<td>Smart, Tbk</td>
</tr>
<tr>
<td>16</td>
<td>SSMS</td>
<td>Sawit Sumbermas Sarana, Tbk</td>
</tr>
</tbody>
</table>
This research uses time-series data. It is financial performance data from 2014 to 2018. IDX has not released the latest data period, 2019, that is why the researchers use the data until 2018 only. The authors admit there are limitations from this dataset for historical analysis. Data for some companies from IDX was also unavailable and incomplete in some cases. So, the authors decided to calculate manually.

6 Financial Performance Measurement

When evaluating financial performance, indicators of valuation can refer to an absolute performance appraisal based on the figures in the financial statements (balance sheet and income statements) and financial ratios [8]. Financial performances in this research were measured by using financial ratios. Financial ratios as variables in performance valuations are commonly used in various studies [16][17][18]. In this study, the researchers use liquidity ratio, profitability ratio, solvency ratio, and firm value ratio to measure the financial performance of the agriculture sector.

Liquidity ratio is the ability from the company to fulfill short-term obligations. High level of liquidity ratio shows that the ability of companies to pay off their short-term debt is also higher [9][19]. The liquidity ratio in this research uses the current ratio (CR). CR measures the short-term financial strength of the company (current assets). Current assets include cash, account receivables, inventories, and short-term bonds [19]. The formula of CR follows:

\[
\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}
\]

The second ratio is the profitability ratio. The profitability ratio shows the company’s fundamental performance in terms of efficiency and effectiveness to gain profits [19]. In this research the authors use return on assets (ROA) to examine profitability ratio. ROA is considered to show the efficiency of the firm performance in managing assets for gaining profit [20][21][22][23]. The ROA formula as follows:

\[
\text{Return on Assets} = \frac{\text{Net Income}}{\text{Total Assets}}
\]

Another ratio is to examine the ability of the company’s solvency using leverage ratio. The leverage ratio or also known as solvency ratio examines a company’s leverage capability related to mix debt and equity, in other words, it is the company’s ability to fills its long-terms and short-terms obligations [19]. Larger the amount of corporate debt will be greater the financial risk of bankruptcy too [8]. In Indonesia, practically, many companies bankrupt caused by the funding structure that does not provide the leverage balance because the understanding of capital structure is more partially and not optimal [19]. In this research, the indicator of the leverage ratio is Debt to Equity Ratio (DER). DER shows the capital structure information that affects the firm’s value as DER will examine the effectiveness of total debt to the capital of the company itself. DER formula as follows:

\[
\text{Debt to Equity Ratio} = \frac{\text{Total Liabilities}}{\text{Total Equity}}
\]
The last ratio used in this study is the firm value’s ratio. Empirical facts show that not all financial performance variables have a significant effect on firm value [19]. The firm’s value ratio for this research uses Price to Book Value (PBV). PBV is measuring the price level of the company’s stock market with the book value of the stock itself. PBV can explain the relationship between various interested parties regarding the share price of a particular company. PBV can be calculated using this following formula:

\[
\text{Price to Book Value} = \frac{\text{Market Price}}{\text{Book Value per Share}}
\]

7 Results and Findings

The researchers use financial ratios to measure the financial performance of the agriculture sector public-traded company in Indonesia. We use data from 2014 to 2018. Financial ratios we used such as current ratio, ROA, DER, and PBV have shown in Figure 2.

![Financial Ratio of Public-Traded the Agriculture Sector](image)

**Fig. 2.** Financial Ratio of Public-Traded the Agriculture Sector. Source: The Authors.

Figure 2 shows that all public-traded companies in the sector of agriculture have CR>0. It means that all companies have the ability to pay off their short-term debts. There are three companies consistently dominant among others emiten with reaching more than 400%. They are BISI, LSIP, and SSMS. Among these three companies, LSIP and SSMS has been an increase significantly more than 3 and 2-fold respectively. In addition, there are 2 other companies that
are interesting in the CR valuation, namely GOLL in 2014 and PALM in 2016. There jumped in that year.

ROA results show that the agriculture sector has not been able to say much to attract the investors. The ability of their asset management to get more profits has not been optimally. From figure 2, the ROA valuations is less than 20%. Even in 2018, 43.75% of whole go-public companies in the agriculture’s sector shown negative ROA index. In 2016, GZCO plunged freely to -43.64%. Although the following year they as extraordinary can cut the minus to -4.79%. Among the data series, only BISI has consistently produced ROA of more than 13% since 2015-2018.

Contrary to profitability ratio, all companies in the agriculture sector have the ability in managing their leverages quite effective. The company that shown the best DER valuation is JAVA. From 2014 to 2018 the increase of DER index was 24.5% per year. Two companies with lowest effectiveness in managing their leverage are BISI and LSIP with DER of 0.2%.

The last financial ratio is to measure the firm value based on stock market price to price to book-value. Overall, the value of the companies in the sector of agriculture is similar vibe. Figure 2 shows the best result from PBV valuation for the 2014-2018 period is shown by SSMS. However, if considered deeper, most companies in the agriculture sector have negative trend in firm value every year. DSFI had a great initial reputation in 2014, but freely felt down in following year until 2018. In the end, as average of firm value from this sector was 1.39%, and the researcher know it is not good enough.

The researchers are aware of the presence of contain outliers in calculating means in the financial ratio. It is because of the financial ratio typically contains outlier. We use the median does not suffer from this problem. The median of financial performance of the agriculture sector is shown in the table 2.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>98.07</td>
<td>100.745</td>
<td>126.17</td>
<td>106.7</td>
<td>97.5</td>
</tr>
<tr>
<td>ROA</td>
<td>4.185</td>
<td>1.38</td>
<td>2.475</td>
<td>3.025</td>
<td>0.315</td>
</tr>
<tr>
<td>DER</td>
<td>1.08</td>
<td>1.13</td>
<td>1.14</td>
<td>1.17</td>
<td>1.315</td>
</tr>
<tr>
<td>PBV</td>
<td>1.15</td>
<td>1.185</td>
<td>1.405</td>
<td>1.07</td>
<td>1.02</td>
</tr>
</tbody>
</table>

Source: The Authors

The results from table 2 show that in general the median financial performance in the agriculture sector has shown good result. Financial performance in all variables look stagnant, not too fluctuating. However, if you look at ROA variable, it must be on more attention. From 2014 to 2018 the median financial performance declined to 3.87 points. The rest variable ratios did not change too much in the 4 years of research period.

The researchers add one more analysis, it is T-Test analysis. We analysis the relationship of four financial ratios to stock prices of the companies in the agriculture’s sector. Stock price is also be indicators that be consideration for shareholders or investor before put their investment. The T-Test analysis show in Table 3. T-Test find that all variables data are valid, reliable, and not multicol. The authors find that all variables data are valid, reliable, and not multicol. The t-test value shows that only ROA have positively significant effect to stock price. CR and DER are negatively affect significant to stock price. Meanwhile PBV is negatively insignificant effect to stock price.
Table 3. T-Test Table Financial Ratios to Stock Prices

<table>
<thead>
<tr>
<th>Financial Ratios</th>
<th>AVE</th>
<th>Cronbach alpha</th>
<th>Inner VIF</th>
<th>Original Sample</th>
<th>P Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>0,246</td>
<td>0,010</td>
</tr>
<tr>
<td>CR</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>-0,226</td>
<td>0,014</td>
</tr>
<tr>
<td>DER</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>-0,176</td>
<td>0,025</td>
</tr>
<tr>
<td>PBV</td>
<td>1,000</td>
<td>1,000</td>
<td>1,000</td>
<td>0,044</td>
<td>0,697</td>
</tr>
</tbody>
</table>

Source: The Authors.

8 Conclusion

The authors presented the financial analysis for public-listed company in the agriculture sector in Indonesia. In conducting our analysis, we use the financial ratios as the basic knowledge for analyzing financial performance. The researchers use all indicator ratios to examines the financial ratios, such as liquidity ratio, profitability ratio, debt ratio, and firm value ratio. In this research, we also added the several analysis methods like t-test analysis and statistical test. We admit that in this research we use the financial literacy and prior research as literacy. We try to provide better analysis of financial performance of the agriculture sector in Indonesia. From our finding, the agriculture sector has a good performance in overall, but we have to put much attentions in profitability ratio (ROA). The strong financial performance in the agriculture sectors are BISI, LSIP, and SSMS. In general, median performance of this sector also good and effective. From the t-test examination shows that ROA have positively significant effect to stock price. It is unique since ROA in financial ratio not really present good valuation in this sector. Next, CR and DER are negatively affect significant to stock price. Meanwhile PBV is negatively insignificant effect to stock price.

The question that arises for the next research is if the profitability ratios used other than ROA will be like. Suppose we will examine using Return on Equity (ROE) for profitability ratio or Earning Per Shares (EPS) for firm value ratio. What the result will be. For the next research we hope our research can contribute as a literature. If we will continue our research, we will compare the financial performance of the agriculture sectors to all of sectors of public-trade firms in IDX. So that will get deeper analysis to the agriculture sector.

References


The Role of Perceived Value on Tourist Loyalty: Case Study on Nature Tourism in Indonesia

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Abstract. Tourist loyalty is the primary aspect to determine future visits. Loyalty is a form of connection between tourists and tourism destinations. Moreover, a loyal tourist will promote a certain destination to their colleague, therefore potentially enhance the number of visitors. Previous research affirms that the critical point to form loyalty is experience, accessibility, facilities, and perceived value. This research novelty aims to ensure the previous studies inconsistency on the relationship of experiential marketing, facilities, accessibility, and tourist loyalty. This study adopts the disconfirmation theory framework to discover comparison tourist's willingness to sacrifice and experience. High perceived value when visiting tourism destinations will affect tourist loyalty. This study involved 116 respondents who visited the Umbul Ponggok which represents nature tourism destination in Indonesia. The results showed that experiential marketing, facility, and accessibility have a direct influence on tourist loyalty, on the other hand, perceived value mediates the relationship of experiential marketing, facility, and accessibility to tourist loyalty. This study indicates that perceived value partially moderates independent variables to tourist loyalty. This study implies that there are tourists who are impressed by tourism destination with reasonable expenditure, thus forming loyalty. On the other hand, adequate facilities and tourist destinations access easily are contribute to shaping tourist loyalty.

Keywords: Experiential Marketing, Facility, Accessibility, Perceived Value, Customer Loyalty

1 Introduction

Experiential marketing is marketing concept of where the management/entrepreneur attempts to present tourists with positive, impressive, and unique experiences. The purpose of the tourism marketing concept is to provide tourists with valuable experience so that they will be satisfied and loyal based on the experience they receive. This experiential marketing does not only provide benefit out of products or services but also provide an experience which may fulfill tourists’ emotional needs\cite{1}. Experiential marketing also provides tourists with the opportunity to gain experience from products/services produced. According to Chen, Cheng and Kim\cite{2}, tourists’ loyalty may be enhanced through emotional touch. The emotional aspect and rational aspect are the aspects targeted by marketers through this program, thus the two aspects will give excellent marketing effect. In the tourism sector, experiential marketing may build a relationship with tourists through various aspects to create differentiation in a destination.

The next strategy which may be used to build customer loyalty is to provide comfort by improving supporting facilities in the tourist destination. Attractive tourist facilities in line with the trend of tourists’ desire will attract tourists to visit and enjoy such facilities. Ryu and Han
state that facilities directly, significantly influence customer loyalty. This is supported by other research conducted by Ramanathan and Ramanathan [4], that facilities and tourist satisfaction significantly, simultaneously and partially influence customer loyalty. However, this does not conform to the research conducted by Wijoyo [5] that facilities are part of brand, thus they do not significantly influence tourist loyalty. Further, it is supported by similar research conducted by Hermawan [6] that also states that security and facilities do not influence tourist loyalty.

Some researchers believe that convenience attributes to reach destination and during tourist visit may provide comfort in their vacation. Accessibility is a measurement of comfort or convenience to reach a destination through the existing transportation network system. Tóth and Dávid [7] state that accessibility is the right to access which is service of the basic need for travel. Accessibility is a measurement of people’s potential or convenience to achieve travel destinations. According to the research conducted by Sulistyadi and Oetomo [8], accessibility significantly, positively influences customer loyalty. The research is supported by other research which proves a significant relationship of accessibility with customer loyalty. Meanwhile, other research shows a different result. Ompusunggu [9] states that accessibility does not significantly, directly influence customer loyalty.

Value is a consideration of benefit and sacrifice. The definition of tourist value is quite extensive and different from various perspectives. According to Robbins, perception is the impression obtained by an individual through the five senses which are then analyzed or organized, interpreted, and evaluated, thus the individual gains some meaning. The perceived value does not only serve as an important determiner in maintaining tourist long-term relationship but also plays an important role in influencing purchase intention [10]. Customer perceived value is the difference between prospective tourist’s assessment of all benefits and the cost of an offering for the existing alternatives. The research conducted by Tu et al. [11] shows that perceived value strongly influences tourist loyalty. Value perceived by tourists is the main key to determine tourist loyalty [12]. Perceived value greatly determines the extent tourists put their trust by agreeing to make revisit to a destination. On the other hand, the perceived value does not always positively, significantly influences tourist loyalty, as proved by the research conducted by Ramseook et al. [13] that there is no direct relationship of perceived value with loyalty and only tourist satisfaction directly influences tourist loyalty, thus we may conclude that perceived value does not always render positive and significant result to tourist loyalty.

Various tourist destinations have developed in line with the development taking place in the community. Of the many existing tourist destinations, one in this research is the Tourist Attraction Umbul Ponggok in Klaten Regency. Based on the gap research explained, it is found that there is a non-conforming result of research on the influence of experiential marketing, facility, and accessibility on customer loyalty, either directly or indirectly, through perceived value.

## 2 Literature Review

Tourist behavior is the processes and activities involved in tourist behavior and the understanding of tourist behavior as well as elements involved in developing various aspects of marketing strategy when people search for, choose, use, evaluate and dispose of products and serves to satisfy their needs and desires [14]. Meanwhile, according to Ali, tourist behavior is a complex psychological response arising in the form of behavior or act typically to the individual
directly involved in an effort to obtain and use the product and to determine decision-making process in purchasing a product, including in repurchase, which means a tourist visits a tourist destination, buys souvenir and someday the tourist revisits it since he feels comfortable and has belief in it.

2.1 Customer Loyalty

Loyalty is a complex multi-dimensional concept. Tourist loyalty plays an important role in creating profit and may be viewed as the power of the relationship between an individual’s relative attitude and their repeated patronage [15]. A loyal tourist will be committed to using, repurchasing, cross-purchasing, and recommending products or services of certain brands. Improving and maintaining tourist loyalty is one of the important methods to win a competition [16]. Loyalty is the level where a tourist is satisfied with website, product, or service and shows their support for a product or service in terms of attitude, behavior, and other general aspects [17].

Based on the definitions above, we may define that customer loyalty is a commitment built by tourists to repurchasing and subscribing to a product or service consistently in the future and there is a good attitude to recommend such product or service to others. Customer loyalty is a reliable measurement to predict sales growth [18]. Loyalty may provide big profit to the company since it influences tourist purchases and free recommendations to others [19].

Business is called a success when it successfully gathers, maintains, and grows tourists [20]. Zhang and Bloemer [21] in their research emphasize the importance of loyalty-building as the basis for company to survive and compete. According to them, customer loyalty to company grows because of some factors, such as good image, service quality, and tourist satisfaction.

2.2 Experiential Marketing

Loyalty is a complex multi-dimensional concept. Tourist loyalty plays an important role in creating profit and may be viewed as the power of the relationship between an individual’s relative attitude and their repeated patronage [15]. A loyal tourist will be committed to using, repurchasing, cross-purchasing, and recommending products or services of certain brands. Improving and maintaining tourist loyalty is one of the important methods to win a competition [16]. Loyalty is the level where a tourist is satisfied with website, product, or service and shows their support for a product or service in terms of attitude, behavior, and other general aspects [17].

Experiential marketing is a method of face-to-face communication, primarily which stimulates tourist’s physical and emotional feelings, which cause tourist to behave relevantly and interactively to some brands and feel as well as experience to their heart content [22]. According to Smilansky [23], experiential marketing is a process to identify and satisfy tourist’s needs and beneficial aspirations, involve by using bidirectional communication to render identity to such brand for its existence and as added value for target tourists. Currently, marketers cannot only rely on features and benefits as their weapon since both are the easiest thing for competitors to imitate.

Fyall et al. [24] state that experiential marketing is a method to make tourist create their experience through five senses, create an affective experience, create creative thinking experience, create tourist’s experience concerning physical body, with behaviors and lifestyles as well as experiences as the result of interaction with others, and to create experience associated with the social condition, lifestyle and culture reflected by such brand, which is developed from sensations, feelings, cognitions, and actions. This conforms to the result of research conducted by Wu and Tseng [17], that experiential marketing significantly, positively influences customer
loyalty. In addition, it is also supported by similar research conducted by Dharmawansyah [25] stating that experiential marketing significantly influences customer loyalty. Such research result also contradicts the result of previous research conducted by Chao [26] stating that experiential marketing does not significantly, positively influence customer loyalty.

- **H1**: Experiential marketing significantly, positively influences customer loyalty
- **H2**: Experiential marketing significantly, positively influences customer loyalty through perceived value

### 2.3 Facility

The facility is anything, either goods or services, accompanying services given by the company, either service, trade, or industrial company. Providing supporting facilities as needed by tourists is one effort to keep tourists [27]. Important innovations are made to improve the business model, one of which is tourist destination. Innovation in tourist destinations may strengthen a business model [28]. Innovation may be made by completing the existing facilities in tourist destinations so that tourists will feel comfortable.

Service is an intangible product, which cannot be seen, cannot be smelled, and cannot be touched, thus the physical form aspect is important as a measurement of service. Needham and Szuster [29] explain that facility is the provision of physical equipment which facilitates tourists in performing their activities so that their needs are fulfilled. Facility in the tourism sector means service provided by a tourist attraction to support the activities of tourists who visit it.

Based on the definitions above, we may conclude that the facility is physical equipment provided by service provider to be used by tourists in performing their activities. According to Tjiptono [30], service facility’s design and layout are closely related to tourist’s perception formation. In some types of service, the perception formed from interaction between tourist and facility influences the quality of such service in the tourist’s mind.

- **H3**: Facility significantly, positively influences customer loyalty
- **H4**: Facility significantly, positively influences customer loyalty through perceived value

### 2.4 Accessibility

According to Tjiptono [30], accessibility is location passed or the easiest way reached by public transportation. One of the important components in tourism activities is accessibility or smooth access to move from a place to another, either in short or long distance. Moving certainly requires a tool for transportation and means of transportation in travel [31].

Accessibility is a measurement of comfort and convenience to reach a location and their connection one with another, whether a location is easily or hardly reached through transportation media [32]. Rheza [33] defines accessibility as anything which may facilitate tourist to come and visit a tourist attraction area. If an object is not supported with sufficient accessibility, such an object with attraction will hardly become a tourism industry, that tourism activities greatly depend on transportation and communication since space and time factors influence a person’s will to have tourism travel [34]. One of the reasons for making an area crowded with visitors is access facilities such as road infrastructure, object closeness to airport, and existing transportation to location/destination.

Tóth and Dávid [7] define accessibility as the ease of access from a location to another location through the existing transportation and facilities, in the form of road infrastructure and movable mode of transportation on it. In tourism, tourists must come to the area where tourism products exist to consume them, particularly tourist objects and attractions [33]. The distance and availability of transportation facilities and infrastructure to the tourism area is a very important thing. Type, volume, rate, and frequency of mode of transportation to and from the
tourism area will influence the number of tourist visits. Convenience during travel to the tourism area also serves as a very important factor to pay attention to. Based on the definitions above, we may conclude that accessibility is a measurement of convenience of access to a certain location, service level or environment.

**H5:** Accessibility significantly, positively influences customer loyalty

**H6:** Accessibility significantly, positively influences customer loyalty through perceived value

### 2.5 Perceived Value

Customer perceived value is the value of the existing product or service in tourist’s mind. Vanessa states that tourist value is the ratio of benefit or advantage perceived to sacrifice incurred, in which perceived benefit is a combination of the physical attribute, service attribute, and supporting technique in utilizing the product. Sacrifice incurred is the total cost incurred by tourists including purchase price and additional costs such as costs of the order, transportation, installation, order handling, and non-purchase costs such as replacement for damage, failure risk or bad service. The success of a product is determined by the extent of value of a product in tourist’s mind. The higher the value of a product, tourist will like it more and tend to buy a product with the high value [35].

According to Zeithaml, perceived value is tourist’s overall valuation of the usability of a product based on his perception of what is received and what is given. Perceived value is the difference between tourist’s evaluation perspective and the total benefit received and the total cost of offer and alternative perceived [36].

Tjiptono [30] states that perceived value is the perceived performance of a series of economic, technical, service, and social benefits in exchange for the price paid for a certain product/service. Perceived value is the tradeoff between tourist’s perception and the quality of product benefit and sacrifice made through cost paid [37]. Based on the experts’ opinions, we may conclude that perceived value is the overall study of benefit of a product/service based on tourist’s perception of what is gained with the cost incurred.

**H7:** Perceived value significantly, positively influences customer loyalty

### 3 Method

This quantitative research employed a non-probability sampling with a purposive sampling technique, in which samples were determined under certain considerations for the best ones. There were two sample criteria determined, which were respondents must be minimum 17 years old so that they will be able to think rationally and have visited Tourist Attraction Umbul Ponggok in Klaten Regency more than once.

### 3.1 Variable

#### 3.1.1 Customer Loyalty

In tourism sector, customer loyalty might be realized in the intensity of tourist’s revisit to a tourist destination. The indicators of tourist loyalty used in this research were making revisit, not interested in other tourist destination and referencing it to others.

#### 3.1.2 Experiential Marketing
Experiential marketing was defined as a marketing concept involving tourist’s emotions and feeling by creating positive and memorable experiences so that tourist will be satisfied and loyal to certain product. A good experiential marketing of a destination may help express tourism service better, which will then become specific characteristics of a tourist destination. The indicators used in this research were sense, feel, think, act and relate.

3.1.3 Facility

Facility was defined as physical equipment provided by service provider for tourist to use in their activities. Facility was not the main factor to stimulatet tourist visit to a tourist destination, but unavailable facility may prevent tourist from enjoying tourist attraction. The indicators of facility in this research were complete, neat and clean; conditions and functions; and easy to use.

3.1.4 Accessibility

Accessibility is the concept of geographically combining land use arrangement system with transportation network system which connects it. Accessibility was taken as the measurement of comfort or convenience of the method to access location and land use planning through transportation network system. The indicators of accessibility used in this research were strategic location, smoothness public transport and cost.

3.1.5 Perceived Value

Perceived value is the whole study of the benefit of a product/service based on tourist’s perception of what is gained with the cost incurred. Perceived value is tourist’s perception of a series of economic, technical, service and social benefits in exchange of the price paid for a certain product/service. The indicators of perceived value used in this research were emotional value, social value, performance and value of money.

4 Result and Discussion

4.1 Result

In this research, an analysis has been conducted using two models, of which results are presented in Table 1 and Table 2.

| Table 1. Model 1 Experiential Marketing, Facility and Accessibility on Perceived Value |
|-----------------------------------------------|-----------------|-----------------|
| Variable                       | t value | .sig      |
| Experiential Marketing         | 2.989   | 0.003    |
| Facility                       | 2.252   | 0.026    |
| Accessibility                  | 3.778   | 0.000    |
The results of calculation in Table 1 and Figure 1 show that the total influence of path coefficient of experiential marketing variable on customer loyalty through perceived value is 0.365 with the value of direct influence of experiential marketing on customer loyalty is 0.313. On this basis, hypothesis 2 states that the influence of experiential marketing on customer loyalty through perceived value is accepted, since the path coefficient of experiential marketing variable on customer loyalty through perceived value is higher than the direct influence of experiential marketing on customer loyalty (0.365 > 0.313). This shows that perceived value is able to mediate the relationship of experiential marketing variable with customer loyalty.

Table 2. Model 2 Experiential Marketing, Facility, Accessibility and Perceived Value on Customer Loyalty

<table>
<thead>
<tr>
<th>Variable</th>
<th>t value</th>
<th>.sig</th>
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</thead>
<tbody>
<tr>
<td>Experiential Marketing</td>
<td>3.291</td>
<td>0.001</td>
</tr>
<tr>
<td>Facility</td>
<td>2.354</td>
<td>0.020</td>
</tr>
<tr>
<td>Accessibility</td>
<td>3.952</td>
<td>0.000</td>
</tr>
<tr>
<td>Perceived Value</td>
<td>1.998</td>
<td>0.048</td>
</tr>
</tbody>
</table>

Table 3. R square Value

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.822a</td>
<td>0.676</td>
<td>0.667</td>
</tr>
<tr>
<td>2</td>
<td>0.885b</td>
<td>0.783</td>
<td>0.775</td>
</tr>
</tbody>
</table>

Fig. 1. Path Analysis on the Influence of Experiential Marketing on Customer Loyalty Mediated by Perceived Value

Fig. 2. Path Analysis on the Influence of Facility on Customer Loyalty Mediated by Perceived Value
Table 2 and figure 2 show that the influence of path coefficient of facility variable on customer loyalty through perceived value is 0.229 with the value of direct influence of facility on customer loyalty is 0.195. On this basis, hypothesis 4 stating that facility influences customer loyalty through perceived value is accepted, since the total influence of path coefficient of facility variable on customer loyalty through perceived value is higher than the direct influence of facility on customer loyalty (0.229 > 0.195). This shows that perceived value is able to mediate the relationship of facility variable with customer loyalty.

4.2 Discussion

4.2.1 Experiential Marketing’s Influence on Customer Loyalty

Through the research result, it is found that experiential marketing significantly, positively influences customer loyalty. Higher experiential marketing value will enhance customer loyalty and, on the contrary, when experiential marketing declines, customer loyalty will also decline. This research shows there is value which is still below average value, which is the indicator ‘Think’, which means that Tourist Attraction Umbul Ponggok of Klaten Regency has not become the first destination to come to tourist’s mind when they desire to visit natural tourist attraction.

This research result also supports the result of previous research conducted by Wu and Tseng [17] that experiential marketing significantly, positively influences customer loyalty. In this research, experiential marketing consisting of sense, feel, think, act and relate statistically influences customer loyalty level. The services given to the tourists through the five sense aspects covering beautiful natural scenery and refreshing mountain air touch the tourists’ feeling and make them enjoy and happy when paying their visits, as well as obtain various facilities, such as hot and cool pools which may stimulate the tourists’ curiosity to try, influence tourists’ behavior to revisit, engage them with wider social environment, and create the tourists’ experience to the Tourist Attraction of Umbul Ponggok in Klaten Regency which has been proven influencing the customer loyalty level.

4.2.2 Experiential Marketing’s Influence on Customer Loyalty through Perceived Value

Based on the research conducted, it is evident that perceived value is able to mediate experiential marketing with customer loyalty. This means that if experiential marketing is well delivered, it will improve tourist’s perceived value of the destination object, which will eventually enhance tourist loyalty level. The influence of experiential marketing on customer loyalty gets stronger when it is mediated by perceived value.

This research result also supports previous research conducted by Akinci et al. [38] stating that experience level perceived by tourist emotionally influences the perceived value, which will lead to higher tourist loyalty. This research result also proves the result of research conducted by Wu, Li, and Li [39] that experiential marketing significantly influences perceived value. This research shows that experiential marketing delivered through the existing services and modes in Tourist Attraction Umbul Ponggok of Klaten Regency is able to create tourist’s good perceived value which will fulfill tourist’s expected emotional value, quality value, social value and value based on the cost incurred, thus customers will reach a certain comfortable point which may trigger act leading to tourist loyalty.
4.2.3 Facility's Influence on Customer Loyalty

With this research result, it is found that facility significantly, positively influences customer loyalty. More complete facility will enhance customer loyalty and, on the contrary, when facility value declines, customer loyalty will decline. The average score of indicators show good value, but there are values below the average value, which are the condition and function of the indicator, this means that the existing facility in Tourist Attraction Umbul Ponggok of Klaten Regency needs improvement in the condition and function of the existing facility to enhance tourist loyalty.

This research result also supports previous research conducted by Ryu and Han [3] stating that facility directly, significantly influences customer loyalty. In this research, the existing facility includes camping ground, service office, security post, Wi-Fi, and others which from the perspective of completeness, tidiness and cleanliness level, condition and function, and ease of facility to be used statically influences customer loyalty. This is supported by Tjiptono [30], that perception obtained from tourist’s interaction with facility influences the quality of service and influences repurchase act and loyalty.

4.2.4 Facility's Influence on Customer Loyalty through Perceived Value

Based on the research result, it is evident that perceived value is able to mediate facility with customer loyalty. This means that the existing facility including camping ground, service office, security post, Wi-Fi, and others which are deemed complete, tidy, clean, well-functioning, and easy to use will improve tourist’s perceived value of the destination object, which will eventually enhance tourist loyalty level. The influence of facility on customer loyalty gets stronger when mediated by perceived value.

This research result also supports the opinion of Mayoni and Ni (2017) explaining that appropriate facility and service management will form high perceived value which will eventually influence tourist to make actual purchase and revisit. In this research, the facility provided in Tourist Attraction Umbul Ponggok of Klaten Regency including camping ground, service office, security post, Wi-Fi, and others is able to create tourist’s good perceived value, which fulfills tourist’s expectation of the emotional value, quality value, social value, and value based on the cost incurred, thus customers will reach a certain comfortable point triggering acts leading to tourist loyalty.

4.2.5 Accessibility’s Influence on Customer Loyalty

With this research result, it is found that accessibility significantly, positively influences customer loyalty. Higher accessibility will enhance customer loyalty and, on the contrary, when accessibility value declines, customer loyalty will decline. The average score of the indicators shows good and very good values, but there is the value below the average value, which is that of indicator smoothness of public transport, which means that the choice of public mode of transportation is not optimally available in Tourist Attraction Umbul Ponggok of Klaten Regency. The number of public modes of transportation is still limited and there is cellular network constraint during transportation order transactions online.

This research result also supports previous research conducted by Sulistyadi and Oetomo [8] that accessibility significantly, positively influences customer loyalty. This research also supports the opinion of Tóth & Dávid [7] explaining that if a tourist attraction is not supported with sufficient accessibility, it will hardly become a tourism industry, that tourism activities greatly depend on transportation and communication since space and time factors influence a person’s will to have a tourism travel.
4.2.6 Accessibility’s Influence on Customer Loyalty through Perceived Value

Based on the research result, it is evident that perceived value is able to mediate accessibility with customer loyalty. This means that ease of accessibility or access to the location of tourist attraction will enhance tourist’s perceived value of the destination object, which will enhance tourist loyalty. The influence of accessibility on customer loyalty gets stronger when mediated by perceived value.

This research result also supports the opinion of Wang et al. [40] that accessibility or the level of ease of convenience to the location of destination greatly influences tourism industry. In this research, accessibility to the location of Tourist Attraction Umbul Ponggok of Klaten Regency including strategic placement of tourist attraction location, availability of choice of alternative route to tourist attraction location, availability of public mode of transportation and estimated cost incurred to go to tourist attraction location is able to create tourist’s good perceived value, which will eventually fulfill tourist’s expected emotional value, quality value, social value and value based on the cost incurred so that customers will reach a certain comfortable point triggering act leading to tourist loyalty.

4.2.7 Perceived Value’s Influence on Customer Loyalty

With this research result, it is found that perceived value significantly, positively influences customer loyalty. Higher perceived value will enhance customer loyalty and, on the contrary, when perceived value declines, customer loyalty will decline. The average score of the indicators shows good and very good values, but there is value below the average value, which is that of indicator ‘Performance’, which means that the quality of existing services has not been optimally delivered in Tourist Attraction Umbul Ponggok of Klaten Regency.

This research result also supports previous research conducted by Tu et al. [11] showing that perceived value strongly influences tourist loyalty. This research is also supported by the research conducted by Zeithaml (1988) that the value perceived by tourist is the main key to determining tourist loyalty. Perceived value greatly determines to what extent tourist put their trust by agreeing to make revisit to a destination. In this research, perceived value may influence customer loyalty, in which Tourist Attraction Umbul Ponggok of Klaten Regency fulfills tourist’s expected emotional value, quality value, social value and value based on the costs incurred through the existing services and modes. This perception includes the capability to enhance the spirit and get rid of fatigue during visit, with good service quality and with affordable entry ticket price.

5 Conclusion

Based on the discussion, this research proves that Experiential marketing significantly, positively influences customer loyalty through perceived value, which means that perceived value is able to mediate the influence of experiential marketing on customer loyalty. Facility significantly, positively influences customer loyalty through perceived value, which means that perceived value is able to mediate the influence of facility on customer loyalty. Accessibility significantly, positively influences customer loyalty through perceived value, which means that perceived value is able to mediate the influence of accessibility on customer loyalty. Perceived value significantly, positively influences customer loyalty. Higher perceived value will enhance customer loyalty and, on the contrary, when perceived value declines, customer loyalty will decline.
5.1 Suggestion

Based on the research result, we may observe that the management should improve tourist’s experience by adding more modes, such as water boom for children’s play facilities in addition to the existing hot and cool pools. In addition, the management should organize regular maintenance program to enhance the facilities management, particularly repair and maintenance of physical buildings. Public transportation access should also be made available for optimal functioning.

5.2 Limitation and Future Research

This research is limited in some aspects, such as it only applies thirteen variables, thus the author recommends future researcher to add other variables such as e-wom, destination image, promotion, and others which may influence customer loyalty to develop a model which may respond any problems in the research.

References


Relationship between Information Technology (IT) Acceptance and Employee Performance using Technology Acceptance Model (TAM)

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Abstract. The issue of the absence of user acceptance and selection of new technologies has for quite some time been an obstruction to its usage achievement. Information technology has vital importance in every field and proven to facilitate employees in performing their tasks. The purpose of this research is to investigate the relationship between information technology (IT) and employee performance using Technology Acceptance Model (TAM). The data for this study were collected from 144 respondents. The sample selection was based on the census sampling method. The data collected was then evaluated by using Statistical Package for the Social Science (SPSS) Version 25. Numerous tests were converged such as frequency distribution, descriptive analysis, reliability analysis, Pearson’s correlation analysis and multiple regression analysis. The results indicated that perceived usefulness and perceived ease of use are related to employee performance.

Keywords: Information Technology, Employee Performance, Technology Acceptance Model, Perceived Usefulness, Perceived Ease of Use

1 Introduction

Employee job performance has always been a major challenge in organizational management and adopting effective ways to motivate employees to achieve and deliver higher job performance as well as increase the organizational competitiveness is the main objective of every business organization [1][2][3][4][5][6]. It is therefore believed that employee performance is instrumental to organizational growth and profitability. The employees are regarded as the major business resources that facilitate the daily activities and operations of an organization [1][4][5]. Most worker of today have a high level of job dissatisfaction which make dispositions which create attitudes that are undesirable on the job and in turn degenerate their performance ability and that their working place as well [7].

Performance of the individuals cannot be verified [8]. Yang [8] indicated that organizations can utilize coordinate rewards and rewards dependent on individual execution if worker performance is observable. In accordance with Yang [8], Bishop [9] revealed that acknowledgement, recognition, and reward of performance of employees direct the discrimination between worker productivity. The affirmation and viable utilization of new technologies and data frameworks by individuals and organizations are territories of research that have gotten centrality in later of years. The issue on absence of user acceptance and adoption
of new innovations has for quite some time been a block to its usage achievement. Accordingly, 
analysts and professionals alike have made these issues a high need thing [10][11][12].

TAM has proven to be useful model in assisting to understand that user will accept the 
technology is useful for them by give specific benefits to boost their performance [13][14][15][16][17][18]. TAM has demonstrated that it is valid, robust and powerful model for predicting user acceptance [14][15][17][19][20]. The model prescribes that when users are 
given another product bundle, various components affect their decision about how and when 
they will use it. The basic TAM model included and tried two explicit convictions: perceived 
usefulness (PU) and perceived ease of use (PEU). Perceived usefulness is characterized as the 
potential user's emotional probability that the use of a specific framework will enhance his/her 
activity and perceived ease of use refers to how much the potential user anticipates that the 
objective system should be easy [14][15][16][17][21].

Information Technology (IT) adopt a huge impact and give competitive advantage on 
business productivity [15]. IT influences a lot of beneficial returns on firms’ productivity. IT 
brings a lot of good feature that can help and assist employees to improve the organization’s 
performance. Furthermore, the adoption of IT has received much attention given the increasing 
of competition and rapid exchange of information. The involvement of technology in the 
industry will influence job performance and enhance productivity [10][14][19]. Through an 
efficient system, IT applications are genuine concentrated with the emphasis on uncovering 
industry's impression of the dimension of selection and helpfulness of IT applications, and 
additionally facilitators and barriers to their adoption.

1.1 Profile Problem Statement

In a matter of couple of decades, Malaysia has changed its economy from agriculture based 
to an exchange driven one. Vital to drive the development of this economic change is its 
exchanging with other nation. It is hard to have successful communication in the present 
business world without the utilization of current IT [10][15][22]. According to Colley, Gale and 
Harris [23] most by far of research has focused on the phenomenon of a 'phobia' or anxiety 
making individuals abstain from utilizing ICT in settings, for example, the work environment, 
school or home [24]. The phenomenon of ‘technophobia’ is considered by social psychologists 
to encompass the fear and apprehension felt by an individual when considering the implications 
of using technology, even when it poses no real or immediate threat. In other words, 
technophobia clouds an individual’s perception of the technology in question, making it appear 
somehow ‘not for them’.

Based on the previous research conducted by Gould, Boeis and Lewis [25], user 
acceptance is often the essential factor in deciding the achievement or disappointment of 
information system and the research came about that numerous issues will happen on the off 
chance that IT isn't adequately actualized and acknowledged at the organization. It is important 
to look further on how dimension of user's acceptance by utilizing TAM model can be used to 
gauge the IT acceptance and its effects on employee performance This study is geared at 
answering the following research question: Are there any relationships between perceived 
usefulness, perceived ease of use and employee performance?
2 Literature Review

The definition of performance does not include the results of an employee’s behavior, but only the behavior themselves. Performance is about behavior or what employees do, not about what employees produce or the outcomes of their work [1][2][3][4][5][26]. Perceived employee performance represents the general belief of the employee about his behavior and contributions in the success of organization. Employee performance may be taken in the perspective of three factors which makes possible to perform better than others, determinants of performance may be such as “declarative knowledge”, “procedural knowledge” and “motivation” [1][4][5][27].

Accordingly, organizations put resources into technology with the desire that it will add to performance, and individuals from the organization must use technology for them to contribute. In any case, not all employees can adapt to fast changes of new technology in organization and it is expected that such conduct can impact job performance [15][17][28]. The study further expressed that the investigations of users’ acceptance of IT were significant as the principal purpose of the technological creations was intended to help or upgrade an individual's task performance. Since research has demonstrated that employee performance is connected to the performance of an organization, it is vital to both the organization and additionally the employees to monitor their performance so as to guarantee that the targets of the organization are met.

2.1 Technology Acceptance Model (TAM)

Technology Acceptance Model (TAM) was developed by Davis in 1989 [21]. TAM was acquainted with help in foreseeing technology use conduct. Theory of reasoned action (TRA) starts from learning theory and accept that behavior toward a specific object is approximated by an aim to perform that behavior.

![Technology Acceptance Model (TAM).](image)

TAM as shown in Figure 1, was an adaption of the TRA and explicitly customized for modeling user acceptance of Information system (IS) by providing clarification of the builds of computer acceptance which is commonly likewise equipped for clarifying user conduct over a broad range of end-user computing advances and the population.
2.2 Perceived Usefulness

Perceived usefulness is defined here as “the degree to which a person believes that using a particular system would enhance his or her job performance”. This follows from the definition of the word useful: “capable of being used advantageously”. Within an organizational context, people are generally reinforced for good performance by raises, promotions, bonuses, and other rewards [29]. Within the organizational context, a system that is high in perceived usefulness is one that the user believes will have a positive use performance relationship [30].

Individuals will in general use or not to use a system application to the degree they trust it will enable them to perform their task better [10][12][14][18][19]. Usefulness can likewise be characterized as the forthcoming adopter’s abstract likelihood that applying the new technology from outside sources will be advantageous to his own and/or the receiving organization's well-being. Or on the other hand that utilizing the technology would enhance the manner in which a user could finish a given task. Perceived usefulness discloses the user's recognition to the degree that the technology will enhance the user's work environment performance [10][12][19]. This implies the user has an impression of how useful the technology is in playing out his job task. This includes diminishing the ideal opportunity for carrying out the responsibility, more productivity and accuracy.

2.3 Perceived Ease of Use

Perceived ease of use is defined as “the degree to which an individual; believes that using a particular system would be free from physical and mental effort” [21]. It has also been defined as a user’s subjective perception of the effortlessness of a computer system. This follows from the definition of the word “ease”: “freedom from difficulty or great effort.” Effort is a limited asset that an individual may apportion to the different exercises for which he or she is capable [31].

Perceived ease of use clarifies the user's impression of the measure of effort required to use the system or degree to which a user trusts that utilizing a specific technology will be easy [10][12][14][19]. Perceived ease of use has been built up from past research to be an essential factor impacting user acceptance and utilization conduct of IT [32]. Perceived ease of use comprises of the accompanying determinants: simple to use, easy to read, utilizing understandable terms, ready to connection to scan for related data and simple to come back to past page. This includes support, complexity and change the management. Venkatesh [11] detailed perceived ease of use portrays the person's impression of how simple the innovation is to learn and to use.

Given that some fraction of a user's total job content is committed to physically utilizing the system as such, if the user turns out to be progressively profitable in that fraction of his or her job by means of more prominent ease of use, at that point the person ought to end up increasingly beneficial generally speaking. Users trust that a given application might be fruitful, yet they may, in the meantime, trust that the technology is too difficult to even consider using and that the performance advantages of utilization are exceeded by the effort of application [19][21].
3 Conceptual Framework

Based on the conceptual framework, this study aimed at examining the following hypotheses:

H1: Perceived usefulness has a positive effect on employee performance.
H2: Perceived ease of use has a positive effect on employee performance.

4 Methodology

The purpose of this research is to investigate the relationship between IT acceptance and employee performance using the TAM. This study will apply a quantitative approach as the research design to gather data and information about this study. Questionnaire will be used in collecting and gathering data. The type of research that used is correlational research that is directed to discover vital components related with the factors of interest [33]. Consequently, this study was led to discover whether the imperative variables had positively or negatively influenced each other. The study will be conducted in a non-contrived setting which is likewise implied the study had no plans to hinder nor control all variables and make up a counterfeit setting for its respondents to accomplish the research objectives. This study is cross-sectional in nature where data will be gathered just at one point in time. For this investigation, the specific questionnaire was distributed amid work hours, and put together by the respondents after they have finished noting the questionnaire and at a convenient time. The unit of analysis will be individuals.

4.1 Population and Sampling

Population can be expressed as a gathering of things, occasions, or individuals that the study needs to consider or explore [33]. In this study, the referred population are employees from TLP Terminal Sdn. Bhd. which situated at Tanjung Langsat, Pasir Gudang, Johor, Malaysia. This study was purposely conducted among the port employees, whose work are largely depending on technology, consist of 190 employees. The selection of the population is based on the accessibility in conducting this study and availability of samples. This study will apply the convenience sampling technique under the non-probability sampling design. Convenience sampling technique is deemed to be more appropriate because the data or
information can be obtained easily at a lower cost and faster. Based on Krejcie & Morgan [34], for the given population the proper sample size for this study is at least 127 respondents.

4.2 Instrument and Measurement

Data for the study will be collected using a self-administered questionnaire. The questionnaire consisted of a set of items which was segregated to 3 sections were presented to the respondents to answer. The questionnaire is divided into Part A (independent variables) Part B (dependent variable) and Part C (demographic). Five points Likert Scale are applied to determine respondent answers from “strongly disagree, disagree, neutral, agree and strongly agree”.

4.3 Data Analysis

All the data collected from the survey will be analyzed using the Statistical Package for Social Science (SPSS). Data will undergo the frequency analysis (demographic), descriptive analysis, reliability analysis, correlational analysis (Person correlations) and multiple regression analysis. Multiple regression analysis will define the relationship whether the independent variables are able to influence the dependent variable. In this research, employee performance will act as the dependent variable, meanwhile perceived usefulness and perceived ease of use will act as independent variables.

5 Result and Discussion

A total 150 questionnaires were distributed, and 144 questionnaires were returned recording a response rate of 96 percent. The purpose of this study is to examine the relationship between Information Technology (IT) acceptance, using Technology Acceptance Model (TAM), and employee performance. Table 1 shows the frequency analysis of respondent’s demographic characteristics. Out of 144 respondents, 78.5% are males and 21.5% are females. The outcomes had demonstrated that the respondent who answer the questionnaire is generally 31-35 years old which aggregated 28.5% which is a total of 41 respondents out of 144.

<table>
<thead>
<tr>
<th>Table 1. Demographic Profile of the Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
</tr>
<tr>
<td>1. Male</td>
</tr>
<tr>
<td>2. Female</td>
</tr>
<tr>
<td>Age</td>
</tr>
<tr>
<td>1. Below 25 years old</td>
</tr>
<tr>
<td>2. 26-30 years old</td>
</tr>
<tr>
<td>3. 31-35 years old</td>
</tr>
<tr>
<td>4. 36-40 years old</td>
</tr>
<tr>
<td>5. 41-50 years old</td>
</tr>
<tr>
<td>6. Above 50 years old</td>
</tr>
<tr>
<td>Education Background</td>
</tr>
<tr>
<td>1. SPM</td>
</tr>
<tr>
<td>2. Diploma</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Male</td>
<td>113</td>
<td>78.5</td>
</tr>
<tr>
<td>2. Female</td>
<td>31</td>
<td>21.5</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Below 25 years old</td>
<td>13</td>
<td>9.0</td>
</tr>
<tr>
<td>2. 26-30 years old</td>
<td>39</td>
<td>27.1</td>
</tr>
<tr>
<td>3. 31-35 years old</td>
<td>41</td>
<td>28.5</td>
</tr>
<tr>
<td>4. 36-40 years old</td>
<td>23</td>
<td>16.0</td>
</tr>
<tr>
<td>5. 41-50 years old</td>
<td>13</td>
<td>9.0</td>
</tr>
<tr>
<td>6. Above 50 years old</td>
<td>15</td>
<td>10.4</td>
</tr>
<tr>
<td>Education Background</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. SPM</td>
<td>79</td>
<td>54.9</td>
</tr>
<tr>
<td>2. Diploma</td>
<td>43</td>
<td>29.9</td>
</tr>
</tbody>
</table>
Out of 144 of the respondents, greater part of the respondents has SPM background which aggregated to 54.9% and pursued by the minor respondents that have Master Degree which indicates 0.7%. Most of the respondent has been in service for 5-10 years which accounted at 57.6% and the least percentage is 15-20 years with 0.7%.

Table 2. Descriptive Analysis for Each Variable

<table>
<thead>
<tr>
<th>Variables</th>
<th>Total Mean</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td>4.2490</td>
<td>0.37</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>4.0486</td>
<td>0.48</td>
</tr>
<tr>
<td>Employee Performance</td>
<td>4.2252</td>
<td>0.36</td>
</tr>
</tbody>
</table>

Table 2 shows the descriptive statistics of the variables in the study. The highest mean is the perceived usefulness with the value of 4.2490. Followed by employee performance with the value of 4.2252 and perceived ease of use with value of 4.0486. Based on the results, most respondents agree with the statements where it can be proven the value of mean is more than 3.

Table 3. Cronbach’s Alpha Reliability Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>Number of Items</th>
<th>Verdict</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Usefulness</td>
<td>0.790</td>
<td>7</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Perceived Ease of Use</td>
<td>0.788</td>
<td>7</td>
<td>Acceptable</td>
</tr>
<tr>
<td>Employee Performance</td>
<td>0.791</td>
<td>7</td>
<td>Acceptable</td>
</tr>
</tbody>
</table>

The reliability analysis in table 3 shows that all variables recorded a Cronbach’s alpha above 0.70 that is acceptable. The highest value of Cronbach's Alpha was 0.791 represented by employee performance with 7 items, followed by perceived usefulness with a value at 0.790 and perceived ease of use which valued at 0.788. Henceforth, through this reliability testing result, it had demonstrated the item used in the study for every variable were in actuality consistent.
Based on the result in Table 4 above, there is a significant, moderate correlation with; substantial relationship between perceived usefulness and employee performance ($r = 0.627$, $P < 0.01$). While, there is a significant but low correlation; definite but small relationship between perceived ease of use and employee performance ($r = 0.395$, $P < 0.01$).

The Table 5 demonstrated the coefficient of determination or R square is .417 which mean 41.7 percent of the difference in dependent variable which is employee performance is clarified by the variety of the independent variable which are perceived usefulness and perceived ease of use. Subsequently, there are 58.3 percent of other independent variables that were excluded in this research.

The result of the analysis also showed that the F value had introduced at $F = 50.499$ ($p=0.000$). It clarified that all the variables have significant relationship with employee performance and implies that the model is fit and factually significant. Moreover, the significance of every independent variables towards the dependent variables were analyzed. It demonstrated the two variables were significance, which perceived usefulness and perceived ease of use. Also, the variables will significant if the significance value were less than $p < 0.01$ and $p < 0.05$. The table demonstrated that perceived usefulness was significance towards employee performance. This is because the significant value for perceived usefulness is 0.000, $p > 0.01$. The beta value for perceived usefulness is 0.559. In this way, it tends to be clarified that increase by 1% of perceived usefulness, the employee performance will increase by 0.559. Second variable is perceived ease of use additionally indicated significant value of 0.018, $p <
0.05 and a beta value of 0.168. This implies the increase of perceived ease of use by 1%, the employee performance will increase by 0.168.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>H(_1) Perceived usefulness has a positive effect on employee performance.</td>
<td>Supported</td>
</tr>
<tr>
<td>H(_2) Perceived ease of use has a positive effect on employee performance.</td>
<td>Supported</td>
</tr>
</tbody>
</table>

Table 6. Hypothesis Testing

Based on the studies, it showed that perceived usefulness has a significant relationship with employee performance (\(\beta = 0.559, p = 0.000 < 0.01\)). Perceived ease of use also has a significant relationship with employee performance (\(\beta = 0.168, p = 0.018 < 0.05\)). Therefore, both hypotheses are accepted.

6 Conclusion

The aim for this study is to examine the relationship between information technology acceptance and employee performance using Technology Acceptance Model (TAM). Based on the past studies, there are several factors that have relationship between IT and employee performance but this study, will only focus on the perceived usefulness and perceived ease of use. From the result, it showed that perceived usefulness has a positive relationship with employee performance. The result showed that employees were satisfied with perceived usefulness of information technology (IT) that they have in their workplace. This meant that users are likely to form a positive attitude toward using the system when it is proven as a useful utility to the practice and vice versa.

This finding is line with Ho et al. [14], which indicated that perceived usefulness has both direct and indirect influences on the attitude towards using the system [13][15][17], Taylor and Todd 1995). The usefulness construct may reflect considerations of both the “benefits” and the “costs” of using the target system. Ease of use may be seen as part of the cost of using the system from the user’s perspective [13][14][15][17]. There are also several studies had highlighted the importance of perceived usefulness relating with a person’s behavior [13][14][15][16].

The result also showed that perceived ease of use has a positive relationship with employee performance. Findings showed that employees were satisfied with perceived ease of use of Information Technology (IT) that they have in their workplace. In general, a system or technology that is perceived to be easy to use or learn would be anticipated to be more useful to the user and this statement was first supported by Davis [21].

The major limitation for this research is the size of samples. The size of samples is limited to the employees at TLP terminal and only represent as respondent for shipping logistics industry. Therefore, the findings cannot represent general population in all shipping logistics industry. Future research should include other variables that may affect employee performance. It is significance to identify any factors that might influence an employee to increase their performance on their job.

References


Evaluation of Implementing Sukuk for Infrastructure Financing in Indonesia Using the Analytic Network Process

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Universitas YARSI, Indonesia³

Abstract. The Indonesian government has used sukuk to finance infrastructure since 2013. However, the issuance of sukuk for infrastructure financing is still low compared to the total value of available underlying assets because of many problems and barriers. This study aims to identify priority problems, solutions and strategies in the implementation of sukuk for infrastructure financing from the obligor perspective. The research uses analytic network process method. The results show that the priority of the problem is the low maximum limit for the issuance of sukuk for infrastructure, market risk, the realization of sukuk issuance for infrastructure is still low, the low sukuk market share compared to bonds, monitoring and evaluation of the use of funds is not optimal. The priority of the solution is to push to complete the project on time so that the burden of costs does not increase, increase the maximum limit for issuance of sukuk, increase the issuance of sukuk for infrastructure investment, optimize monitoring and evaluation of the use of funds, open up broad opportunities for foreign investors. The priority strategies are Synergy, innovation, and the use of IT.

Keywords: Sukuk, Infrastructure Financing, Islamic Finance, ANP

1 Introduction

Infrastructure is an important one for the progress of the country. Without adequate infrastructure, economic mobility hampered. Infrastructure is the index or variable number two that determines the level of state competition in the 2019 Global Competitiveness Report issued by the World Economic Forum [1]. Looking at the level of state competition from the availability of infrastructure, it turns out that Indonesia is still lagging behind neighboring countries. Singapore is the country with the best infrastructure in the world, which ranks first out of 141 countries. Malaysia ranks 35th, Brunei ranks 58th, and Thailand ranks 71st. Indonesia ranks 72nd, one level below Thailand. It explains that the infrastructure gap in Indonesia is higher compared to neighboring countries. Table 1 explains that the road and connectivity sector received the smallest value of 59.8. Indonesia's road sector infrastructure ranks 109th. The quality of roads in Indonesia is also still ranked 60th, whereas roads are the essential infrastructure that will support economic mobility. Indonesia's energy and water resources infrastructure are also still lagging in the order of 95 and 98.
Therefore, to improve infrastructure gap, the Indonesian government continues to encourage infrastructure development in various regions. The infrastructure budget also continues to increase from year to year. The increase in infrastructure budget is not only from the amount but also the portion. The peak was in 2017, the infrastructure budget increase by Rp. 119.2 Trillion compared to 2016 [2]. In 2019 the infrastructure budget touched Rp. 415 Trillion. The increase in the infrastructure budget certainly shows the seriousness of the Indonesian government to improve the country's infrastructure.

![Fig. 1. Indonesian Infrastructure Budget in the APBN [3].](image)

The government issued state sukuk since 2008 to expand the source of the state budget. Since 2013, state sukuk began to earmarked as infrastructure financing instruments [4]. However, until 2019, the issuance of state sukuk for infrastructure has not been maximized. When compared with the available underlying assets, the number of issuances of sukuk is still very far. Underlying assets in question are in the form of infrastructure investment projects and assets owned by the state or State Property (Barang Milik Negara/BMN).

### Table 1. Indonesian Infrastructure Index

<table>
<thead>
<tr>
<th>Infrastructure</th>
<th>Score</th>
<th>Rank/141</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transport infrastructure</td>
<td>56.1</td>
<td>55</td>
</tr>
<tr>
<td>Road connectivity</td>
<td>59.8</td>
<td>109</td>
</tr>
<tr>
<td>Quality of road infrastructure</td>
<td>52.6</td>
<td>60</td>
</tr>
<tr>
<td>Railroad density km/1.000 km</td>
<td>6.5</td>
<td>85</td>
</tr>
<tr>
<td>Efficiency of train service</td>
<td>61.1</td>
<td>19</td>
</tr>
<tr>
<td>Airport connectivity</td>
<td>100</td>
<td>5</td>
</tr>
<tr>
<td>Efficiency of air transport service</td>
<td>65.2</td>
<td>56</td>
</tr>
<tr>
<td>Liner shipping connectivity</td>
<td>47.8</td>
<td>36</td>
</tr>
<tr>
<td>Efficiency of seaport service</td>
<td>55.8</td>
<td>61</td>
</tr>
<tr>
<td>Utility infrastructure</td>
<td>79.4</td>
<td>89</td>
</tr>
<tr>
<td>Electricity access % of population</td>
<td>94.8</td>
<td>95</td>
</tr>
<tr>
<td>Electricity supply quality % of output</td>
<td>94.7</td>
<td>54</td>
</tr>
<tr>
<td>Exposure to unsafe drinking water % of population</td>
<td>65.5</td>
<td>98</td>
</tr>
<tr>
<td>Reliability of water supply</td>
<td>62.5</td>
<td>74</td>
</tr>
</tbody>
</table>

The Committee for the Acceleration of Priority Infrastructure Providers (Komite Percepatan Penyedia Infrastruktur Prioritas/KPPIP) notes that the overall National Strategic Project is estimated to require an investment value of Rp. 4,180 trillion [5]. A total of 81 projects have completed, 27 projects and 2 programs are under construction [5]. The rest of the government still needs an investment of Rp. 2,860 trillion. Supposedly, the value of the investment can be an opportunity for sukuk issuance. Indonesia Ministry of Finance recorded the amount of BMN as of December 2018, reaching Rp. 5,728.49 trillion [4]. The issuance of sukuk until 2019 only reached Rp. 1,221 trillion [3]. The amount is also far from underlying physical assets. It means that of the total available underlying assets, the potential for sukuk issuance can still be a maximum of around Rp. 7,367 trillion.

The sukuk issuance has not been maximally certainly due to obstacles and obstacles that occur. In a report submitted in Bali on October 10, 2018, the Ministry of Finance, as a sukuk issuer, stated the barriers faced in financing infrastructure with state sukuk. Among them; the construction auction process is late, there are problematic contractors, the land is not ready, there are assets lost/destroyed due to disasters and others. So, to continue to encourage the issuance of sukuk to finance infrastructure, evaluation is needed on the current implementation. Especially on the side of the government as a sukuk issuer and policymaker. Then this paper will help look for any problems that occur in the implementation of state sukuk for infrastructure financing. As well as finding solutions and strategies to help evaluate the implementation of state sukuk for infrastructure financing.

2 Literature Review

2.1 Overview

Sukuk is also called an Islamic bond. In Arabic terminology, sukuk comes from the verb 'tashik', meaning securitization, while the word sukuk comes from the plural word 'Sakk' (Hassan & Mollah, 2018). The Accounting and Auditing Organization of Islamic Financial Institutions (AAOIFI) defines sukuk as follows:

“Sukuk (plural of Sak) are certificates of equal value representing undivided shares in ownership of tangible assets, usufruct and services or (in ownership of) the assets of particular projects or special investment activity. However, it is true after receipt of the value of sukuk, closing of subscription and employment of funds received for the purpose for which the Sukuk were issued”.

Simply stated, sukuk is a letter of ownership of investment assets. The fundamental difference between sukuk and bonds is that the issuance of sukuk requires underlying assets. As an Islamic financial instrument, sukuk must also comply with Shariah compliance before being issued. The suitability of sharia sukuk is the same as the basic principles of sharia economics and finance in general, which sourced from the Qur'an and Hadith. Including; free from usury, gharar and maysir, and obey the rules of halal and haram.

Three rules must be fulfilled in the issuance of sukuk, according to Mutum et al. [6]. First, assets identified as underlying must be sharia-compliant. Second, the information that the obligor gives to investors about the business being invested must be clear. Third, the sukuk structure, contract, and business prospects invested must be clear.
Sukuk was first published in Indonesia in 2002. Sukuk issued are sukuk owned by PT
Indosat. While the Indonesian government only issued sukuk in 2008 after the issuance of
Indonesia Law number 19 of 2008 [7]. Sukuk issued by the Indonesian government are referred
to as state sukuk or State Sharia Securities (Surat Berharga Syariah Negara/SBSN). Project-
Based Sukuk (PBS) is a series of sukuk issued by the Indonesian government specifically to
finance infrastructure projects (earmarked). PBS introduced in 2012 to institutional investors.
In 2013 PBS had funded infrastructure development projects [7].
Infrastructure financing with sukuk has two schemes, namely project underlying and
project financing. In the underlying project scheme, Hariyanto [8] explained that the
infrastructure that had been listed in the APBN would be the basis for issuance. Then the funds
from the issuance are used to replace the APBN funds that have been spent on the project
whereas project financing allows the project itself to find the funding needed [9]. The project
process is also included first in the state budget and then get funding from sukuk (earmarked).
Generally, this scheme also emphasizes that the return on capital will come from the results of
the project itself [10].

2.2 Previous Research

Jatmiko [11] explains the sukuk risk problems faced by obligors. First is the price level
risk that occurs when the value of the issuance of the proposed sukuk is different from the value
of the asset. The second burden of sukuk costs that must be paid will increase if the project
completion is too late from the due date of the agreement. The third credit risk that occurs
because there is no preliminary fund provision to overcome the differences in the cycle of
disbursement of funds and the time of issuance of sukuk. Finally, market risk is due to the rate
of return. Sukuk that have fixed returns will reduce sukuk income when there is an increase in
market returns. Nopijantoro [12] also mentioned many infrastructure financings risks with
sukuk, namely the delayed completion of the project will result in suboptimal use of funds. The
burden of sukuk costs has also increased because it must continue to be paid when due while
the infrastructure project has not yet been completed.

Rarasati [9], in her research “Islamic Project Financing in Indonesia Infrastructure
Development” also mentioned the problems faced in infrastructure financing with Islamic
finance. Among them are the condition of investors who are still profit-oriented and the lack of
public knowledge about Islamic finance. Government regulations and policies are also said to
be a challenge for the issuance of state sukuk always. Short term investment is more attractive
than long term. The problem is that most infrastructure financing projects are long term. In
financing, there is a mismatch between the maturity and the time of financing needs.

Other research that discusses the issue of implementing state sukuk was also attended by
Beik [13]. According to Beik [13] the economic impact is not apparent because the infrastructure
built is not by regional needs. This happens because of the lack of coordination between the
central government and local governments regarding the implementation of infrastructure
development projects. Project proponents need to be extended to the regions so that they can
have a direct impact on the regional economy. Beik [13] also mentioned the lack of investor
interest in sukuk investment instruments, lack of public education and socialization regarding
sukuk, and the suitability of sharia sukuk which is still being debated.

The problem regarding underlying assets was revealed in a study conducted by Rosyidah
et al. [14]. According to him, the sukuk domestic market has issues with limited availability of
underlying assets, but not because of the lack of assets owned by the state. That is because there
is no updated and reliable data available on state-owned assets, especially regarding productive
assets that can be used as underlying assets for sukuk issuance. There is no benchmark yield for state assets that can also be a barrier.

Research conducted by Datuk [15] also revealed the problem of the implementation of state sukuk for infrastructure financing. The first is the market of Islamic financial products, which is still low compared to conventional financial products. Secondly, public knowledge about sukuk is still low. The third is the availability of underlying assets. Fourth, about tax regulations. Fifth, the sukuk secondary market has not yet developed, and the sukuk liquidity in the secondary market is still low, investors buy and hold. Sixth, there is no Islamic benchmark, however. Lastly, supporting infrastructure in the context of price discovery to encourage price transparency is not yet perfect.

3 Method

This research uses a mixed approach. Data sources used include primary data from filling out questionnaires and in-depth interviews by expert respondents and secondary literature review results. The in-depth interviews and the questionnaire filled out by expert respondents were chosen because of their capacity in understanding the problem in this study.

<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Position</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dwi Irianti Hadiningdyah, S.H., M.A.</td>
<td>Director of Islamic Finance in the Directorate General of Budget Financing and Risk Management, Indonesia Ministry of Finance</td>
</tr>
<tr>
<td>2</td>
<td>M. Faudji</td>
<td>Head of Section in the SBSN Division, Department of Islamic Finance, Directorate General of Management and Financing and Risk, Indonesia Ministry of Finance</td>
</tr>
<tr>
<td>3</td>
<td>Rifki Ismal, Ph.D.</td>
<td>Head of Division in the Department of Islamic Economic and Finance, Bank Indonesia (Central Bank of Indonesia)</td>
</tr>
<tr>
<td>4</td>
<td>Ronald Rulindo, Ph.D.</td>
<td>Director of Product Innovation, Market Deepening and Financial System Infrastructure Development</td>
</tr>
<tr>
<td>5</td>
<td>Farah</td>
<td>Special Staff of Director of Product Innovation, Market Deepening and Financial System Infrastructure Development</td>
</tr>
<tr>
<td>6</td>
<td>Yuke Rachmawati, M.A.</td>
<td>Staff in The Sharia Business and Economic Industries, National Sharia Board-Indonesian Ulama Council (DSN-MUI)</td>
</tr>
<tr>
<td>7</td>
<td>Ayomi Dita Rarasati, Ph.D.</td>
<td>Lecturer and researcher in the management of infrastructure financing, Universitas Indonesia</td>
</tr>
</tbody>
</table>

Source: Author, 2019.

The data analysis method uses the Analytic Network Process to analyze priority problems, solutions, and strategies in implementing state sukuk for infrastructure financing in Indonesia. Analytical Network Process (ANP) is the development of the Analytic Hierarchy Process (AHP) method. ANP is a decision-making method developed by Saaty [16]. In the methodological
framework, ANP is included in the qualitative approach. But ANP can also combine qualitative and quantitative aspects because the use of ANP is flexible for various problems [17]. ANP method is used to solve problems that depend on the criteria contained in the research model. Three basic principles in ANP [17]:

a. Decomposition, constructing complex problems into a hierarchical framework or network of clusters, sub-clusters, and so on.
b. Comparative assessment by pairwise comparisons of all combinations of elements in the cluster or group to get local priorities.
c. Compositions or synthetics that will produce global or overall priorities.

In a comparative assessment that will determine priorities requires a rating scale. The scale of assessment contained in ANP is range 1-9, which explains how important/influential/relevant variable X is compared to Y to Z. The stages of the research method carried out refer to the three basic principles of ANP above and are explained through the figure below:

![ANP Research Stages](image)

**Fig. 2.** ANP Research Stages, modified from Ascarya [17].

### 4 Finding

Figure 3 explains that there are 3 (three) areas of evaluation in the implementation of state sukuk for infrastructure financing, namely problems, solutions, and strategies. The conceptual framework model produced by ANP divides problems and solutions into four clusters, namely internal, regulation and policy, risk, and market share. Furthermore, each problem cluster and solution that is reviewed from the obligor perspective has criteria in it that will be compared and produce priorities.
Fig. 3. Conceptual Framework (Author, 2019).

4.1 Geometric Mean and Inconsistency Ratio

Like quantitative research in general that uses questionnaires, validity and reliability testing is needed to assess the instruments used. In ANP, validity and reliability can be done by looking at the geometric mean and inconsistency ratio. The smallest geometric mean obtained is 4 and the largest is 9. Referring to the ANP priority rating scale 4 means important and 9 is very important [18]. That explains that the respondent gives an assessment on an important level to very important on each item submitted questionnaire. The value that often appears is 7, meaning that many items of the questionnaire are considered very important. In conclusion the criteria proposed in the questionnaire are relevant to the issues raised.

Inconsistency ratios are used to ensure that the proposed criteria or sub-criteria are relevant for comparison [18]. The acceptable inconsistency ratio is a maximum of 0.1 or 10%. The inconsistency value results show the lowest is 0, and the highest is 0.03703. All criteria used in the research questionnaire had an inconsistency value of <0.1 or <10%. This means that all the proposed criteria are acceptable and relevant for comparison.

4.2 Priorities of Problems, Solutions, and Strategies

The results of the decomposition divided through evaluation aspects into four clusters, namely; internal, regulation and policies, risk, and market share. The questionnaire gave the result that the main problem in the implementation of state sukuk for infrastructure financing was the issuance sukuk limits for infrastructure are still low with a value of 52.95% (Figure 4). The second priority issue is late construction projects that will increase the burden of sukuk costs with a value of 51.94%. The third priority problem with a value of 43.40% is the realization of sukuk issuance is still low compared to the value of infrastructure investment needs. The fourth priority issue is the market share sukuk in Indonesia is still low compared to bonds with a value of 35.95%. The fifth priority is monitoring, and evaluation of the use of funds is not optimal with a value of 35.37%.
The low limit of sukuk issuance for infrastructure is a major problem. This problem is included in the cluster of regulatory and policy issues. According to Mr. Rulindo, one of the expert respondents from KNKS, the maximum limit for the issuance of sukuk for infrastructure depends on the value of the project that is ready. Because sukuk cannot be issued if the project used as an underlying asset is not ready. Ms. Farah, a practitioner from KNKS also conveyed the following explanation;

“In 2018, project-based sukuk will reach Rp. 28 trillion, then the following year the amount will decrease. We had a discussion and asked why the issuance of sukuk dropped and the answer was because the number of projects ready also declined. So, the readiness of the project affects the amount of issuance of sukuk, not limited”.

Based on the theory, one of which must be considered in the issuance of sukuk is a definite underlying asset [6]. If the project itself becomes underlying, the project should be ready. This also relates to the suitability of Islamic sukuk. So, the issue of issuance of sukuk limits for infrastructure, in essence, depends on the problem of project readiness.

The second priority issue is included in the risk problem cluster, namely the problem of increased cost burden due to late project completion. This relates to the government's ability to repay sukuk funds to investors when they are due. Mr. Faudji, a practitioner of the Ministry of Finance's Sharia Financing Directorate, stated that one of the crucial risks for the government is a fiscal risk. He said that sukuk financing does not stand alone. In the APBN there are several other sources of funds, each of which has a risk analysis portion. So, it is another source of funds that will be used for example, for refinancing or for other things. But if this problem continues to occur, of course, infrastructure financing with sukuk will be challenging to develop.

Mr. Faudji also explained that if there were a failure to pay, the assets which were used as the underlying would be held up. This risk only happens to the government and has no impact on investors. Ms. Hadiningdyah, head of the Sharia Finance Directorate of the Ministry of
Finance of the Republic of Indonesia, also said, “if the government is truly unable to pay, investor rights will be made into debt, but the underlying remains impractical because buying and selling are rights, not physical benefits”. From this explanation, it can be interpreted that the risk for the government is to be no longer able to use the assets as the underlying because the assets are held as long as the return of sukuk funds is completed.

The third and fourth priority issues are included in the problem cluster regarding market share. The realization of sukuk issuance, which is still low compared to infrastructure investment needs, is the third priority issue. This problem indeed cannot be separated from the problem of project readiness as a statement said by Mr. Rulindo that the government could issue sukuk with great value to finance infrastructure. But the project must be ready. It is what distinguishes sukuk investment from bonds. Any bond can be issued, but sukuk issuance must be based on underlying value. If the project to be used as an underlying is not ready, the project value cannot be estimated yet. Projects that are not ready cannot be used as underlying because they cannot be transferred to investors.

Sukuk's market share in Indonesia, which is still low compared to bonds, is the fourth priority issue. Regarding this, Ms. Hadiningdyah argues that the market share of sukuk and obligations cannot be compared because there are many different characteristics between them. The historical issuance of sukuk in Indonesia must also be taken into account because the bonds had already been issued in 2002:

“...history of the country's bonds issued earlier in 2002, but previously regularly in the government market has issued 600 trillion, so the start was in the amount of 600 trillion. Bonds have started 6 years earlier than sukuk. So, there are more in the market whereas sukuk were issued in 2008 and in August (mid-year). First published 2008 only once and starting from zero”.

The problem is a challenge for the government if you want to increase sukuk market share in Indonesia. Although internationally, sukuk issuance in Indonesia has begun to dominate [4]. But rising domestic market share is also very important to build independence in financing national development. As Ms. Rachmawati UIN academic Syarif Hidayatullah and Practitioners at DSN-MUI, who said that if sukuk has a good market share in Indonesia, will certainly have a good impact on the Indonesian economy. That is because money does not flow out, but only revolves in the domestic market.

The last priority problem is the problem of monitoring and evaluating the use of funds that have not been optimal. This problem is included in the cluster of internal problems that occur on the obligor side. Faudzi explained that sukuk for infrastructure financing has been earmarked for specific infrastructure projects, so the project must be completely completed. So, to mitigate sukuk investment money will not be a stalled project, there are ways taken by the government such as the presentation of Faudzi:

“First, the government will select ready projects. Second, the government provides an opportunity to complete the project even though the tempo has been lost. Third, the government will monitor the planning, also though monitoring evaluation is not on site. Sukuk financing is different from funding direct with pure rupiah. Funding infrastructure with pure rupiah under the Ministry of Finance also, there is no project monitoring plan, only recording withdrawals. Whether the project is completed or not is no longer the responsibility of the finance minister”.
Responsibility for the use of funds is ultimately the responsibility of the obligor to investors because it is the obligor who needs funds for infrastructure development. But for the state sukuk issued by the Indonesian government, the finance ministry is only an obligor and SPV and not a user of funds. In this case, the user of the fund is not the obligor directly, but the ministries and institutions that have infrastructure development projects. Therefore, obligors must encourage departments and institutions that use sukuk funds so that investment funds are truly utilized optimally.

Then, the results of solution priorities are summarized in figure 5. The priority of the solution that had to be done was that the government first had to push for the completion of sukuk-funded projects on time so as not to increase the burden of sukuk costs. The solution gets a value of 54.18%. Second, increasing the maximum limit of sukuk issuance for infrastructure financing with a value of 48.13%. Third, increase sukuk issuance to meet infrastructure investment needs with a value of 41.98%. Fourth, optimize monitoring and evaluation of the use of funds with a value of 39.52%. The last priority of solution with a value of 35.01% is opens up vast opportunities for foreign investors.

**Fig. 5. Solution Priorities (Author, 2019).**

Sukuk have an agreed maturity between the obligor and the investor. Late project completion is a significant obstacle to the development of sukuk financing for infrastructure. Late project completion can result in increased cost burdens. It is a risk for the government as an obligor. Ministries and Institutions that manage sukuk funds should be able to complete infrastructure projects on time so that the burden of sukuk costs does not increase. Although Hadiningdyah explained that there had been many ways taken to monitor and evaluate ministries and institutions in completing projects.

“...There is an evaluation forum. The evaluation forum is to bring together ministries and institutions whose performance is still low. We also invite those with excellent performance to give testimonials and sharing sessions. Then we also hold a high-
level meeting. At the High-level meeting, we invited the heads of ministries and agencies to inform about sukuk financing and how the financing process is”.

So far, the government has indeed carried out monitoring and evaluation. There are still projects that are overdue and not even completed until the end of the contract period. Therefore, encouraging project completion on time to avoid increasing costs is always a priority solution in evaluating the implementation of state sukuk for infrastructure financing. The solution is included in the risk cluster.

The second solution priority that can be done is to increase the limit on the issuance of sukuk and to be included in the regulatory and policy solution cluster. It has been explained previously that the limit for issuance of sukuk depends on the value of the project when using a project financing scheme [9]. Project financing means the project itself will be underlying. So, to increase the maximum limit for the issuance of sukuk, the government needs to encourage ministries and institutions to prepare projects as well as possible. Regarding project readiness, in addition to sharia compliance, this has also been regulated in Government Regulation Number 56 of 2011 concerning project requirements that can be financed by state sukuk. One of them is that the project has fulfilled the readiness and feasibility criteria to be implemented.

The third priority solution that can be implemented is increasing sukuk issuance to meet infrastructure investment needs. The solution is included in the market share cluster. One of the main objectives of the government in issuing sukuk is to finance infrastructure [4]. In line with this goal, the government should continue to increase the issuance of sukuk to meet the infrastructure investment needs. Besides, the government must also prioritize the issuance of sukuk to finance infrastructure development compared to other instruments. Because according to Ismal, currently, the government has not prioritized sukuk issuance.

“The problem is because the tendency to prioritize state sukuk as an alternative to infrastructure financing is still not high. The government always prioritizes conventional instruments first, sukuk only to complete. Whereas sukuk from the financial side is better because there are underlying assets, then sukuk enthusiasts are also relatively high”.

Another critical solution for the government is to increase the monitoring and evaluation of the use of funds. It is the fourth priority solution included in the internal cluster. This solution is important so that it can be known that the funds that have been invested by investors can be optimally absorbed and utilized. According to Rachmawati, something like this is essential because the problem of using funds is still prone to corruption. If that happens, of course it will also affect the quality of the resulting construction. Monitoring and evaluating the use of sukuk funds is also crucial because it involves the benefit of investment funds. Because basically every Islamic financing must contain elements of advantages and maslahah for the people [19].

The fifth solution priority is to open broad opportunities for foreign investors to invest through sukuk instruments. In recent years, Indonesia's Islamic finance industry has experienced a significant increase. One of the reasons for this is the issuance of state sukuk. In fact, Indonesia is one of the largest global sukuk cultivators in the world [3]. But according to Rachmawati, although Indonesia's global sukuk is the largest, the results of sukuk investment do not yet have a significant economic impact. So, the solution to open up broad opportunities for foreign investors by increasing global sukuk issuance is still a priority solution that can be considered for the development of the sukuk financial industry.
After problems and solutions, this research also outlines priority strategies that can accelerate the steps in evaluating the implementation of state sukuk for infrastructure financing. The first strategic priority is a synergy to obtain results in the amount of 39.07%. The second priority is an innovation that is equal to 35.72%. Finally, the optimization of IT usage is 25.21%.

![Strategy Priorities](Fig.6. Strategy Priorities (Author, 2019)).

Synergy is a top priority as a way to accelerate steps in evaluating the implementation of state sukuk for infrastructure financing. Based on the results of the priority problems and solutions above, the synergy between institutions is indeed a critical strategy carried out by the government. Given the priority problems that arise are regarding delays in project implementation, which can lead to suboptimal use of funds or even add to the burden of costs. So, to solve this problem, the Ministry of Finance of the Republic of Indonesia as an obligor can increase synergy with the ministries and the project initiating agency.

Innovation is the second strategic priority. Innovations can be made to increase market share, both domestically and abroad. One example of innovation that has been done by the government is by making green sukuk products. The presence of a new variant of sukuk that raises environmental issues is certainly expected to increase interest, especially investors who care about the environment. In the future, to continue expanding sukuk market share, innovation must continue to be made so that sukuk products continue to be increasingly in demand.

The final solution priority is to optimize the use of IT. The use of IT can be optimized, for example for the process of monitoring and evaluating the use of funds through e-budgeting. IT can also be used to monitor submissions for ministries and project proponents (initiators), and for other things that can optimize the implementation of sukuk for infrastructure financing. But what should be considered in optimizing the use of IT is human resources and supporting technology infrastructure.

5 Conclusion and Implication

There are four problem clusters and solutions faced by obligors in implementing state sukuk for infrastructure financing in Indonesia. The four clusters are internal, market share, regulations and policies, and risks. Among the problems divided into the four clusters, ANP gave the result that the problem that became the first priority was the limit of sukuk issuance
which was still low. Second, the burden of increased costs due to late completion of the project. Third, the realization of sukuk issuance for infrastructure is still low compared to the value of infrastructure investment needs. Fourth, market share sukuk in Indonesia is still low compared to bonds. The fifth is monitoring and evaluation of the use of funds is not optimal.

The solution priority is the first to encourage project completion on time so as not to increase the burden of sukuk costs. Second, to increase the maximum limit for the issuance of sukuk for infrastructure financing. Third, increase sukuk issuance to meet infrastructure investment needs. Fourth, Optimize monitoring and evaluation of the use of funds. Fifth, to open up opportunities for foreign investors. The priority strategies that can be implemented are synergy, innovation, and optimizing the use of IT.

This research contributes to the field of Islamic finance, especially regarding sukuk instruments for infrastructure financing. The results can contribute to assisting the government in evaluating the implementation of state sukuk for the infrastructure financing. Due to the development of the Islamic finance industry in Indonesia, especially the state sukuk instrument. Research is needed in this area because state sukuk is an instrument that dominates the Islamic financial market in Indonesia. State sukuk has been trusted to be a safe investment instrument because it has an underlying and guaranteed by the state. Then you don’t have to worry about losing money if you invest in state sukuk.

6 Acknowledgments

We thank Universitas Indonesia for funding this research.

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alternatif pembiayaan proyek infrastruktur,” Universitas Indonesia, 2012.


Portrait of Indonesian Muslim Consumers

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Abstract. This study was conducted on the Indonesian Muslim consumers. The problem of the study is what is the portrait of Indonesian Muslim consumers? This study aims to know the portrait of Indonesian Muslim consumers. This study uses descriptive analysis method using secondary data in the form of Susenas 2018 compiled by BPS Indonesia which is operated using Stata 14. The result and conclusion of the study is that Indonesian Muslim consumers are mostly (70.20%) on the island of Java, mostly live in urban areas (59.45%), evenly divided between men and women, low income, quite low education, mostly are working (50.77%) and housekeeping (47.36%), mostly (54.78%) are working in manufacturing (15.49%), wholesale and retail trade (19.58%), agriculture (12.46%), and other service activities sectors (7.25%), mostly (70.38%) are employees (47.74%) and own workers (22.64%), mostly own cellular phone (70.66%), actively using internet (48.90%), and mostly in productive age (78.09%). This study recommends that producers must sell goods and services that are in accordance with the condition of Indonesian Muslim consumers that are goods and services for low income and quite low education consumers, for consumers who are working in manufacturing, wholesale and retail trade, agriculture, and other service activities sectors, and sell goods and services in the online way.

Keywords: Muslim Consumers, Location, Main Activity, Economic Sectors, Gender

1 Introduction

Islamic economics and finance have experienced rapid development in the last two decades, both globally and nationally. The State of the Global Islamic Economy Report 2018/2019 reports that the amount of food expenditure and halal lifestyle of the world's Muslims reached USD 2.1 trillion in 2017 and is expected to continue to grow to reach USD 3 trillion in 2023 [1].

As a country with the largest Muslim population in the world, the potential consumption of its population is of course very large. So, it is very important for producers to know the characteristics of Indonesian Muslim consumers. This study was conducted to answer the question of how a portrait of Indonesian Muslim consumers.

2 Literature Review

The challenges of the economy after a decade of global financial crisis are increasingly complex and diverse. Trade, financial and geopolitical risks place various countries in instability and vulnerability. In responding to various external uncertainties, the ability to seize opportunities and transform is the key to national economic resilience [1].
Indonesia is part of a global society. As a member of the G20, Indonesia contributes greatly in the formation of world gross domestic product (GDP). In addition, it cannot be denied that with the majority of the Muslim population, Indonesia is part of an international Muslim community that helps determine global sharia economic trends [1].

The State of the Global Economic Report 2018/2019 estimates total Muslim spending to reach USD 2.1 trillion in 2017 which is around 0.27 percent of the total world gross product. This figure is mainly derived from the consumption of halal food (USD 1.3 trillion), followed by fashion (USD 270 billion), media and recreation (USD 209 billion), travel (USD 177 billion), and pharmacy and cosmetics (USD 87 billion). This potential is expected to continue to increase along with the growth of the world's Muslim population [1][2].

With the largest Muslim population in the world, Indonesia is the largest consumer of halal products on the international market, so it is very important for entrepreneurs, governments and other parties to know the portrait of Indonesian Muslim consumers.

3 Method

This study uses descriptive analysis method using secondary data in the form of Susenas 2018 compiled by Indonesian Statistics [3] which is operated using Stata 14.

This research uses descriptive analysis method. This method aims to create a systematic review of an issue by analyzing data and facts, formulating hypotheses, and concluding a research object. Descriptive analysis characterizes the world or a phenomenon, answering questions about who, what, when, and to what extent. Whether the goal is to identify and describe trends and variation in populations, create new measures of key phenomenon, or describe samples in studies aimed at identifying causal effects, description plays a critical role in the scientific process in general. Descriptive analysis stands on its own as a research product, such as when it identifies socially important phenomena that have not previously been recognized. In many instances, description can also point toward causal understanding and to the mechanisms behind causal relationships [4].

This study was conducted on the Indonesian Muslim consumers. The problem of the study is what is the portrait of Indonesian Muslim consumers? This study aims to know the portrait of Indonesian Muslim consumers.

4 Finding

This study found that the majority of Indonesian Muslim consumers are in Java, mostly live in urban areas, evenly distributed between men and women, low income, quite low education, most of them are working or housekeeping, physically fit and psychologically, most of them are working in the manufacture industry, wholesale and retail trade, agriculture, and other service activities sectors, most of them are employees and own workers, mostly own cellular phone, actively using internet, and in productive age.

As can be seen in table 1, the majority of Indonesian Muslim consumers live in Java at 70.20%, where the majority live in West Java Province (24.88%), then in East Java Province (18.11%), in Central Java Province (15.59%), Banten Province (5.97%), DKI Jakarta Province (4.23%) and DI Yogyakarta Province (1.43%).
Based on urban and rural locations, the majority of Indonesian Muslim consumers live in urban areas, namely 59.45% and the remaining 40.55% of Indonesian Muslim consumers live in rural areas. The difference is quite large, namely 18.90% or 21,326,197 more people who live in urban areas. This can be seen in Table 2.

<table>
<thead>
<tr>
<th>No</th>
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<th>Persons</th>
<th>Percentage</th>
</tr>
</thead>
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<td>34</td>
<td>Papua</td>
<td>293,803</td>
<td>0.26%</td>
</tr>
</tbody>
</table>

| Total | 112,862,907 | 100.00% |

Source: Susenas [3], calculated.
By gender, the division of the amount between male Muslim consumers and female Muslim consumers is fairly evenly distributed where male Muslim consumers are 50.07% and female Muslim consumers are 49.93%.

Meanwhile, based on income per capita of Indonesia's Muslim population totaling 112,862,907 people, where per capita income per month is divided into 10 income layers, as much as 99.11% of Indonesia's Muslim population is in the lowest layer, followed by 0.76% is in the second layer from the bottom. As many as 737 people or 0.00065% of Indonesia's Muslim population are in the highest income layer or tenth layer. With this data (table 4), it can be stated that the majority of Indonesian Muslim consumers have a fairly low per capita income per month.

Based on the highest school certificate owned, it can be stated that Indonesian Muslim consumers have a fairly low level of education. This can be explained through data where the largest share of Indonesian Muslim consumers, amounting to 22.75%, has the highest certificate in the form of basic school. The second largest part of 19.23% did not have a school certificate because they had never attended school or attended school but did not graduate. This can be seen in table 5.
Based on daily activities, the majority of Indonesian Muslim consumers have daily activities in the form of working, where the number reaches 57,296,810 people or 50.77% of the total number of Indonesian Muslim consumers as many as 112,862,907 people. Then the second largest number is having daily activities in the form of housekeeping where the number reaches 53,447,023 people or 47.36%. The third largest number is having daily activities in the form of personal activities not working, not schooling, and not housekeeping. The number reached 36,699,945 people or 32.52%. Examples of such activities include taking care of one's own home with the cost of living borne by others who are neighbors or relatives. Generally, people who are in this category are in economically apprehensive circumstances. Complete information can be seen in table 6.

Table 5. Indonesian Muslim Consumers Based on Highest School Certificate

<table>
<thead>
<tr>
<th>No</th>
<th>Certificate</th>
<th>Persons</th>
<th>Percentage</th>
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<td>No Certificate</td>
<td>21,700,949</td>
<td>19.23%</td>
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<td>2</td>
<td>Paket A</td>
<td>81,080</td>
<td>0.07%</td>
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<td>SDLB</td>
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<td>4</td>
<td>SD</td>
<td>25,670,739</td>
<td>22.75%</td>
</tr>
<tr>
<td>5</td>
<td>MI</td>
<td>1,755,451</td>
<td>1.56%</td>
</tr>
<tr>
<td>6</td>
<td>Paket B</td>
<td>177,168</td>
<td>0.16%</td>
</tr>
<tr>
<td>7</td>
<td>SMP</td>
<td>208,733</td>
<td>0.18%</td>
</tr>
<tr>
<td>8</td>
<td>SMP</td>
<td>19,183,351</td>
<td>17.00%</td>
</tr>
<tr>
<td>9</td>
<td>MTs</td>
<td>3,380,378</td>
<td>3.00%</td>
</tr>
<tr>
<td>10</td>
<td>Paket C</td>
<td>376,525</td>
<td>0.33%</td>
</tr>
<tr>
<td>11</td>
<td>SMLB</td>
<td>63,487</td>
<td>0.06%</td>
</tr>
<tr>
<td>12</td>
<td>SMA</td>
<td>18,809,841</td>
<td>16.67%</td>
</tr>
<tr>
<td>13</td>
<td>MA</td>
<td>2,645,981</td>
<td>2.34%</td>
</tr>
<tr>
<td>14</td>
<td>SMK</td>
<td>6,012,652</td>
<td>5.33%</td>
</tr>
<tr>
<td>15</td>
<td>MAK</td>
<td>50,722</td>
<td>0.04%</td>
</tr>
<tr>
<td>16</td>
<td>D1/D2</td>
<td>536,148</td>
<td>0.48%</td>
</tr>
<tr>
<td>17</td>
<td>D3</td>
<td>1,789,890</td>
<td>1.59%</td>
</tr>
<tr>
<td>18</td>
<td>D4</td>
<td>269,227</td>
<td>0.24%</td>
</tr>
<tr>
<td>19</td>
<td>S1</td>
<td>6,316,605</td>
<td>5.60%</td>
</tr>
<tr>
<td>20</td>
<td>S2</td>
<td>514,776</td>
<td>0.46%</td>
</tr>
<tr>
<td>21</td>
<td>S3</td>
<td>48,980</td>
<td>0.04%</td>
</tr>
<tr>
<td></td>
<td>Total Indonesian Muslim Consumers</td>
<td>112,862,907</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Table 6. Indonesian Muslim Consumers Based on Daily Activities for Last Week

<table>
<thead>
<tr>
<th>No</th>
<th>Daily Activities</th>
<th>Persons</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Working</td>
<td>57,296,810</td>
<td>50.77%</td>
</tr>
<tr>
<td>2</td>
<td>Attending School</td>
<td>22,681,838</td>
<td>20.10%</td>
</tr>
<tr>
<td>3</td>
<td>Housekeeping</td>
<td>53,447,023</td>
<td>47.36%</td>
</tr>
<tr>
<td>4</td>
<td>Others Except Personal Activities</td>
<td>36,699,945</td>
<td>32.52%</td>
</tr>
<tr>
<td>5</td>
<td>No Activities</td>
<td>2,103,927</td>
<td>1.86%</td>
</tr>
<tr>
<td></td>
<td>Total Indonesian Muslim Consumers</td>
<td>112,862,907</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Susenas [3], calculated.
Based on the main employment status, the majority of Indonesian Muslim consumers who are working have the status of Labors/Employees at 47.74%, followed by the status of Own Workers at 22.64%. More detailed data can be seen in table 7.

Table 7. Indonesian Muslim Consumers Based on Main Employment Status

<table>
<thead>
<tr>
<th>No</th>
<th>Main Employment Status</th>
<th>Persons</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Own Workers</td>
<td>13,132,903</td>
<td>22.64%</td>
</tr>
<tr>
<td>2</td>
<td>Own Workers with Temporary/Unpaid Workers</td>
<td>5,251,405</td>
<td>9.05%</td>
</tr>
<tr>
<td>3</td>
<td>Own Workers with Permanent/Paid Workers</td>
<td>1,858,878</td>
<td>3.21%</td>
</tr>
<tr>
<td>4</td>
<td>Labors/Employees</td>
<td>27,687,050</td>
<td>47.74%</td>
</tr>
<tr>
<td>5</td>
<td>Free Labors</td>
<td>5,543,281</td>
<td>9.56%</td>
</tr>
<tr>
<td>6</td>
<td>Family Workers</td>
<td>4,521,496</td>
<td>7.80%</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>57,995,013</strong></td>
<td><strong>100.00%</strong></td>
</tr>
</tbody>
</table>

Source: Susenas [3], calculated.

Based on the business sector or economic activities, the majority of Indonesian Muslim consumers namely 54.78% are working in the Wholesale and Retail Trade, Repair and Maintenance of Cars and Motorbikes (19.58%), the Manufacturing Sector (15.49%), Paddy and Secondary Crops (12.46%), and Other Service Activities Sector (7.25%).

Table 8. Indonesian Muslim Consumers Based on Economic Activities

<table>
<thead>
<tr>
<th>No</th>
<th>Main Activity</th>
<th>Persons</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wholesale and Retail Trade, Repair and Maintenance of Cars and Motorbikes</td>
<td>11,356,223</td>
<td>19.58%</td>
</tr>
<tr>
<td>2</td>
<td>Manufacturing</td>
<td>8,984,315</td>
<td>15.49%</td>
</tr>
<tr>
<td>3</td>
<td>Paddy and Secondary Crops</td>
<td>7,228,031</td>
<td>12.46%</td>
</tr>
<tr>
<td>4</td>
<td>Other Service Activities</td>
<td>4,207,323</td>
<td>7.25%</td>
</tr>
<tr>
<td>5</td>
<td>Construction</td>
<td>3,890,754</td>
<td>6.71%</td>
</tr>
<tr>
<td>6</td>
<td>Education</td>
<td>3,526,678</td>
<td>6.08%</td>
</tr>
<tr>
<td>7</td>
<td>Provision of Accommodation and Provision of Food and Drink</td>
<td>3,208,951</td>
<td>5.53%</td>
</tr>
<tr>
<td>8</td>
<td>Plantation</td>
<td>3,159,863</td>
<td>5.45%</td>
</tr>
<tr>
<td>9</td>
<td>Government administration, defense and mandatory social security</td>
<td>2,564,442</td>
<td>4.42%</td>
</tr>
<tr>
<td>10</td>
<td>Transportation and Warehousing</td>
<td>2,459,470</td>
<td>4.24%</td>
</tr>
<tr>
<td>11</td>
<td>Fishery</td>
<td>945,369</td>
<td>1.63%</td>
</tr>
<tr>
<td>12</td>
<td>Horticulture</td>
<td>936,310</td>
<td>1.61%</td>
</tr>
<tr>
<td>13</td>
<td>Human Health and Social Activities</td>
<td>901,829</td>
<td>1.56%</td>
</tr>
<tr>
<td>14</td>
<td>Animal Husbandry</td>
<td>887,734</td>
<td>1.53%</td>
</tr>
<tr>
<td>15</td>
<td>Financial and Insurance Activities</td>
<td>876,146</td>
<td>1.51%</td>
</tr>
<tr>
<td>16</td>
<td>Mining and Quarrying</td>
<td>462,383</td>
<td>0.80%</td>
</tr>
<tr>
<td>17</td>
<td>Information and Communication</td>
<td>456,914</td>
<td>0.79%</td>
</tr>
<tr>
<td>18</td>
<td>Professional, Scientific and Technical Activities</td>
<td>311,064</td>
<td>0.54%</td>
</tr>
<tr>
<td>19</td>
<td>Household Activities as An Employer</td>
<td>257,564</td>
<td>0.44%</td>
</tr>
<tr>
<td>20</td>
<td>Forestry and Other Agriculture</td>
<td>253,310</td>
<td>0.44%</td>
</tr>
<tr>
<td>21</td>
<td>Arts, Entertainment and Recreation</td>
<td>246,071</td>
<td>0.42%</td>
</tr>
<tr>
<td>22</td>
<td>Rental and Leasing Without Option Rights Activities, Employment, Travel Agents,</td>
<td>236,817</td>
<td>0.41%</td>
</tr>
<tr>
<td></td>
<td>and Other Business Support</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Indonesian Muslim consumers are also having many assets. This is based on data that 83.02% of them own residential buildings with self-owned ownership status.

Table 9. Indonesian Muslim Consumers Based on Dwelling Ownership Status

<table>
<thead>
<tr>
<th>No</th>
<th>Dwelling Ownership Status</th>
<th>Persons</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Private</td>
<td>93,702,279</td>
<td>83.02%</td>
</tr>
<tr>
<td>2</td>
<td>Lease/Rent</td>
<td>8,808,698</td>
<td>7.80%</td>
</tr>
<tr>
<td>3</td>
<td>Free Occupy</td>
<td>9,071,340</td>
<td>8.04%</td>
</tr>
<tr>
<td>4</td>
<td>Official Residence</td>
<td>929,989</td>
<td>0.82%</td>
</tr>
<tr>
<td>5</td>
<td>Others</td>
<td>350,601</td>
<td>0.31%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>112,862,907</td>
<td>100.00%</td>
</tr>
</tbody>
</table>

Source: Susenas [3], calculated.

Besides the fact that 83.02% of Indonesian Muslim consumers own residential buildings with self-owned ownership, most of them also have refrigerators (65.13%), have motorbikes (85.20%), own land (73.64%), and cellular phones (70.66%). This can be seen from table 10.

Table 10. Indonesian Muslim Consumers Based on Ownership of Asset

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Yes Persons</th>
<th>Yes Percentage</th>
<th>No Persons</th>
<th>No Percentage</th>
<th>Total Persons</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Have Dwell/House (Private Ownership)?</td>
<td>93,702,279</td>
<td>83.02%</td>
<td>19,160,628</td>
<td>16.98%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>2</td>
<td>Have Another House, Other Than the House Currently Occupied?</td>
<td>12,015,038</td>
<td>10.65%</td>
<td>100,847,869</td>
<td>89.35%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>3</td>
<td>Have a Fridge/Refrigerator?</td>
<td>73,505,875</td>
<td>65.13%</td>
<td>39,357,032</td>
<td>34.87%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>4</td>
<td>Have Air Conditioner?</td>
<td>10,494,490</td>
<td>9.30%</td>
<td>102,368,417</td>
<td>90.70%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>5</td>
<td>Have Water Heater?</td>
<td>3,080,222</td>
<td>2.73%</td>
<td>109,782,685</td>
<td>97.27%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>6</td>
<td>Have Landline/PSTN?</td>
<td>2,255,640</td>
<td>2.00%</td>
<td>109,607,267</td>
<td>97.12%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>7</td>
<td>Have Computer/Laptop?</td>
<td>28,331,918</td>
<td>25.10%</td>
<td>84,530,989</td>
<td>74.90%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>8</td>
<td>Have Precious Metals?</td>
<td>24,326,664</td>
<td>21.55%</td>
<td>88,536,243</td>
<td>78.45%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>9</td>
<td>Have Motorcycles?</td>
<td>96,160,158</td>
<td>85.20%</td>
<td>16,702,749</td>
<td>14.80%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>10</td>
<td>Have Cars?</td>
<td>15,625,512</td>
<td>13.84%</td>
<td>97,237,395</td>
<td>86.16%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>11</td>
<td>Have Flat Screen Television (Minimum of 30 Inches)?</td>
<td>18,562,469</td>
<td>16.45%</td>
<td>94,300,438</td>
<td>83.55%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>12</td>
<td>Have Land?</td>
<td>83,110,754</td>
<td>73.64%</td>
<td>29,752,153</td>
<td>26.36%</td>
<td>112,862,907</td>
</tr>
<tr>
<td>13</td>
<td>Have Handphone/Cellular Phone?</td>
<td>79,698,340</td>
<td>70.66%</td>
<td>33,085,020</td>
<td>29.34%</td>
<td>112,783,360</td>
</tr>
</tbody>
</table>

Source: Susenas [3], calculated.

Based on table 11 below, it can be stated that quite a lot of Indonesian Muslim consumers are accustomed to accessing the internet at 48.90%. This shows that Indonesian Muslim consumers are quite familiar with the latest technology and information. This can be an entry...
point for Indonesian Muslim consumers to obtain information and knowledge that can be used to improve their financial performance.

Table 11. Indonesian Muslim Consumers Based on Ownership of Gadget, Internet, and Savings Account

<table>
<thead>
<tr>
<th>No</th>
<th>Description</th>
<th>Yes</th>
<th>Percentage</th>
<th>No</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In last 3 months, did you use handphone/cellular phone?</td>
<td>90,690,600</td>
<td>80.41%</td>
<td>22,092,760</td>
<td>19.59%</td>
<td>112,783,360</td>
</tr>
<tr>
<td>2</td>
<td>In last 3 months, did you own/control handphone/cellular phone?</td>
<td>79,698,340</td>
<td>70.66%</td>
<td>33,085,020</td>
<td>29.34%</td>
<td>112,783,360</td>
</tr>
<tr>
<td>3</td>
<td>In last 3 months, did you use computer?</td>
<td>26,932,844</td>
<td>23.88%</td>
<td>85,850,516</td>
<td>76.12%</td>
<td>112,783,360</td>
</tr>
<tr>
<td>4</td>
<td>In last 3 months, have you ever used internet?</td>
<td>55,155,291</td>
<td>48.90%</td>
<td>57,628,069</td>
<td>51.10%</td>
<td>112,783,360</td>
</tr>
<tr>
<td>5</td>
<td>Did you have a savings account either in your own name or collective at a financial institution?</td>
<td>36,959,548</td>
<td>32.77%</td>
<td>75,823,812</td>
<td>67.23%</td>
<td>112,783,360</td>
</tr>
</tbody>
</table>

Source: Susenas [3], calculated.

In addition to having sufficient assets, the majority of Indonesian Muslim consumers, namely 78.09% or 88,120,206 people are at productive ages, i.e., aged between 15 years to 64 years. A total of 18.08% or 20,396,193 people aged 14 years and under and as many as 3.84% or 4,346,508 people aged 65 years and over.

Based on above explanation, producers must sell goods and services that are in accordance with the condition of Indonesian Muslim consumers that are goods and services for low income and quite low education consumers, for consumers who are working in manufacturing, wholesale and retail trade, agriculture, and other service activities sectors, and producers can sell goods and services in the online way.

In conventional economics, consumers have behavior i.e., consumer’s behavior which are referring to how a user allocates an amount of money on various combinations of goods or services in order to maximize their satisfaction. While Muslim consumers, in addition to behavior, they also have ethics that should be considered by every individual Muslim in selecting, purchasing, and using the products or services of any kind [5]. Producers must concern with this ethics while they are servicing Indonesian Muslim consumers. Chandra’s study found that the consumer behavior of the Ekis FIAI UII students has actually been in accordance with the principle of aqidah, amaliyah, and spirituality, even though it has not yet represented the simple and modest principle [6]. Producers must also concern with this phenomenon while they are servicing Indonesian Muslim consumers.

5 Conclusion and Implication

The conclusion of this study is that Indonesian Muslim consumers are mostly (70.20%) on the island of Java, mostly live in urban areas (59.45%), evenly divided between men and women, low income, quite low education, mostly are working (50.77%) and housekeeping (47.36%), mostly (54.78%) are working in manufacturing (15.49%), wholesale and retail trade (19.58%), agriculture (12.46%), and other service activities sectors (7.25%), mostly (70.38%) are employees (47.74%) and own workers (22.64%), mostly own cellular phone (70.66%), actively using internet (48.90%), and mostly in productive age (78.09%).

This study recommends that producers must sell goods and services that are in accordance with the condition of Indonesian Muslim consumers that are goods and services for low income and quite low education consumers, for consumers who are working in manufacturing,
wholesale and retail trade, agriculture, and other service activities sectors, and producers can sell goods and services in the online way.

References


Taiwan Halal Tourism Industry: Policy and Practice

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Abstract. Recently, halal tourism has become an emerging phenomenon in the world. Taiwan as the Muslim-minority region has also paid more attention to develop halal tourism industry. The growing number of Muslim populations in the world has been seen as the major potential market for halal market, trade and tourism. This strategy is part of the NSP launched in 2016. Though still at the early stage of development, Taiwan has shown achievement. This good performance might be influenced by supportive tourism policy. Two main areas have become the focus of the development, namely accommodation, and restaurant. This study will investigate policy and practice of halal tourism development in Taiwan. The policy that develops or promotes tourism is supposed to result maximum social and economic benefit to nation, region or locality. Many scholars have investigated halal tourism industry development but limited research has been done for the case of Taiwan. This research uses qualitative approach by using interview. Data was collected through desk and field research in Taipei and Taichung. Structured interviews with some stakeholders were conducted. Analysis is done descriptively by using policy approach. The research found that in developing the halal tourism industry in Taiwan, there is no explicit halal industry development policy and exact plan of action how to support the policy implementation. In practice, Taiwan’s efforts to promote halal certification and to create Muslim-friendly environment. Five categories of halal certification have been issued by four different halal certified bodies. A few numbers of Taiwan culinary becomes challenge to develop Taiwan halal tourism. subsidy program to promote the Muslim friendly restaurant was not well informed to the businessman.

Keywords: Taiwan, Halal Tourism, Policy, Practice

1 Introduction

Recently, halal tourism has become an emerging phenomenon in the world [1][2]. Though Arab world was the pioneer in developing the halal tourism, nowadays other countries have also paid more attention to develop the halal tourism, including the non-Muslim countries like Canada, Hong Kong, Australia [2], Japan, South Korea and Taiwan. The growing number of Muslim populations in the world has been seen as the major potential market for halal market, trade and tourism. Pew Research Centre [3] noted that in 2010 the total population of the Muslim world was around 1.7 billion, representing 23% of the world's population. The number increased

1 Historically, the emerged of the halal tourism was started as a result of the booming of petrodollar. The boom of the oil business in the Middle East encouraged the need of Islamic banking as a place to manage finance with non-interest based. Further, this generated the development of Syariah banking business that develops into the other countries, including the UK, Swiss and so on [6]. Then, the halal tourism industry expands into the other business, into the lifestyle including tourism, hospitality, recreation, medical care, fashion, cosmetics, etc. The fastest growing of Muslim population as well as their high purchasing power become factors of generator of this demand.
to 1.8 billion or 24.1% of the total world population in 2015 and will increase to 2.2 billion people by 2030 or represents 26.4% of the projected population of 8.3 billion [4]. According to the estimation of the Crescent rating [5], between 2015 and 2060, Muslim demographics will grow more than twice as fast as the overall growth in the world population. While the world population is projected to grow by 32% in the same period. Whereas according to the Thomson Reuters Global Islamic Report Economy in 2017 Muslim’s consumption’s biggest products were food, tourism, cloth, formation, media/recreation, cosmetics, which accounted for USD 2 trillion or equals to 11.9% of the total consumption of the People’s Republic of China’s consumption in those 6 sectors [6]. Regarding consumer spending, in 2015 spending in the food and lifestyle sector generated around US$ 1.9 trillion. Meanwhile research by The Mastercard-Halal Trip Muslim Millennial Travel Report 2017 estimates that the expenditure of Muslim tourists as a whole will reach USD 300 billion by 2026 [7].

Since Taiwan launched the New Southbound Policy (NSP) in 2016, halal tourism has been included as one of the platforms of the policy and has been developed more intensively. Among the four strategic policies in the NSP, developing the halal tourism industry is included in flagship of the resource sharing.

Topic of the Taiwan halal Tourism is interesting to be searched considering that Taiwan is predominated by Buddhist and Taoist society, but it has also been trying to develop halal tourism industry. Though still at the early stage of development, in fact, Taiwan’s efforts have shown an achievement. Based on the Global Muslim Travel Index 2019, among the non-OIC destinations, Taiwan ranked number 5 as the top destination of Muslim traveler, just after Singapore, Thailand, UK, and Japan (Crescent rating, 2019). Hence, it can be said that Taiwan is quite successful in developing its halal tourism industry. This study argues that this good performance might be contributed by the support of the policy on the development of the halal tourism industry.

<table>
<thead>
<tr>
<th>Year</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rank</td>
<td>10</td>
<td>7</td>
<td>7</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

Source: Crescent Rating Global Muslim Travel Index (GMTI), various years.

Many scholars have investigated the application of halal tourism in many places [6][8][9][10][11]. Even though Muslim-friendly tourism in Taiwan has become a trending issue among scholars, very limited research has been carried out. For example, Mohsin, Ramli and Alkhalafy [1] conduct study on the halal tourism: emerging opportunities. They explain about the growing trends of the halal tourism market segment and identify some basic information about this segment, such as the definition of halal tourism, the source of information, and the potency of halal tourism. The method of the research was based on the secondary resources. However, little explanation of the research was about authority body or institutions that give halal certification in eight countries, both the Muslim-majority countries and Muslim-minority countries, including Taiwan. Hence, it can be said that information of the halal tourism in Taiwan was so limited.

Adham [12] conducts a research on the “Halal Taiwan: Emerging Player in the Global Halal Market”. His research focuses on the existence operation of halal industry in Taiwan and analyzes some potential for sustainable growth and facing global competitiveness. He explains some aspects and analyses it from systematic perspective, including the halal certification bodies, halal products providers and other related bodies in their value chain such as the
supplying and retailing business in Taipei. His study finds that the halal industry in Taiwan is characterized by stringent certification procedures that emphasize getting recognition from reputable international halal certification bodies. The halal certification process is implemented by multiple certification bodies and mostly private driven while there is absence of the role of the Taiwan’s administration involvement in administering the affairs of the development of the halal industry. However, his study focuses more on the halal products in Taiwan, and does not discuss in detail about the halal tourism industry in Taiwan.

In addition, Battour and Ismail [13] that review the halal tourism: concept, practices, challenges and future mention that halal tourism gets more attention for both the perspectives of industry and research. By using secondary resources, the study mentions that the success of developing and marketing halal tourism destination has to adopt Islamic teaching and principles. They explain some concepts of the halal tourism with the components within the industry. They also give some examples of the current best practices of the Muslim-minorities countries such as Japan, the Philippines, and Brazil. Though halal tourism is such a good business opportunity for Taiwan, they don’t explain it further.

Yang [14] that conducts research on the “Traditional Market consumers’ care about the halal meat label” picks up a case on Taiwan, focuses on the willingness to purchase the halal-labeled chicken. The study finds that although the attribute of religious norms influences a small group of consumers, majority of the consumer of the halal labeled chicken in traditional market are attracted to buy it due to the factors of cleanliness, and animal welfare. These factors, further, are recommended to be part of the marketing strategy and development of local halal food product for the government and enterprises.

A study by Lin et al. as cited by Yilmaz and Gultekin [15] based on the interview with tourism officials and 83 people working as senior executives, finds that the most attractive factor about tourists experience the cuisine of Taiwan is participating in the local festivals, gourmet tours and holidays. Besides, Taiwan has gastronomy destination identity with its various and different local foods.

From the above-mentioned literatures show that the existing literatures on Taiwan halal tourism industry are very limited and there is still gap for further research: No research on the policy of the halal tourism development in Taiwan and how it is practiced. Hence, this study is expected to fill the gap. This research is trying to answer two questions: How does Taiwan’s policy on the halal tourism industry development and how it is implemented from the perspective of businesspeople?

This study is aimed to understand the policy that supports the development of the halal tourism industry in Taiwan and to understand the implementation of the policy.

2 Methods

This is a qualitative research. Data was collected through desk research to obtain secondary resources from the existing publications that are available in the books, journals in internet and in the library in Taipei. Besides, a field research was conducted to collect primary data by doing some interviews. Location for the field research was done in Taipei and Taichung cities. Both regions are among big cities in Taiwan that become the main tourism destinations in Taiwan. Hence, it is assumed that these districts have also developed their halal tourism industry. According to a report published by global market research firm Euromonitor International, in 2015 Taipei and Taichung ranked 14th and 97th as the most popular cities for visitor that received
9.04 million and 1.98 million visitors, respectively [16]. The field research was conducted for a month in total, from August 5 to September 4, 2018.

Structured interviews with some stakeholders with the total number of 27 informants were conducted including with the Taiwan representative officers (4) (IETO, the Bureau of Tourism - Taiwan Ministry of Transportation and Communication, district representative officers from the Bureau of Tourism of Taipei and Taichung Cities), businessman run in the restaurant (8) and accommodation (1), the halal certification bodies (Chinese Muslim Association/CMA, the Taipei Grand Mosque/TGM), and the other body, some Taiwanese and Indonesian residing in Taiwan as well as scholars (10).

All of the interviews were digitally recorded and were transcript following the interviews. To avoid misinterpretation of the substance of the interviews in Mandarin Language, a local assistant was hired. To enrich the knowledge on halal according to Islam, I also attended a public lecture series given by the director of Halal Center of Gadjah Mada University at the “SendaNgaji” Islamic community in Jogjakarta.

Analysis of the research from the perspective of businessman is done descriptively analysis by using policy approaches.

2.1 Definition of Halal Tourism

There are many definitions about halal tourism [17][18]. Some scholars use term of “Islamic tourism” as they think both can be interchangeable though they can also be confusing [13]. However, actually Halal tourism is different from the religious tourism [6]. Religious tourism is any kind of tour that is motivated partly or exclusively for religious reason (Rinschede as cited by Jaelani [10]). According to Battour [17], halal tourism is all tourism activities, facilities, actions and objectives that are permissible according to Islamic Law (Sharia). When doing something, a Muslim has to consider Syaria or Islamic law, including in tourism.

Halal tourism is a relatively newly concept so that there is a challenge in defining the right term and the proper clarification of halal tourism. According to Djakfar [6], halal tourism is various kinds of tourism activities which are supported by various facilities and services from the community, entrepreneurs, government (central and regional) in accordance with Syaria principles. However, Djakfar [6] explains that halal tourism has different characteristic from the conventional tourism. Hence, it has difference consequence for the involved stake holders. Taiwan itself defines the halal tourism similar to the general tourism but there are extended services for the Muslim visitors.

2.2 Halal Tourism Policy in Taiwan

Morris in Ashman (2010) defines a policy as a regulation that regulates one’s life and determines expectation to behave. A policy determines how government, society and organization run within a predictable and coordinated way. Goeldner and Ritchie [19] define tourism policy as any kind of regulation, guidance, direction, and development goals, promotion and strategy for decision making either for individual or collective that gives direct influence to tourism development in the long-term and daily activities in a tourist destination. In addition, Biederman [20] defines tourism policy as a plan direction used either by a country, region, locality or even individual destination to develop or to promote tourism. With the policy, there supposed to be maximum social and economic benefits that would be gained by nation, region or locality from tourism.

Since the launch of the New Southbound Policy (NSP) in Taiwan in 2016, the development of the halal tourism industry has been included as one of the platforms of the policy. Since then,
it has been developed more intensively. Basically, NSP constitutes Taiwan’s strategy to establish a long-term cooperation and to develop broad relations with countries in Southeast Asia, South Asia, New Zealand and Australia.

Tourism industry which plays significantly to Taiwan’s economy was predominated by tourists from Mainland China. However, due to the declining tourism market since the leadership of President Tsai Ing-wen, many experts have suggested the opening of new markets.

To build a strategic partnership that is expected to create regional prosperity, four tasks are performed under the NSP. *First*, by encouraging economic collaboration with the New Southbound countries, focusing on a) supply chains, b) domestic market demand, and infrastructure projects. *Second*, by carrying out talent exchange, by focusing on a) educational relationships, b) industry talent, and c) new immigrants. *Third*, resource sharing, by focusing on a) health care, b) culture, c) tourism, d) technology, and e) agriculture. *Fourth*, strengthening regional relations, by focusing on a) regional integration, b) negotiations and dialogue, c) strategic alliances, and d) Taiwanese networks abroad. Hence, the development of the halal tourism industry constitutes as the implementation of the 3rd task of the NSP, namely resources sharing.

Several reasons have attracted the Taiwan authority to pay more attention to Muslim visitors. Eric Lin, the Director of International Affairs Division, Taiwan Tourism Bureau, during the interview with Bahardeen mentioned some factors. *First*, is number and the growth of the population of Muslim in the world. *Second*, is due to the changing of people’s lifestyle. The newly rich people in Muslim countries now see traveling as a necessity of living, so the traveling population has grown fast. *Third*, Muslims like to travel with families and would like to know the latest and most popular destinations. *Fourth*, a lot of Muslim family would like to look for experience that relevant to Islamic values. This trend has also attracted some other countries whose population is non-Muslim majority, such as Thailand, Singapore, Japan, and South Korea to create halal tourism industry which later on they may become Taiwan’s competitors or partners.

### 3 Result and Discussion

As the Halal Tourism Industry development is included in the NSP, its development industry in Taiwan has been supported by policy. However, instead of providing law or regulation on it, Taiwan authority only provides general policy to some stakeholders. To attract inbound Muslim tourists, two kinds of policies have been issued, namely halal certification policy and creating a Muslim-friendly environment.

Implementation of the halal tourism industry is coordinated by the Ministry of Transportation and Communication while the developments of the halal tourism in Taipei city and Taichung city are under the coordination of the Tourism Bureau of the Taipei city and Taichung city, respectively. However, the implementation in the regions highly depends on the readiness of the district itself. In fact, Taipei City is more ready compared to Taichung City.

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2 Ma Ying-jeou, the former President made easier entry barriers for mainland Chinese group tourists to visit Taiwan. The aim was to improve cross-strait relations. As a result, tourists from Mainland China increased from 289,000 in 2008 to more than 4 million people in 2015. This number represents 40% of the total inbound tourists in the same year. The influx of Mainland Chinese tourists is certainly a big contribution to Taiwan's economy. According to statistics, the estimated total expenditure of mainland Chinese tourists was USD 198.43 in 2016 or the second largest after tourists from Japan. Most expenses come from consumer goods, accommodation, and food.

3 Thailand has developed a tourism program of *Syaria* spa since 2012 [22].
Since 2009 Taiwan has begun to initiate the development of Muslim-friendly tourism, as delivered by the Chinese Muslim Association (CMA), an institution that is given authority for managing Muslim affairs in Taiwan. This was indicated from the brochure published by the CMA. However, only in 2013 Taiwan officially announced the development of Muslim-friendly tourism through its tourism policy, mentioning that Taiwan would target more Muslim tourists. However, there were not many actions to support the development of the industry development. As a result, from 2009 to 2016 the development of the halal tourism industry in Taiwan was stagnant. Perhaps this is the factor why Taiwan's halal tourism industry had not shown any significant development. Besides, concept of the halal tourism was just a new concept so it was not popular yet. For example, the number of restaurants that received halal certification was very limited. Even, there was no data that recorded the Muslim friendly accommodations in Taiwan. Since 2013 the development of halal tourism did not change so much.

After 2016, the development of the halal tourism industry was more significant as it was included as one of the platforms of the NSP. The NSP defines efforts of resource sharing in the field of tourism that aims to promote halal tourism industry and to export Taiwan halal products. Encouraging companies to get halal certifications is very necessary, and so does to get the halal certified products for export and domestic markets. These strategies are expected to create Muslim friendly environment and thus enable to attract more inbound tourists into Taiwan. To export Taiwan halal products, in 2017 Taiwan Halal Center (THC) was established under the Taiwan External Trade Development Council (TAITRA).

Though the NSP has mentioned the priority areas for halal tourism development, there is no explicit policy like law or regulation to develop halal industry and exact plan of action on how to support the policy implementation [12]. However, the establishment of THC at least can be an indication of the Taiwan’s transformation toward a Muslim friendly tourism.

In order to promote the halal certification, the Ministry of Tourism Bureau has cooperated with the private institutions to manage it, in which Taiwan administration relies on these groups very much.

Some institutions that have authority to give halal certifications in Taiwan are: the CMA, Taipei Grand Mosque (TGM), and the Taiwan Integrity Development Association (THIDA) (Taiwan Halal Center, 2019). Only in 2017 the other new authority for halal certification, namely Sincung Halal for Taiwan Co., Ltd was established (Taiwan Halal Center, 2019). Thus, overall, there are four official halal certification institutions in Taiwan. Each institution has a slightly different scope of authority. Besides, it also has different halal certificate logo.

These institutions have collaborated with international halal certification bodies, including the Malaysian Islamic Progress Position (JAKIM) - Malaysia, the Indonesian Ulema Council (MUI), and the Singapore Islamic Ulema Council (MUIS) (Taiwan Halal Center, 2019).

The CMA which was established in 1958 is the main body for administering the affairs of Muslims in Taiwan and Taiwan administration. Its location is in the Taipei Grand Mosque-Taipei.

The other halal certification body is the Taipei Grand Mosque, particularly for the manufacturers. Together with the other five mosques in Taiwan, including the Taipei Cultural Mosque, Long Gang, Dayuan, Taichung, and Kaoshiung mosques, they can issue halal certificate. Previously, they give the halal certificate to Muslim owner only based on trust. However, since in 1990s more non-Muslim owners wanted to get the certificate halal certification was given in the writing form Setyaningsih [23].

In 1993 for the first time the Taiwanese halal logo was developed and was used as the halal stamp certificate [12]. Previously, manufacturers had to pay for NTD 20,000 to get the halal certificate from CMA and TGM, but since 2011 TGM only focuses on the manufacturers.
Whereas, the local mosque focuses on giving that of the slaughterhouse and halal restaurant operated by Muslims. In 2012 the TGM Foundation issued its own halal certification logo. In late 2011 the Taiwan Integrity Development Association (THIDA) began to issue its own halal certification, after it received approval from JAKIM, MUI and MUIS. Hence, there were three bodies that can issue halal certificate, namely the CMA, TGM and the other mosques, the mosques and THIDA.

By 2017, there were four halal certification bodies in Taiwan, namely the CMA that focuses on the local service, including restaurant, kitchens, hotels, and other tourism players. TGM focuses on giving halal certificate to local services and manufacturing companies. THIDA concentrates on the manufacturer products and Sincung that works with Indonesia Ulema Council (MUI).

There are five kinds of halal certifications, namely: Muslim Restaurant (MR), Muslim Friendly Restaurant (MFR), Muslim Friendly Tourism (MFT), Halal Kitchen (HK) and Muslim Friendly Tour Guide (MFTG). MR refers to restaurant that belongs to a Muslim owner, while the MFR refers to that belongs to a non-Muslim owner. MFT refers to any accommodation that received halal certification, whereas the HK provides halal catering service for the tourist hotel industry, hotel industry, and sightseeing and amusement industry. The last one is MFTG, certificate for tour guide, as she or he is an actor that will guide the tourists during traveling in Taiwan.

According to the CMA, until 2017, there has been at least 100 halal certified eateries and accommodation in Taiwan, consist of 30 halal restaurants, 20 Muslim-friendly restaurants, and 30 Muslim-friendly hotels in Taiwan out of about 550 hotels. The number increased to 200 in 2018.

Those hotels and restaurants spread all over Taiwan. However, in term of the quantity, the number in Taipei is higher. It is not wondering, since Taipei is a capital city; as a consequence, more facilities are available there. Besides, Taipei is the biggest city and becomes the top tourist destination in Taiwan, followed by Kaoshiung and Taichung. Hence, Taipei can be a benchmark as the halal tourism development.

Amongst the halal or Muslim friendly restaurants in Taiwan, most of them provide various menus, ranging from Asian, including the Middle East, India, Pakistan and Indonesian. Only a few numbers of the restaurants that provide Chinese or Taiwanese menus. Most of the restaurants are in the scale of Small and Medium Enterprises (SMEs) as they become the characteristic of enterprises in Taiwan. The limited number of the halal local culinary becomes challenge in developing the halal tourism industry since Taiwan has gastronomy destination identity that has various and different local foods. Meanwhile, participating in the local festivals, gourmet tours and holidays are the most attractive factor of tourist’s experience (Lin, 2015). In addition, the Bureau of Tourism has determined night market is one of the must-visited places for tourists to enjoy Taiwan because it serves many kinds of local authentic local foods. However, only a few numbers of the food stalls that have halal certification. This becomes barriers for the Muslim tourists to enjoy the halal locality taste of Taiwan.

The Muslim Business Traveler Insights 2016 (透視穆斯林商務旅客) released in October 2016 stated that while 43% of Muslim travelers only dine in restaurants that solely serve halal food, 44% of them are willing to accept eateries that clearly label —non-Muslim food and —Pork-containing dish on their menus (https://www.travel.taipei/en/news/details/9014, 2016). To help the Muslim friendly tourists, non-alcohol and pork free stickers may help them to understand the content.

To obtain halal certification from the authority, there are some processes of investigations that must be followed by the restaurants. The CMA gives training to the cook, the employee
who gives services to the Muslim guests, and the management staff about Islam and the other knowledge that they need if they receive Muslim tourists. The training is usually done in Taipei city, where the office of the CMA exists and is followed by representative officers from the hotel or restaurant. However, for those who stay in other cities, the hotel or restaurant owner can also host the training, but can be attended by most of the staffs. After that, they will proceed to provide symbol or sign of halal logo that active for one year. After one year, they do not need to follow training. It is only when there is a shift of their staff, which is very often, they have to follow the training again. In giving the halal certification, the authority does not request any charge, excluded the training process.

To promote the Muslim Friendly Restaurant, the Taiwan administration has provided subsidy. The subsidy is aimed to assist the aspects of equipment needed, and the other staffs in which each of them is paid 50% of the amount of expenditure. They need to apply for this subsidy by fulfilling the requirements as available in their website (http://admin.taiwan.net.tw/law/law_en.aspx?no=9). Two categories of the subsidies are available, namely subsidy for the restaurant that has 30-50 seats and for the one that has 50 seats and more.

The first category will receive subsidy of NT 100,000 while the second one will receive NT 200,000 for the maximum. Since the annual budget is limited to NT$ 10 million only, so the application for the subsidy is limited to one time. A team of reviewer, which consists of experts from the bureau, hotel management, kitchen affairs and electromechanical planning, and CMA will review the application for giving approval. Those who passed the review will be granted; in contrast, those who lose the halal certification have to return the subsidy. However, this information is not well informed to all of the restaurant owners. Besides, giving subsidy is considered as a short-term solving problem to increase number of the halal restaurant, but does not guarantee a long-term sustainability.

The problems that may be faced by the CMA is in controlling the validity of the certified restaurant/hotel. After the hotels/restaurants received their certificate, an agreement is issued by the halal certification body and the owner. The owner has to follow the regulation. In case there is a violation against the rule, the CMA will send a card to them and they have to pay the fine. In fact, many of the restaurant owners do not extend the certificate once it is expired. The CMA implements an online system which will automatically remind the business owner about the validity of the halal certificate. This notification can be also available in the tourism bureau website. In case the business owner does not want to extend the expired certificate, they achieved, they just need to return it to the CMA.

Until 2018, there was less than 10% of the business owner who does not want to extend the validation. This is related to the internal policy of the hotel/restaurant. Besides, they think that the halal certificate does not increase number of customer.

To assist the hotel or restaurant to attract more customers, promotion is boosted by the authority under the —partnership with the local program. The CMA in co-operation with some travel agencies and the airplane companies introducing the Halal tourism in Taiwan. It is expected that the Muslim travelers will feel secure and safe about the halal things in Taiwan.

Besides, an Apps has also been created to facilitate the visitors during staying in Taiwan. This Apps provides information about halal restaurants, Muslim friendly accommodations, praying schedule, and anything about Taiwan Halal tourism.
3.1 Promoting Halal Tourism Industry and Muslim Friendly Environment

There are several kinds of efforts that have been done to promote the halal tourism industry and Muslim friendly environment. To attract more inbound tourists to Taiwan, easy procedures for applying visa has been made for South East Asian citizens. For example, since 2017 the Indonesian who hold permanent residence permits issued by Taiwan, the US, Canada, Australia New Zealand, Japan, Korea, Britain, or Schengen Agreement signatories or those hold a visa or valid residence permits from one of those countries that is valid or that expired within 10 years of the date expected to arrive in Taiwan and whose do not have record of violating Taiwan’s law, can apply visa on the website of the Immigration Department of the Taiwan Ministry of Interior.

When the Muslim tourists have already been in Taiwan, some facilitations have been prepared. To ease Muslims to perform pray, the bureau of Tourism has encouraged public transportation facilities and scenic spots to build prayer rooms and wash lets. Until 2017, lots of public spaces are equipped with prayer rooms. For example, the 13 National Scenic Areas, Taoyuan International Airport, Kaohsiung International Airport, Taipei Train Station, Kaohsiung Train Station, and Taiwan High Speed Rail Taichung Station, all have Muslim-friendly facilities. Besides, some public places have also been equipped with prayer room as well. For example, in the second floor of the Discovery Center of Taipei, the National Palace Museum in Taipei, shopping mall Taipei 101, Alishan National Scenic Area in Chiayi County and Sun Moon Lake in Nantou County are also equipped with a Muslim prayer room. Compared to the situation in the last five years, the number of prayer rooms has increased significantly. These facilities are very important for Muslim travelers so they can do travelling and worship at the same time. In fact, this facilitation is also very beneficial to the Muslim residents, as well.

Besides, Taiwan has also given appreciation to Muslim big holidays like *Eid Al Fitr* by providing places for Muslim residents to celebrate it. On 6th of July, 2016 at the first time the Taiwan administration formally announced that *Eid al-Fitr* as an important Holiday for Muslim. The Taipei Grand Mosque Chairman at that time, Feng Tung-yu, urged employers and company executives to support Muslim workers to attend the *Eid al-Fitr* activities at mosques located close to them, to allow them complete their required lessons as a Muslim. In 2017, President Tsai Ing-wen also gave speech to congratulate Muslims in Taiwan. In particular she also thanks to the Muslim workers who have contributed to the Taiwan cultural development. Besides, Mayor Ko Wen-Je, the mayor of Taipei City, also attended the celebration in the Taipei Grand Mosque & passed out *Hong bao* to Indonesian workers in Taipei. In addition to these, some programs and information have also been broadcasted through television. The programs that introduce the Southeast Asian countries’ cultures also introduce Indonesian Muslim’s cultures. As a result, these also affect the Taiwanese’s understanding toward Muslim. All of these efforts need to be appreciated.

Regardless the increasing trend of Muslim tourist in the future, Taiwan businessman still concentrate on non-Muslim customers. Besides, the various local culinary of Taiwanese are supposed to be resources that can be utilized to attract more Muslim tourists into Taiwan.

In fact, at the early stage of the development, visitors coming from the Muslim-majority countries were still limited. According to the data, in 2016 around 200,000 of the 10.44 million visitors or almost 2%, coming into Taiwan were Muslim Visitors. They were mostly come from Malaysia, Singapore, Indonesia, India, and the Philippines. Only a few people came from the

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Middle East, whose number was as less than 2% of the total foreign visitors. This small amount of number of the Muslim visitors to Taiwan made disappointment expressed by businesses in the tourism sector due to their poor return on their investment [21]. Factor that may contribute to this small number was related to the relatively new established of the industry, hence this has made the investors still focus on the non-Muslim visitors.

However, number of the Muslim visitors is expected to increase year by year, in line with the increasing effort of Taiwan side to create better environment to Muslim. Responding to the issue, the Tourism Bureau Deputy Director said that based on the history, Taiwan itself needed over 10 years to grow the number of Japanese visitors so that in 2015 the number of it reached 1.63 million. Meanwhile, the Muslim tourism has just started recently and thus it will need more time to attract more tourists.

Until April 2017, visitor arrivals from Southeast Asia increased 38.6% year on year to about 675,000. Of this total, number of the visitors from Malaysia and Singapore increased by 14% and 10%, to about 172,000 and 127,000, respectively. Meanwhile, visitors from Indonesia increased to more than 6% annually to almost 189,000. It is expected that in 2018 the number will increase to reach 250,000 visitors [24].

However, it must be confessed that regarding the number of the Muslim visitors, it is difficult to get the actual number. Until nowadays, there has been no exact database on the data of Muslim visitors coming into Taiwan [23]. The Bureau of Tourism under the Ministry of Transportation and Communications has been only making assumption based on the visitors coming from Muslim majority-countries.

In term of the development of halal tourism industry, Taipei city is the most developed one. As the capital city of Taiwan, the availability of halal restaurants and Muslim friendly accommodations are higher. Among the halal-certified services, Taipei city makes 60%. In contrast, the Taichung government has been trying to develop its tourism industry. As the third largest tourist destination in Taiwan, Taichung administration has been trying to attract more tourists coming into Taichung. In Mandarin, Taichung [台中/Taizhong] means center of Taiwan. Most of tourists coming into Taiwan often set their destination from Taipei to Kaoshiung. As a result, Taichung is just a crossing area for tourists. Hence, the focus of the administration is how to attract more tourists to visit Taichung.

4 Conclusion

After 3 years of the NSP, the Halal tourism industry in Taiwan has still at the beginning stage of development. It still needs time to develop successfully. Among the southeast Asian countries, Indonesia Muslim tourist is the target for the Halal tourism in Taiwan since its society is not strict and more open to the Muslim-friendly category. However, no database available on the exact number of the Muslim tourists coming into Taiwan.

Since Taiwan is not Muslim-majority region, role of the religious organization is very important in giving authority of halal certification. However, there is no explicit halal industry development policy and exact plan of action how to support the policy implementation. Four main bodies that give halal certification have their own roles in giving the certificate. The effort to create Muslim-friendly environment promote Muslim-friendly

Regardless the increasing trend of Muslim tourist in the future, Taiwan businessman still concentrate on non-Muslim customers. Besides, the various local culinary of Taiwanese are supposed to be resources that can be utilized to attract more Muslim tourists into Taiwan.
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References


Impact of Covid-19 to Halal Tourism in Turbulence Economy on H Theory

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Abstract. This study aims to discourse between the sharia sector and the economic sector in the pandemic Covid-19 phenomena with Islamic religion rooted in Allah that can be merged in it by one faith in Islam as salat. Salat is the first design before human had been created. Methodology in this research was carried out using a qualitative descriptive approach that collects data on field notes, personal documentation, and other official records which will be used as proof provided. Hahslm theory is reflected in tourism as guidance to tourism from God with the reflexivity of worship. Islam is derived from s, l, m for the entire structure that Islam will understand on earth is required. It requires a kaffah system to cover three principal things: God, nature, and worship. The research can conclude that sharia tourism is tourism that combines the concepts of conventional tourism and religious tourism by always paying attention to halal and haram benchmarks in its implementation.

Keywords: Hahslm, Shalat, Tourism, Economics, Covid-19

1 Introduction

Currently, the tourism industry has made a major contribution to increasing economic growth in Indonesia. Based on information obtained from the official website of the Republic of Indonesia’s Ministry of Tourism, contributions gained by Indonesia from the tourism sector are earned from foreign exchange earnings, national profits, national growth, as well as through the absorption of investment and labor and market creation distributed through various parts of Indonesia. Indonesia is the biggest muslim country in the world. And the muslim have obligation to do worship as Quran 51.56 where salat is the root of worship as the initial blueprint of creation [1]. According to the Ministry of Tourism's Pocket Book, the tourism industry led to increasing the national Gross Domestic Product (GDP) to 9 percent or around Rp 946.09 trillion in 2014. In Indonesia, the tourism industry also plays a part in job development. This can be seen from data on donations to job openings that exceeded 11 million people in 2014 [2]. Consistent with this increase, the Regional Medium-Term Development Plan 2015-2019 has made tourism sector growth an element in supporting national economic growth.

Islamic tourism essentially has a definition that combines aspects of tourism with Islamic values. The Islamic values aspects can be attached to the accommodation elements, restaurants, to the whole set of activities that refer to Islamic norms. The philosophy of Sharia tourism is the actualization of the philosophy of Islam in which the main criteria are halal and haram standards, which ensures that all facets of tourism operations are inseparable from halal certification, which must be a reference point for any tourism participant. The concept of Sharia tourism can also be interpreted as worship and da'wah-based tourism activity, while Muslim tourists can travel and
admire the results of the creation of Allah SWT (nature \textit{tafakur}) by continuing to fulfill compulsory prayer obligations five times a day and all this is well facilitated and removed from all that He prohibits.

The planet is now stunned by the occurrence of the spread of a plague caused by the coronavirus. The coronavirus was first discovered in Wuhan city, China. This viral infection is known as Covid-19. This virus has a relatively high rate of dissemination. Coronavirus or Coronavirus 2 (SARS-CoV-2) Extreme Acute Respiratory Syndrome is a virus that affects the respiratory system and can cause serious to minor respiratory infections that can cause death in patients. The widespread propagation of the virus across the world worldwide harms the global economy. The tourism business is one of the impacts of the Covid-19 pandemic. The coronavirus that spread very quickly from humans to other individuals allows this disease to affect many countries around the world. As a result, many countries around the world are introducing a lockdown strategy to minimize the rapid transmission rate, a strategy that limits entry to and exit from goods or individuals overseas and inside the country for some reason. The presence of these policies impacts the domestic tourism industry, as the tourism sector includes human beings as the key asset in its operation. Therefore, due to the spread of the coronavirus, airlines, hotels, restaurants, and travel agencies who rely on their revenue from visitors are experiencing a crisis. The effect of the tourism sector will affect domestic economic development where the tourism sector is one of the foundations of the Indonesian economy in Indonesia itself.

2 Research Methods

2.1 Research Scope

To order to explain the topic that needs to be addressed so that the conversation isn't too broad or deviating, a question boundary is required. The scope of the topics that will be addressed in this journal's writing is mainly in the framework of the Covid-19 epidemic related to sharia tourism, fasting, the HaHslm hypothesis, the environment, and the current world conditions. The subject to be explored in this article is how the relationship between the factors to which the economy has been referred. In this article the area to be addressed is:

a. This study will concentrate on the consequences and connections between variables of Covid-19, sharia tourism, meditation, HaHslm theory, and the economy.

b. The research study is qualitative, that is, the evidence collected by analyzing many essential documents and reports which are then comprehensively analyzed and presented in word form.

c. This methodology is considered appropriate because this research wants to know the qualitative variables and not the quantitative of the variables, so these results are valid.

2.2 Data Determination Method

There are several variables in this analysis, including Islamic tourism, prayer, HaHslm theory, economy, and Covid-19. To identify each variable and help the research phase in this report, we need some data used, such as positive coronavirus data, data on patient recovery, coronavirus death data as a predictor of Covid-19 transmission in Indonesia. Also, foreign exchange income, GDP, and sharia tourism growth data are used as Indonesian economy
indicators. Moreover, to assess their association with Covid-19 and the Indonesian economy, many hypotheses and study evidence on prayer and Hahslm theory is used.

The authors use supplementary data gathered indirectly in this analysis as the authors collected data from official websites and publications such as newspapers or other official writings in this analysis. For this analysis, the authors mixed qualitative and quantitative data with specific statistical criteria due to the existence of the variables. Quantitative data is data in the form of numbers (numeric) and qualitative opposite, i.e. data in the form of numbers and is not. Ghony and Almanshur [3], qualitative analysis technique, is a study that produces new results that are collected with careful observation during the data collection process and involves a detailed overview followed by notes of certain documents that are then analyzed in full and thorough form.

2.3 Data Collection Method

The process for collecting samples is performed using Observation and Record Analysis. Observation is a dynamic method of data gathering since it includes a variety of variables in its execution. This approach can also be used to document different events that exist such as the pandemic Covid-19 in the process of gathering observation data is not just a matter of the respondents' attitude.

The investigator's data collection is non-participant evaluation since the scientist is not actively interested in the events or procedures found in the analysis process. This method of data collection is considered appropriate as this practice is used to study human behavior, work processes, and natural phenomena.

This is the method of document analysis, the method of document research is to collect evidence or information by reading documents, reports, summaries, written comments, and other writings [4].

2.4 Data Analysis Method

This study uses a descriptive method of qualitative data analysis, a method that gathers information and data through literature study, literature exploration, and several documents and other official records that are then fully and comprehensively reviewed. The writers in this study identify the notion of Islamic economics, Islamic prayer, Hahslm theory, and Covid-19. Then continue with a critical and thorough study of how these factors in human lives and the economic environment can be linked and influence one another.

Descriptive qualitative research method according to Emzir [5] is a research method which refers to sentences or words rather than numbers, such as field notes, personal documents, and other official records with the findings in the form of quotes from the data obtained, and the data will later be used as proof presented. Meanwhile, according to Hanafi [6] in his book entitled “Language Study Methods for Analysis, Thesis and Dissertation” qualitative research is analysis whose question focuses on the explanation of the observed symptoms and aims to locate a truth or facts based on subjects examined with a natural approach, such as observing, questioning, reading, and writing.

Work that explores the ramifications and relationships between sharia tourism, prayer in Islam, Hahslm economic theory, and Covid-19 is very appropriate by using concise qualitative approaches, based on expert opinions on concise standard measures. Since while the research in this analysis is collaborative, which is to combine quantitative data and qualitative data, there
are no data gathered by the author by mathematical testing, such that the presentation is in the form of terms and explanations only.

2.5 Research Limitation

For the time and location from March to April 2020, attributable to government policies that advise not undertaking things outside the home to enforce social distancing. Therefore, to avoid the dissemination of Covid-19, the method of face-to-face learning practices was converted into online instruction. That's in line with Chancellor Circular No. HK.00.7/3/2020 B.885/R. The data obtained on Covid-19 is gathered based on data submitted between January and April 2020. Certain evidence, though, that was gathered successfully in a review of data that occurred a long time ago.

3 Results and Discussion

The growth of an increasingly exponential age makes life harder in terms of tourism for all human activities. Tourism experiences are pretty convenient for all in the modern technology age as there are so many inexpensive tourism destinations with easy access that people of all classes can enter. Tourism practices have now become part of the community's desire to achieve personal self-satisfaction. Nevertheless, if the joy satisfied the divine dimensions or is restricted only to the fulfillment of the pleasure of the world and whether the tourist practices are promised advantages in achieving the blessing of Allah SWT. Starting from these issues, the tourism industry was created that could satisfy human needs in terms of a person's fulfillment as well as moral happiness, the new industry was called sharia tourism.

The Quran does not mention directly about tourism. There are several analyses related to tourism. Sara or command, endeavor (effort), and the desire to travel as in the letter Jonah: 22 (Al-Ashafan, 2002). A total of 27 verses that include the words sara 14 of them encourage humans to travel which are all accompanied by the command mentadabbur or pay attention. In the Qur'an and Sunnah, it is explained several purposes in making a journey.

From the Islamic perspective, Islamic tourism activities are directed by the principles of ta'arruf (mutual acquaintance), tabadul al-manafi (exchange of benefits) and ta'awwun, and takaful (helping each other and bearing risks). Therefore, one of the missions of tourism science in Islam is to formulate scientifically and systematically efforts to maximize the benefits of tourism and minimize its negative impacts [7].

Indonesia is known as the biggest Muslim country in the world. And Muslims must worship Allah. And worship can be tapped as reflexivity in life as QS Ad Cultural property owned by Indonesia is illustrated by the many ethnicities, races, and religions, each of which has a different culture and culture. Not only that, but Indonesia is also rich in history that accompanies this country, which is still standing today. Indo-Dzariyat [51]: 56. Indonesia is known to the world as a multicultural country rich in civilization. It was then encouraged the interest of the international community and local communities to make tourism trips to Indonesia which have increased. This is proven through data quoted from the official website of the Central Statistics Agency each year. Indonesia has an increase in local and international tourists seen from 2015 where the number of foreign tourists visiting Indonesia amounted to 10 million to 15 million in 2018. This indicates an increase in demand in the sector of Indonesian tourism.
As explained in the previous section about increasing demand for the tourism sector by the Indonesian people, so too is the demand for sharia tourism in Indonesia which also indirectly contributes to the growth of the national economy. This is directly proportional to the increasing number of Indonesian Muslims who make Islam the majority religion in Indonesia.

Based on research conducted by the United Nations World Tourism Organization in 2016, Indonesia is in the position of the Top 5 World Halal Tourism Destinations with total foreign exchange revenues reaching the US$ 13 billion and affecting the Gross Domestic Product (GDP) of US$ 57.9 billion. So in 2020, sharia tourism is projected to continue to be the largest contributor to the country's foreign exchange earnings in the context of increasing Indonesia's economic growth. Therefore, in achieving these goals the Ministry of Tourism and Creative Economy has now determined that there are at least nine regions in Indonesia that have the potential to be used as sharia tourism destination development, including West Sumatra, Riau, Lampung, Banten, Jakarta, West Java, East Java, Makassar, and Lombok. Certainly, the stipulation of these areas is a step of the government in developing the tourism potential contained in each of these areas so that it can also be converted into an Islamic tourism area and its output is expected to attract more tourists who come so that it can also increase GDP through economic equality in Indonesia. So based on the previous explanation above, it can be concluded that the sharia tourism sector and the economy in Indonesia have a connection because, with the presence of a new tourism style, it can attract more visitors and will increase state revenue through certain regions that empower tourism potential in the area. With the increase in state revenue, it is expected to improve or even improve the economic stability of the Indonesian state.

Next is how to link the elements of sharia tourism with the Hahslm analysis. The analysis Hahslm according to Roikhan [8] is a complete set/whole system/integrated part consisting of three main elements, namely primary (creator/intermediary), secondary (creation/receiver), tertiary (worship/transmitter) that can be positively or negatively charged, so that of the three elements will be composed a statement where the secondary will be below the primary will do tertiary (humans were created by God to worship). It also relates to the contents of the Qur'an which reads kaffah silmi which is formed through the letters sin lam mim, where there is a symbiosis between God, nature, and worship. If symbiosis is a comprehensive kaffah system, then it can be ascertained that the symbiosis consists of the variables of God, nature, and worship.

From the above explanation, it can be seen that even in sharia tourism there is an element of connection between God (Allah SWT), nature (tourist destinations), and worship (a series of activities and use of sharia tourism facilities).

The last few months of the world were rocked by the Covid-19 outbreak that attacked almost all corners of the world. The virus suspected to originate from China has made many influences on the lives of the world community. In the end, made this outbreak as a pandemic and a world emergency because of its rapid spread.

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), initially named novel coronavirus or 2019-nCoV, is a single-stranded RNA virus that forms one of the seven coronaviridae [9]. On 30th January 2020, the WHO declared the Chinese outbreak of Covid-19 to be a Public Health Emergency of International Concern posing a high risk to countries with vulnerable health systems. The emergency committee has stated that the spread of Covid-19 may be interrupted by early detection, isolation, prompt treatment, and the implementation of a robust system to trace contact [10].

World phenomena related to epidemics caused by Covid-19 can be external shocks that affect the financial system and the economy in Indonesia. As is known, that the economy has a
fluctuating nature means that an economy can not be predicted to increase and decrease. It depends on factors that can affect the economy itself. One factor that can affect the economy is global phenomena such as the Covid-19 outbreak. Covid-19 can affect the stability of the financial system and the Indonesian economy because the Indonesian economy with the world is connected or in other words countries in the world work together and interact to help each other in the economy.

Covid-19 outbreaks appear and spread with very rapid transmission rates. This affects economic activities between countries and even the world. In Indonesia alone, the increase in the total number of cases continues to increase over time. According to data from the Ministry of Health of the Republic of Indonesia there are about 10,000 more than the total number of total cases. Concerns between Indonesia and countries in the world of Covid-19 that spread very quickly resulted in several countries imposing a lockdown policy, a policy that limits all activities in and out of an area on the grounds to prevent the spread of Covid-19 outbreaks to spread. This results in economic activity records that become disrupted, one of them is world trade activities (exports and imports). China is the main trading partner of Indonesia and the country of origin for Indonesia's largest imports and non-oil and gas export destinations. Total exports to China in 2019 reached USD 25.85 billion, while imports reached USD 44.58 billion (katadata.co.id). Based on data released by BPS [11], non-oil and gas exports in January 2020 decreased compared to December 2019. This decline occurred in part one of the main destination countries, one of which is China, which reached USD 211.9 million, down 9.15%. While the value of non-oil and gas imports in January 2020 also declined. The total value of non-oil and gas imports during January 2020 was USD 9,670 million or decreased by USD 313.5 million or down 3.14% compared to December 2019. This was caused by the decline in the value of non-oil and gas imports from several major countries, one of which was China from USD 4.07 billion to USD 3.94 billion or down 3.08%. The disruption of export and import activities will have an impact on industrial activity and the domestic economy where industrial raw materials and the needs of some sectors in Indonesia are still dependent on imports from other countries. This will increase in the overall price of goods, even more so followed by surging demand due to public panic over the condition. In addition to the disrupted trading system, this outbreak also affected the Composite Stock Price Index (ISHG) which had dropped 6.24 percent on March 9, 2020 and the rupiah exchange rate had weakened to Rp. 16,000 to the US Dollar.

Therefore, the explanation above shows that the Covid-19 outbreak had a very significant impact on the economy and the tourism sector in both conventional and sharia forms.

The influence that was created by the Covid-19 outbreak was not only on economic-related fields, but other community activities such as religious worship, one of which was the worship of Muslims was also affected by the Covid-19 outbreak. to stay home and not make large gatherings in the region. As a result of this policy, all activities in places of worship such as mosques were abolished such as the five daily prayers in congregation, Friday prayers, scientific studies, and so forth. This is by the MUI fatwa No. 14 of 2020 concerning organizing worship in situations of the outbreak of Covid-19 as a form of avoiding this epidemic to become more widespread.

In the teachings of Islam also explained about avoiding epidemics, the Prophet Muhammad once said firra minal majdzûmi firaraka minal asad. “You should flee” - meaning avoid – “from a person affected by leprosy, just as you have to run from a lion”. Close to people who have leprosy, the same as people who are close to lions. That is when there is an outbreak of disease we must always be trustworthy and vigilant not to let the disease be contagious. This is in line with the PSBB policy and the ban on congregational prayers at the mosque in the congregation.
4 Conclusion

From the explanation above, it was concluded that sharia tourism is tourism that combines the concepts of conventional tourism and religious tourism by always paying attention to halal and haram benchmarks in its implementation. Sharia tourism also contributes greatly to the Indonesian economy. Sharia tourism is good in addition to providing the beauty of tourist destinations that can strengthen the values of Islam. The sharia tourism sector also does not forget aspects of Islamic values derived from Allah through the Qur'an and Sunnah in providing limits on the scope of sharia tourism. Sharia tourism is one of the new leading sectors. The government has made a push in the form of incentives for the tourism sector so that its survival is maintained. These steps are considered to have no significant effect due to conditions that do not allow tourists to travel. Not only the tourism sector was disrupted but the entire economic sector was also disrupted due to this outbreak.

Spiritual needs must always be maintained because at this stage many people feel hopeless. Therefore the role of prayer is very important for Muslims. With prayer, people feel close to Allah and can reduce depression experienced by someone.

References

Determinants of Dividend Policy of Indonesian Companies: A Panel Data Analysis

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Abstract. This study aims to investigate the determinants of the dividend policy of Indonesian companies using a sample of 17 listed non-financial Indonesian companies that continuously paid dividends from 2014 to 2018. This study uses several theories to assist readers in better comprehending the concept of dividends and dividend policy, including signaling hypothesis, free cash flow hypothesis, life cycle hypothesis, and capital structure hypothesis. This study applies a panel data analysis to test those hypotheses. The variables used in this study that may explain a company’s dividend decisions are selected based on the theories and available empirical research and are determined by data availability. This study uses the dividend payout ratio and dividend yield to represent the dividend policy. The findings suggest that free cash flow, liquidity, and investment opportunity are the major determinants of the dividend payout ratio for Indonesia companies. Furthermore, the results also suggest that asset tangibility and size are major determinants of dividend yield. In general, the results apparently show little support for the signaling and capital structure hypotheses but considerable support for the free cash flow and life cycle hypotheses. This research is expected to have profound implications for future studies on dividend policy in Indonesia and might assist companies and authorities in making effective decisions about dividend policy for Indonesian companies and investors in determining their investment strategies.

Keywords: Dividend Policy, Signaling Theory, Free Cash Flow Theory, Life Cycle Theory, Capital Structure Theory

1 Introduction

Discussions about dividends and their relationship with the company have continued for several years. According to the most common definition, dividends are a form of corporate profit distribution to all shareholders in return for the capital they provide to the company [1]. Thus, dividend policy has a relationship with the decision to pay out company profits or retain and invest them.

Two traditional theories—signaling hypothesis and free cash flow (FCF) hypothesis—have been developed to explain the company’s dividend policy. Signal hypothesis states that managers, as people appointed by company owners, determine the level of dividend payments to deliver information to investors on the company’s future profitability [2].

The FCF hypothesis states that dividend payments are a corporate mechanism undertaken to reduce the overinvestment problem by reducing spending on agencies that originate from FCF (agency problem). In the analysis by Jensen [3], the agency problem arises from the manager’s impulse to take individual benefits, such as developing a business project by
investing in a company’s FCF, when the project has a negative value. Thus, dividend distributions are considered to reduce the risk of managers’ irregular use of FCF [4].

Recently, academics developed the life cycle theory of dividends (life cycle theory). The essence of this theory is that mature, established companies are more likely to pay dividends than young companies with abundant growth opportunities and limited resources [4].

Lastly, the capital structure hypothesis explains that companies with high debt ratios are likely to face financial constraints and are less able to pay dividends, thus reducing the portion of dividends that should be distributed to shareholders [2][5].

The researchers endeavor to test the four dividend theories (signaling, FCF, life cycle, and capital structure) and various factors considered to influence dividend policies in Indonesian companies. This research draws its inspiration from a research model developed by Fairchild et al. [2] and Labhane & Mahakud [5] for company dividend policies in Thailand and India. Researchers have observed similarities between Indonesia and Thailand, the first of which is financing that strongly depends on banks, which led to the 1998 crisis. In 2001, after the crisis, Bank Indonesia stated that bank financing at companies declined from 40% to 25%—a step taken by companies to minimize the effects of rising Indonesian interest rates [6]. In addition, ownership concentration is an issue in these two ASEAN countries. Ownership concentration on the part of the family (company founder) increases asymmetric information. Moreover, competition among families has the potential to cause company performance to deteriorate because of an inability of family members to run the company, resulting in agency conflicts between owners and investors [7].

The similarities between Indonesia and India can be observed in several ways. India and Indonesia have similar characteristics in terms of poor corporate governance. The behavior of companies that are only concerned with profits has gradually created a crisis in the country, which has caused some company managers to use a dividend policy to reduce agency conflict problems between owners and outside investors [8]. In fact, an understanding of good governance standards will encourage foreign investors or multinational companies to do business with India and Indonesia.

Researchers are interested in the research model because the Indonesian investment market still presents a great opportunity. Data published by PT. Kustodian Sentral Efek Indonesia showed that the number of investors in the Indonesian capital market at the end of 2019 was 2.47 million, a figure that increased from 1.61 million in 2018 [9]. Data from the database (2019)

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**Fig. 1.** The research model revealed by Fairchild et al. [2] has been further processed.
showed that the highest increase was for the 18–25 age group, for which growth reached 181.01% from 2016 to 2019. The largest number of investors was from the 41–100-year age group [10]. Moreover, investors in the over 60 age group have the largest amount of assets, approximately IDR 249.33 trillion. Based on these characteristics, Indonesian investors who have entered retirement will tend to choose to receive dividends over capital gains because of their large capital amounts and age [11].

Fig. 2. The number of Indonesian investors from 2016 to 2019 is based on age group [10].

No research exists that comprehensively explained the four hypotheses, their variables, and their relationship with dividend payments in Indonesia. As a result, researchers observed a link between the FCF hypothesis and the company’s life cycle hypothesis. The FCF hypothesis is represented by three variables: FCF (significantly positive), asset tangibility (significantly negative), and liquidity (significantly positive). The life cycle hypothesis is represented by two variables: investment opportunity (significantly positive) and size (significantly negative). The results show that no significant support exists for the signaling and capital structure hypotheses.

The sample of companies used is taken from the list of BEI companies that regularly pay dividends from 2014 to 2018. Dividend payment regularity is important because, if the company does not pay dividends, the data will be unbalanced. Unbalanced panel data cause problems with estimation and calculation [12].

2 Research Methods

Labhane and Mahakud [5] attempted to examine a number of factors that influence the level of dividend distributions using the panel data estimation method. Panel data analysis has the following advantages when paired with a cross-sectional or time series [13]:

a. More accurate model parameter interference;
b. Greater capacity to capture the complexity of human behavior;
c. Simplification of calculations and statistical inference.
The panel data model uses two techniques to accommodate unobserved effects. First, effects that cannot be observed are included in the error. In this case, the “random effect” is the right estimator. However, problems can arise with the random effect estimators, that is, if the effects that cannot be observed are correlated with some or all of the variables. As an alternative to the random effect estimator, dummy variables can be entered for each company. This approach is commonly called the “fixed effect approach”. If the researcher uses the dummy variable for only the company, then the model is called the “one-way fixed effect model”. If the researcher uses the dummy variable for the company and time, then the model is known as the “two-way fixed effect model”. Assuming a linear relationship between the dividend payment policy and its determinants, the panel data model can be determined as follows:

\[ Y_{it} = \alpha + \beta_1 BR_{it} + \beta_2 PROF_{it} + \beta_3 FC\text{F}_{it} + \beta_4 TANG_{it} + \beta_5 LIQ_{it} + \beta_6 INVT_{it} + \beta_7 LC_{it} + \beta_8 SIZE_{it} + \beta_9 LEV_{it} + \epsilon_{it} \]

<table>
<thead>
<tr>
<th>Theory</th>
<th>Variable</th>
<th>Measure</th>
<th>Expected Relation with Dividends</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signaling</td>
<td>Business Risk (BR)</td>
<td>measured as the standard deviation of operating income divided by total assets</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Profitability (PROF)</td>
<td>defined as the earnings before interest and taxes (EBIT) divided by the total assets</td>
<td>positive</td>
</tr>
<tr>
<td>Free cash flow</td>
<td>Free Cash Flow (FCF)</td>
<td>measured as the net operating cash flow divided by total assets</td>
<td>positive</td>
</tr>
<tr>
<td></td>
<td>Tangibility of assets (TANG)</td>
<td>measured as the net fixed assets divided by total assets</td>
<td>positive</td>
</tr>
<tr>
<td></td>
<td>Liquidity (LIQ)</td>
<td>defined as the ratio of current assets to current liabilities</td>
<td>positive</td>
</tr>
<tr>
<td>Life cycle</td>
<td>Investment Opportunity (INVT)</td>
<td>calculated as the market value of equity divided by the book value of equity</td>
<td>negative</td>
</tr>
<tr>
<td></td>
<td>Life Cycle (LC)</td>
<td>measured as the ratio of retained earnings divided by total equity</td>
<td>positive</td>
</tr>
<tr>
<td>Capital structure</td>
<td>Leverage (LEV)</td>
<td>calculated as the total debt divided total capital</td>
<td>negative</td>
</tr>
</tbody>
</table>

Where \( Y_{it} \) = dividend payout ratio (DPR) or dividend yield (DYLD) company \( i \) in year \( t \); \( BR_{it} \) is the standard deviation of the first difference in the operating income divided by the total assets of company \( i \) in year \( t \); \( PROF_{it} \) is a profitability variable measured as earnings before interest and taxes divided by total assets for company \( i \) in year \( t \); \( FC\text{F}_{it} \) is free cash flow measured as net operating cash flow divided by total assets for company \( i \) in year \( t \); \( TANG_{it} \) is asset tangibility measured as the ratio of net fixed assets divided by total assets for company \( i \) in year \( t \); \( LIQ_{it} \) is liquidity measured as the current ratio, that is, current assets divided by current liabilities, for company \( i \) in year \( t \); \( INVT_{it} \) is an investment opportunity variable measured as the ratio of the market value of equity divided by the book value of equity for company \( i \) in year \( t \);
LC_{it} is the life cycle variable measured as the ratio between retained earnings and total equity for company i in year t; SIZE_{it} is a size variable measured as the natural log of the market capitalization of company i in year t; LEV_{it} is the leverage ratio measured as the ratio of debt to capital for company i in year t; α is a constant; β is the slope coefficient; and ε_{it} is an error term for company i in year t.

Researchers eliminate bank and financial services companies from the sample list because they have different accounting and regulatory practices than companies in general, and these practices significantly affect dividend payout policies. Researchers analyzed the distribution ratio of dividends in several companies that traded on the exchange from 2014 to 2018, and dividend data must be available to calculate the DPR. To be included as a sample, companies must pay dividends during the successive research period. The regularity of dividend payments becomes important because if the company does not pay dividends, then the data become unbalanced. Unbalanced panel data cause problems in estimation and calculation [12].

At the stage in which the panel data regression estimation model is determined, three approaches can be carried out, as follows:

a. Common effect model (pooled least square);
b. Fixed effect (FE) model;
c. Random effect (RE) model.

The following three tests can be used to determine the appropriate model.

a. Lagrange multiplier (LM) test. An LM test is performed to determine whether the RE model is better than the common effect model.
   
   H0: Common effect is a suitable model.
   
   H1: RE is a suitable model.
   
   A p-value < 0.05 indicates that H0 is rejected.
b. Hausman test. This test aims to determine whether the FE and RE models are better than the common effect model.
   \[ H_0: \text{RE is a suitable model.} \]
   \[ H_1: \text{FE is a suitable model.} \]
   A p-value < 0.05 indicates that \( H_0 \) is rejected.

c. Chow test. This test is conducted to determine whether the FE regression technique is better than the common effect model. The hypotheses are as follows.
   \[ H_0: \text{Common effect is a suitable model.} \]
   \[ H_1: \text{FE is a suitable model.} \]
   A p-value < 0.05 indicates that \( H_0 \) is rejected.

After determining the right model, data processing is continued by testing the classic assumptions. The following three tests exist.

a. Multicollinearity
b. Heteroscedasticity
c. Autocorrelation

The final step after all of the steps have been taken is to interpret the data.

3 Result and Discussion

Table 2 presents the descriptive statistics of all of the variables in this study. The variable value of the DPR has a mean of 51.8848 and a standard deviation of 28.6229. The lowest DPR value of 0.6800 is owned by PT Multi Bintang Indonesia Tbk. (MLBI) in 2014, whereas the highest value of 145.9200 is also owned by MLBI in 2015. The DYLD variable value has a mean of 3.1224 and a standard deviation of 2.5892. DYLD value is at a minimum of 0.2800, owned by MLBI in 2018, and the maximum value is at 17.2700, obtained by PT Indo Tambangraya Megah Tbk. in 2017. The lowest FCF variable value was \(-0.3370\), owned by MLBI in 2014. This negative value is derived from the company’s negative net operating cash flows.
Table 2. Descriptive Statistic

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>St dev</th>
<th>Min</th>
<th>Median</th>
<th>Max</th>
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</thead>
<tbody>
<tr>
<td>DPR</td>
<td>51.8848</td>
<td>28.6229</td>
<td>0.6800</td>
<td>48.1000</td>
<td>145.9200</td>
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<tr>
<td>DYLD</td>
<td>3.1224</td>
<td>2.5892</td>
<td>0.2800</td>
<td>2.6100</td>
<td>17.2700</td>
</tr>
<tr>
<td>BR</td>
<td>0.0251</td>
<td>0.0319</td>
<td>0.0000</td>
<td>0.0160</td>
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<tr>
<td>PROF</td>
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<td>0.1390</td>
<td>0.6260</td>
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<tr>
<td>FCF</td>
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<td>0.0798</td>
<td>-0.3370</td>
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<td>0.4661</td>
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<td>LIQ</td>
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<td>LC</td>
<td>0.7351</td>
<td>0.2341</td>
<td>0.1280</td>
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<tr>
<td>LEV</td>
<td>0.1639</td>
<td>0.1439</td>
<td>0.0000</td>
<td>0.1150</td>
<td>0.5750</td>
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</table>

Table 3. Correlation between Variables

<table>
<thead>
<tr>
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<th>DPR</th>
<th>BR</th>
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<th>INVT</th>
<th>LC</th>
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<tr>
<td>BR</td>
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<tr>
<td>PROF</td>
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<td>0.4883</td>
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<td>0.2686</td>
<td>0.4155</td>
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</table>

Table 3 represents the correlations of the independent variable, and a correlation between the profitability (PROF) and investment opportunity (INVT) variables exists. This correlation may occur because greater opportunities (for the company) exist to invest as profits increase. However, according to Haron [14], because the correlation value is lower than 0.95, the collinearity of the variables does not matter. Therefore, all independent variables can be included in the regression.
The determination of the most suitable model, namely, among PLS, FE, and RE, uses three testing stages. The first test conducted was the LM test to choose between PLS and RE. The second test is the Hausman test to choose between the FE and RE models. The final test is the Chow test to ascertain which of the PLS and FE models is the correct one.

The regression results are listed in Table 4, for which the PLS estimation model is used for the DPR variable, and the RE model is used for the DYLD variable.

<table>
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<tr>
<td>BR</td>
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<tr>
<td>LIQ</td>
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<tr>
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<td>SIZE</td>
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<td>-0.4655**</td>
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<td>LEV</td>
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<tr>
<td>_cons</td>
<td>67.3173*</td>
<td>13.4772**</td>
</tr>
<tr>
<td>N</td>
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<td>85</td>
</tr>
<tr>
<td>adj. $R^2$</td>
<td>0.2260</td>
<td>0.0930</td>
</tr>
<tr>
<td>$R^2$</td>
<td>0.3091</td>
<td>0.1253</td>
</tr>
</tbody>
</table>

LM test 0.1147 0.0000
Hausman test 0.9327 0.3727
Chow test 0.7825 0.0000

VIF 2.5800 2.5800
Wald Test 0.0000 0.0000
Wooldridge Test 0.8392 0.1410

Standard errors in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$
For the DPR variable, the results of the LM test state that the PLS model is more appropriate than the RE model for a p-value > 0.05, such that H0 is not rejected. The Hausman test results show that the RE model is suitable because the p-value > 0.05, and H0 is not rejected. The Chow test results state that the PLS model is suitable because the p-value > 0.05, and H0 is accepted. In conclusion, the PLS model is used for the research.

For the DYLD variable, the results of the LM test state that the RE model is more appropriate to use because the p-value < 0.05, and H0 is rejected. Hausman test results show that the RE model is more suitable than the FE because the p-value > 0.05, and H0 is not rejected. The result of the correct Chow test model is FE because the p-value < 0.05; then, H0 is rejected. In conclusion, RE is the appropriate model to use.

Based on data from the table, no multicollinearity problem exists with the DPR or DYLD variables because the value of the variance inflation factor is less than 10 [5].

The heteroscedasticity test is next, which is conducted using the Wald test. Table 4 indicates that both the DPR and DYLD variables have a heteroscedasticity problem because the p-value < 0.05. Heteroscedasticity usually occurs with cross-section data, for which panel data are closer to the characteristics of the data section than time series data. However, if the heteroscedasticity assumption is not met, then the regression model can be considered invalid as an estimation model, which can be corrected using FGLS regression. After the FGLS regression, the results show that the data include homoscedasticity such that heteroscedasticity problems do not occur.

The last class assumption test conducted was to measure autocorrelation using the Wooldridge test. The results show a p-value > 0.05, indicating that the autocorrelation problem did not occur.

The $R^2$ results indicate that the independent variable can explain 30.91% of the DPR variable. Meanwhile, the independent variable only explained 12.53% of the DYLD variable. That is, many other influencing factors exist that are external to the model.

The PLS results show that the FCF, liquidity (LIQ), and investment opportunity (INVT) variables significantly affect the DPR variable. In accordance with the theory, FCF has a positive relationship with the DPR at the 5% level. These results are consistent with Labhane & Mahakud [5] and Jensen & Meckling [3]. Companies that generate more FCF can distribute more dividends to shareholders [5]. The same phenomenon also happened to the liquidity variable, which was positively correlated and in accordance with the initial hypothesis at the 1% level. These values are in line with theories written by Labhane & Mahakud [5] and Rój [1]. A higher liquidity ratio then shows relatively smaller debt compared with assets; therefore, the possibility of paying higher dividends is even greater [5]. However, investment opportunities are positively correlated with the DPR, which is not in accordance with the initial hypothesis at the 10% level. This finding is in line with Rój [1], who measured the effect of several variables on dividend payouts in Poland. Rój stated that despite having high investment opportunities, companies in Poland still had sufficient cash to pay dividends. This phenomenon may exist because Poland and Indonesia are still in developing markets, and the theories that apply to developed countries may not necessarily be in accordance with developing countries [1].

The results of the RE model show that asset tangibility (TANG) and company size (SIZE) are the variables that have a significant effect on the DYLD variables. Unlike the initial hypothesis, both are negatively correlated with dividend yield. These results are significant at the 10% level, which occurs for TANG, according to the research by Labhane and Mahakud [5] and Aivazian et al. [15]. This result is possible if companies that have many fixed assets in developing countries sometimes experience financial difficulties from the unavailability of short-term financing to cover working capital needs [5]. The results of the correlation are...
negative and significant at the 5% level for firm size variables, which is not in line with the research of Labhane & Mahakud [5] and Røj [1]. This finding indicates that small companies tend to pay even higher dividends. According to Zhang & Fu [16], these results are because of the characteristics of market capitalization in developing countries, the majority of which are small relative to global companies.

4 Conclusion

As a result, researchers observe a significant lack of support for the signal hypothesis and a capital structure with a dividend policy. In contrast, researchers observe a relationship between the FCF hypothesis and the life cycle. The FCF hypothesis is represented by three variables: FCF (significantly positive), asset tangibility (significantly negative), and liquidity (significantly positive). The life cycle hypothesis is represented by two variables: investment opportunity (significantly positive) and size (significantly negative).

In conclusion, the effect of the FCF hypothesis on dividend policy is supported by Fairchild et al. [2]; Labhane & Mahakud [5]; Bostanci et al. [17]; and Smith & Pennathur [18], whereas the influence of the company’s life cycle hypothesis on dividend policy is supported by Fairchild et al. [2]; Labhane & Mahakud [5]; El-Ansary & Gomaa [19]; and Hassani & Dizaji [20].

Researchers’ first suggestion for further research is to try other variables outside of those covered in this study. Thus, it is expected that the R-square value will increase and make the research model more descriptive of the various factors that influence the dividend policy of Indonesian companies as a whole. One variable that can be considered is the share ownership of the board of directors (directors and commissioners). It is expected that the increasing number of shares owned by the directors will also increase the company’s dividend payments due to agency problems. In addition, it would be better if the research further investigated by separating the categories based on stand-alone companies and companies that are in a group (corporations). This is expected to affect dividend policy because corporations are more likely to hold back the parent company’s profit and distribute them to its subsidiaries that need additional capital. Another variable that can be further elaborated on is the companies’ life cycle stages. The second suggestion is to increase the research period, so that researchers can discuss trends in dividend policy in Indonesia.

<table>
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<th>Variable</th>
<th>Expected</th>
<th>Result</th>
<th>Level of Significance</th>
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<td>positive</td>
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</tr>
<tr>
<td></td>
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<tr>
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</tr>
<tr>
<td>Life Cycle</td>
<td>Investment Opportunity</td>
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<td>positive</td>
<td>10%</td>
</tr>
<tr>
<td></td>
<td>Size</td>
<td>positive</td>
<td>negative</td>
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A summary of the final results shows that the theory that affects the company’s dividend policy in Indonesia is the theory of FCF and the life cycle theory of the company. The effect of the FCF theory on dividend policy is supported by Fairchild et al. [2]; Labhane & Mahakud [5]; Bostanci et al. [17]; and Smith & Pennathur [18]. FCF is generally used as a relatively
appropriate benchmark to understand the state of the company because this component is more difficult to manipulate. Investors use the theory of FCF to determine how efficient a company is with its use of cash and to determine whether the company has enough cash to pay dividends.

The application of the company’s life cycle theory to dividend policy is supported by Fairchild et al. [2]; Labhane & Mahakud [5]; El-Ansary & Gomaa [19]; and Hassani & Dizaji [20]. Companies that are still in the developing stage will invest large amounts of money, forcing them to increase their sources of capital from external financing. As a result, companies will skimp, possibly by not paying dividends. Mature companies have stable profits and investment opportunities, encouraging companies to subsequently distribute profits in the form of dividends.

References


CSR and Tax Aggressiveness: The Moderation Role of Risk Management

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Universitas Negeri Semarang, Indonesia¹, ², ³, ⁴, ⁵

Abstract. This study aims to examine the effect of CSR on tax aggressiveness of non-financial companies in Indonesia. This study also aims to examine the moderation role of risk management in the effect of CSR on tax aggressiveness. This study uses secondary data sourced from Indonesia Stock Exchange (IDX) and firms’ website amounted to 342 firm-years covering 2013-2018. The data then processed using balanced panel regression with STATA 12 Software. The result shows that there is no significant effect of CSR on tax aggressiveness. The result also shows that risk management moderate the effect of CSR on tax aggressiveness. This study is useful for industry in making CSR reporting and tax aggressiveness strategy. This study also useful for tax authority in evaluating the risk of tax aggressiveness through CSR reporting.

Keywords: CSR, Risk Management, Tax Aggressiveness.

1 Introduction

Companies are not only required to provide optimum value for shareholders, but also are required to provide value added for all stakeholders, includes community and the environment. The concept of social responsibility rests on the notion that companies not only have economic and legal obligations, but also have responsibilities to society. Government through Law No. 40 of 2007 and OJK Kep-431/BL/2012 regulations require all companies listed on the Indonesia Stock Exchange (IDX) to report on corporate social activities in annual reports. CSR becomes an important thing for business organizations to realize their commitment in establishing relationships with internal and external stakeholders of the company.

Most of Indonesia's state revenue comes from taxes. There are differences in interests between the government as a tax collector and companies as taxpayers. The company tried to pay taxes as minimum as possible to maximize profits, namely tax aggressiveness.

Tax aggressiveness is an act of manipulation in reducing taxable income through tax planning, whether in the form of tax evasion or not [1]. It is feared that the act of tax aggressiveness encourage management to be opportunistic if it is done without regard to the long-term sustainability of the company [2]. Companies that carry out tax aggressiveness are companies that do not have social responsibility [3]. CSR activities can be considered as a benchmark for determining the sustainability of a company.
The level of CSR activities varies by company. The higher the company's awareness of the importance of CSR, the company should also have a high awareness of the importance of taxes for the community. The high activity of CSR is expected to negatively affect the level of corporate tax aggressiveness. CSR is considered to represent the level of corporate awareness. Responsible CSR activities will make companies more comply with regulations by not being involved in tax aggressiveness [4][5]. CSR is negatively related to Effective Tax Rate (ETR) and positively related to tax lobbying expenditure (positively affecting tax avoidance) [6].

Previous research related to the effect of CSR on tax aggressiveness still shows different results. CSR has a negative effect on tax aggressiveness shown by the research results of Lanis and Richardson's [3], Hoi et al. [7], Lanis & Richardson [8], Qodратурасыйд [9], Karthikeyan & Jain [10], Shafer & Simmons [11], and Zeng [12].

However, other studies have found that CSR has a positive effect on tax aggressiveness [13]. Other studies conclude that CSR activities have no effect on tax aggressiveness [14][15]. The company continues to carry out tax aggressiveness despite CSR, especially countries that have transactions in tax haven countries [14][15][16].

On the other hand, CSR is used to avoid company’s tax obligations or to cover its opportunistic behavior in avoiding taxes. Companies that avoid tax have a higher level of CSR disclosure to maintain the legitimacy of the company's operational activities and cover the company's opportunistic behavior [17].

CSR activities is a form of responsibility, not a way to avoid company’s tax obligations. Therefore, effective supervision is needed through the mechanism of Corporate Governance (CG) in the company [8]. One of the CG mechanisms that is expected to influence the relationship of CSR and tax aggressiveness is risk management. The CG mechanism through effective risk management is a way to reduce tax aggressiveness. Risk management is expected to be able to maintain the consistency of CSR activities as a form of responsibility, not as a form of tax aggressiveness because it can potentially lead to tax compliance issues [9].

Global Reporting Initiatives (GRI) [18] states that tax payments are a positive contribution to people's welfare. However, some companies have argued in their sustainability reports that tax payments reduce social welfare. Minimum tax payments increase economic development [6].

Companies may consider tax payments as a reduction in public welfare because tax payments can reduce innovation, job growth and economic development [19]. Profit institutions are more efficient than governments in allocating resources [20]. Smaller tax payments can make social benefits higher.

Previous research that show inconsistent result suggest that there are other variables that influence the relationship between CSR and tax aggressiveness. This study aims to examine the effect of CSR on tax aggressiveness and to examine the moderating effect of risk management on the effect of CSR on tax aggressiveness.

The inconsistency of the results of previous studies encouraged researchers to test a variable that might moderate the influence of CSR to Tax Aggressiveness. The object of this research is Indonesia with the intention of analyzing the differences in the research context compared to previous research and enriching the literature (different law enforcement and still developing capital markets), thus causing differences in CSR activities and tax aggressiveness.

To strengthen the development of hypotheses and analysis of the results of this study, we use corporate culture theory to examine the effect of CSR on tax aggressiveness. The study
took a sample of companies in the non-financial industry which are listed on the Indonesia Stock Exchange with an observation year 2013-2018. Data sources used are secondary data in the form of annual reports and sustainability reports.

This study contributes to academics by adding literature about CSR, tax aggressiveness, and risk management. This study also contributes to industry in formulating CSR and tax planning strategy. For tax authority, this study could be used in evaluating the risk of tax aggressiveness through CSR activity.

The remaining section of the paper discussed about literature review and hypothesis development, methodology, result and discussion, conclusions, and suggestions.

2 Literature Review

This section discusses about theory, hypothesis development, and research framework used in this study.

2.1 Corporate Culture Theory

This theory is used to analyze the effect of CSR on tax aggressiveness. All company decisions must reflect the value of right behavior, so it results negative relationship between CSR and tax aggressiveness [21]. Companies should not be involved in activities that can have negative consequences on society.

The company carries out CSR activities for the welfare of various stakeholders including shareholders, employees, customers, suppliers, regulators, creditors, and the community. If the government is also considered as part of these stakeholders, then tax aggressiveness should be being inconsistent with CSR activities. Therefore, if corporate culture drives corporate decisions, then socially responsible companies have a low level of tax aggressiveness.

Stakeholders are those who influence or are affected by company’s policies and operational activities [22]. To accommodate the interests of other stakeholders, company initiations have emerged in the form of social activities by targeting other stakeholders besides shareholders such as employees, suppliers, government, consumers, the environmental community and the community around the company carrying out its operations.

Although ethically CSR can be said to be one of the symbols of corporate ethics [22], other studies Lanis & Richardson [23] have found that CSR is used by companies to cover up unethical actions such as corporate tax avoidance practices. But departing from corporate culture theory and the influence of CSR disclosure by companies, this study will refer to corporate culture theory as has been done by Lanis & Richardson [8] and Bozzolan et al. [24] and Col & Petal [21].

2.2 Hypothesis Development

Tax aggressiveness is carried out for the benefit of shareholders without considering the negative impact on other stakeholders such as government and society [25]. Tax aggressiveness is considered unethical and irresponsible by the community and other stakeholders [26]. Reputation is very important as a legitimacy strategy [27]. The company is expected to provide information on CSR activities as a voluntary disclosure for related parties to increase legitimacy through maintaining its reputation [28]. Companies are expected to be
more careful in carrying out tax aggressiveness Lanis & Richardson [3] to maintain their reputation.

CSR activities and the fulfillment of tax obligations are still considered large expenses for companies so that many companies doing CSR activity to carry out tax aggressiveness actions to minimize their tax obligations [16]. This action is considered socially irresponsible and unacceptable [3]. Companies that carry out CSR are considered as ethical and responsible companies so that they have a good reputation [11].

Based on corporate culture theory, corporate decisions must reflect the value of right behavior resulting in a negative relationship between CSR and tax aggressiveness [21]. Companies should not be involved in activities that can have negative consequences on society. The company carries out CSR activities for the welfare of various stakeholders including the government. Tax aggressiveness is seen as being inconsistent with CSR activities. Therefore, socially responsible companies have a low level of tax aggressiveness.

Lanis and Richardson [3] conclude that the more corporate investment in social activities, the less likely the company is to avoid tax (study in Australia). Landolf [29] and Williams (2007) concludes that when companies take tax avoidance actions, public attention will lead to these unethical actions that damage the reputation and legitimacy that the company has built with the community and the surrounding environment.

Qodraturrasyid [9] conducted a study in Indonesia and found a negative relationship between CSR activities and tax aggressiveness actions. The risk management system has a role in moderating the relationship between CSR and tax aggressiveness (strengthening negative influences).

Increased CSR activities provide legitimacy through improved reputation (van der Laan, 2009). Companies are expected to have low level tax aggressiveness to maintain their reputation [3]. Laguir et al. [30] concluded that the higher the social dimension of CSR activities, the lower the level of tax aggressiveness; the higher the economic dimension, the higher the level of tax aggressiveness. Karthikeyan & Jain [10], Zeng [12], Lanis & Richardson [3], Hoi et al. [7] also concluded that there is a negative relationship of CSR to tax aggressiveness.

**Hypothesis 1: CSR has a negative effect on tax aggressiveness**

CSR activities and tax payments are a burden on the company. Both oversight mechanisms are needed, especially the board of commissioners in carrying out its supervisory role [8]. CSR activities and tax payments can be seen as ethical actions that benefit all stakeholders [31].

The risk management system is one way to assess the fairness of methodology and assumptions in compiling accounting and taxation information. With the implementation of a comprehensive risk management system, reporting CSR activities and fulfilling tax obligations will be higher quality.

Companies with more effective risk management systems should tend not to be involved in financial reporting fraud, for example management is not being optimistic by choosing CSR based solely on income tax deduction aspects. In Indonesia, provisions relating to CSR activities as an aspect of income tax deduction are specifically regulated in PP No. 93 of 2010 concerning Deductible Donations from Gross Income. The effect of CSR activities in reducing tax aggressiveness is strengthened by the application of effective risk management. The risk management system has a role in moderating the relationship between CSR and tax...
aggressiveness (strengthening negative influences).

**Hypothesis 2: Risk Management moderate the effect of CSR on tax aggressiveness**

### 2.3 Research Framework

Figure 1 shows the research framework used in this study.

![Research Framework Diagram]

**Fig. 1. Research Framework**

### 3 Research Methods

This research paper uses empirical approach. The secondary data was analyzed using panel regression with STATA software. Population used in this study is non-financial firms listed in Indonesia Stock Exchange (IDX) year 2013-2018 while the samples are chosen by using some criteria (table 1). The data were collected by using documentation techniques.

Equation 1 shows the research model refers to Davis et al. [6] with adjustment in control variable:

\[
TaxAg_{i,t} = \alpha + \beta_1 CSR_{i,t} + \beta_2 CSR \times RM_{i,t} + \beta_3 RM_{i,t} + \beta_4 LEV_{i,t} + \beta_5 SIZE_{i,t} + \beta_6 CAPINT_{i,t} + \beta_7 ROA_{i,t} + \beta_8 MBV_{i,t} + \beta_9 invINT_{i,t} + \varepsilon_{i,t} \tag{1}
\]

Table 2 shows the variable definition and operationalization used.

<table>
<thead>
<tr>
<th>Table 1. Sampling Criteria</th>
<th>Number of samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing firms 2013-2018</td>
<td>781</td>
</tr>
<tr>
<td>Unbalanced samples elimination</td>
<td>(325)</td>
</tr>
<tr>
<td>No Financial statement</td>
<td>(42)</td>
</tr>
<tr>
<td>USD currency reporting</td>
<td>(66)</td>
</tr>
<tr>
<td>Annual report could not be read by</td>
<td>(6)</td>
</tr>
</tbody>
</table>
Table 2. Variable Definition and Operationalization

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition and Operationalization</th>
</tr>
</thead>
</table>
| $TaxAg_{i,t}$ | Tax aggressiveness. Proxies: 
1. Total BTD (Manzon & Plezko; 2002) 

$$Total \ BTD_{i,t} = \frac{AI_{i,t} - TI_{i,t}}{Asset_{i,t-1}}$$ 
Total BTD$_{i,t}$ = Total book tax difference 
$AI_{i,t}$ = Accounting income/pretax book income 
$TI_{i,t}$ = Taxable income 
$Asset_{i,t-1}$ = Total asset t-1 
2. Permanent BTD (Manzon & Plezko; 2002; Khurana and Moser, 2009) 

$$Permanent \ BTD_{i,t} = \frac{AI_{i,t} - TI_{i,t} - TempDiff_{i,t}}{Asset_{i,t-1}}$$ 
$Permanent \ BTD_{i,t}$ = Permanent book tax difference 
$TempDiff_{i,t}$ = Temporary difference 
3. ETR [32] 

$$ETR_{i,t} = \frac{CTE_{i,t}}{AI_{i,t}}$$ 
$ETR_{i,t}$ = Effective Tax Rate 
$CTE_{i,t}$ = Current Tax Expense 
$AI_{i,t}$ = Accounting Income/Pretax Book Income 
Low level of ETR shows high level of tax aggressiveness. ETR value times by -1 to accommodate this relationship. |
| $CSR_{i,t}$ | Corporate Social Responsibility, measured by using Nvivo query result. |
| $RM_{i,t}$ | Risk Management, dummy variable 1 if companies stated that risk management system have been effectively conducted in all material respect in their annual report. |
| $LEV_{i,t}$ | Leverage, total debt divided by total asset |
| $SIZE_{i,t}$ | Company size, natural logarithm of total asset |
| $CAP1NT_{i,t}$ | Capital intensity: property plant and equipment divided by total asset |
| $ROA_{i,t}$ | Return on Asset: net income divided by total asset |
| $MBV_{i,t}$ | Market to book value ratio |
| $INVINT_{i,t}$ | Inventory intensity: inventory divided by total asset |
4 Results and Discussion

Table 3 shows the descriptive statistic result of the data.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>TaxAg (BTD)</td>
<td>-0.0899</td>
<td>0.0994</td>
<td>0.0047</td>
<td>0.0309</td>
</tr>
<tr>
<td>TaxAg (Permanent BTD)</td>
<td>-0.1433</td>
<td>0.1597</td>
<td>0.0081</td>
<td>0.0500</td>
</tr>
<tr>
<td>TaxAg (ETR)</td>
<td>-3.4529</td>
<td>2.7735</td>
<td>-0.3937</td>
<td>1.0124</td>
</tr>
<tr>
<td>CSR</td>
<td>0</td>
<td>0.2566</td>
<td>0.0543</td>
<td>0.0512</td>
</tr>
<tr>
<td>LEV</td>
<td>0</td>
<td>0.6444</td>
<td>0.1508</td>
<td>0.1637</td>
</tr>
<tr>
<td>SIZE</td>
<td>25.2953</td>
<td>33.3415</td>
<td>28.5590</td>
<td>1.7469</td>
</tr>
<tr>
<td>CAPINT</td>
<td>0.0358</td>
<td>1.3983</td>
<td>0.4748</td>
<td>0.1012</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.1103</td>
<td>0.3433</td>
<td>0.0794</td>
<td>0.0859</td>
</tr>
<tr>
<td>MBV</td>
<td>-9.7615</td>
<td>16.3374</td>
<td>3.1787</td>
<td>4.3088</td>
</tr>
<tr>
<td>INVINT</td>
<td>0.0141</td>
<td>0.6306</td>
<td>0.2156</td>
<td>0.1380</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>% no. of sample with RM=1</th>
<th>% no. of sample with RM=0</th>
</tr>
</thead>
<tbody>
<tr>
<td>RM (dummy variable)</td>
<td>39.18%</td>
<td>60.82%</td>
</tr>
</tbody>
</table>

Source: Stata Output, 2020.

The result of classic assumption test shows that the data is normal where the significance value is 0.312, more than 0.05. Multicollinearity test shows VIF value <10 and tolerance value > 0.01, so that all independent variables are free from multicollinearity problem. Heteroscedasticity test performed with the White test shows that the data are free from heteroscedasticity problems. Autocorrelation testing proof that the data are free from the autocorrelation problem.

Adjusted R square of 0.442 means that the variation of CSR and risk management as a moderating variable can explain the variation of tax aggressiveness as much as 44.2%, while remains (55.8%) are caused by other variables. Table 4 below shows regression result of CSR effect on tax aggressiveness with 3 different proxies: ETR, BTD, and Permanent BTD.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>-</td>
<td>-1.101</td>
<td>0.263</td>
<td>-0.058</td>
<td>0.112</td>
<td>-0.777</td>
<td>0.155</td>
</tr>
<tr>
<td>RM</td>
<td>-</td>
<td>-0.125</td>
<td>0.227</td>
<td>-0.000</td>
<td>0.463</td>
<td>-0.001</td>
<td>0.440</td>
</tr>
<tr>
<td>CSR*RM</td>
<td>+/-</td>
<td>1.457</td>
<td>0.098*</td>
<td>0.081</td>
<td>0.074*</td>
<td>0.122</td>
<td>0.094*</td>
</tr>
<tr>
<td>LEV</td>
<td>+</td>
<td>-0.250</td>
<td>0.010***</td>
<td>0.004</td>
<td>0.010***</td>
<td>-0.003</td>
<td>0.010***</td>
</tr>
<tr>
<td>SIZE</td>
<td>+</td>
<td>0.326</td>
<td>0.000***</td>
<td>-0.006</td>
<td>0.000***</td>
<td>-0.013</td>
<td>0.000***</td>
</tr>
<tr>
<td>CAPINT</td>
<td>+</td>
<td>0.358</td>
<td>0.000***</td>
<td>0.000</td>
<td>0.000***</td>
<td>-0.002</td>
<td>0.000***</td>
</tr>
<tr>
<td>ROA</td>
<td>+</td>
<td>-0.251</td>
<td>0.000***</td>
<td>0.088</td>
<td>0.000***</td>
<td>0.148</td>
<td>0.000***</td>
</tr>
<tr>
<td>MBV</td>
<td>-</td>
<td>-0.007</td>
<td>0.426</td>
<td>0.000</td>
<td>0.439</td>
<td>0.000</td>
<td>0.427</td>
</tr>
<tr>
<td>INVINT</td>
<td>-</td>
<td>-0.263</td>
<td>0.087*</td>
<td>-0.009</td>
<td>0.089*</td>
<td>-0.022</td>
<td>0.088*</td>
</tr>
<tr>
<td>N</td>
<td></td>
<td>342</td>
<td>342</td>
<td>342</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### 4.1 The Effect of CSR on Tax Aggressiveness

Based on Table 4 above, we can conclude that CSR do not affect tax aggressiveness. The result shows that there is no significant effect of CSR on tax aggressiveness in these 3 measurements. We can conclude that CSR do not affect tax aggressiveness. This result is inconsistent with corporate culture theory which states that company with high level of CSR will have low level of tax aggressiveness. Corporate culture theory suggests that if the government is also considered as part of stakeholders, then tax aggressiveness should be being inconsistent with CSR activities. Therefore, if corporate culture drives corporate decisions, then socially responsible companies have a low level of tax aggressiveness. This result also not in line with Garriga & Mele [22], Lanis & Richardson [8], Bozzolan et al. [24], Col & Petal [21], Hoi et al. [7], Qodraturrasyid [9], Karthikeyan & Jain [10], Shafer & Simmons [11], and Zeng [12].

This result is in line with the research of Wahyudi [14], Wijayanti et al. [15] and Rusydi and Siregar [16]. Companies that have high CSR activity do not necessarily have low level of tax aggressiveness. CSR cannot become an indicator of tax aggressiveness activity. This may happen because companies in Indonesia do CSR activities not driven by corporate culture but only to fulfill government mandatory. This also may happen because CSR activity in Indonesia is still voluntary in action. The company continues to carry out tax aggressiveness despite CSR, especially countries that have transactions in tax haven countries [14][15][16].

### 4.2 The Moderation Role of Risk Management in the effect of CSR on Tax Aggressiveness

Risk management can moderate the effect of CSR on tax aggressiveness. The risk management is proven to strengthen the effect of CSR on tax aggressiveness. Implementation of a comprehensive risk management system makes the quality of CSR reporting and tax obligations fulfillment becomes higher. Companies with more effective risk management systems should not tend to be involved in financial reporting fraud, for example management is not being optimistic by choosing CSR based solely on income tax deduction aspects. The effect of CSR activities in reducing tax aggressiveness is strengthened by the application of effective risk management. The risk management system has a role in moderating the relationship between CSR and tax aggressiveness. This result is in line with the research of Qodraturrasyid [9].

### 5 Conclusion

The result of this study shows that CSR do not affect tax aggressiveness while risk management can moderate the effect of CSR on tax aggressiveness. This study is limited in terms of period observation (2013-2019). The impact in the long run needs to be examined further. CSR is measured using NVivo scoring with keywords generated from GRI G4 guidelines. Others CSR measurement tool such as manual scoring needs to be used to know
whether it affects the result. Other studies examine the reverse relationship of tax aggressiveness towards CSR and simultaneous relationships among them. These relationships need to be examined further.

5.1 Funding
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References


Does Corporate Social Responsibility Determine the Stock Return of Indonesian Listed Firms?

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{Joseph_lie@sbm-itb.ac.id¹}

Institut Teknologi Bandung, Indonesia¹,²

Abstract. As CSR becomes a company’s obligation in Indonesia, question arises whether or not CSR will impact the return of listed companies. This research focus on testing CSR as a risk factor to help explain the stock return of listed companies in Indonesia by using KOMPAS100 companies. The methodology used in this research is Multi Linear Regression by regressing excess return (\( \text{Ri} - \text{Rf} \)) with 3 portfolio returns which are CSR Expense portfolio, Sri-Kehati Portfolio Return, and CSA Portfolio return. CSR Expense portfolio is formed by grouping the top 10% highest and 10% lowest CSR expense from the KOMPAS 100, the return of the portfolio is calculated by extracting HighCSR return from LowCSR as the researcher expects from previous studies that High CSR leads to lower return. The result of the regression indicates that CSR expense cannot explain the stock return significantly. However, the result is significant when using sustainability portfolio such as Sri-Kehati and CSA. This leads to conclusion that CSR is a significant risk factor that can be used to explain stock return, but in valuing the CSR of a company, CSR expense cannot be used as a single measurement, it has to include other aspect aside from expense alone.

Keywords: CSR, Portfolio, Return, Risk Factor, Multi Linear Regression.

1 Introduction

Corporate Social Responsibility (CSR) is a mandatory program that had to be done by companies that is according to Indonesian Law number 40 subsection 74 in 2007 about limited company, social responsibility, and the environment that is relevant to the company that runs the business and is affecting the natural resources and is not limited by its contribution that is also loaded on the financial report.

CSR is only good parties that is not bearing the expense of the CSR which means that a good news from CSR is not a good news for shareholder since they are the one that bear the cost [1]. There are studies that suspect CSR as only beneficial for managers that get good reputation from key stakeholder, however the cost used for CSR is not good for holder of share because they lost some of their retained earnings, this perspective was first popularized by Milton Friedman on its post said that ‘The only responsibility of corporations is to make profits’ (New York Times Magazine, 1970). However, there is another perspective of CSR from several researchers such as Edmans [2], Dimson, Karakas, and Li [3], Derwall, Guenster, Bauer and Koedijk [4], Flammer [5], Servaes and Tamayo [6], or Dowell, Hart and Yeung [7] where they stated that managers simply do CSR because these projects are perceived to have positive NPV and will increase shareholder wealth. Systematically, CSR means better image
of a company, a better image will create better exposure creating bigger market thus leading to higher profitability business and in the end increase shareholder’s wealth by increasing the stock price of the company, this assumption however has yet to be proven since the correlation of CSR and return is still unclear Ullmann [8].

This research is inspired by the Capital asset pricing model first developed by Sharpe and Lintner in 1964 and 1965 [9]. They suspect that the expected return of a stock can be calculated using a single variable called beta. However, in 1993 Eugene F. Fama and Kenneth R. French developed new variables to the existing CAPM model which will later be called the Three-Factor asset pricing model of Fama and French [10]. Fama and French model added additional variables of Small Minus Big (SMB) and High Minus Low (HML) to measure the size premium and value premium. Following the publish in 1993, Fama and French model had been challenged by other professional claiming that the three-factor model miss some important things, thus in 2014 Fama and French published a new model, The Five-Factor Asset Pricing Model [11]. The Five-Factor asset pricing model still uses the original 3 factors; SMB, HML and Market risk, but they added 2 additional factors to it which are profitability factor Robust Minus Weak (RMB) and investment factor Conservative Minus Aggressive (CMA). Learning from the research published by Fama and French [11], the researcher realise that they did not consider CSR as part of their formulation to explain return of stock, while on this era, brand image is something that is for sure affecting the stock price of a listed company and brand image can be correlated with CSR. Thus, triggering the researcher to study more about it.

The furthest studies related to this topic are done by several researchers in Indonesia that studies about the correlation of CSR to the corporate performance of listed company in Indonesia, there is however a study in China about Can CSR reduce stock price crash risk? Evidence from China's energy industry [12]. The study by Wu & Hu [12] focused on finding the evidence that CSR can reduce the risk of a stock price to crash, their study suggest that energy companies in China should invest more on their CSR to reduce their crash risk since good CSR send signal to investor that the management are not sending any bad news resulting in the investor to hold or buy the stock. Another study was also published by Ding, Ferreira, and Wongchoti [13] which suggest that value impact of CSR activities relies heavily on the industry-specific relative position of the firm [13]. Their study might not be directly related to this paper but their findings and methodology can be used in this paper as what both paper study about is the same, CSR on stock price. There is also one research from an undergraduate student from Indonesia that analyse the effect of CSR on the profitability of listed companies in mining industry in Indonesia [14], they conclude that there is no significant influence between profitability to CSR disclosure, it is however very limited to the scope of only mining industry.

The researcher tested CSR factor because CSR in the long run is an important factor for companies as explained by Caroline Flammer [15] in her study regarding environment awareness of shareholders. Dumitru et al. [16] also said in their study that CSR had impact on the stock return of a firm in Bucharest which led to the idea to test the factor in Indonesia.

1.1 Research Question and Objective

RQ1: How is the CSR performance of Indonesian listed firms during the period of 2015 to 2018?
RQ2: Is CSR another risk factor in CAPM that may determine the stock return of Indonesian listed firms?
RO1: To find whether CSR performance may improve the CAPM to explain the stock return of Indonesian listed firms.

2 Literature Review

2.1 Efficient Market Hypothesis (EMH)

The concept of EMH has been evolving for years in finance industry, the concept explains that all asset’s pricing in the market are ‘efficient’ meaning that it has reflect all the information available about the asset. This theory suggest that an investor cannot get extra return compared to others, or they can’t defeat the market. This means that to get higher return would be to take higher risk asset [17]. This also means that no matter what model is used to calculate the excess return of an assets, the expected return of all model should be the same due to the same available information about the asset on the market [18]. EMH suggests that with all the available information of an asset, there could possibly be no abnormal return of a stock.

2.2 Corporate Social Responsibility (CSR)

The concern of CSR is to treat the stakeholders of the firm with ethic. Ethic means stakeholders getting treated in a manner that is accepted by civilized societies. Economic responsibility is included in Social. Stakeholders exist either within or outside a firm. Even the natural environment is considered as stakeholder. The bigger achievement of social responsibility is to achieve higher and higher standards of living, while keeping on preserving the profitability of the firm, for people both within and outside the firm [19]. So, CSR is moral behaviour of the company to their stakeholders. With numerous of understanding of CSR, there is not a single accepted term for it.

2.3 Capital Asset Pricing Model (1964)

Capital asset pricing model (CAPM) is a theory initially stated by Fama & French in 1964 by Sharpe and Lintner [9] in their research Capital Asset Prices: A Theory of Market Equilibrium under Conditions of Risk where they suspect that the return of a stock can be predicted using a single measure called Beta. Beta is the variable to measure the sensitivity of a stock towards the market [10].

The CAPM model later evolved by Fama and French with added variables in 1993 and 2015. The risk-free rate refers to the government bond risk and the market premium refers to the expected return of market.

2.4 Fama and French 3 Factor model Model (1993)

In 1993, Fama and French published a study about additional variables that should be included in the original Sharpe CAPM model, those variables are Size and Book-To-Market equity. Fama and French result shows that these additional variables indeed show the return of a stock compared to its market.

The results are easy to summarize. Stocks and portfolios that mimic risk factors constructed by manager that is related to size and book to market value of equity have the capability to capture high common variation in terms of return, regardless of the time-series regression method. This can be proof that both size and book to market value of equity do have proxy for correlation to common risk factors in terms of stock returns, Even furthers,
Fama and French [10] also examine the interception of three-factor regression which in the calculation include the excess market return and the similar returns for size and book to market equity value factors that are close to 0. That, indicate that a market factor and the proxies developed by Fama and French [10] which includes size and book to market equity value can be concluded to have explained the cross-section of average stock returns in a good way [10].

2.5 Fama and French Five-Factor Model (2015)

On 2015, Fama and French published their research on yet another 2 additional variables to consider at Capital Asset Pricing Model after getting critics, The evidence from Novy Marx [20], Titman, Wei, and Xie [21], and others says that it is not a perfect model for excess because much of the variation is missed by the three factors. Triggered by the evidence and the valuation, French and Fama add profitability and investment factors to the three-factor model [11].

In the equation, RMW is the difference of the return from stock consisted in diversified portfolio with Robust for firm with high profitability and weak for firm with small profitability ,and CMA is the difference of the return from stock consisted in diversified portfolio with conservative for firm with low portion of retained earnings for expansion while aggressive is for firm with high portion of retained earnings for expansion [11]. Fama and French expect two interpretations of hypothesis of nun intercept. Looking up on Huberman and Kandel [22], is the first to say that the MVE tangency portfolio, which prices every available asset, combines the risk-free asset, the market portfolio, SMB, HML, RMW, and CMA. The proposed idea become more complicated as the equation for regression of a version of Merton’s [23] framework where there is more than three not-specified state var leads to excess return that is not gotten by market factors. In this view, neither size nor book to market value nor operating profit nor investment are stated as state variables. What is not considered state variable mimicking portfolios are RMW, CMA, HML and SMB. Fama demonstrate that the variables are only portfolio consisted with diversified composite of disclosure to variable of unknown state. Supporting previous factors, the factor spans what is known as relevant multi factor efficient set. In this case, valuation role is to indicates the factors that will allow the researcher to get the glimpse of excess return effects from state variables without needing to know them [11].

2.6 Sri-Kehati Index

Sri-Kehati Index is an index listed in Indonesian stock exchange that is form by 25 companies that are categorized to have good sustainable and responsible investment (IDX.com). The index is form by IDX with collaboration from Yayasan Keanekaragaman Hayati Indonesia.

2.7 Centre for Entrepreneurship, Change and Third Sector (CECT) Sustainability Award

CECT is a study center under the university of Trisakti that is also a consultant for CSR in Jakarta. The goal of this study center is to award those who had comply to the ISO 26000 or the standard procedure for Corporate Social Responsibility (CECT official Website). CSA (CECT Sustainability Award) is the annual award given by CCET to companies that has been doing great on their CSR.
2.8 Development of Hypothesis

Based on the literature review and previous study done by the researcher, the researcher wants to test whether or not CSR performance does impact return. With the understanding of EMH, the researcher wanted to test if CSR information regarding a company can act as a risk factor that will add the risk of an asset, or in this case a stock, which will later explain the expected return of the stock. The H0 and H1 are declared as:

\[ H_0 = \text{CSR as a risk factor may not explain the stock return of Indonesian listed firms.} \]

\[ H_1 = \text{CSR as a risk factor may explain the stock return of Indonesian listed firms.} \]

3 Research Method

3.1 Data Collection Method

To collect the monthly return of market and monthly return of stocks, the researcher download the data of monthly market and stocks price in form of excel via Yahoo Finance, the return will then be calculated by using the equation of the current month price minus the previous month price divided by the previous month price using the Adjusted Close data from Yahoo Finance.

To collect the data of risk-free rate, 10Y Gov-Bond monthly data is used. The researcher used data available from CNBC Indonesia website, the researcher considers using data from Indonesian Bond Pricing Agency (IBPA) website, however the data of 10Y Gov-Bond from 2017 is unavailable, there is only 1-year data.

The CSR Expense data is collected though the annual report of the companies listed in KOMPAS100 Feb-July period. Some companies have their CSR Expense data in the dollar currency (usually Mining-Industry companies), the exchange rate used by the researcher is $1: IDR14000. The CSR Expense data that is collected from the companies ranging from 2015 to 2018, because majority of the 2019 data were still unavailable at the moment this research was done. The CSR Expense data will then be group, the 10% top and bottom of the group each year will be used to form another portfolio called LowCSR and HighCSR where their return will be calculated by averaging the return of stocks listed in the portfolio.

To form the portfolio for Sri-Kehati and CSA, the researcher collects the Sri-Kehati and CSA award winner data from their official website (Sri-Kehati and CSA website), and then choose companies that is consistently being awarded from 2015 to 2019, the selected will then form a portfolio where the return of the portfolio will be based on the average of the stocks listed on the portfolio. The portfolios are form based on consistency due to different reason each. As for Sri-Kehati, because there is changes of 0 to 2 companies each year, the researcher expect that the difference will be insignificant even when using consistent portfolio, hence the reason. While for CSA, the rewarding of CSA is very different each year, on 2015 there are more than 20 companies awarded while on 2017 there is less than 10 companies awarded. The formatting reward each year is also different which makes it unfair if the portfolio is form solely on awarded companies each year, thus causing the researcher to form consistent portfolio. After the portfolio is formed, the return of the portfolio will be calculated monthly using the same method as calculating stock’s return mentioned above.
3.2 Data Analysis Method

To analyse the data, researcher is going to use multiple linear regression method to understand if CSR can affect return with CAPM as the reference. The reason the model is using LowCSR minus HighCSR is because the researcher expect companies with lower CSR cost has higher risk compared to companies with higher CSR cost, this expectation is supported by the literature review by Lee and Faff at 2009 [24] where they stated that companies with high CSR performance have smaller market risk. Applying EMH, high CSR companies leads to lower return since it has lower risk while low CSR companies leads to higher return since it has higher risk. The multiple linear regression model is illustrated as follow.

\[ R_{it} - R_{it} = a_1 + b_1 (R_{mt} - R_{ft}) + c_1 \left( \frac{(\text{LowCSR} - \text{HighCSR})/(\text{Sri-Kehati Portfolio Return})/(\text{CSA Portfolio Return})} \right) + e_{it} \]

3.3 Measurement of each variables

- \( R_i \): Monthly return of the selected stock.
- \( R_f \): Monthly return of 10Y government bond (data starts from June 2015, January to May 2015 is assumed to be same with June 2015 due to unavailability of data)
- \( R_m \): Monthly return of IHSG
- \( \text{LowCSR} \): Excess of portfolio with the 10% lowest CSR expense.
- \( \text{HighCSR} \): Excess of portfolio with the 10% highest CSR expense.
- \( \text{Sri-Kehati Portfolio Return} \): The average of stocks returns listed on the Sri-Kehati portfolio formed (explained in Data Collection Method)
- \( \text{CSA Portfolio Return} \): The average of stocks returns listed on the CSA portfolio formed (explained in Data Collection Method)
- \( e_{it} \): Error

3.4 Test Statistic Procedure

The Test Statistic Procedure used in this research will be using Stata. The data will be served in a comprehensive table in an excel, the data are consisted with \( R_i-R_f \), \( R_m-R_f \), \( \text{LowCSR}-\text{HighCSR}/\text{Sri-Kehati Portfolio Return}/\text{CSA Portfolio Return} \), company code, and year. The data will then be run using standard multiple linear regression. To further understand the data, the researcher will then transform the data as a panel data by using company code as the panel ID and month as the time. After transforming the data into panel set, researcher will run the data using Fixed Effect Regression model and Random Effect model, the result of both will then be tested using Hausman test to validate which model is more proper. The result from the more proper model based on Hausman test will then be used for the analysis.

4 Result and Discussion

4.1 Panel Result Discussion

The researcher performs 3 correlation tests which are CSR Expense, Sri-Kehati Portfolio, and CECT Sustainability Award. Both Sri-Kehati and CSA are correlated positively, with CSR Expense as the only variable to be negatively correlated. All variables are tested with the Ri-Rf and Rm-Rf of the 61 companies mentioned before.
4.2 CSR Expense and Stock Return

<table>
<thead>
<tr>
<th>Table 1. The Linear Regression</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
</tr>
<tr>
<td>Rm-Rf</td>
</tr>
<tr>
<td>LowCSR-HighCSR</td>
</tr>
<tr>
<td>Constanta</td>
</tr>
</tbody>
</table>

With a total of 2867 number of observation, the R^2 of this model is 8.34%, table 6 shows that linear regression result of LowCSR-HighCSR portfolio is not really significant in terms of reflecting the return of the stock since the P value is higher than 5% or 12.5%, and R square is very low or only 8.34%.

Using Hausman test to confirm the most appropriate test for this variable, the researcher found that Fixed effect is more suitable. So, the result for the fixed effect regression can be seen on table 2.

<table>
<thead>
<tr>
<th>Table 2. The fixed effect regression</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
</tr>
<tr>
<td>Rm-Rf</td>
</tr>
<tr>
<td>LowCSR-HighCSR</td>
</tr>
<tr>
<td>Constanta</td>
</tr>
</tbody>
</table>

The result from above confirms that LowCSR-HighCSR portfolio indeed is not a significant variable to explain return of the 61 stocks. Because the factor is not a significant factor, the previous CAPM model still remains as the significant one.

4.3 Alternative Test using Sri-Kehati Portfolio

<table>
<thead>
<tr>
<th>Table 3. The linear regression for Sri-Kehati Portfolio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
</tr>
<tr>
<td>Rm-Rf</td>
</tr>
<tr>
<td>Sri-Kehati Portfolio</td>
</tr>
<tr>
<td>Constanta</td>
</tr>
</tbody>
</table>

Table 3 shows that Sri-Kehati portfolio return is correlated with the return of the 61 companies used before since its P value is lower than 5%. The positive coefficient also shows that they are positively correlated with expectation that for every increase of 1 percent in Sri-Kehati Portfolio return, the return Ri-Rf may increase by 0.7.

Hausman test result shows that Sri-Kehati Portfolio is better explained by Random effect regression rather than fixed effect. The result is shown table 4.

<table>
<thead>
<tr>
<th>Table 4. Result shows that Sri-Kehati Portfolio is better explained by Random effect regression rather than fixed effect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
</tr>
<tr>
<td>Rm-Rf</td>
</tr>
</tbody>
</table>
Sri-Kehati Portfolio 0.705153 0.119681 0.000 0.470580 0.939725
Constanta 0.000099 0.002796 0.972 -0.00538 0.005579

Similar with Linear regression, the random effect regression shows that the return of Sri-Kehati portfolio can significantly explain the return of the 61 companies. The regression result indicates that the Constanta is insignificant in the model which leads to the EMH theory that suggest there is no abnormal return or return unexplained by risk factor (Constanta equal 0). This model supports the theory of EMH since the Constanta is not significant in explaining the expected return

### 4.4 Alternative Test using CSA Portfolio

Table 5. The Linear regression for CSA Portfolio

| Independent Variable | Coef.   | Std. Err. | P > |t| | 95% Interval |
|----------------------|---------|-----------|-----|---|----------------|
| Rm-Rf                | 0.7876  | 0.13119   | 0.000 |  | 0.53038 to 1.0448 |
| CSA Portfolio        | 0.3478  | 0.08364   | 0.000 |  | 0.18381 to 0.5118 |
| Constanta           | 0.0035  | 0.0027    | 0.182 |  | -0.0016 to 0.0087 |

Table 5 shows that CSA Portfolio Return is a very significant variable to explain Ri-Rf of the 61 companies since the P value is very low. The positive coefficient also shows that the correlation of CSA Portfolio with Ri-Rm is positive with expectation of every 1 percent increase in CSA Portfolio return will increase the Ri-Rf by 0.3478.

Test result shows that CSA Portfolio is better explained by Random effect regression rather than fixed effect. The result shown table 6.

Table 6. Test result shows that CSA Portfolio is better explained by Random effect regression rather than fixed effect

| Independent Variable | Coef.   | Std. Err. | P > |t| | 95% Interval |
|----------------------|---------|-----------|-----|---|----------------|
| Rm-Rf                | 0.7876  | 0.13117   | 0.000 |  | 0.53052 to 1.0447 |
| CSA Portfolio        | 0.3478  | 0.08363   | 0.000 |  | 0.18389 to 0.5117 |
| Constanta           | 0.00355 | 0.00267   | 0.184 |  | -0.00168 to 0.00878 |

Similar with Linear regression, the random effect regression shows that the return of CSA portfolio can significantly explain the return of the 61 companies. This model regression result shows that the Constanta is insignificant in the model to explain return, means that there is no abnormal return on this model. This model is also supporting the EMH theory where the Constanta equal to 0.

### 4.5 CSR as a Risk Factor Discussion

To answer the research question of can CSR as a risk factor explain the return of stocks listed in Indonesia, using available test result the researcher suggest that CSR can as a risk factor explain the return of stocks listed in Indonesia, it is however very important to understand that CSR cannot be solely quantified using the Expense (money spent on the CSR) only, rather we can use the portfolio of good CSR companies formed by legitimate organization such as Sri-Kehati and CECT to explain the market return.
Both CSA and Sri-Kehati regression results show on their 95% confidence interval that their coefficient of the CSR risk factor is positive, this could be an indication which shows that the correlation coefficient of CSR and stock return is expected to be positive at 95% confidence interval.

The result of those regressions could lead to an understanding that the higher the CSR risk get, the higher the expected return of investors gets. This understanding is based on the positive coefficients of the regression which tells that increase in risk factor will increase in expected return and vice versa.

The significant result from 2 portfolios test indicates that CSR performance can indeed be used as a risk factor that can explain the expected return of stocks in Indonesia from 2015-2018 period.

Sri-Kehati and CSA portfolio model also shows that the Constanta in their model is insignificant in explaining the expected return which means that both this model supports the EMH theory where there is no abnormal return in the model.

Practically, the overall result of the tests implies that CSR is found to be a risk factor that can explain the expected return of stock listed in Indonesia from 2015 to 2018 period.

5 Conclusion

This paper examines the correlation of CSR and stock return using 3 variables, CSR expense, Sri-Kehati Portfolio return and CSA Portfolio return. The Panel tests result indicates that there is no significant influence of CSR expense to the stocks’ return while there is significant influence of both Sri-Kehati and CSA portfolio to the stocks’ return. Using 95% confidence interval, it is confirmed by Sri-Kehati and CSA portfolio test that the correlation of those portfolio returns with the stocks’ return is positive. This study implies that CSR can be a risk factor to determine stocks’ expected return in Indonesia. However, it is important to note that to measure CSR it is not good to only use expense as the only quantification as it fails to significantly explain the stocks’ return, because CSR expense cannot capture the risk asserted in the CSR risk factor. Instead, we can use the portfolio formed by legitimate organization such as Sri-Kehati and CSA to be used as a factor to explain stock return.

References


Technology Acceptance and Customer Perception of Augmented Reality (AR) in Indonesian Beauty Industry

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Abstract. AR utilization in Indonesia is still infancy while the Indonesian beauty industry growth is currently appealing. This research aims to determine AR attributes that influence AR acceptance in the Indonesian beauty industry and how it shaped the customer perception. Through an experiment of three AR platforms (website, e-commerce, and social media) on 413 customers, the research also aims to discover which platform that gives the best experience. The experiment result is obtained by utilizing a questionnaire and be analyzed using PLS-SEM while the platform comparison is done by deploying Kruskall-Wallis. Interviews are also conducted before experimenting. Open coding and triangulation will be used to analyze the interview result. The findings indicate that all attributes of AR influence indicators of technology acceptance but vividness is found not influencing perceived ease of use. The research also shows that the good performance of interactivity, vividness, and novelty of AR will positively influence customer perception. Moreover, customer perception had the biggest effect on influencing enjoyment. The platform comparison reveals that e-commerce gives the best customer experience which may be caused by its good performance of interactivity and vividness and the familiarity of Indonesian females with the platform. In conclusion, if AR performs a good quality of interactivity, vividness, and novelty, customers will have a good perception towards the platform and accept the AR technology where they perceive the technology as easy to use, useful, and enjoyable.

Keywords: Augmented Reality, Technology Acceptance, Customer Perception, Beauty Industry, PLS-SEM.

1 Introduction

AR has emerged as an invention in technology that can improve the marketing environment [1]. Azuma [2] identifies AR as an interactive virtual object superimposed with the real world in real-time interaction. Mclean and Wilson [3] proposed three attributes of AR which are interactivity, vividness, and novelty.

Sephora found that women buy the wrong base of color about seven times before they find the right shade which appears to be the issue with purchasing make-up offline and online. By using AR, consumers can see the visualization of how a product would look like on them [4]. AR helps consumers to see whether the makeup is a perfect fit for them before purchasing it. In the beauty industry, some brands have been implementing AR on several platforms.
Giorgio Armani and Maybelline use websites as their virtual try-on tool, MAC and NARS use YouTube. While L’Oréal Paris and Maybelline utilize both website and Shopee. The growth of the Indonesian beauty industry is currently appealing whilst it is also placed as the main sector that contributes to national exports [5]. The Indonesian Ministry of Industry mentioned that the cosmetics industry needs to improve its marketing strategy to compete with imported products. He suggested utilizing “Industry 4.0” to create new added values. AR could be the answer to his suggestion. But, a thorough search of the relevant literature yielded no related literature on the implications of AR implementation on the Indonesian beauty industry. Furthermore, Mclean and Wilson [3] stated that AR application in consumer markets is still in its infancy so the study regarding AR is still lacking. Since the use of AR is still lacking in Indonesia, this research aims to determine AR attributes that influence technology acceptance and how it shaped the customer perception. The research will also assess 3 AR platforms which are Maybelline’s website, e-commerce, and social media to discover which platform gives the best experience.

2 Literature Review

2.1 Technology Acceptance

2.1.1 Perceived Ease of Use

Perceived ease of use refers to the degree in which individuals perceive the use of technology as easy or effortless which results in increased productivity, efficiency, control, and performance [6]. Yim et al. [7] assert that perceived ease of use has been regarded as an influential variable in the adoption and the use of new technology.

2.1.2 Perceived Usefulness

Perceived usefulness is the individual’s perception that using a technological system or function will increase their performance [3]. Yim et al. [7] assert that perceived usefulness has been regarded as an influential variable in the adoption and the use of new technology.

2.1.3 Enjoyment

Enjoyment is the degree to which the action of using technology is being enjoyable aside from any consequences of performance that may be predicted [8]. Enjoyment is a major attribute besides perceived usefulness and perceived ease of use to affect the attitude and intention to adopt and use a system [8].

2.2 AR Attributes

2.2.1 Interactivity

Interactivity is the AR capacity to manipulate the things that the user sees while the real and virtual world integrates [2]. Interactivity in AR increases the customer acceptance of the technological system [4] since it is easy for customers to interact and be involved with the content provided [9]. Moreover, interactivity will yield a positive influence on the perceived ease of use [3].

H1: The interactivity of AR technology will positively influence the perceived ease of use.
Increased interactivity will enable customers to effectively gather more information because it can stimulate cognitive information processing thus enhancing the usefulness of information in the customer’s mind [10]. Additionally, interactivity provided in the AR content will yield a positive influence on the perceived usefulness [3].

**H2:** The interactivity of AR technology will positively influence perceived usefulness.

Individuals who experience more interactive operation will tend to feel a higher sense of enjoyment. Interactivity in AR through media features can develop an enjoyable experience through the new product visualization [3].

**H3:** The interactivity of AR technology will positively influence enjoyment.

### 2.2.2 Vividness

Vividness is defined as the clear, detailed representation of an image in the combination of the real and virtual world [3]. Jiang and Benbasat [5] assert that more vivid content can lead to an increased positive perception of customer experience in online shopping, which in turn affects customer perception of its ease of use. Vivid presentation of the real and virtual world will influence the perception of ease of use [3].

**H4:** The vividness of AR technology will positively influence the perceived ease of use.

Increased vividness enables customers to collect product information more effectively by providing a realistic examination of virtual products which increases perceived usefulness [7]. Vividness encourages more active participation during product searching with more efficient and detailed data processing thereby enhancing perceived usefulness [11].

**H5:** The vividness of AR technology will positively influence perceived usefulness.

By experiencing the new and real-like product in AR, customers will undergo a positive evaluation such as enjoyment [12]. The 3D virtual object in the online platform that provides a try-on product feature can encourage enjoyment in the customers’ experience. Customers who experience more vivid pictures will result in a higher level of enjoyment [7].

**H6:** The vividness of AR technology will positively influence enjoyment.

### 2.2.3 Novelty

The novelty is defined as the new, unique, and user-specific information combining the real world and virtual world each time an individual uses the feature which provides a unique experience [2][3]. Ease of use will increase productivity, efficiency, control, and efficiency [6] so the unique contents of the novelty will enhance the AR perceived ease of use [3].

**H7:** The novelty of AR technology will positively influence the perceived ease of use.

The novelty of AR allows customers to personalize AR content to be matched with their interests and preferences [13]. The novelty will enhance the customer’s shopping performance yielding increased shopping efficiency, making it easier to shop, complete a task, and visualize the product [3].

**H8:** The novelty of AR technology will positively influence perceived usefulness.

Individual likes to interconnect with novel stimuli. Hoffman [9] has outlined that human psychological states lead to enjoyment and immersion since the strange stimuli provided by novel effects will stimulate the sharing and discussion about novel objects or situations.
**H9:** The novelty of AR technology will positively influence enjoyment.

### 2.3 Customer Perception

Customer perception defined as how customers perceive a product or service and how customers assess the thing they have experienced [14]. Evaluation is common with perception. AR generated product visualization will commonly result in significantly greater values of customer evaluation [7]. Moreover, interactivity and vividness will promote positive customer evaluation when AR is running. Mclean & Wilson [3] suggest that the customer’s perception can be influenced by the components of AR interactivity.

**H10a:** The interactivity of AR technology will positively influence customer perception.

**H10b:** The vividness of AR technology will positively influence customer perception.

AR is directly correlated with novelty effects. However, the customer’s perception of AR uniqueness and newness which produces a prominent novelty effect will bring benefits from AR [7]. Therefore, it can be hypothesized that the novelty effect of AR will create a customer perception.

**H10c:** The novelty of AR technology will positively influence customer perception.

Jihyun Kim [15] affirm that there is a positive relationship between perception and enjoyment which means that the customer’s perception of the online environment will exhibit a beneficial impact on enjoyment. They also found that the customer’s perception had the strongest effect to influence enjoyment.

**H11:** Customer perception of AR technology will positively influence enjoyment.

### 2.4 Conceptual Framework

![Conceptual Framework](image_url)

The framework is adopted from previous research by Mclean and Wilson [3] with some modifications from Yim [7] and Kim [15].
3 Research Methods

3.1 Qualitative Method

To validate whether the variables are worth being assessed, structured interviews with 10 respondents was conducted. The respondents are females whose ages ranged from 17 to 39 years old, domiciled in Indonesia, wear makeup from Maybelline/L’Oréal Paris/MAC, have used the AR virtual try-on feature (Maybelline’s website/Shoppee/YouTube). Open coding and triangulation will be used to analyze and verify the result.

3.2 Quantitative Method

The respondent characteristics of quantitative are the same with the qualitative but they should have not tried makeup try-on feature before. Pre-experimental design (one-shot case study) will be employed. To process the data obtained, PLS-SEM will be used. After the respondents have done the experiment step, they should fulfill the questionnaire. All questions are provided with a 7 Likert-scale. The minimum sample size of the test-marketing study is 200 [16]. Then, the platforms will be examined using the Kruskal-Wallis test.

4 Result and Discussion

4.1 Qualitative Method

4.1.1 Interactivity

Interactivity is a very important aspect of AR since it will provide a good experience for the customers. Shoppers will engage more with their shopping experience if they are provided with a highly interactive system [17]. The slow performance of AR in responding to customers will give a perception of an error system that makes customers lose interest and decide not to continue accessing the feature.

“This is important because when I do online shopping, I want it to be easy and fast”, Rani.

4.1.2 Vividness

Vividness is a very important aspect of AR because customers want the color shades in virtual makeup to look like the original one since it is the actual purpose of AR. It will help customers to compare and make decisions to buy the product which fits their face the most. The actual role of AR is to help the decision making of customers by visualizing how the products will look on the customer’s face [3]. If the AR platform fails to do so, it will still create the gap between expectation and reality which is the main problem that AR wants to solve.

“It is the “actual purpose” of the AR platform. If it doesn’t provide an original makeup look, customers will feel dissatisfied when they buy the product that doesn't have the exact color or look as expected”, Chyntia.

4.1.3 Novelty

The novelty aspect of AR is quite important. AR features do not have to always provide something new or unique to its users because AR is already a new and unique thing today. But
adding something new would be better to stimulate the interest of customers so it can give them a new customer experience and prevent them from feeling bored with the old features and product options. People perceive AR as a new technology [7].

“Not really important [...] But adding something new will make a better impression”, Riwie.

4.1.4 Perceived Ease of Use

The perceived ease of use of an AR feature is very important because customers will tend to choose a system that is practical or easy to operate. The main function of AR is to help customers to shop easier so the absence of this aspect will make customers think it is a waste of time and simultaneously lose their interest and stop using the feature. In line with who said that shoppers will feel annoyed and abandon their transaction if they perceive the system is not beneficial [18]. Perceived ease of use has been regarded as an influential variable in the adoption and the use of new technology [7].

“If it’s not easy to use than it’s just a waste of time”, Ara.

4.1.5 Perceived Usefulness

Perceived usefulness refers to how customers perceive the usefulness of AR and how it can enhance shopping time efficiency. This aspect is the main purpose of why customers use AR so they can use the AR on their mobile phones as a quicker and practical way to compare and buy makeup products so AR will enhance their shopping time efficiency. The benefits that contribute to the usefulness of AR are how it can enhance shopping productivity and how it can enable customers to shop more efficiently [3].

“If the AR platform provides good results or examples from the brand, it will increase our shopping time the make us more satisfied”, Sherina.

4.1.6 Enjoyment

The enjoyment of AR can be obtained if the platform is easy to use and performs a quick response. People who are exposed to a higher level of interactivity will result in a higher level of shopping enjoyment [19]. If users enjoy their time while using AR, they will have the intention to use the platform again. Shoppers who gain positive experiences from the system will likely have a positive attitude and behavioral intention toward the system [18]. Meanwhile, AR platforms will give a bad impression to customers and make them immediately leave the platform. Shoppers who gain a bad experience from the system will likely abort the online transaction that was intended [18].

“Must be enjoyable to make us enjoy while using the platform. If it’s not enjoyable, I can immediately exit”, Anin.

4.1.7 Customer Perception of AR

An AR platform needs to get a good customer perception because it will create a good brand image. Brand image is a set of customer perception that increase the value of the products or services [19]. Customers will have the intention to try and use the platform again if they have a positive perception of the AR platform. Moreover, good customer perception of an AR platform will increase the possibility of the users to recommend the platform to their friends. Customers who engage with a brand who makes its users perceive the brand positively will recommend the brand to others [20].

“Obviously important. To make the users amazed and keeping the good brand image”, Aliya.
4.1.8 Feedback for AR

The three platforms have similar problems regarding interactivity and vividness. The Maybelline’s website already provides a complete set of makeup while the other platforms still provide a few options for makeup products. Specifically, for Shopee, some people perceive the platform as interactive and vivid but some people think the other way around. YouTube gives the novel effect since customers feel a new and unique experience by trying on makeup on YouTube where the platform is usually only used to upload or watch videos.

4.2 Quantitative Method

The survey was filled with 413 respondents in total. 134 respondents tried the website, 150 respondents tried Shopee, and 129 respondents tried YouTube. Respondents profile can be seen in table 1.

<table>
<thead>
<tr>
<th>Table 1. Respondents Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Respondents Profile</strong></td>
</tr>
<tr>
<td><strong>Age</strong></td>
</tr>
<tr>
<td>17-20 years old</td>
</tr>
<tr>
<td>21-25 years old</td>
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<tr>
<td>26-30 years old</td>
</tr>
<tr>
<td>31-35 years old</td>
</tr>
<tr>
<td>36-39 years old</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
</tr>
<tr>
<td>Senior High School</td>
</tr>
<tr>
<td>D1</td>
</tr>
<tr>
<td>D2</td>
</tr>
<tr>
<td>D3</td>
</tr>
<tr>
<td>D4</td>
</tr>
<tr>
<td>Bachelor</td>
</tr>
<tr>
<td>Master</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Domicile</strong></td>
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<td>Bandung</td>
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<td>Samarinda</td>
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<td>Surabaya</td>
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<td>Yogyakarta</td>
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<tr>
<td>Makassar</td>
</tr>
<tr>
<td>Others</td>
</tr>
<tr>
<td><strong>Spending per month</strong></td>
</tr>
<tr>
<td>&lt; Rp1.000.000</td>
</tr>
<tr>
<td>Rp1.000.000-Rp4.999.999</td>
</tr>
<tr>
<td>Rp5.000.000-Rp9.999.999</td>
</tr>
<tr>
<td>Rp10.000.000-Rp19.999.999</td>
</tr>
<tr>
<td>&gt;Rp20.000.000</td>
</tr>
</tbody>
</table>
4.2.1 Validity and Reliability

All variables are valid since all AVE scores are greater than 0.5 and reliable since all other indicators have scores greater than 0.7. All variables do not have any collinearity problems since VIF values are lower than 5. Result of validity and reliability can be seen in Table 2.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Label</th>
<th>AVE</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>Outer Loadings</th>
<th>VIF</th>
</tr>
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<tbody>
<tr>
<td>Augmented Reality</td>
<td>IR1</td>
<td>0.711</td>
<td>0.796</td>
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<td>IR2</td>
<td>0.785</td>
<td>1.385</td>
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<tr>
<td></td>
<td>IR3</td>
<td>0.759</td>
<td>1.570</td>
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<tr>
<td>Vividness</td>
<td>VV1</td>
<td>0.699</td>
<td>0.856</td>
<td>0.903</td>
<td>0.864</td>
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<td></td>
<td>VV2</td>
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<td>VV3</td>
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<td></td>
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<td></td>
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<tr>
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<td>0.903</td>
<td>0.939</td>
<td>0.904</td>
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<tr>
<td></td>
<td>PE2</td>
<td>0.938</td>
<td>3.673</td>
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<td>0.935</td>
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</tr>
<tr>
<td></td>
<td>PE3</td>
<td>0.907</td>
<td>2.588</td>
<td></td>
<td>0.907</td>
<td></td>
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<td>0.891</td>
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<td>0.910</td>
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<tr>
<td></td>
<td>PU2</td>
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<td>3.711</td>
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<td>0.928</td>
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<tr>
<td></td>
<td>PU3</td>
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<td>2.058</td>
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<td>0.902</td>
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<td>0.735</td>
<td>0.820</td>
<td>0.893</td>
<td>0.879</td>
<td>1.972</td>
<td></td>
</tr>
<tr>
<td></td>
<td>CP2</td>
<td>0.869</td>
<td>1.938</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CP3</td>
<td>0.823</td>
<td>1.670</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.2.2 Hypothesis Testing

![Fig. 2. Hypothesis Testing](image-url)
To accept a hypothesis by using a two-tailed t-test of a 5% significant level, the T-statistics must be greater than 1.96 and the p-value must be lower than 0.05.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Structural Path</th>
<th>T-statistics</th>
<th>P Values</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁</td>
<td>IR → PE</td>
<td>10.440</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₂</td>
<td>VV → PE</td>
<td>0.291</td>
<td>0.772</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₃</td>
<td>NV → PE</td>
<td>3.886</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₄</td>
<td>IR → PU</td>
<td>3.911</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₅</td>
<td>VV → PU</td>
<td>8.694</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₆</td>
<td>NV → PU</td>
<td>3.098</td>
<td>0.002</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₇</td>
<td>IR → EY</td>
<td>2.143</td>
<td>0.033</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₈</td>
<td>VV → EY</td>
<td>2.450</td>
<td>0.015</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₉</td>
<td>NV → EY</td>
<td>3.801</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₁₀a</td>
<td>IR → CP</td>
<td>5.845</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₁₀b</td>
<td>VV → CP</td>
<td>7.644</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₁₀c</td>
<td>NV → CP</td>
<td>9.476</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₁₁</td>
<td>CP → EY</td>
<td>6.839</td>
<td>0.000</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

**H₁:** The interactivity of AR technology will positively influence perceived ease of use

The hypothesis is accepted. The quick response and control of users to navigate the AR feature makes people perceive that the technology is easy to use. In line with the interview result, it is better to perform a real-time response because customers want something easy and fast when it comes to the online environment.

**H₂:** The vividness of AR technology will positively influence perceived ease of use

The hypothesis is rejected. The study shows that the vividness of AR technology will not positively influence the perceived ease of use. This may be caused by the poor vividness quality of the AR platforms that are being assessed in this study.

**H₃:** The novelty of AR technology will positively influence perceived ease of use

The hypothesis is accepted. The unique contents of the novelty will enhance the perceived ease of use of AR. In line with Mclean [13], the unique contents of the novelty will enhance the perceived ease of use and perceived usefulness of AR.

**H₄:** The interactivity of AR technology will positively influence perceived usefulness

The hypothesis is accepted. The slow performance of AR in responding to customers will give a perception of an error system that makes customers lose interest and decide not to continue accessing the feature. The platform will not be useful for its target users.

**H₅:** The vividness of AR technology will positively influence perceived usefulness

The hypothesis is accepted. Providing color shades in virtual makeup to look like the original one is the actual purpose of the AR feature. It will help customers to compare and make decisions to buy the product which fits their face the most. Therefore, the AR is perceived to be useful.
H$_6$: The novelty of AR technology will positively influence perceived usefulness
The hypothesis is accepted. Updating the product options with the newest one might be an option to promote a novelty aspect in AR which also promotes the usefulness of AR since it helps customers to decide whether to buy the newly launched product or not.

H$_7$: The interactivity of AR technology will positively influence enjoyment
The hypothesis is accepted. Interactivity affects the convenient aspect of using AR features where the convenient aspect is related to enjoyment. In line with the interview result, interactivity affects the convenient aspect of using AR features where the convenient aspect is related to enjoyment.

H$_8$: The vividness of AR technology will positively influence enjoyment
The hypothesis is accepted. Customers will undergo a positive evaluation such as enjoyment by experiencing the real-like product in AR [12].

H$_9$: The novelty of AR technology will positively influence enjoyment
The hypothesis is accepted. Adding something new in the feature would stimulate the interest of customers so it can give them a new customer experience and prevent them from feeling bored with the old features and product options.

H$_{10a}$: The interactivity of AR technology will positively influence customer perception
The hypothesis is accepted. The slow performance of AR in responding to customers will give a perception of an error system that makes customers lose interest and decide not to continue accessing the feature. Meanwhile, a responsive feature will give a perception of a convenient AR platform.

H$_{10b}$: The vividness of AR technology will positively influence customer perception
The hypothesis is accepted. AR-generated product visualization will result in significantly greater values of customer perception [7].

H$_{10c}$: The novelty of AR technology will positively influence customer perception
The hypothesis is accepted. Customers perceive AR is already a new and unique thing today. There will be benefits by producing a prominent novelty effect to create the customer’s perception of AR uniqueness and newness [7].

H$_{11}$: Customer perception of AR technology will positively influence enjoyment
The hypothesis is accepted. If the customers get a bad impression from AR, they will immediately leave the platform because they are not enjoying it. Customer perception had the biggest effect to influence enjoyment.

4.2.3 Kruskal-Wallis Test
Asymp. Sig. value must be lower than 0.05 to be accepted. There are significant differences between platforms if Adj. Sig. value is lower than 0.05. The higher mean indicates that the platform is better in influencing the variables.

<table>
<thead>
<tr>
<th>Table 4. Technology Acceptance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Acceptance</td>
</tr>
<tr>
<td>Kruskal-Wallis H</td>
</tr>
</tbody>
</table>
YouTube and Shopee are the best platforms in influencing Technology Acceptance which may be caused by their good performance of interactivity and vividness. Customers feel YouTube provides a unique experience by enabling AR features in social media. According to Hootsuite (2020), YouTube is the most-used social media platform in Indonesia. This behavior supports the AR technology on YouTube since it can be accessed in a KOL’s video.

 Whereas for Shopee, it may be caused by the familiarity of Indonesian females with Shopee since it is the first top e-commerce site in Indonesia (Statista.com). Shopee is specially designed for Indonesian customers. It provides the makeup price in Rupiah currency and customers can directly buy their orders there. The confidence of the customers correlates monotonically with their level of familiarity.

### Table 5. Adj. Sig.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Platform Comparison</th>
<th>Adj. Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Acceptance</td>
<td>Website - Social Media (YouTube)</td>
<td>0.014</td>
</tr>
<tr>
<td></td>
<td>Website - E-commerce (Shopee)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Social Media (YouTube) - E-commerce (Shopee)</td>
<td>0.476</td>
</tr>
</tbody>
</table>

5 Conclusion

All attributes of AR influence indicators of technology acceptance but vividness is found not influencing the perceived ease of use. The interactivity, vividness, and novelty of AR technology will positively influence customer perception. YouTube and Shopee are the best platforms in giving the best experience.

The study only assessed the influence of customer perception on enjoyment as one of the technology acceptance indicators. Future research should examine the influence of customer perception on other indicators which are perceived ease of use and perceived usefulness. Given the non-significant influence of vividness to perceived ease of use, future research should reassess these using AR platforms that have a very good quality of interactivity, vividness, and novelty. Moreover, future research should investigate the advantages of AR utilization in other industries.

### References


The Impact of the Facility Condition and Social Influence on Intention to Use E-Learning

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Abstract. E-learning is an online learning process that can be accessed anywhere. Apart from ensuring adequate facility conditions, social interaction is also needed to generate the intention to carry out the e-learning process. The purpose of this study is to determine whether there is an influence of facility conditions and social influence on the intention to use e-learning. The research was conducted at Semarang State University in February 2020 to determine the acceptance and usefulness aspects of e-learning. In this study, facility conditions and social influences are determinants and supporters of the intention to use e-learning. Facility conditions and social influence are determining factors in supporting the intention to use e-learning. The data collection technique is in the form of a questionnaire. The data analysis technique uses SEM with the WarpPLS approach, which will test the causality path both on the outer and inner models with an experimental design. This medium is expected to explore the findings of new, more comprehensive, and suitable causal pathways that can be used to interpret data appropriately. The results showed that the facilities' condition was very good, and the support of social influences could increase the intention to use e-learning as an environmentally friendly learning technology.

Keywords: Facilitating Conditions, Social Influence, Behavioral Intention, E-learning.

1 Introduction

The advancement of information technology in education is very fast and demands that all participate in applying technology. Higher education must be aware of technology and information quickly, accurately, relevant, and accurately in academic activities [1]. Academic quality can be seen from the strategy to achieve competitive advantage and high competitiveness between universities [2]. Technological developments in higher education can support the learning process, one of which is using e-learning. According to Ariani [3], e-learning is interactive, attracts attention, and involves students in the learning process. E-learning is a learning method using the internet [4]. The e-learning process is carried out formally according to the learning curriculum, semester learning plans, teaching materials, and learning evaluations that have been compiled and defined.

E-learning is an information technology-based learning technology that can be accepted in the world of education. This acceptance is in the context of improving quality human resources with this information technology's ability to overcome labor problems and economic conditions [5]. E-learning is part of information technology, which is the main requirement for competence in the social and the world of work [6]. According to Horton [7], e-learning is a
web technology using the internet for the learning process. E-learning is an innovation in sending interactive material with various attributes and digital technology resources in an open, flexible, and distribution learning process [8]. According to Gilbert and Jones [9], E-learning delivers learning materials with electronic media using the internet, broadcast satellites, audio/videotapes, interactive television, CD-ROM, and computer-based training. Furthermore, e-learning is learning using electronic circuits in the form of local area networks, wide area networks, or the internet as the delivery of learning content and interaction or guidance [10].

The e-learning process includes the following components: 1) Relevant content, 2) Learning methods as needed, 3) Media elements as content distribution and learning methods, 4) Guided learning or independent learning, 5) Growing knowledge and techniques new learning objectives [11]. The main components in e-learning include: 1) students, 2) faculty/instructors, 3) facilitators, 4) support staff 5) administrators [12]. Components in e-learning that institutions must now consist of 1) learning design, 2) multimedia components, 3) internet equipment, 4) computers and storage of tools, 5) connection and service providers, 6) power/management programs, software, 7) services and applications connection [8]. The electronic learning process in the classroom includes: 1) Supplement is an available and selectable electronic learning material 2) Complement is an electronic learning material that is programmed as a complement to learning material that can be accepted in class 3) Substitution is an alternative learning model [13].

Universitas Negeri Semarang has used a learning system using e-learning. In the learning process, using e-learning is expected to support more effective and efficient learning management. E-learning provides convenience in the learning process and does not need to be face to face. Even though e-learning has been applied to theoretical, practical, and assignment courses, e-learning is still difficult to use in the learning process. There are many obstacles, such as lack of information about e-learning, less flexible e-learning support facilities, and other barriers related to social influence and the condition of existing facilities. Social impact is the use of technology-based on encouragement or support from outside other individuals [14], [15]. Before making a decision, a person sometimes considers the expectations that will be achieved. Beliefs provide encouragement or support in forming intentions. The social influence will affect intent [15][16].

Meanwhile, the facility's condition is a person's perception of infrastructure, resources, and techniques in operating technology [15][17]. The intention is something that is expected by a certain behavior [18]. According to Fishbein [19], the purpose is an effort made to achieve a goal. The intention is the desire to carry out a behavior, while the behavior is real action on that desire [20]. The stronger the insults or expectations, the stronger the intention to display a behavior [21]. The use of e-learning aims to socialize better learning system improvements.

2 Research Methods

This research was conducted at the Faculty of Economics, State University of Semarang. The data used are primary data obtained from questionnaires to respondents consisting of students and documentation [22]. Sampling using a proportionate stratified random sampling method because the population is not homogeneous. According to Sugiyono [23], proportionate stratified random sampling is used if the community has members who are not
homogeneous and have proportionate strata. The sample used was 280 respondents. According to Ferdinand [24], sampling is based on Krijcie and Morgan tables with 1000-1100 respondents. Reliability testing can use the indicator value by squaring each indicator. An indicator is said to be reliable if the hand is greater than 0.7 [25]. The validity test can be seen from the average variance extracted (AVE) value of the latent variable. It is valid if the latent variable has an average variance extracted (AVE) value greater than 0.5 [26].

There are independent variables in this study, namely social influence and facility conditions, while the dependent variable is intention. The data analysis technique in this study, used the Structural Equation Model (SEM). SEM is a technique that combines multiple regression and factor analysis to estimate the dependency relationship simultaneously [27]. SEM is widely used to calculate variance, covariance analysis, multiple regression, factor analysis, path analysis, simultaneous equations and nonrecursive modeling, latent, and multilevel curve modeling [28]. SEM can identify constructs and influence measures that have identified dimensions [29].

3 Result and Discussion

![Fig. 1. Research Model in WarpPLS](image)

Testing the reliability using SEM WarpPLS it is necessary to check indicators as a measurement tool for latent variables. Reliability can be accepted if the indicator is more than 0.7 [25]. Each indicator can be calculated by running the PLS algorithm using WarpPLS 6.

<table>
<thead>
<tr>
<th>Table 1. Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Latent Variable</td>
</tr>
<tr>
<td>Social Influence</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Condition Facilities</td>
</tr>
</tbody>
</table>
Based on Table 1., the social influence variable has four indicators: getting the predicate reliable on all hands. There are three indicators in the facility condition variable with a reliable predicate for each indicator. The intention to use e-learning has three arrows, and all of them get reliable predicates. It is said to be valid if the average variance extracted (AVE) value in the variable is greater than 0.5 [26].

**Table 2. Average Variance Extracted (AVE)**

<table>
<thead>
<tr>
<th>Latent Variable</th>
<th>Average Variance Extracted (AVE)</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Influence</td>
<td>0.554</td>
<td>Valid</td>
</tr>
<tr>
<td>Condition Facilities</td>
<td>0.593</td>
<td>Valid</td>
</tr>
<tr>
<td>Intentions Using</td>
<td>0.508</td>
<td>Valid</td>
</tr>
</tbody>
</table>


Based on Table 2, the social influence variable is valid, with a value of 0.554. The Average Variance Extracted (AVE) value of 0.593 is said to be useful for the variable facility conditions, and the intention to use e-learning gets an Average Variance Extracted (AVE) value of 0.508 with a valid predicate. The following is a table 3 of the results of the research hypothesis:

**Table 3. Path Coefficients**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Social influence</th>
<th>Facility conditions</th>
<th>Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Influence</td>
<td>0.575</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Conditions</td>
<td>0.385</td>
<td>0.299</td>
<td></td>
</tr>
</tbody>
</table>


Based on table 3., it shows that the influence of the variable on the condition of the facility is 0.575, the coefficient of the impact of the social influence variable on the intention to use e-learning is 0.385, and the influence coefficient of the effect on the choice to use e-learning is 0.299.

**Table 4. P-Values**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Social influence</th>
<th>Facility conditions</th>
<th>Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Influence</td>
<td>&lt;0.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Facility Conditions</td>
<td>&lt;0.001</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>


Based on table 4, the p-value shows the influence of the social influence variable on the condition of the facility of <0.001, the p-value shows the impact of the social influence
variable on the intention to use e-learning of <0.001, and the p-value is the effect of the facility condition on purpose using e-learning for <0.001.

<table>
<thead>
<tr>
<th>Table 5. Hypothesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relationship Between Variables</td>
</tr>
<tr>
<td>Social Influence</td>
</tr>
<tr>
<td>Social Influence</td>
</tr>
<tr>
<td>Facility Conditions</td>
</tr>
</tbody>
</table>


Based on table 5, the results of the research hypothesis that there is a variable influence of social influence on the condition of the facility with a value of p <0.001, so it gets a very significant predicate with a coefficient of 0.575. This shows that the greater the social influence, the better the condition of the facilities. The variable of the impact of the colonial effect on the intention to use e-learning with a p-value of <0.001, then it gets a very significant predicate with a coefficient of 0.385. This shows that the greater the social influence of eating, the greater the intention to use e-learning. The effect of facility conditions on the choice to use e-learning with a p-value of <0.001, then getting the predicate is very significant with a coefficient of 0.299. This shows that a good improvement in the facility's condition will further support the use of e-learning intentions.

3.1 Discussion

3.1.1 Social Influence on Facility Conditions

From the research results that have been carried out, the social influence on the facility's condition shows a positive coefficient of 0.575 with a p-value of <0.001 and obtains the predicate of highly significant. This indicates that the social influence on the state of the facility has a positive and significant effect. The use of e-learning has received support from the campus and lecturers and has received a touch of changes in the conditions of e-learning supporting facilities. The improved social influence will improve existing facilities. They are supported by Ismail's [30] study of the socio-economic changes experienced by the Karangploso community due to the construction of tourism facilities. The environment affects learning conditions [31].

3.1.2 Social Influence on Intention to Use E-Learning

From the research results, it was found that the social influence on the intention to use e-learning was 0.385 with a p-value of <0.001 and got the predicate of highly significant. This shows that the social impact on the choice to use e-learning has a positive and significant effect. The increasing social influence, the more the intention to use e-learning. Social influence is related to a person's perception, who thinks someone should do a certain behavior. High social influence results in high intentions in using new technology and systems. Someone who has no experience using technology tends to seek information from the surrounding environment, such as family, friends, and social media, to affect the data obtained. The use of e-learning has received support from various parties, both campuses, and lecturers, to use e-learning. It is proven that many lecturers have conducted lectures online, not only giving assignments or chatting.

The results of this study are supported by Destaningrum [32], showing a positive and significant influence between the social impact on intention to use e-learning. The greater the
social impact, the greater the choice to use e-learning. Like Permana's research [33], there is social influence on the intention to use positive and significant applications, the more social influence increases, the more the choice to use the application. The same result states that social influence positively and significantly affects user intention [34].

3.1.3 The Effect of Facility conditions on Intention to Use E-learning

From the research results that have been carried out, there is an effect of facility conditions on using e-learning of 0.299 with a p-value of <0.001 and obtaining the predicate as highly significant. This shows that the social influence on the intention to use e-learning has a positive and significant effect. The condition of the facility is related to internal and external perceptions which include self-confidence in technological facilities, environmental factors make an action to be carried out and how far innovation is perceived consistently according to potential needs and experience. The use of media in the form of e-learning can be exciting to learn and interact directly. The use of e-learning has gained very adequate facilities in the form of very fast Wi-Fi to be used.

This study's results are the same as those conducted by Haryanto [35], showing a positive and significant effect between the facility's condition on the intention to use. The state of adequate facilities makes it easier for users to access the Edmodo online learning system. This medium is evidenced by the hypothesis that there is a positive and significant effect between falsities’ condition on the intention to use Edmodo [36]. This medium is also supported by Radiansyah's research [37] that the facility's state has a significant effect on the intention to use T-Cash. The facility's condition increases, so the choice to use will improve for application users [33].

4 Conclusion

On the results of testing the hypothesis that social influence has a positive and significant effect on the facility's condition. The social impact affects the intention to use e-learning positively and significantly. The facility condition is stated positive and meaningful towards the choice to use e-learning.

References


The Effect of Corporate Social Performance (CFP) on Corporate Financial Performance (CFP) in SOE and Non-SOE Companies in Indonesia

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Abstract. This study analyzes the relationship between Corporate Social Performance and Corporate Financial Performance in State-Owned Enterprise (SOE) and non-SOE companies in Indonesia. The issue of CSR in developing countries is still left behind compared to developed countries in Europe and America. Previous research has shown how CSP can affect CFP is quite positive. The extent of the influence of CSR on financial performance will be measured using regression analysis. This research is a quantitative study using the Ordinary Least Square (OLS) method. Our data sources consist of companies listed on the IDX and have an ESG rating from 2013-2017. Besides, it will be seen the influence of the government in market competition, especially regarding SOE companies. The results show that CSP has a weak influence on the company's financial performance in all samples. In the case of Indonesia, state ownership does not influence the effect of CSP on CFP. In third model, this research show that CSP has a significant negative effect on the competitive industry group, but in concentrated industry shows that CSP has no significant effect on CFP. This study shows different result from many previous studies. This study has limitations because only a few state-owned companies in Indonesia have listed, furthermore too many companies in Indonesia did not have ESG rating during 2013-2017.

Keywords: Corporate Social Performance, Corporate Financial Performance, State-Owned Enterprise, Market Competition.

1 Introduction

The development of company management has made CSR an important issue in seeing the credibility of a company. Ghillyer [1] defines CSR as an action of an organization that seeks to achieve social benefits above the maximum social benefit for its shareholders and the fulfilment of all its obligations. This definition indirectly describes the corporation that operates in a competitive business environment. Besides, company managers are committed to an aggressive growth strategy while complying with all legal obligations at all levels of government [2]. Hinson and Ndhlouv [3] see that CSR management in the global context has moved rapidly from planning and implementation to evaluation and supervision stages. CSR is then associated with the company's performance in the future.

Suto and Hitoshi [4] said that Corporate Social Performance (CSP) could be measured by looking back at the five dimensions of CSR relating to stakeholder positions from a CSR perspective. The five CSP matrix dimensions are Employee Relations (EMP), environmental
preservation (ENV), social contributions (SC), firm security and product safety (SS), and internal governance and risk management (IG). However, the relationship between the two variables is also influenced by other variables that differ in each country due to regulatory factors and the existing political situation. Long, Li, Wu, and Song [5] tried to see the impact of the government's authority on the implementation of CSR in China. They combine the emerging political views into the dominant instrumental view to understand CSR in China. The article shows that companies can be strategically involved in CSR to be able to improve their financial performance as economic actors or use CSR to overcome social problems as political actors.

So far, research in Indonesia has only been limited to the influence of the two variables without involving aspects of state ownership and market competition. In addition, the CSR data used comes from ESG which has paid attention to all aspects in detail. So that in the future it is hoped that the role of the government in market intervention through SOE can be evaluated. Further research can also see the influence that exists from each industry, not only from market competition. Because in Indonesia the political influence of the government on the market is still quite large and the policies regarding CSR are not systematic enough to be able to increase company awareness in maintaining sustainability.

2 Literature Review

2.1 Social-Economic Model of CSR

This model has two main arguments regarding CSR. First comes from the orthodox paradigm group which states that the social responsibility of business is a one-dimensional activity. This paradigm is often raised by Friedman, this group believes that the policy of social improvement is only based on consideration of profit as the only criterion for assessing the efficiency of business operations [6]. This group ignores the fact that business is part of a larger society with responsibilities that reach beyond the profit perspective.

On the other hand, the second model group sees business as part of a social matrix that contributes to the social matrix for the welfare of society as a whole and supports that business is part of a larger society and has the responsibility of reaching beyond the perspective of looking for long-term benefits. Zu [7] see that there were four different quadrants in seeing this dimension.

- **Classical View:** This quadrant relates to the classical view that social responsibility does not have provisions to be able to generate maximum profit for the company.
- **Social-Economic view:** This quadrant represents a narrow view of CSR where adopting several levels of CSR will result in a net profit for the company in terms of, for example, being able to avoid expensive regulations, building good relationships with customers, relationships with good distributors and of course is a political connection. This quadrant focuses on the socioeconomic view in which the business can simultaneously carry out the dual function of maximizing profits and serving social demand.
- **Modern view:** The perspective of this quadrant believes more, that business maintains its relationship with the broader community matrix where there are benefits that will flow from CSR actions in the long term and the short term.
- **Philanthropic view:** this quadrant represents a broader view of the SCR in which the business agrees to participate in charitable activities even though this is considered a "net
cost”. This impulse comes from altruistic feelings (prioritizing the interests of others) or ethics to do good for society.

### 2.2 Relationship between CSP and CFP

Previous research on the relationship between CSP and CSR has produced several theories. The instrumental stakeholder theory focuses on the relationship between stakeholder contracts and the belief that stakeholders (claims to improve CSR) contribute to the company’s main objectives [8]. Trade-off Theory shows a negative relationship between CSR and CFP. The main reason is that CSR will only increase spending and reduce profits. This theory is a neoclassical theory which is currently not much discussed in discussions about CSR [9]. Slack Resources Theory considers that a good CFP condition in a company will increase access to financial resources. So then CSR can be enhanced by investing the funds they have for social interests, such as relations with workers, communities or the environment [9]. Managerial Opportunism Hypothesis sees that a good CFP condition does not make the company carry out activities to improve CSR. A good CFP is actually used to make as much investment as possible [10].

Literature review on the relationship between CSP and CFP study indicates that there are positive relations about the CSP attributes in effect to the Firm’s financial performance. Busch and Friede [11] explain that CSP-CFP has a positive impact, whether firms focus on ecological or social aspects, through corporate reputation turns out to be a key CSP determinant. Lin, Hung, Chou, and Lai [12] in Taiwan also showed the positive effect of CSP on financial performance. The research uses the CSR Hub index by paying attention to the geographical and industrial aspects of the company. But, some studies show that CSP-CFP has a weak relationship. McWilliams and Siegel [13] show that CSR has a neutral impact on the financial performance of the company. The research shows that investment in R&D is very significant in improving company performance. Wang and Sarkis [14] have taken data on the 500 largest companies in America during the period 2009-2013 showing the small impact of CSR on the company's financial performance. CSR can have further influence when CSR is carried out focused on efforts to increase company revenue. In addition to the United States, research on the impact of CSR on CFP has begun to be carried out in many Asian countries.

This study uses an index created by ESG Bloomberg because ESG data is considered to have several advantages compared to other databases regarding CSR. First, ESG uses the most comprehensive methodology to evaluate corporate governance, social and environmental activities. The ESG database began to be built by the Bloomberg ESG Group in early 2008. Second, the Bloomberg ESG database provides detailed scores on a scale of 0-1000 in each environmental, social and governance category. Examples are Coca-Cola has an environmental value of 41.33, social 31.00 and governance 62.5. The Bloomberg Team believes that ESG can provide investors with a macro-level assessment of how companies manage their ESG so that it can be integrated into their fundamental analysis.

This study determines relations between CSP-CFP using the Regression Method that also used by [5]. Their study tried to see the impact of the government's influence on the implementation of CSR in China. They combine the emerging political views into the dominant instrumental view to understand CSR in China. The article shows that companies can be strategically involved in CSR to be able to improve their financial performance as economic actors or use CSR to overcome social problems as political actors.

This study uses the same variable and model to test the hypothesis in Indonesia. The combination of the institutional and political perspectives of CSR enables us to better understand CSR practices rather than applying these perspectives separately. Companies can
use CSR strategically to differentiate themselves and to improve their financial performance. Long et al [5] show that non-SOE companies can use CSR to add value to companies, this strategy is very effective for those operating in highly competitive industries. Although state-owned companies have the advantage of obtaining government-controlled resources and enjoy preferential treatment because of their inherent connections to the government, CSR continues to play an increasingly important role in improving financial performance when the competition is intensified.

3 Research Methods

This research uses the Ordinary Least Square (OLS) method. Most of the empirical analysis in management research uses linear regression models. The aim is to present coefficient estimates and statistically assess significance. Independent variables with statistically significant coefficients are said to affect the dependent variable. The general view that can be held is that the estimated coefficient captures how the independent variable influences the dependent variable. The data obtained from the results of subsequent studies were analyzed with multiple linear regression analysis models using the help of Eviews 4.0. Before a multiple regression analysis is performed, author make Classic Assumptions Test, which are the Normality, Multicollinearity, Heteroscedasticity, and Autocorrelation Tests.

Observation data were obtained from companies that had a CSP rating from the ESG Score Rating for the 2013-2017 period. Information about the rating from ESG is very important to be able to see the effect of CSP on the company's financial performance. In the case of Indonesia, there were only 32 Indonesian companies that were on the Indonesia Stock Exchange and had an ESG score during the 2013-2017 period. The 32 companies include SOE and Non-SOE companies from various industries. In addition, the financial data of selected companies will also be collected through Tomson Reuters.

The variables used in this study were divided into three categories: the dependent variable, the independent variable, and the control variable [15]. The dependent variable used is ROA as a reference to assess the financial performance of the selected company. ROA is seen from the total net income divided by the total assets of the company. The independent variables used in this study are Corporate Social Performance, HHI index and the Effect of State Ownership which are calculated with dummy variables. In addition, this study also uses four control variables namely firm size by looking at the Logs of Total Assets, Leverage by calculating total liabilities divided by total company assets, sales growth is calculated by looking at the company's revenue growth each year and Firm Age seen by how long the company operates in the current industry.

Based on the data above, this study uses three models to be able to see the results of the hypotheses that have been submitted. The three models are:

\[
ROA_{t+1} = \alpha + \beta_1 CSP_t + \sum \beta_k Control\ variable_t + \epsilon_t: (1)
\]

\[
ROA_{t+1} = \alpha + \beta_1 CSP_t + \beta_2 State\ ownership_t + \beta_3 CSP_t \times State\ ownership_t + \sum \beta_k Control\ variable_t + \epsilon_t: (2)
\]

\[
ROA_{t+1} = \alpha + \beta_1 CSP_t + \beta_2 Industry\ competition_t + \beta_3 CSP_t \times Industry\ competition_t + \sum \beta_k Control\ variable_t + \epsilon_t. (3)
\]
Where:

- ROA = Return on Asset
- CSP = Corporate Social Performance (ESG)
- State Ownership = Dummy variable
- Industry Competition = Herfindahl-Hirschman Index

After modelling the data and getting the estimated parameters, statistical testing to be performed are the parameters significance testing, the goodness of fit model testing, and the overdispersion model testing. After all experiments have been completed, the expected estimation is that CSR performance affects the company's finances. In addition, the role of the government in the intervention of SOE companies also makes a good CSR evaluation of SOEs even though they do not have a good enough impact on the company's financial performance.

### 4 Results and Discussion

#### 4.1 Descriptive Statistics

From the statistical results, it can be seen how the average of the variables used and see the most significant and smallest values of the data taken and the average and standard deviation to see the normality of the data to be used. With a total of 160 observations, the samples taken were those listed from the public financial statements with complete information for five years.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Median</th>
<th>Maximum</th>
<th>Minimum</th>
<th>Std. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>0.095642</td>
<td>0.059471</td>
<td>0.457885</td>
<td>-0.050124</td>
<td>0.106187</td>
</tr>
<tr>
<td>CSP</td>
<td>52.95884</td>
<td>58.16480</td>
<td>91.00000</td>
<td>12.70347</td>
<td>18.31310</td>
</tr>
<tr>
<td>SO</td>
<td>0.281250</td>
<td>0.000000</td>
<td>1.000000</td>
<td>0.000000</td>
<td>0.451021</td>
</tr>
<tr>
<td>HHI</td>
<td>2125.557</td>
<td>1357.285</td>
<td>6148.167</td>
<td>524.2017</td>
<td>1371.526</td>
</tr>
<tr>
<td>SIZE</td>
<td>17.71795</td>
<td>17.38527</td>
<td>1.106197</td>
<td>-0.277242</td>
<td>0.545125</td>
</tr>
<tr>
<td>Growth Sales</td>
<td>0.094403</td>
<td>0.082629</td>
<td>1.106197</td>
<td>0.179628</td>
<td>0.163742</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.05125</td>
<td>0.031540</td>
<td>0.179628</td>
<td>0.013306</td>
<td>0.163742</td>
</tr>
<tr>
<td>Firm Age</td>
<td>38.68750</td>
<td>39.00000</td>
<td>81.00000</td>
<td>9.000000</td>
<td>15.91138</td>
</tr>
</tbody>
</table>

| Obs. | 160 |

<table>
<thead>
<tr>
<th>Variable</th>
<th>ROA</th>
<th>CSP</th>
<th>SO</th>
<th>HHI</th>
<th>SIZE</th>
<th>Growth Sales</th>
<th>Leverage</th>
<th>Firm Age</th>
</tr>
</thead>
</table>

#### Table 2. Serial Correlation Test Tables

<table>
<thead>
<tr>
<th>Variable</th>
<th>CSP</th>
<th>HHI</th>
<th>SO</th>
<th>Leverage</th>
<th>Size</th>
<th>Growth Sales</th>
<th>Firm Age</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSP</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HHI</td>
<td>-0.016826</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SO</td>
<td>0.366105</td>
<td>-0.056749</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Leverage</td>
<td>0.015865</td>
<td>0.179628</td>
<td>0.174762</td>
<td>1.000000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td>0.340480</td>
<td>-0.010576</td>
<td>0.392317</td>
<td>0.511211</td>
<td>1.000000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth Sales</td>
<td>-0.054352</td>
<td>0.067583</td>
<td>0.216724</td>
<td>0.220167</td>
<td>0.082143</td>
<td>1.000000</td>
<td></td>
</tr>
<tr>
<td>Firm Age</td>
<td>0.356388</td>
<td>0.257633</td>
<td>0.223525</td>
<td>0.081422</td>
<td>0.255478</td>
<td>0.022097</td>
<td>1.000000</td>
</tr>
</tbody>
</table>

If we look at the results of the correlation tables that have been tested, it can be seen that the correlation coefficient between the independent variables does not have an enormous
enough value. The highest value is 0.6252, and it does not reach 0.7 [16]. By looking at the results of the table above, we can conclude that this model does not have multicollinearity. This is because the correlation coefficient between independent variables is still under the condition of multicollinearity, which is 0.8 [17].

4.2 Regression Results

Because we use panel data for the period 2013-2017 in this study, we perform the Hausman test to determine an appropriate regression model. The results from the pooled ordinary least square (OLS) and fixed-effect models indicate that $p = 0.000$. Which suggest that the fixed-effects model is more favorable. The results for fixed and random-effects models show that $p = 0.3008$ and $p = 0.5208$. This result suggests that the random-effects is more favorable. As a result, we use the fixed-effects model in this study.

| Table 3. Relationship between CSP and financial performance |
|-----------------|-----------------|
| Variable        | Coef.           | Prob. |
| CSP             | -0.939415       | 0.3490 |
| Size            | -4.489502       | 0.0000 |
| Growth Sales    | 2.057599        | 0.0413 |
| Leverage        | 0.208302        | 0.8353 |
| Firm Age        | 1.870133        | 0.0634 |

Based on the data in the table 3, the relationship between CSP and CFP in previous studies has shown a positive effect. This means that the quality of the company's social performance will significantly affect the company's financial performance. However, in this study it can be seen that the effect of CSP on CFP is not significant. Based on the regression results, the probability p-value is 0.3479 for all companies. The coefficient value also has a negative number, namely 0.939415.

| Table 4. Relationship between CSP and financial performance in SOE and Non-SOE |
|-----------------|-----------------|-----------------|
| Variable        | Non-SOE         | SOE             |
| CSP             | 0.17422         | -2.00214        |
|                 | 0.8620          | 0.0523          |
| Size            | -4.75907        | 0.45474         |
|                 | 0.0000          | 0.6518          |
| Growth Sales    | 0.39013         | 2.63334         |
|                 | 0.6972          | 0.0121          |
| Leverage        | 0.88489         | -2.9886         |
|                 | 0.3782          | 0.0048          |
| Firm Age        | 1.84186         | -0.30669        |
|                 | 0.0682          | 0.7607          |
Table 5. Relationship between CSP and financial performance and the moderating effect of state ownership

<table>
<thead>
<tr>
<th>Variable</th>
<th>All Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSP</td>
<td>Coef. -0.422892</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.673</td>
</tr>
<tr>
<td>CSP x SO</td>
<td>Coef. -0.624835</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.533</td>
</tr>
<tr>
<td>SO</td>
<td>Coef. 0.324648</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.7459</td>
</tr>
<tr>
<td>Size</td>
<td>Coef. -4.159286</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.0001</td>
</tr>
<tr>
<td>Growth Sales</td>
<td>Coef. 2.114719</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.0361</td>
</tr>
<tr>
<td>Leverage</td>
<td>Coef. 0.260202</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.7951</td>
</tr>
<tr>
<td>Firm Age</td>
<td>Coef. 1.733732</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.085</td>
</tr>
</tbody>
</table>

Based on the regression results from the first model with a sample of BUMN and Non-BUMN companies, there are differences in the results in the influence between CSP and ROA. For non-BUMN companies, the p-value is 0.8620, which indicates that there is no significance between the CSP variable and ROA. Whereas in BUMN companies the probability of p-value shows the number 0.0523 (<10%) which indicates that there is a significant influence between CSP and ROA in SOE companies. CSP has a negative effect when viewed from the coefficient value, namely -2.00214. This shows that CSP negatively affects the profitability of SOE companies. Which is if the company improves their CSR performance, it will reduce the level of profitability. This condition shows that the theory of trade-off is proven in the case of SOE in Indonesia. This cannot be separated from the function of SOE which is also a service, so that profit is not the only goal of companies such as Non-SOE companies. SOE will tend to continue to have a social impact on society without paying too much attention to the profitability of their company.

Table 6. Relationship between CSP and financial performance and the moderating effect of industry competition

<table>
<thead>
<tr>
<th>Variable</th>
<th>All Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSP</td>
<td>Coef. 1.339831</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.1823</td>
</tr>
<tr>
<td>HHI Competitive</td>
<td>Coef. 2.430617</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.0163</td>
</tr>
<tr>
<td>HHI Less Competitive</td>
<td>Coef. 0.806674</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.7459</td>
</tr>
<tr>
<td>CSP X HHI Competitive</td>
<td>Coef. -2.178176</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.031</td>
</tr>
<tr>
<td>CSP X HHI Less Competitive</td>
<td>Coef. -0.612452</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.5412</td>
</tr>
<tr>
<td>Size</td>
<td>Coef. -4.159286</td>
</tr>
<tr>
<td></td>
<td>Prob. 0.0001</td>
</tr>
</tbody>
</table>
Based on the results of the third regression model for all sample companies, industrial competition affects the company's financial performance, especially in more competitive industries. The probability of p-value in this variable shows the number 0.0163 with a coefficient of 2.430617, which means that there is a positive significance between industrial competition and financial performance as measured by ROA. Meanwhile, the variable that combines industrial competition and CSP shows a probability p-value of 0.031 and a coefficient of -2.178176. This condition shows that in a more competitive industry, CSP actually gives negative significance to the company's ROA.

4.3 Discussion

The relationship between CSP and CFP in previous studies has shown a greater impact. This means that the quality of corporate social performance will significantly affect the company's financial performance [18]. The results of the research in the first model of research tend to support the old theory of the relationship between CSP and CFP, namely the trade-off theory which states that corporate social performance is negatively related to the company's financial performance. This theory sees that social activities only spend money owned by companies without clear benefits, even though the funds owned can be used to be able to make investments and increase company income. In addition, the data in Indonesia also relates to the theory of slack resources which sees that companies that have good financial performance will actually give birth to good social performance and vice versa.

The results of this first hypothesis study also show different results from Long et al. [5] In research conducted in China, it can be seen that the CSP has a greater impact to the company's financial performance. Long et al. [5] in their study used a sample of 2218 companies from all over China. The number of samples differed quite significantly from the data available in Indonesia, which was 32 companies.

The results in the second model of this study show a negative relationship of the effect of state ownership on the relationship between CSP and CFP. This hypothesis certainly cannot be separated from the first hypothesis which shows the negative impact between CSP and CFP on all existing samples. Long [5] sees that social performance will have a more positive impact on companies that are not owned by the state. The first reason is that social performance is often used as a tool to gain political legitimacy and also the resources of the state. So that private companies need efforts to get it by continuing to improve their CSR. Whereas SOE companies no longer need these efforts because they are companies that are directly owned by the government as political authorities and also have access to government owned resources.

Long et al. [5] considers that in industries that have higher competition tends to increase the relationship between CSP and CFP. This study is different from the findings of Lev et al. [18] which shows that American companies in the financial sector and retail have a positive influence on their CSP and CFP relationships. In this study, it can be seen that the influence exerted by CSP on the company's financial performance is negatively related. This means that the increase in social performance carried out by companies in this industry has a negative
impact on company profitability. This condition tends to support the trade-off theory which is a classic theory that is rarely found in previous research.

5 Conclusion

Based on the results of research and analysis that has been done, then some conclusions can be drawn. First, the company's CSR performance which is measured using a rating from ESG shows no significance to the ROA of both SOE companies and non-SOE companies. This is not in line with research conducted by Long et al. [5]. This condition shows that CSR in Indonesia in general has not been able to affect the performance of companies, especially in terms of profitability. Firm profitability tends to be influenced by other factors, the research can be seen from several control variables such as Size can Growth Sales which shows a positive effect on company ROA.

Second, the effect of corporate CSR performance on financial performance in SOE and non-SOE companies is not much different. This means that state ownership has no impact on companies' efforts to increase their profitability through increased CSR. SOE companies basically have various CSR programs that are specifically regulated by the Law so that SOE companies' CSR reports tend to be better.

Third, the effect of CSR performance on company financial performance shows a negative effect on industries that have high competition. Meanwhile, industries that tend to be concentrated have no effect. This condition shows that companies in an industry with a high level of competition will actually experience a decrease in profitability if they take CSR actions. Industries that have a high level of competition tend to be industries that use consumers as their source of income, not companies that have major government partners or between companies. Companies in a competitive industry should be able to use CSR as a source of their promotion, but in reality, in Indonesia this cannot be in line as in previous studies.

5.1 Research Limitations

This study has several limitations, first, not all companies in Indonesia have had ESG data since 2013, thus creating limited companies that can be sampled. Second, the period used in this study is only 5 years ago because before 2013 the companies that have ESG under 32 companies. Third, Indonesia has only a handful of state-owned companies listed on the stock exchange.

References


Factors Affecting Target Leverage in Companies Listed in Indonesia Stock Exchange from 2014 to 2018

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Universitas Indonesia, Indonesia¹, ²

Abstract. This study aims to find out whether companies in Indonesia have the existence of target capital structure and factors that affect target leverage for the period 2014 to 2018. This study uses a dynamic partial adjustment model with a generalized method of moments estimator. The company's leverage target is influenced not only by company-specific factors but also by corporate governance variables so that the corporate governance variable is included in this study. The results of this research indicate that companies in Indonesia appear to have target leverage and are reported to adjust their leverage towards the target level with the adjustment speed of Indonesian firms is 50.29% thus it took 1,98846 years to reach the leverage target. Firm-specific factors such as profitability, size, growth, and tangibility have a significant effect, and corporate governance factors such as board size and family ownership have a significant effect on leverage. The sample of companies is only in Indonesia so that further research can be expanded by adding companies in other countries besides Indonesia and the addition of independent variables. This study of the listed firms in Indonesia contributes to the literature by examining the speed of adjustment and the determinants of optimal leverage.

Keywords: Leverage, Capital Structure Dynamics, Speed of Adjustment, Corporate Governance, Generalized Method of Moments.

1 Introduction

Successful selection and use of capital are some of the key elements of a company's financial strategy. Good or bad capital structure will have a direct effect on the financial position of the company, which then ultimately affects the value of the company. Based on trade-off theory capital structure can maximize the value of the company if the costs and benefits derived from additional debt reach balance. Referring to Elsas and Florysiak [1] in the theory of dynamic model structures, it predicted that corporate leverage would systematically deviate from the target even though it uses the trade-off theory capital structure. In an environment without friction, companies can efficiently adjust leverage to the target leverage. Still, because of asymmetric information, transaction costs, and other adjustment costs, companies cannot fully adjust their actual leverage from the previous period to the target leverage. After knowing that there is a position that is not optimal in the capital structure, the dynamic conditions can be seen by researching the direction of change and how quickly the company reaches its optimal capital structure or known as the speed of capital structure adjustment. The speed at which a company reaches target leverage is a speed of adjustment. The company will gradually make adjustments to the optimal capital structure. The speed of adjustment of optimal capital structure can be valuable information for investors to manage their portfolio. Companies that make adjustments quickly give a positive signal to investors.
where managers can make better decisions regarding capital structure and maximize corporate values [2].

This study provides an overview of capital structure in emerging economies. The characteristics of companies in developing and developed countries have differences mostly in the context of concentrated share ownership and control also generally family ownership or state ownership. Although many new instruments for financing such as perpetual bonds, green bonds, regional bonds, as well as several other alternatives through the capital market, conventional financing such as bank loans are still included in the list of instruments chosen by the issuer in 2018 (https://investasi.kontan.co.id), banks, as a primary financing alternative and high ownership concentration, make the speed of adjustment and optimal leverage substantial from a research perspective.

This study is focused on optimizing the capital structure by analyzing various variables that affect the capital structure of companies registered in Indonesia. In practice, real target leverage is something that cannot be observed so some literature studies try to solve these obstacles, namely for the proxy of the target leverage the observed leverage ratio is used. Corporate governance variables are included in this study because target corporate leverage is influenced, not only by firm-specific factors but also by governance variables [3]. The corporate governance system leads to a collection of regulations and encouragement used by management to direct and oversee the course of company activities. Therefore, good corporate governance can have a positive impact on the company. Based on this description, the author will research the factors that influence target leverage in companies listed on the Indonesia Stock Exchange. The research objectives are to find out whether companies in Indonesia have the existence of target capital structure and factors that affect target leverage for the period 2014 to 2018.

This research is expected to provide a reference to company managers in policy-making by taking into account factors of corporate characteristics, corporate governance practices, and adjustments to the capital structure of companies listed on the Indonesia Stock Exchange. The paper proceeds as follows. In section 2, a literature review related to this research is explored. Then, the methodology is presented in section 3. Results and Discussion are presented in section 4. The final section 5 concludes the paper.

2 Literature Review

2.1 Modigliani and Miller

Modigliani and Miller [4] stated that the company's capital structure would not affect the value of the company. Based on the assumption of investor and capital market behavior that securities are traded on a perfect capital market, and all information for making decisions is relevant and available, or there is no information asymmetry. Also, there are no fees, such as transaction fees, bankruptcy fees, and taxes. From these assumptions, Modigliani and Miller's theory argues that the optimal debt to capital ratio does not exist, and shareholder wealth is not related to capital structure. In their seminal paper, Modigliani and Miller contend that the value of a levered firm is the same as the value of unlevered firms so that the capital structure does not need to be considered by managers and managers can freely determine the choice of capital structure composition. This theory, although theoretically solid, uses unrealistic assumptions, because the world without taxes is invalid [5].
2.2 Trade-off theory

Opinion from Modigliani Miller that corporate tax will increase the value of the company, so from the statement, the maximum debt selection must be chosen by all companies. But in the real world, the theory cannot predict corporate behavior. Therefore, other authors argue that reducing the value of the levered firm is related to bankruptcy and associated costs. The integration of tax effects and distress costs is shown in Figure 1. The value of companies in the world without bankruptcy costs is represented by a diagonal straight line. The curve of the value of the firm with these costs. When a company moves from all equity to a small amount of debt, the curve will rise, because the probability of distress is minimal, so the present value at the distress cost is minimum, the present value of these costs will increase at an increasing rate.

![Graph of Value of firm (V) vs Debt (B)](image)

**Fig. 1.** The Optimal amount of Debt and the Value of the Firm [6].

An increase in the present value of these costs from additional debt dollars will equal an increase in the present value of the tax shield at some point. The point marked by B* is the level of debt that maximizes the value of the company, which can be seen in Figure 1. Therefore B* is the optimal amount of debt. The value of the company will decline due to an increase in bankruptcy costs that are faster than the tax shield beyond that point. It implies that the company will involve a trade-off between the tax benefit of debt and the cost of financial distress for capital structure decisions. So for each company, there will be an optimal amount of debt, and the amount of debt is the company's debt target. Bankruptcy costs increase faster than the tax shield beyond this point, implying a reduction in the value of the company from further leverage. It shows that the company's capital structure decision involves. The implication is that there is an optimal amount of debt for each company. This amount of debt is the target level of the company's debt [6].

2.3 Dynamic Capital Structure Theory

Dynamic Capital Structure Theory states that companies gradually make adjustments over time to their optimal capital structure. If the cost of adjustment is zero, the company will not be pushed to deviate from its optimal capital structure, and adjustments will be made immediately; however, due to market imperfections such as information asymmetry and
funding costs, the company may deviate from its optimal capital structure. The cost of balancing leverage will affect the speed of adjustment of the company's capital structure. The actual and desired leverage ratios may not be the same at some time due to market disruptions. Market shifts, such as transaction costs, prevent a company from adjusting its actual capital structure to an optimal level immediately, which will ultimately affect the speed or slow process of capital structure adjustment [7].

2.4 Corporate Governance

According to the OECD Principles of Corporate Governance [8], Corporate governance involves a series of relationships between company management, the board of directors, shareholders, and other stakeholders. Corporate governance also provides a structure through which the company's goals are set, and the means to achieve those goals and monitor performance are determined. Corporate governance aims to help build the environment of trust, transparency, and accountability needed to foster long-term investment, financial stability, and business integrity to support stronger growth and a more inclusive society. The quality of corporate governance affects the costs for companies to access capital for growth and the trust that those who provide capital - directly or indirectly - can participate and share in their value creation on fair and equitable terms [8].

2.5 Determinants of Leverage

Buvanendra et al. [3] found that profitability variables have a negative and significant relationship in companies in Sri Lanka which indicates that profitable companies tend to reduce debt positions with retained-earning, growth opportunity variables have a positive relationship with companies in India which showed that to achieve high growth, companies in India carried out debt financing, a positive relationship to leverage shows that tangible assets in company ownership allow companies to take on more debt financing because they have collateral to secure credit and reduce the risk for lenders. For larger companies, it is usually easier to increase new debt or new equity because larger companies provide more information to the public, which results in low asymmetric information. The size of the company produces a positive and significant effect, as researched by Tamirat, Trujillo-Barrera, and Pennings [9]; Etudaiye-Muhtar and Ahmad [10] and Yang, Albaity, and Hassan [11]. There is another tax reduction, namely depreciation, so leverage is also affected by the non-debt tax shields, an increase from this which could potentially negatively affect leverage, in a study by Yang et al. [11] found a negative relationship to leverage, debt will be less attractive to companies that have high non-debt tax shields. Corporate governance factors are also considered in several studies such as board size, Ganiyu and Abiodun [12] found a positive relationship which showed that large boards tended to carry out effective monitoring because a large number of directors applied high debt levels to increase company value; Schmid [13] found that family-controlled companies will use lower debt because they avoid the risk of default associated with the tendency that families use a longer perspective than companies that use operational managers and compensation can reduce agency problems which can then facilitate the timely convergence of target capital structures [3].
3 Research Methods

3.1 Sources and Data Research

Criteria for selecting the data in this study are Indonesian companies in sectors other than banking, finance, insurance, and utilities that are listed in the Indonesia Stock Exchange the period 2013-2018 due to the financial and business characteristics that are typical. Also, the company has complete data associated with variables research at Thomson Reuters Data Stream during the years 2013-2018.

3.2 Research Variable

The variables used in this study consisted of two types of a dependent variable and an independent variable.

3.2.1 Dependent variables

Leverage (LEV) is to calculate the company’s capital structure. Researchers use the book-debt ratio because it is not distorted by a market expectation of uncertainty and instability from time to time [3].

\[
Leverage_{it} = \frac{Total\ debt_{it}}{Total\ assets_{it}}
\]

3.2.2 Independent Variables

Independent variables used in this study to explain the variation in the target leverage ratio consists of the variable characteristics of the company and corporate governance.

1) Lag leverage

\[
Leverage_{it-1} = \frac{Total\ debt_{it-1}}{Total\ assets_{it-1}}
\]

2) Profitability

\[
Profitability_{it} = \frac{EBIT_{it}}{Total\ assets_{it}}
\]

3) Size

\[
Size_{it} = \text{Natural logarithm of total assets}_{it}
\]

4) Growth Opportunity

\[
Growth_{it} = \frac{Market\ capitalisation_{it}}{Common\ equity_{it}}
\]

5) Non-debt tax shield

\[
\text{Non-debt\ tax\ shield}_{it} = \frac{Depreciation_{it}}{Total\ assets_{it}}
\]
(6) Tangibility
\[\text{Tangibility}_{it} = \frac{\text{Tangible fixed assets}_{it}}{\text{Total assets}_{it}}\]

(7) Board Size
Total the number of directors on the board of a company.

(8) Family ownership (Dummy)
Using a dummy variable that is one, if a family or a family member is the controlling shareholder; otherwise, set to zero.

(9) Percent of directors’ compensation
\[\text{Percent of directors' compensation}_{it} = \frac{\text{Remuneration of directors}_{it}}{\text{Staff cost}_{it}}\]

3.3 Research Model
The target leverage ratio for firm i in period t is set as LEV*_{it}. Then Xit represented as a set of independent variables, which have been used as a previous study by Buvanendra et al. [3] and Etudaiye-Muhtar and Ahmad [10]. The model used is as follows:

\[\text{LEV}^{*}_{it} = \beta X_{it} + \epsilon_{it}\]  
(1)

Market without friction, an observed leverage ratio of firm i at time t, denoted as Lev_{it} must equal the target leverage ratio, i.e., \(\text{LEV}^{*}_{it} = \text{Lev}_{it}\). In a perfect environment, the difference between the observed capital structure in the current period and the previous period will be the same as the difference between the target capital structure and the capital structure of the previous period. But in the practical world, due to market imperfections that cause the costs of adjustment, the company may not fully adjust their actual debt ratio from the previous period to the current target debt ratio. Therefore, the partial adjustment, the company's leverage ratio was observed at any point in time generally will not be the same as the target leverage ratio. A model of partial adjustment may represent the following as in equation (1):

\[\text{LEV}_{it} - \text{LEV}_{it-1} = \lambda(\text{LEV}^{*}_{it} - \text{LEV}_{it-1})\]  
(2)

Where \(\text{Lev}_{it}\) and \(\text{LEV}_{it-1}\) is leverage for firm i in period t and t-1 and \(\lambda\) represents the speed of adjustment. If the rate adjustment lags slow or fast, the leverage will be close to zero, and if the level of adjustment of the company is fast or high, then the lag leverage has a value close to one.

By combining or substituting equations (1) and (2), it can be derived as follows:

\[\text{LEV}_{it} = \text{LEV}_{it-1} + \lambda(\text{LEV}^{*}_{it} - \text{LEV}_{it-1})\]  
(3)

\[\text{LEV}_{it} = \text{LEV}_{it-1} + \lambda \text{LEV}^{*}_{it} - \lambda \text{LEV}_{it-1}\]  
(4)

\[\text{LEV}_{it} = (1 - \lambda)\text{LEV}_{it-1} + \lambda \beta X_{it} + \epsilon_{it}\]  
(5)

The research model used by equation (5) can be described as follows:

\[\text{LEV}_{it} = (1 - \lambda)\text{LEV}_{it-1} + \lambda \beta_{1}\text{PROF}_{it} + \lambda \beta_{2}\text{SZ}_{it} + \lambda \beta_{3}\text{GROW}_{it} + \lambda \beta_{4}\text{TANG}_{it} + \lambda \beta_{5}\text{NDTS}_{it} + \lambda \beta_{6}\text{size}_{it} + \lambda \beta_{7}\text{FO}_{it} + \lambda \beta_{8}\text{PDC}_{it} + \epsilon_{it}\]  
(6)
Where:
\( LEV_{it} \) : leverage
\( LEV_{it-1} \) : lag leverage
\( PROF_{it} \) : profitability
\( SZ_{it} \) : size Company
\( GROW_{it} \) : growth Company
\( TANG_{it} \) : tangibility Company
\( NDTS_{it} \) : non-debt tax shield
\( Bsize_{it} \) : board Size
\( FO_{it} \) : family ownership
\( PDC_{it} \) : percent of directors' compensation
\( \varepsilon_{it} \) : error terms

3.4 Data Analysis Method

The data used to support the goals of this research is panel data that non-financial companies listed on the Indonesia Stock Exchange 5 years (2014-2018). The combination of time series data and cross-section is panel data. Time series is data in a certain time frame collected from an individual, while the cross-section is data within a specific time that is collected by many individuals. If the model is estimated with a fixed effect or random effect approach it will produce biased and inconsistent estimation results due to the presence of lag dependent variables that can cause endogeneity problem [14]. In addressing this problem, Arellano and Bond using the method of moments approach or called the generalized method of moments (GMM), which is known to overcome the issues of endogeneity resulting from the use of the dependent variable lag. Wald test, Sargan test and Arellano-Bond test (AR2) will be carried out to test the feasibility of the model using the GMM estimation method.

4 Results and Discussion

Generalized Method of Moment (GMM) estimation is used to determine the effect of firm-specific factors and corporate governance factors on the leverage so that in table 1 the estimated results of the research model are presented. After estimation is done, the next is to test the validity of the model used. Tests used are the Wald test, AR(2) test, and Sargan Test. From the Wald test was found that as a whole, the independent variables significantly influence the dependent variable. The AR(2) test shows that there is no second-order autocorrelation in the research model, while the sargan test indicates that the instruments used in the research model are valid and are not over-identified.
4.1 The presence of target leverage and speed of adjustment

Table 1 presents the results of the estimation of the factors that affect the target leverage on companies in Indonesia. In the lagged variable leverage shows a significant coefficient thus supporting dynamic trade-off theory. The leverage target is having a coefficient value of 0.497100, so the speed of adjustment is estimated at 50.29% (1 - 0.497100), which indicates that the company is adjusting the current leverage level to the target value at the level of 50.29% per year, implying every year the company reaching around 50.29% of the target leverage. It takes 1,988.46 years (1/0.5029) years to reach the target so that it can be concluded that the company closed the gap between current leverage and the target in almost two years.

Table 1. Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEV(-1)</td>
<td>0.497100</td>
<td>0.0009**</td>
</tr>
<tr>
<td>Profitability</td>
<td>-0.333113</td>
<td>0.0000***</td>
</tr>
<tr>
<td>Size</td>
<td>0.061770</td>
<td>0.0205**</td>
</tr>
<tr>
<td>Growth</td>
<td>0.004603</td>
<td>0.0519*</td>
</tr>
<tr>
<td>Tangibility</td>
<td>0.095963</td>
<td>0.0133*</td>
</tr>
<tr>
<td>Non-debt tax shield</td>
<td>-0.794201</td>
<td>0.3662</td>
</tr>
<tr>
<td>Board Size</td>
<td>0.005835</td>
<td>0.0501*</td>
</tr>
<tr>
<td>Family Ownership</td>
<td>-0.045756</td>
<td>0.0011**</td>
</tr>
<tr>
<td>% Directors’ compensation</td>
<td>-0.033752</td>
<td>0.7729</td>
</tr>
<tr>
<td>Number of observations</td>
<td>620</td>
<td></td>
</tr>
<tr>
<td>Wald test</td>
<td>0.0000</td>
<td></td>
</tr>
<tr>
<td>AR(2) test</td>
<td>0.6044</td>
<td></td>
</tr>
<tr>
<td>Sargan test</td>
<td>0.3975</td>
<td></td>
</tr>
</tbody>
</table>

Significant at 10% alpha value is marked by *
Significant at 5% alpha value is marked by **
Significant at 1% alpha value is marked by ***

Source: Data Collected and Processed by the Author.

4.2 Determinants of Leverage

Six variables were found to be significant in influencing the target leverage of companies in Indonesia during the period under study. These variables are profitability, size, growth opportunity, tangibility, board size, and family ownership. Profitability negatively affects leverage in the sample company, the higher the profitability, the lower the leverage, thus supporting the pecking order theory. It shows that companies with high profits in their capital structure will use less debt financing, which indicates that profitable companies will use the retention of profits to reduce debt positions. A profitable company can be said to have good internal finance because the company tends to have high retained earnings. This finding is consistent with Buvanendra et al. [3], Tamirat et al. [9] and Oino and Ukaegbu [15].

Size influences leverage positively on the companies sampled, which indicates that the company that is more diversified is the larger company. Hence, companies can use higher leverage because they have more capacity to use leverage. A positive relationship between size and leverage supports the trade-off theory. For asymmetric information, for large companies, the level of information asymmetry in the market will be much lower, as more
information is expected to be available to large companies. These large companies can turn to debt financing, so there is a positive relationship. With a much lower level of asymmetric information, it is more likely for these large companies to turn to debt financing, hence a positive relationship. This finding is consistent with Etudaiye-Muhtar and Ahmad [10], Oino and Ukaegbu [15], Tamirat et al. [9] and Nehrebecka and Dzik-Walczak [16].

Growth Opportunity affects leverage positively on the companies that are sampled, the higher the growth, the higher the leverage. It shows that companies will use debt financing to achieve higher growth [3]. When a company has a growth opportunity, there will be a possibility that the company will carry out debt financing, especially if the company does not have sufficient retained earnings. The use of debt will give a good signal to the market, indicating that more debt shows the company is confident of the prospect of his company [9]. This finding is consistent with Buvanendra et al. [3], Tamirat et al. [9], and Oino and Ukaegbu [15].

Tangibility influences leverage positively on the companies sampled. The higher the tangibility, the higher the leverage, there is a positive correlation following the trade-off theory which states that companies with higher tangible assets will have the ability to finance the debt, because it will have a higher credit rating if it has higher tangible assets. This finding is consistent with research conducted by Buvanendra et al. [3].

For corporate governance variables, only board size and family ownership produce significant probabilities, while for percent of directors' compensation variables are not significant. Board size positively affects the leverage of the company being sampled, the higher the board size, the higher the leverage. Large board members can improve the company by using external funds. This finding is consistent with research conducted by Jaradat [17]. Also, large boards tend to carry out effective monitoring with the aim of increasing the value of the company thus applying a high level of debt due to an adequate number of board sizes, and take the opportunity to be able to carry out expansion activities [12].

Family ownership negatively affects leverage in companies that are sampled, which indicates that research shows that family-controlled companies will use lower debt compared to companies controlled by professional managers [18]. Family ownership can be more sensitive about using leverage, which is associated with a tendency for companies with family ownership to use a longer perspective than managers [19]. This finding is consistent with Schmid [13], which states that to avoid the risk of default, the relationship between family ownership and leverage is negative.

5 Conclusions

This research was conducted to determine the dynamic aspects of the capital structure, such as the existence of target leverage, speed of adjustment, and the factors that influence leverage in companies in Indonesia. This study covers a period of 5 years, namely 2014 to 2018. By using the GMM estimator, it was found that Indonesian companies practice target leverage and leverage influenced by firm-specific factors such as profitability, size, growth opportunity, and tangibility, while corporate governance factors are board-size and family ownership. Profitability has a negative effect on leverage, while size, growth opportunity, and tangibility have a positive effect on leverage. On corporate governance factors, board size has a positive effect on leverage, while family ownership has a negative effect on leverage. This research contributes to the empirical literature by analyzing the determinants of target leverage.
in Indonesian companies. The limitations of study in this research are related to research data because some of the research data needed in this study are not available on the Thomson Reuters Data stream and company annual reports so that the number of sample companies used in this research is 155 companies. In this study, the sample of companies is only in Indonesia so that further research can be expanded by adding companies in other countries besides Indonesia and the addition of independent variables or exploring new firm specific factors and corporate governance. For managerial implications, companies in Indonesia must be careful of bankruptcy costs that can arise from the use of excessive debt if it optimizes the tax benefits obtained from the use of debt, so company managers must estimate the target capital structure that can be used as a guide in conducting policies on corporate financing. Company managers can use the influence of corporate characteristics and corporate governance as well as the speed of capital structure adjustment so that companies can optimize the cost of capital and ultimately achieve good corporate value. Regulators are expected to consider the results of this research in making regulations for companies in Indonesia related to leverage and also adjustment costs that can help develop companies in Indonesia.

References


Are MSMEs Still Interesting? A Descriptive Analysis on Growth, Workforce, and Export of Indonesian MSMEs 2010-2018

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Universiti Teknologi Mara, Malaysia²

Abstract. This study aims to describe year on year about the number of MSME business units, the number of MSME workforce, and the total number of MSME exports in the period of 2010-2018. Secondary data used in this study came from the Ministry of Cooperatives and SMEs in the period 2010-2018 with interval scale and pooled data. The results of the study were in the period of 2010-2018: the number of MSMEs increased by 21.06%; the number of large businesses increased by 18.70%; the proportion of the number of MSMEs compared to large businesses increased from 99.9911% to 99.9914%; the average number of workers in large businesses has increased from 576 people to 652 people; the ability to absorb labor at MSMEs has increased from 316 to 357 times greater than large businesses; the number of MSME exports increased by 36.6%; the number of exports of large businesses decreased and the ratio of the number of MSME exports compared to large businesses increased from 21% to 150%. The conclusion of this study is the number of MSMEs and the ability to absorb labor has increased from the period 2010-2018. However, the number of non-oil exports have fluctuated from the period 2010-2018. Therefore, MSMEs facilitation policy from the government is needed so that MSMEs are able to access product sales overseas.

Keywords: Audit Quality, Audit Committee, KAP Size, Auditor Specialization.

1 Introduction

The understanding of MSMEs according to Law 20/2008 on Micro, Small and Medium Enterprises sets limits on the MSME criteria [1]. The criteria for Micro Business are as follows: (a) Has a net asset of no more than Rp 50,000,000 (fifty million rupiah) excluding land and buildings where the business is located; or (b) Has annual sales results of at most Rp.300,000,000.00 (three hundred million rupiah). Whereas, Small Business Criteria are as follows: (a) Has a net worth of more than Rp.50,000,000.00 (fifty million rupiah) up to a maximum of Rp500,000,000.00 (five hundred million rupiah) excluding land and buildings where the business is located; or (b) Has annual sales results of more than Rp.300,000,000.00 (three hundred million rupiah) up to a maximum of Rp2,500,000,000.00 (two billion five hundred million rupiah). The criteria for Medium Enterprises are as follows: (a) Has a net asset of more than Rp. 500,000,000.00 (five hundred million rupiah) up to a maximum of Rp 10,000,000,000.00 (ten billion rupiah) excluding land and buildings where the business is
located; or (b) Has annual sales results of more than Rp2,500,000,000.00 (two billion five hundred million rupiah) up to a maximum of Rp50,000,000,000.00 (fifty billion rupiah).

The potential of MSMEs in Indonesia both in reducing unemployment and accelerating economic growth, but there are still many obstacles in the optimal funding policy, so that the competitiveness of large businesses remains weak. Riyanto et al. [2] research with OLS model shows that MSMEs in Manokwari are able to absorb more workers than large businesses, but are constrained in the matter of funding decisions. It is recommended not to increase debt in funding decisions even though the fixed assets can be used as collateral. Furthermore, the Ministry of Trade [3] explains that the role of stakeholder synergy is needed in building the competitiveness of MSMEs through appropriate funding decisions: MSMEs, banking and financial institutions, and the government.

The purpose of this study is to describe the development of the number of MSMEs in Indonesia, describe the number of MSME workforce absorption in Indonesia, describe the number of MSME exports in Indonesia in the period 2010-2018, and find out whether the growth of MSMEs is affected by the growth of the previous period.

2 Research Methods

This study used descriptive qualitative method. Secondary data used in this study came from the Ministry of Cooperatives and SMEs in the period 2010-2018 with interval scale and pooled data.

3 Result and Discussion

The comparison of Non-Oil and Gas Exports in 2010-2018 is greater in large businesses compared to MSMEs. non-oil exports in large businesses tend to increase, but in MSMEs tend to decrease. Data on non-oil exports at MSMEs and large-scale businesses can be seen in table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>MSMEs (in billions of rupiah)</th>
<th>Large Businesses (in billions of rupiah)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>162,254.6</td>
<td>790,835.3</td>
</tr>
<tr>
<td>2011</td>
<td>175,894.9</td>
<td>936,825.0</td>
</tr>
<tr>
<td>2012</td>
<td>187,441.8</td>
<td>953,009.3</td>
</tr>
<tr>
<td>2013</td>
<td>166,626.4</td>
<td>1,018,764.5</td>
</tr>
<tr>
<td>2014</td>
<td>182,112.7</td>
<td>979,214.8</td>
</tr>
<tr>
<td>2015</td>
<td>185,975.0</td>
<td>996,668.0</td>
</tr>
<tr>
<td>2016</td>
<td>255,126.1</td>
<td>1,519,500.8</td>
</tr>
<tr>
<td>2017</td>
<td>301,629.9</td>
<td>1,772,195.1</td>
</tr>
<tr>
<td>2018</td>
<td>293,840.9</td>
<td>1,750,649.9</td>
</tr>
</tbody>
</table>

The proportion of MSME non-oil and gas exports compared to large businesses in the 2010-2018 period declined. Various MSME policies that have been carried out such as export facilitation through overseas exhibitions, policies to facilitate export have little impact on MSMEs. Export access is still mostly done by large businesses.
The ability to absorb MSME workers has increased and large businesses have decreased. This indicates that the business climate is conducive for MSMEs. So that many MSMEs increase production capacity and increase labor. However, it can be seen from table 1, that the increase in MSME production capacity is not for export, on the contrary for large businesses to be exported to various countries.

Table 2. Workers working in MSMEs and large businesses in the 2010-2018 period (people)

<table>
<thead>
<tr>
<th>Year</th>
<th>MSMEs</th>
<th>Large Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>96,193,623</td>
<td>2,692,374</td>
</tr>
<tr>
<td>2011</td>
<td>98,238,913</td>
<td>2,753,049</td>
</tr>
<tr>
<td>2012</td>
<td>101,722,458</td>
<td>2,891,224</td>
</tr>
<tr>
<td>2013</td>
<td>107,657,510</td>
<td>3,150,645</td>
</tr>
<tr>
<td>2014</td>
<td>114,144,082</td>
<td>3,537,162</td>
</tr>
<tr>
<td>2015</td>
<td>123,229,387</td>
<td>4,194,051</td>
</tr>
<tr>
<td>2016</td>
<td>112,828,610</td>
<td>3,444,746</td>
</tr>
<tr>
<td>2017</td>
<td>116,431,224</td>
<td>3,828,953</td>
</tr>
<tr>
<td>2018</td>
<td>116,978,631</td>
<td>3,619,507</td>
</tr>
</tbody>
</table>

The number of MSMEs and large businesses has increased, this is an indication of the ease of licensing the establishment of businesses, obtaining working capital.

Table 3. Number of MSMEs and large business period 2010-2018 (units)

<table>
<thead>
<tr>
<th>Year</th>
<th>MSMEs</th>
<th>Large Business</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>52,764,750</td>
<td>4,676</td>
</tr>
<tr>
<td>2011</td>
<td>54,114,821</td>
<td>5,150</td>
</tr>
<tr>
<td>2012</td>
<td>55,206,444</td>
<td>4,952</td>
</tr>
<tr>
<td>2013</td>
<td>56,534,591</td>
<td>4,968</td>
</tr>
</tbody>
</table>
The number of MSMEs has increased, non-oil exports have fluctuated and the use of labor tends to increase. After 2016, it appears that there is an increase in the use of labor and the number of MSMEs has increased but the products have not been oriented towards exports, so exports tend to decline.

![Graph showing number of MSMEs, use of MSME workers, and MSME exports from 2010 to 2018.](image)

**Fig. 2.** Number of MSMEs, Use of MSME Workers, MSME Exports for 2010-2018.

### 3.1 MSME Growth Prediction

#### 3.1.1 3 Month Moving Average Approach

| Year | MSMEs | pred | |e| | e^2 |
|------|-------|------|------|---|---------|
| 2010 | 52765 |       |      | 54028.67 | 6279631.705 |
| 2011 | 54115 |       |      | 55285.29 | 6814374.37 |
| 2012 | 55206 |       |      | 56545.59 | 7383103.382 |
| 2013 | 56535 |       |      | 54028.67 | 6279631.705 |
| 2014 | 57896 |       |      | 55285.29 | 6814374.37 |
| 2015 | 59263 |       |      | 56545.59 | 7383103.382 |
| 2016 | 61651 |       |      | 57897.69 | 14088622.12 |
| 2017 | 62923 |       |      | 59603.22 | 11018376.53 |
| 2018 | 64194 |       |      | 61278.86 | 8498396.87 |
| 2019 | 62922.62 | | 62922.62 | 3959255646 |
| 2020 | 63558.34 | | 63558.34 | 4039662139 |
| MAE  | 18037.82 | | | |
| MSE  | 1006625036 | | | |
3.1.2 Weighted Moving Average Approach

Table 5. Weighted Moving Average Approach

<table>
<thead>
<tr>
<th>Year</th>
<th>MSMEs</th>
<th>pred</th>
<th></th>
<th>e</th>
<th>e^2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>52765</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>54115</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>55206</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>56535</td>
<td>54635</td>
<td>1899.8</td>
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<td></td>
</tr>
<tr>
<td>2014</td>
<td>57896</td>
<td>55894</td>
<td>2001.6</td>
<td>4006206.806</td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>59263</td>
<td>57218</td>
<td>2044.3</td>
<td>4192344.859</td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>61651</td>
<td>58580</td>
<td>3071.3</td>
<td>9433113.425</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>62923</td>
<td>60559</td>
<td>2363.5</td>
<td>5586168.648</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>64194</td>
<td>62175</td>
<td>2018.9</td>
<td>4075778.741</td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>63558</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2020</td>
<td>25550</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MAE 5148292.509

3.1.3 ACF (Autocorrelation Function)

Table 6. Autocorrelation Function

<table>
<thead>
<tr>
<th>Year</th>
<th>Dow</th>
<th>Lag</th>
<th>ACF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>52764.75</td>
<td>1</td>
<td>0.679623</td>
</tr>
<tr>
<td>2011</td>
<td>54114.82</td>
<td>2</td>
<td>0.362767</td>
</tr>
<tr>
<td>2012</td>
<td>55206.44</td>
<td>3</td>
<td>0.049152</td>
</tr>
<tr>
<td>2013</td>
<td>56534.59</td>
<td>4</td>
<td>-0.17568</td>
</tr>
<tr>
<td>2014</td>
<td>57895.72</td>
<td>5</td>
<td>-0.3408</td>
</tr>
<tr>
<td>2015</td>
<td>59262.77</td>
<td>6</td>
<td>-0.43407</td>
</tr>
<tr>
<td>2016</td>
<td>61651.18</td>
<td>7</td>
<td>-0.38866</td>
</tr>
<tr>
<td>2017</td>
<td>62922.62</td>
<td>8</td>
<td>-0.25233</td>
</tr>
<tr>
<td>2018</td>
<td>64194.06</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td></td>
</tr>
</tbody>
</table>

Correlogram
Based on the data above, it is known that the results are not significant, meaning that there is a growth in the number of MSMEs due to the growth in the number of MSMEs in the next period. Then it can be concluded that the interest in doing business at MSME is determined by the number of MSMEs in the previous period.

4 Conclusions

Based on the result above, it can be concluding that the number of MSMEs and the ability to absorb labor has increased from the period 2010-2018. However, the number of non-oil exports have fluctuated from the period 2010-2018. In 2018, on average each MSME is only able to export 0.31% of total exports. Therefore, MSME facilitation policy from the government is needed so that MSMEs are able to access product sales overseas.

References

The Effect of the Size of Public Accounting Firms (KAP) and Specialist Auditors on Audit Quality with the Audit Committee as a Moderating Variable

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Universitas Negeri Semarang, Indonesia1,2,3,4
Universitas Andalas, Indonesia5

Abstract. The audit quality becomes important in the realization of good corporate governance. There are several things that affect audit quality, namely the size of public accounting firm (KAP), specialist auditors, audit tenure, and so on. This study examines the influence of KAP size and specialist auditors on audit quality in banking companies in Indonesia. Furthermore, this study has a novelty on the use of audit committee variables as a moderating variable. The sample of this study is the audit report of banking company listed on the Indonesian Stock Exchange (IDX) in 2014-2018. Furthermore, the data analysis method uses MRA test with SPSS 21. The result of this study indicate that auditor specialization has a negative effect on audit quality. Whereas, the size of the KAP has no effect on audit quality. Furthermore, there is a significant influence between KAP size on audit quality that is moderated by the audit committee. However, the audit committee cannot moderate the relationship of the influence of auditor specialization on audit quality. This research contributes to the scientific literature related to audit quality.

Keywords: Audit Quality, Audit Committee, KAP Size, Auditor Specialization.

1 Introduction

Audit quality is the possibility of auditor to find misstatements on client financial statement [1]. In determining misstatement, the auditor must have an attitude of professional skepticism. Misstatements can occur as a result of mistakes or fraud. Public Accountant Professional Standards (SPAP) is a reference set to a quality standard that must be obeyed by public accountants in the provision of services [2]. The auditor is responsible for complying with audits of financial statements.

Cases that have dragged the names of public accountants into many cases in Indonesia, such as irregularities in Garuda Indonesia's financial statements in 2018, caused a lot of polemic. It all started with the results of Garuda Indonesia's financial statements for the 2018 fiscal year. Garuda Indonesia Group posted a net profit of USD809.85 thousand or equivalent to Rp11.33 billion (assuming an exchange rate of Rp14,000 per US dollar). This figure jumped sharply compared to 2017 which suffered a loss of USD216.5 million, but the financial statements caused a polemic, because two Garuda Indonesia commissioners namely Chairal Tanjung and Dony Oskaria (currently not in office), considered the 2018 Garuda Indonesia financial statements were not in accordance with the Statement Financial Accounting Standards (PSAK). This is because Garuda Indonesia includes the receivables as
income received from PT Mahata Aero Teknologi. PT Mahata Aero Teknologi itself has debts related to the installation of unpaid Wi-Fi.

Audit quality is a systematic and independent examination to determine activities, quality and results in accordance with the planned arrangements and whether these arrangements are implemented effectively and in accordance with the objectives. When the activities, quality and results are in accordance with the regulations and principles that have been determined, it can be said that the quality of the audit is high. KAP which is affiliated with KAP Big Four and has a high reputation can produce high audit quality. In addition, specialist auditors are more likely to detect errors and deviations from non-specialist auditors. Hence, specialist auditors tend to provide higher quality audit results than non-specialist auditors. High audit quality indicates that the company's activities, quality and performance are running well and accordingly. In banking companies, their performance can be seen from the financial reports that have been audited by the Public Accounting Firm.

When the banking company shows good company performance, the public and investor confidence will increase. The public will believe in saving their money and making loans to these banks. Furthermore, investors will be willing to invest. The existence of commercial banks in a modern economy is very important for the country's economy, especially in terms of maintaining financial stability, controlling inflation, the payment system, and the monetary authority.

Some previous studies show inconsistencies in audit quality research. Che et al. [3], Alsmairat et al. [4], Ibrahim & Ali [5], Muliawan & Sujana [6] shows that there is a positive influence on KAP size on audit quality. However, research Paputungan & Kaluge [7], Atmojo & Sukirman [8] shows that KAP size has a negative effect on audit quality. On the other hand, research conducted by Nurintiati & Purwanto [9], Nizar [10], Nugroho [11] and Sari, Diyanti & Wijayanti [12] stated that KAP size had no influence on audit quality. Then Tjun [13] and Fitriany [14] shows that auditor specialization has a negative effect on audit quality. Whereas Nurintiati & Purwanto [9], Pramaswaradana & Astika [15], Pertwi, Hasan & Hardi [16] stated that auditor specialization has no effect on audit quality. However, Sari, Diyanti & Wijayanti [12] and Atmojo & Sukirman [8] found that auditor specialization had a positive effect on audit quality.

In addition to the emergence of regulations regarding mandatory audit rotation, the formation of an audit committee in each company is one way to improve audit quality [17]. The audit committee was formed with the aim of overseeing the course of the external audit process and maintaining the relationship between the company's management and the external auditor. Audit committee oversight aims to reduce the existence of an emotional relationship between the company and the external auditor, which will reduce the independence of the external auditor itself and have an impact on audit quality. In addition, the existence of an audit committee is expected to be able to oversee negotiations on the determination of the use of Big Four and non-Big Four KAPs, specialist KAPs and KAP who do not have industry specialization in conducting an audit engagement. hence this paper examines the effect of the size of public accounting firms, and specialist auditors on financial companies in Indonesia with the audit committee as a moderating variable.
2 Literature Review and Hypothesis Development

2.1 Effect of KAP size on Audit Quality

The large KAP size explains the ability of auditors to be independent and professional towards clients because they are less dependent on clients. Big KAP (Big 4 accounting firms) are believed to conduct higher quality audits compared to small KAP (Non-Big 4 accounting firms). KAP that has a good reputation are considered to be more efficient in conducting the audit process and will produce information in accordance with the fairness of the company's financial statements. Giri (2010) states that reputable KAP explains the existence of auditor independence in carrying out audit tasks. Choi et al. [18] state that large-scale KAPs are internationally well-known KAPs that provide higher quality audit services than small-scale KAPs.

Alsmairat et al. [4] found that the size of the Public Accounting Firm (KAP) had a significant positive effect on audit quality. The results of the study showed that the KAP size had a significant influence on audit quality, indicating that the big four KAP or KAP affiliated with the big four KAP auditing the company's financial statements was able to influence audit quality. Based on this description, the following hypothesis is formulated:

H1: KAP size has a positive influence on audit quality.

2.2 Effect of Change of Auditor Specialization on Audit Quality

An auditor's experience of an industry's understanding of the company being audited is also very helpful in detecting fraud. Kallapur et al. [19] concerning the effect of market concentration audit on audit quality where the higher the market concentration, the lower the audit quality. In general, specialist accounting firms control market share in an industry so maintain market power in a particular industry, there is a possibility that specialist accounting firms are forced to sacrifice their independence in order to retain their clients [13].

H2: Auditor specialization has a negative influence on Audit Quality.

2.3 The Role of Audit Committee in Moderating the relationship of KAP size to Audit Quality

The external auditor becomes an independent party from outside the company, while the audit committee becomes an independent party from within the company. The audit committee has a function in providing views and suggestions regarding problems in the company's operations, policies and conducting internal controls [17]. Hence audit committee could minimize risk of fraud. The use of KAP affiliated with Big Four KAP and supported by a good audit committee so that the independence of auditors can survive well. Monitoring carried out by the audit committee during the audit process ensures that the audit is conducted properly so that it is considered capable of improving audit quality. Based on these descriptions, the researchers formulated the hypothesis as follows:

H3: The Audit Committee could moderate the relationship between KAP Size and Audit Quality

2.4 The Role of the Audit Committee in Moderating the Relationship of the Auditor Specialization to Audit Quality

The use of specialist public accountant services and supported by a qualified audit committee is expected to be able to produce quality audits that are reliable and reliable. Good
communication between the audit committee and the public accountant will make the audit process can be carried out with appropriate procedures so that when encountering a problem, the solution will be easy to find and from that good audit quality will be produced. The presence of the audit committee as a supervisor is considered capable of limiting the auditor to maintain his market share for personal or group gain by sacrificing his independence and doing everything that can reduce audit quality. So that the audit quality produced by specialist auditors and non-specialist auditors can be of good quality.

H4: The Audit Committee could moderate the relationship between auditor specialization on Audit Quality.

3 Research Methods

3.1 Data Collection

This study uses quantitative methods and uses secondary data. The population is a banking sector company listed on the Indonesia Stock Exchange (IDX) for the 2014-2018 period. Sample selection used purposive sampling method. The total population is 220, from the sampling conducted obtained a sample of 150.

<table>
<thead>
<tr>
<th>Table 1. Sample Criteria</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of banking companies listed on the IDX</td>
<td>44</td>
</tr>
<tr>
<td>Banking companies registered after 2014</td>
<td>(3)</td>
</tr>
<tr>
<td>Companies that do not publish consecutive financial statements during the study period</td>
<td>(6)</td>
</tr>
<tr>
<td>Banking companies that are not accompanied by independent auditor's report</td>
<td>0</td>
</tr>
<tr>
<td>Amount of outlier data</td>
<td>(5)</td>
</tr>
<tr>
<td>Sample</td>
<td>30</td>
</tr>
<tr>
<td>Number of observations (2014-2018)</td>
<td>5</td>
</tr>
<tr>
<td>Final Sample</td>
<td>150</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 2. Definition of Variable Operations</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No.</td>
<td>Variable</td>
</tr>
<tr>
<td>1.</td>
<td>Audit Quality</td>
</tr>
</tbody>
</table>
misstatements on financial statements.

2. $\text{TACit} = \text{NIit} - \text{CFOit}$

3. $\text{NDACit} = \alpha_1 \left[ \frac{1}{\text{TAnit} - 1} \right] + \alpha_2 \left[ \frac{\Delta \text{REVit}}{\text{TAnit} - 1} - \frac{\Delta \text{RECit}}{\text{TAnit} - 1} \right] + \alpha_3 \left[ \frac{\text{PPEit}}{\text{TAnit} - 1} \right]$

4. Accrual Discretioner:

$$\text{DACit} = \frac{\text{TACit}}{\text{TAnit} - 1} - \text{NDTACit}$$ [20]

2. Size of KAP

The KAP size in this study is divided into two groups, namely KAP affiliated with Big 4 and KAP not affiliated with Big 4.

If the company is audited by Big 4 KAP, it will be given a value of 1. Whereas if the company is audited by non-Big 4 KAP, then it is given a value of 0 [9].

3. Auditor Specialization

Auditor specialization is the number of clients of a KAP in certain industry. $\frac{\text{TK}}{\text{TE}} \times 100\%$. Public Accounting Firm (KAP) > 15% market share will be given the number 1 and KAP <15% market share will be given the number 0 [10].

4. Audit Committee

The audit committee is independent committee to supervisory functions over the company's activities related to the review of financial information and internal control.

The number of Audit committee divided by the number of commissioner board.

3.2 Data Analysis

Hypothesis testing is done with a Moderated Regression Analysis (MRA) to analyze the effect of audit tenure, KAP size, auditor specialization and audit fees on audit quality by using the audit committee as a moderating variable. This study uses an interaction test (MRA) to test the audit committee as moderating. The moderation variable used is the audit committee (KA). The audit committee in this study was measured based on the percentage of the existence of the audit committee.

4 Results and Discussion

4.1 Descriptive Testing

Based on table 3 shows that from the data processed as many as 150, the audit quality variable which is proxied by discretionary accruals (DAC) has a range of 0.0006 to 0.2547. The lowest value of 0.0006 is owned by Bank QNB Indonesia Tbk. in 2017 and Bank Rakyat Indonesia (Persero) Tbk. 2016 showed that the company carried out accrual management by
reducing its profits by 0.0006. The highest value of 0.2547 is owned by Bank QNB Indonesia Tbk. 2014 showed that the company carried out accrual management by increasing its profit by 0.2547. The average value (mean) of 0.051312 indicates that the average sample company in the 2014-2018 period carried out accrual management of 0.51312. The standard deviation produced in this study of 0.0455997 shows relatively small data deviations because the value is smaller than the mean (mean). The existence of a small data deviation indicates good and varied data distribution on audit quality variables.

<table>
<thead>
<tr>
<th>Table 3. Descriptive Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td>Size of KAP</td>
</tr>
<tr>
<td>Auditor Specialization</td>
</tr>
<tr>
<td>Audit Quality</td>
</tr>
<tr>
<td>Audit Committee</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>


Based on table 3, the proportion of the audit committee shows an average of 0.8829 with a standard deviation of 0.32408. This means that the average number of members of the audit committee is 88.29% of the total number of commissioners in the company. The standard deviation of 0.32450 shows a relatively small data deviation because the value is smaller than the average value. The existence of a small data deviation indicates good and varied data distribution on audit committee variables. In table 3 the minimum value of the audit committee proportion is 0.38 owned by PT Bank Negara Indonesia (Persero) Tbk. 2014 and PT Bank Negara Indonesia (Persero) Tbk. 2016. While the maximum value of the audit committee proportion of 1.67 is owned by PT Bank Maspion Indonesia Tbk. 2014, PT Bank Harda Internasional Tbk. 2014 and PT Bank Maspion Indonesia Tbk. 2015.

4.2 Results of Inferential Statistical Analysis

4.2.1 Normality Test

In this study the results of the Kolmogorov-Smirnov test showed a figure of 0.326 where this indicates that a normal distribution was obtained because it was greater than 0.05.

<table>
<thead>
<tr>
<th>Table 4. Normality Test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N</strong></td>
</tr>
<tr>
<td>150</td>
</tr>
<tr>
<td>Normal Parameters&lt;sup&gt;a,b&lt;/sup&gt;</td>
</tr>
<tr>
<td>Std. Deviation</td>
</tr>
<tr>
<td>Most Extreme Differences</td>
</tr>
<tr>
<td>Positive</td>
</tr>
<tr>
<td>Negative</td>
</tr>
<tr>
<td>Kolmogorov-Smirnov Z</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
</tr>
</tbody>
</table>

Source: SPSS Output, processed by the author, 2020.
4.2.2 Classic Assumption Test

Based on Table 5, regression model is free from multicollinearity. The results of multicollinearity testing can be seen in table 5 below. Table 6 shows there is no positive or negative autocorrelation. Then, from picture 1 shows this research free from heteroskedasticity.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Constant)</td>
<td>.023</td>
<td>.011</td>
<td>2.091</td>
<td>.038</td>
<td></td>
</tr>
<tr>
<td>Size of KAP</td>
<td>.010</td>
<td>.008</td>
<td>.098</td>
<td>1.228</td>
<td>.221</td>
</tr>
<tr>
<td>Auditor Specialization</td>
<td>.024</td>
<td>.008</td>
<td>.248</td>
<td>3.134</td>
<td>.002</td>
</tr>
<tr>
<td>Audit Committee</td>
<td>.020</td>
<td>.011</td>
<td>.140</td>
<td>1.758</td>
<td>.081</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Audit Quality

Source: Source: SPSS Output, processed by the author, 2020.

<table>
<thead>
<tr>
<th>Model Summaryb</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LAG_RES1
b. Dependent Variable: Unstandardized Residual

Source: SPSS Output, processed by the author, 2020.

Picture 2. Scatterplot

Source: SPSS Output, processed by the author, 2020.
4.3 Hypothesis Test

Table 7 shows that the results of H1 testing obtained a significance value of 0.453 (> 0.05) so that H2 is rejected. These results are in line with research conducted by Nurintiati & Purwanto [9], Nizar [10], Nugroho [11], Sari, Diyanti & Wijayanti [12] and Apriani [21] who found that the size of the Public Accounting Firm had no effect on audit quality. KAPs that are affiliated with big four KAPs do not tend to produce better audit quality than KAPs that are not affiliated with big four KAPs. An auditor who works both in the big four KAP and non-big four KAP they are bound by professional competency standards so that wherever they work for the big four or non-big four KAP, they will carry out checks in accordance with the established regulations and standards [22].

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>.045</td>
<td>.006</td>
<td></td>
<td>7.476</td>
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<tr>
<td>Size of KAP</td>
<td>-.007</td>
<td>.009</td>
<td>-.072</td>
<td>-.752</td>
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<td>Auditor Specialization</td>
<td>.027</td>
<td>.008</td>
<td>.275</td>
<td>3.439</td>
</tr>
<tr>
<td>Interaction of KA KAP</td>
<td>.033</td>
<td>.012</td>
<td>.297</td>
<td>2.866</td>
</tr>
<tr>
<td>Interaction of KA SA</td>
<td>-.012</td>
<td>.008</td>
<td>-.132</td>
<td>-1.507</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Audit Quality


H2 test results obtained a significance value of 0.001 (<0.05) so that H2 is accepted. This result is consistent with research conducted by Tjun [13], Fitriany [14] and Kallapur [19] who found that auditor specialization had a positive effect on discretionary accruals or had a negative effect on audit quality. In general, auditors or specialized accounting firms control market share in an industry. To maintain market power in a particular industry, it is possible that auditors or KAP specialists are forced to sacrifice their independence in order to retain their clients.

The H3 test results obtained a significance value of 0.005 (<0.05), so that H3 is accepted. The results of this study are in line with research conducted by Atmojo and Sukirman [8] who found that the audit committee was able to moderate the relationship between KAP size and audit quality. This happened because the audit committee and KAP did not support each other's work. In addition, the work pressure received by KAP because many clients use KAP services affiliated with Big Four KAP compared to KAP affiliated with non-Big Four KAP can reduce audit quality. Excessive workload on KAP will negatively impact the quality of audits produced [7][23].

The H4 test shows significance value of 0.134 (> 0.05), so that H4 was rejected. These results indicate that the existence of an audit committee does not affect the interests of specialist auditors to maintain market power and their clients. To maintain market power in an industry, it is possible that auditors or KAP specialists are forced to sacrifice their independence in order to retain their clients and this causes a decline in audit quality [13][14][19].
4.4 Influence of KAP size on Audit Quality

This shows that the KAP size has no effect on audit quality, so the second hypothesis is rejected. Nurintiati and Purwanto [9] state that KAP size does not have an influence on audit quality because local KAP affiliated with Big Four KAP are more focused on attracting and gaining clients. Sari, Diyanti & Wijayanti [12] state that the KAP size that has no effect on audit quality indicates that non-Big Four KAPs have improved their quality in conducting and producing audit services so that in determining the choice of KAP, the company no longer makes Big Four or non-Big Four KAP as the main consideration.

The results of this study break the agency theory that underlies that the company owner (principal) cooperates with the Big Four KAP to conduct an examination of the financial statements presented by management to assess the fairness of the financial statements presented in the hope of being able to produce better and reliable audit quality. The results of this study provide empirical evidence that KAP size does not affect audit quality.

These results are in line with research conducted by Nizar [10], Nugroho [11] and Apriani [21] who found that the size of the Public Accounting Firm had no effect on audit quality. KAPs that are affiliated with big four KAPs do not tend to produce better audit quality than KAPs that are not affiliated with big four KAPs. An auditor who works both in a big four KAP and a non-big four KAP they are bound by professional competency standards so that wherever they work at a big four or non-big four KAP, they will carry out checks in accordance with the established regulations and standards [22].

4.5 Influence of Auditor Specialization on Audit Quality

This study shows that auditor specialization has a significant positive effect on discretionary accruals or a significant negative effect on audit quality so that the third hypothesis is accepted. Tjun [13] found that auditor specialization has a negative effect on audit quality. These results break the agency theory that underlies the relationship and conflict of interest between management (agent) and company owner (principal). The conflict of interest requires an independent third party to evaluate and check the performance of management through the financial statements presented, the owner of the company contracts the KAP or auditor who specializes in an industry. However, the results showed different things, where the appointment of specialist auditors to audit financial statements presented by management tended to reduce audit quality.

This result is consistent with research conducted by Fitriany [14] and Kallapur [19] who found that auditor specialization has a positive effect on discretionary accruals or negatively affects audit quality. In general, auditors or specialized accounting firms control market share in an industry. It is possible that auditors or KAP specialists are forced to sacrifice their independence in order to retain their clients. The decline in audit quality is due to the decrease in independence greater than the increase in audit quality due to their specialization, because their independence is disrupted, then audit quality decreases [14].

4.6 The Role of the Audit Committee in Moderating the relationship of KAP size to Audit Quality

The results of interactions between audit committee variables and KAP size significantly influence discretionary accruals with a positive direction or a negative direction on audit quality. These results mean that the audit committee as a moderating variable weakens the influence of the KAP size on audit quality. Based on these results break the agency theory previously mentioned that the presence of the audit committee could oversee the emotional
relationship that is too close between KAP with management. The presence of the audit committee in conducting oversight that is too strict and rigid makes the auditor feel limited in carrying out and carrying out audit procedures. In addition, poor communication between public accounting firms and audit committees can be one of the causes that can reduce audit quality, in other words it can reduce audit quality.

The results of this study are in line with research conducted by Atmojo and Sukirman [8] who found that the audit committee was able to moderate the relationship between KAP size and audit quality. This happened because the audit committee and KAP did not support each other's work. In addition, the work pressure received by KAP because many clients use KAP services affiliated with Big Four KAP compared to KAP affiliated with non-Big Four KAP can reduce audit quality. Excessive workload on KAP will negatively impact the quality of audits produced [7][23].

4.7 The Role of the Audit Committee in Moderating the Relationship of the Auditor Specialization to Audit Quality

Based on the results of the study showed the interaction between audit committee variables and auditor specialization did not have a significant effect on audit quality so that the audit committee was unable to moderate the influence of auditor specialization on audit quality [24], so the fifth hypothesis was rejected. The presence of the audit committee is not able to moderate the influence of auditor specialization on audit quality because specialist auditors tend to have more knowledge in certain industry fields and have experience auditing companies with different systems, so the presence of the audit committee has no effect.

In addition, this paper breaks the agency theory previously mentioned that the presence of the audit committee could oversee specialist auditors to carry out audit activities according to good procedures. The presence of the audit committee in supervising specialist auditors is unable to weaken or strengthen audit quality. Poor communication during the supervision and monitoring period is the reason why the presence of the audit committee does not affect the relationship between auditor specialization and audit quality.

These results indicate that the existence of an audit committee does not affect the interests of specialist auditors to maintain market power and their clients. To maintain market power, it is possible that auditors or KAP specialists are forced to sacrifice their independence in order to retain their clients and this causes a decline in audit quality [13][14][19].

5 Conclusions

This research give evidence that KAP size does not affect audit quality. While auditor specialization has a negative effect on audit quality. The audit committee is unable to strengthen or weaken the influence of auditor specialization on audit quality. However, the audit committee could weaken the influence of KAP size on audit quality. In this study, there are limitations, namely the sample used only in banking sector companies listed on the Indonesia Stock Exchange. Another limitation, the measurement of KAP size variables does not use data from the IAPI. Further research is expected to examine the KAP size used uses a broader assessment such as KAP affiliated with international KAP. Furthermore, it can use companies in other sectors with periods of more than 5 years.
References


Identifying the Factor of Employee Wellbeing towards the Engagement of Employee in Gojek Bandung Company

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Abstract. Employee wellbeing is becoming a critical concept to boost employee engagement in a company. Employee wellbeing and engagement run hand-in-hand as it has a positive relationship and builds off of one another. When the employee is happy and feels content with their job, it does affect their wellbeing. As well as when the employee is physically and mentally healthy, they will also feel happier in the workplace thus contributing to better performance. However, employees that are highly engaged demonstrate a much workload in which the condition might cause stress for employees consequently affect their wellbeing. This condition occurred in one of the leading startup companies named Gojek, specifically for the employees in Bandung Region. A survey indicates a low number of employees agreed that their amount of stress is manageable. Meanwhile, manageable stress has a strong correlation with employee engagement. This study has aimed to identify the factor of employee wellbeing that could engage the employees. The data were processed using Multiple Linear Regression to identify which independent variable significantly affected the dependent variable. The research found that from the five factors, only Financial Wellbeing has a significant correlation with the employee engagement in Gojek Company in Bandung Region. Therefore, it is important for the company to develop employee wellbeing initiatives programs that focus on the employees’ financial wellbeing in order to improve employee wellbeing and maintain employee engagement in a good state.

Keywords: Employee Wellbeing, Employee Engagement, Employee Wellbeing Initiatives, Startup Company, Multiple Linear Regression

1 Introduction

The public-list companies of the agriculture sector in Indonesia seems not attractive enough for investors. The Investment Coordinating Board (BKPM in Indonesia-red) in January 2018 has released domestic investment data (PMDN in Indonesia-red) and foreign investment data (PMA in Indonesia-red) for the 4th Quarter 2017 whose figured out around IDR692,8 trillion. That figure has risen to 13,05% from the investment of PMDN and PMA in 2016 for the same period. However, the agricultural sector only reached 8,1% out of the total investment or around IDR14,6 trillion.

Human resources are the most significant assets of a company to support company’s activities by utilizing their potential and ability. The effectively and efficiently used of human talent as the development human resources in formal organization system has a significant contribution to achieve organizational objectives [1]. A company can achieve competitive
advantages by putting concern to this human factor since business organizations is a group of people who interact with each other to perform and function to achieve the goals of organization [2]. The strategic importance of human resources lies in the fact that a company’s long-term success and failure relies upon the existence of the right people at the right place at the right time [3]. Not only for large companies, startup companies also need the role of HR to support the development of the company. According to Workable.com (2019), a strong HR practices in startup company showed better position to develop and retain their employees. No exception for Gojek Company, where the HR generally functions to review and evaluate employees and firm performances, motivate the human power to generate a favorable output, and is responsible for giving rewards to the outstanding employees as to maintain their performance.

Ries [4] on his book, defines startup as an “organization dedicated to creating something new under conditions of extreme uncertainty”. PT Aplikasi Karya Anak Bangsa or well-known as Gojek, currently become Indonesia’s first decacorn startup as of the first quarter of 2019, its valuation hit US$ 10 billion according to CB Insights [5]. The company initial focus is to gather ojek drivers to be operate effectively and organized through one integrated application. The company then continues to grow and create innovations that become a solution to solve societies’ daily needs. Currently expand its services in various lifestyle specialties in the form of GoRide, GoCar, GoMed, GoMart, GoShop, GoSend, GoMassage, GoClean, GoFitness, GoFood, GoTix, GoPlay, GoNews, GoPulsa, GoNearby, GoBills, GoPoints, GoSure, GoBluebird, and GoBox under its mobile apps named Gojek. With the range of programs that are run, Gojek has a large number of employees to support the running of the program. According to Gojek [6], the average age of its employees is 29 years old, which is included as millennial employee or from Generation Y. According to Kasasa [7], Generation Y is people who are born between 1980 and 1994 (current minimum age is 26).

Along with a study conducted by Dale Carnegie Indonesia in 2016, titled “Employee Engagement Among Millennials” with objectives is to determine to what extent is Indonesian employees are engaged to their organization. The survey shows that 9% of millennial employees refused to engage or disengaged to the company, following to 66% of millennial employees that are partially engaged, and only 25% of millennial workforce are fully engaged with the organization or company they are work for. Moreover, can be seen from the survey that from millennial workforces who are fully engaged, 60% of millennial employees plan to resign if they feel disengaged with the company or organization.

Employees that are engaged tend to perform better, enhance productivity and lessen employee turnover. For that reason, employee engagement has become a subject matter in organizations as it directly impacts to the growth and development of the company. The extent of employee engagement is to which the workforce is committed to the mission, vision, and goal of the organization [8]. According to Gorgievski et al. [9], research shows positive results between individuals and organizations when employees are engaged.

Kohll [10] argued that employee engagement and wellbeing run hand-in-hand as it has positive relationship and builds off of one another. When the employee happy and feel content of their job, it does affect their wellbeing. As well as when the employee is physically and mentally healthy, they will also feel happier in the workplace thus contribute to a better performance. Based on Employee Engagement Index survey by Gallup [11], asking how work lives benefit employees’ psychological health, a 78% majority of engaged employees feel their work lives have benefit them psychologically, following to 48% of not-engaged employees and 15% actively disengaged employees saying the same benefit. Based on data mentioned, it shows that the condition of work life has an impact towards employees’ wellbeing. According to Islam
Working environment is formed by company culture, it is a shared value, belief system, and attitudes that shared by all of the stakeholders in a workplace. Many companies have its own strategic organizational management that influence company culture to a certain extent, especially in Gojek Indonesia. Identifying employee reviews from Gojek [6], the organization has an innovative and inclusive culture that allows the employee to move fast and think different to solve difficult problems. Gojek gives a freedom to its employees to have a high initiative and experimenting raw ideas into shaping the end product. Moreover, as mentioned by Gojek Tech, the company does not have "office timings", usually called “9 to 5 job”. Hence, they have a flexible working hours and flexible working place for the employee to complete their works. However, identifying from the working culture it has, usually it is resulting in more working hours than the regular working hours for the Gojek employees to work or perform. Highly working hours demonstrate a (too) highly engaged employee. Hancock and Cooper [13] argued that employees that are highly engaged does not always mean to have high wellbeing. This does even mean that when the employees are highly engaged, they probably have too much workload and have working for too many hours. Not infrequently they fail to take breaks or time off consequently impact their wellbeing and productivity if they reach burnout at the end. This condition also impacting firms’ performance and productivity.

On the other hand, Gojek as a startup company has to move fast in order to catch up to market demand and also to face fierce competition among the competitors. Based on this condition, it is important for Gojek to maintain employee performance as it is become the core resources. One key thing that Gojek can do to maintain the performance of the employee is to keep employee wellness.

## 2 Research Methods
3 Result and Discussion

3.1 Validity and Reliability

In order to test the accuracy of a concept used to measure the variable that intended to be measured, validity test needs to be implemented in a quantitative study. Validity test conducted using Pearson Correlation Coefficient by correlating the value of R count with the R table value. The question will be considered as valid if the value of R arithmetic > R table and shows positive value. As the second measure in quantitative study is reliability. Reliability relates to the consistency of a measure which testing the extent to which a research instrument shows a consistent result. In order to test the reliability of the data, the researcher used the Cronbach’s alpha. Therefore, the result of validity and reliability test can be seen in the table 1 and table 2.

<table>
<thead>
<tr>
<th>Group Item</th>
<th>Item</th>
<th>Pearson’s R</th>
<th>Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR WB</td>
<td>Q1</td>
<td>0.859</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.815</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.867</td>
<td>Valid</td>
</tr>
<tr>
<td>SOC WB</td>
<td>Q1</td>
<td>0.760</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.867</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.824</td>
<td>Valid</td>
</tr>
<tr>
<td>FIN WB</td>
<td>Q1</td>
<td>0.795</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.806</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.779</td>
<td>Valid</td>
</tr>
<tr>
<td>PY WB</td>
<td>Q1</td>
<td>0.856</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.838</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.795</td>
<td>Valid</td>
</tr>
<tr>
<td>CM WB</td>
<td>Q1</td>
<td>0.893</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.733</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.883</td>
<td>Valid</td>
</tr>
<tr>
<td>EMP EG</td>
<td>Q1</td>
<td>0.792</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q2</td>
<td>0.849</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q3</td>
<td>0.873</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q4</td>
<td>0.782</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q5</td>
<td>0.798</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td>Q6</td>
<td>0.868</td>
<td>Valid</td>
</tr>
</tbody>
</table>

*df = 31, R Table = 0.344

The outcome of R table is 0.344 (df = 31 and confidence level = 95%). From the table above it can be interpreted that the correlation coefficient of all variable is higher than the R table. Therefore, the data is known as a valid data.

<table>
<thead>
<tr>
<th>Group Item</th>
<th>Cronbach’s Alpha</th>
<th>Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR WB</td>
<td>0.802</td>
<td>Reliable</td>
</tr>
<tr>
<td>SOC WB</td>
<td>0.750</td>
<td>Reliable</td>
</tr>
<tr>
<td>FIN WB</td>
<td>0.691</td>
<td>Reliable</td>
</tr>
</tbody>
</table>
Moreover, as for the reliability test, the overall Cronbach’s alpha value is more than 0.6 which indicate the data is reliable.

### 3.2 Validity and Reliability

#### 3.2.1 Normality Test

Normality test is used to determine whether the data is normally distributed or not. The data that has normal distribution is determined as a good data and can be distinguished from the level of skewness. Standardized residual data that tend to be skewed to the right is called negative skewness, if the residual data tend to be skewed to the left is called positive skewness. Therefore, the data is said to be normal if the skewness is symmetrical. The result of the normality test can be seen in the figure 1.

![Histogram of Engagement](image)

**Fig. 1.** Normality Test

Based on the figure 1, the standardized residual data has formed zero or symmetrical skewness (Median = Mean = Mode), which implies the data has spread evenly or **normally distributed**.

#### 3.2.2 Multicollinearity Test

Multicollinearity test is used to find out the high correlation existed between independent and dependent variables in a multiple regression model. The data can be said no multicollinearity by looking at the Value Inflation Factors (VIF) and Tolerance. As the basic of

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PY WB</td>
<td>0.765</td>
<td>Reliable</td>
</tr>
<tr>
<td>CM WB</td>
<td>0.784</td>
<td>Reliable</td>
</tr>
<tr>
<td>EMP EG</td>
<td>0.899</td>
<td>Reliable</td>
</tr>
</tbody>
</table>

*N = 33, Reliability at 0.6*
decision, there is no multicollinearity if VIF < 10 and the value of Tolerance > 0.10. The result of multicollinearity test in this research is shown on the table 3.

Table 3. Multicollinearity Test

| Model       | 95.0% Confidence Interval for B | Collinearity Statistics | Model
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>Tolerance</td>
</tr>
<tr>
<td>1</td>
<td>-2.373</td>
<td>1.218</td>
<td>.640</td>
</tr>
<tr>
<td>Career</td>
<td>-.036</td>
<td>.633</td>
<td>.303</td>
</tr>
<tr>
<td>Social</td>
<td>-.187</td>
<td>.564</td>
<td>.371</td>
</tr>
<tr>
<td>Financial</td>
<td>.036</td>
<td>.718</td>
<td>.238</td>
</tr>
<tr>
<td>Physical</td>
<td>-.485</td>
<td>.263</td>
<td>.238</td>
</tr>
<tr>
<td>Community</td>
<td>-.065</td>
<td>.783</td>
<td>.253</td>
</tr>
</tbody>
</table>

According to the table 3, the Tolerance value of each variables are greater than 0.10 with details: Career (0.640), Social (0.303), Financial (0.371), Physical (0.238), and Community (0.253). Moreover, the VIF had values less than 10 with details: Career (1.562), Social (3.295), Financial (2.697), Physical (4.200), and Community (3.952). Based on the test, there is no high correlation between the dependent variables or indicates as no multicollinearity.

3.2.3 Heteroscedasticity Test

Heteroscedasticity test is conducted to see if there was a regression model residual variance inequality from one observation to another. According to Ghozali (2007), a data was indicated heteroscedasticity if the residual variance is not constant. Heteroscedasticity can be seen from the value of significant by using Glejser Test method. The data has no heteroscedasticity if the significance value > 0.05. The result can be seen in the table 4.

Table 4. Heteroscedasticity Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.714</td>
<td>.476</td>
<td></td>
<td>3.602</td>
</tr>
<tr>
<td>Career</td>
<td>.116</td>
<td>.089</td>
<td>.190</td>
<td>1.306</td>
</tr>
<tr>
<td>Social</td>
<td>-.150</td>
<td>.099</td>
<td>-.319</td>
<td>-1.507</td>
</tr>
<tr>
<td>Financial</td>
<td>-.171</td>
<td>.090</td>
<td>-.363</td>
<td>-1.897</td>
</tr>
<tr>
<td>Physical</td>
<td>.131</td>
<td>.099</td>
<td>.315</td>
<td>1.321</td>
</tr>
<tr>
<td>Community</td>
<td>-.133</td>
<td>.112</td>
<td>-.274</td>
<td>-1.184</td>
</tr>
</tbody>
</table>

Based on the Table 4.4, the significant value of all variables has value higher than 0.05 which indicates there is no heteroscedasticity in this data.

3.2.4 Linearity Test

Linearity test is used to find out whether or not the variables have a significant linear relationship. The linearity of data can be seen from the P-P Plot when the distribution of standardized residual data is following the normality line such as the result of linearity test in the figure 2.
Based on the P-P Plot in the Figure 4.2, the point of distributions is following the diagonal lines, hence the result of linearity test in this study indicates there is a linear relationship between variables.

### 3.3 Multiple Linear Regression

Multiple regression analysis is a multivariate technique which used when the research has more than one independent variable and one dependent variable. The regression coefficient will indicate the relative importance of each independent variables in the prediction of the dependent variable. Prior to conducting Multiple Linear Regression, the data must past the Classic Assumption Test first. The analysis of multiple regression can be shown in the table 5, table 6, and table 7.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>31.929</td>
<td>5</td>
<td>6.386</td>
<td>13.546</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>25.456</td>
<td>54</td>
<td>.471</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>57.386</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Engagement  
b. Predictors: (Constant), Community, Career, Financial, Social, Physical

Based on the analysis using ANOVA, the regression model is a fit used in this study and shows the F(5, 54) = 13.546, and p-value (Sig.) is 0.000, which less than 0.05. Consequently, all the independent variables (Career, Social, Financial, Physical, Community) has significantly predict the dependent variable (Employee Engagement) simultaneously.
Table 6. Model Summary Table

<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>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.746</td>
<td>.556</td>
<td>.515</td>
<td>.68660</td>
<td>2.563</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Community, Career, Financial, Social, Physical
b. Dependent Variable: Engagement

In the Model Summary table, the R, R2, adjusted R2, and the Std. Error of estimate is used to determine how fits the regression model to the data. Based on the Table x, the independent variables explain 51.5% of the variability of the dependent variable.

Table 7. Multiple Linear Regression Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.577</td>
<td>.896</td>
<td></td>
<td>-.645</td>
</tr>
<tr>
<td>Career</td>
<td>.298</td>
<td>.167</td>
<td>.203</td>
<td>1.791</td>
</tr>
<tr>
<td>Social</td>
<td>.189</td>
<td>.187</td>
<td>.166</td>
<td>1.008</td>
</tr>
<tr>
<td>Financial</td>
<td>.377</td>
<td>.170</td>
<td>.330</td>
<td>2.219</td>
</tr>
<tr>
<td>Physical</td>
<td>-.111</td>
<td>.187</td>
<td>.110</td>
<td>-.595</td>
</tr>
<tr>
<td>Community</td>
<td>.359</td>
<td>.211</td>
<td>.306</td>
<td>1.699</td>
</tr>
</tbody>
</table>

In order to determine whether the hypothesis is accepted or rejected, each variable must have level of significance below 0.05. Based on the Multiple Linear Regression test, Financial is the only accepted hypothesis with significance level 0.031, whereas Career, Social, Physical, and Community are rejected hypothesis because the value of significance level is > 0.05.

3.4 Discussion

Financial Wellbeing is one out of the five factor of employee wellbeing that have significant correlation with Employee Engagement. The result of the Multiple Linear Regression shows that the engagement of employees in Gojek Bandung company could raise if they have a good state of financial wellbeing. This condition occurs because when people have good wellbeing of financial, it does imply that someone will not feel forced or stressed about making choices by considering their baseline expenses or necessities [14]. The absence of feeling stress about finances both in the short-term and long-term events can help the employee to focus on their performances thus improve their engagement. Additionally, fostering financial wellbeing for employees at an organizational level is a part of Corporate Social Responsibility goals and has been proven by Arendt and Brettel [15] to have a contribution to improving the company’s image. A positive image of a company is an important aspect to increase employee engagement, specifically for the “Say” factor [16]. The positive image that the company has can make the employees utter good things about the company to coworkers, potential employees, and customers.

Career Wellbeing in the result of the Multiple Linear Regression test has a barely detectable statistically significant difference with significance value of 0.079. This result shows that for employees in Gojek Bandung Company, Career Wellbeing has no significant correlation towards Employee Engagement. Based on the analysis, this condition might happen because the majority of employees in Gojek Bandung company are in the transition age between Millennials...
and Gen Z, specifically between 21 to 28. Their tendency in having insecurity financial stability does impact them to focus more on the financial aspect and still have the tendency to changing jobs. For that reason, career wellbeing has not significantly affected the employee engagement.

Social Wellbeing in the result of the Multiple Linear Regression test is a non-significant factor for employee engagement with significance value 0.318. This result shows that for employees in Gojek Bandung company, Social Wellbeing has no significant correlation towards Employee Engagement. This condition could also happen because the employees are more focus on the fulfillment of safety needs first (can be seen from the result that Financial Wellbeing, which part of the Personal Security Needs, has the significant correlation with Employee Engagement) and subsequently, by Maslow’s Hierarchy of Needs, is love and belonging needs, which including social wellbeing. Therefore, the employees feel they must fulfill good financial wellbeing first so that the social wellbeing can be considered as the factor to increase the employee engagement [17].

Physical Wellbeing in the result of the Multiple Linear Regression test is the most non-significant factor for employee engagement with the highest significance value up to 0.555. This result shows that for employees in Gojek Bandung company, Physical Wellbeing has no significant correlation towards Employee Engagement. Based on the analysis according to Maslow’s Hierarchy of Needs, taking concern into physical wellbeing (encompasses put attention on the intake habit, join gym classes) is a part of Self-Esteem. Self-esteem is the fourth stage of fulfillment, will become a considerable factor for engagement if the individual has formerly fulfilled the physiological, safety, and social needs. For that reason, this is aligned with the MLR result that shows financial wellbeing is the only factor that has a significant correlation with employee engagement and proves that employees in Gojek Bandung company are more focused on the fulfillment of financial aspects first.

Community Wellbeing in the result of the Multiple Linear Regression test has a borderline significant trend with a significance value of 0.095. This result shows that for employees in Gojek Bandung company, Community Wellbeing has no significant correlation towards Employee Engagement. The condition could be explained with the Maslow’s Hierarchy of Needs as well since the relationship between individual and the stakeholders they live with is included in the Social Needs stage. Employees in Gojek Bandung company have not put their attention on the social needs before the financial needs have been fulfilled. Moreover, with the majority of ages owned by employees ranging between 21 to 28, the tendency of people with mentioned age found joy in discover new things and willing to motivated themselves in a challenging situation. Therefore, a good state of community wellbeing has not significantly affected the engagement of employees in Gojek Bandung company.

4 Conclusion

Gojek as a startup company has to move fast in order to catch up to market demand and also to face fierce competition among the competitors. Based on this condition, it is important for Gojek to maintain employee performance as it is become the core resources. On the other hand, based on Employee Engagement Survey for preliminary study, the result shows that 86% of the employees in Gojek Bandung company are engaged. However, only 71% of the respondent stated that the amount of their stress is manageable. Based on the symptoms appeared, the problems of this research are to find factors of employee wellbeing initiatives and analyze which factor has significant correlation to increase the engagement of employees in Gojek Bandung company.
Based on the analysis on the previous literature, Career Wellbeing, Social Wellbeing, Financial Wellbeing, Physical Wellbeing, and Community Wellbeing play a significant role to increase the engagement of employees. However, after conducting Multiple Linear Regression test on this research with Career, Social, Financial, Physical, and Community as the independent variable and Employee Engagement as the dependent variable, only one out of the five factors that has a significant correlation with the dependent variable.

Albeit the previous literature defined that the five factors can significantly affect the employee engagement, the engagement of employees in Gojek Bandung company does not affected by the four factors which are Career, Social, Physical, and Community. This study has discovered only Financial factor has a significant correlation towards the engagement of the employees in the company. After conducted further analysis, the condition appeared might be affected due to the fact that most of the employees are within the age of 21 to 28 years old, thus the employees have a willingness to discover new things and referred as a “Job Hopper” generation by Gallup [18]. For that reason, that is why Career and Community is not become a significant factor to increase the engagement for the employees. On top of that, based on analysis using Maslow’s Hierarchy of Needs, employees are in the stage to fulfill their Security Needs, followed by Social Needs, Self-Esteem, and Self-Actualization. One of the factors that can fulfill the security needs is to have a good wellbeing of financial. If their financial wellbeing has been fulfilled, the other factor will be considered.

For conclusion, the engagement of employees in Gojek Bandung company can only significantly affected by having a good financial wellbeing, and not significantly affected by the career, social, physical, and community factor.

4.1 Recommendation

Based on the result of the research, several recommendations of Employee Wellbeing Initiatives program will be suggested to the company in order to improve the employee engagement.

a. This study has found that Financial Wellbeing is the factor that become a concern for the employees in the company. Therefore, the company has to put more attention to this factor in order to improve the employee engagement effectively. The initiatives that the company can prepare are:
   - Ensure the employees’ long-term financial security by offering several insurances such as health insurance and life insurance. This initiative can help the employees to have long-term financial peace of mind.
   - Provide financial counseling program for the employees to discuss financial-related issues. Financial issues can be in any form, such as financial pressure, financial distress, unexpected expenses, and many other forms. The condition can cause stress for individuals thus affecting their productivity to a certain extent. In order to prevent this problem experienced by the employees, the employer can provide financial counseling program to help the employees prevent and or overcome such situations.
   - Provide information regarding local businesses discount vouchers and promos. That information can help the employees to make a wise purchase decision and also inspire more manageable spending.

b. Based on the result of this research, albeit the other factor such as Career, Social, Physical, and Community have no significant correlation with Employee Engagement in Gojek Bandung Company, however, this factor can support the program as long as the employees’ financial wellbeing has been fulfilled. According to Social Comparison
Theory, individuals are fundamentally driven by evaluating and comparing themselves toward the other. As a consequence, individuals might want to achieve more than they already had up until they achieve their full potential.

References

Determinants of Regional Tax Revenue in Central Java Province

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Universitas Negeri Semarang, Indonesia¹,²,³,⁴

Abstract. Regional autonomy motivates regional government for being independent in managing and exploring fund local development. Tax is one of the local revenue sources that plays an important role. This study aims to analyze factors such as Gross Regional Domestic Products (GRDP), Consumer Price Index (CPI), total population and number of hotels to local revenue of districts or cities in Central Java from 2014 to 2018. The dependent variables employed are GDP, CPI, total population and hotel. This study implements a multiple regression analysis with an OLS method and panel data. The data panel used is a fixed-effect model. The research shows that GRDP, total population and number of hotels impact the regional revenue positively and significantly. However, CPI influences local revenue negatively and significantly.

Keywords: Regional Tax, GRDP, CPI, Total Population, Number of Hotel

1 Introduction

Indonesia implemented a regional autonomy after an MPR (The People’s Consultative Assembly) Decree Number XV/MPR/1998 about the implementation of regional autonomy, management, division and equitable utilization of national resources and balance between central and regional finance within The Indonesia Republic was issued. Since the new order government’s fall in 1998, Indonesia has changed from the most authoritarian country to the most democratic and decentralized country [1]. The political situation changes have pushed the government to decrease expenditure and change political ideology by bringing power and responsibility closer to the people [2].

Officially, Indonesia started a regional autonomy on the 1st of January 2001. According to Smith [3], decentralized politics in Indonesia is the biggest project of decentralized politics. This phenomenon is due to the transfer of 2 million public civil servants from the central government to the regional one such as districts or cities. Kis-Katos and Sjahrir [4] argued that Indonesia has simultaneously carried out a decentralization in three dimensions: politics, fiscal, and administrative. Indonesia implemented politics and administrative decentralization by giving full authority to the regional governments in managing their territories and direct general election for local governments and DPRD (Regional House of Representative).

Further, regional governments can manage their finance from regional fund sources and intergovernmental transfers. Even though Indonesia has implemented autonomy for 20 years, but many weaknesses still come up. Badrudin and Siregar [5] viewed that regional autonomy goals have not been successfully increased the society’s welfare because of many factors such as the regional government inability in managing the regional finance and budget fraud.
Central Java Province is one of the large provinces in Indonesia. After the implementation of regional autonomy, there is an increase in regional revenue and expenditure. Haniz and Sasana [6] wrote that the bigger the authority, given from the central government to the regional government, the more significant the regional revenue role in the regional structural finance. Hence, regional revenue becomes the primary finance source in regional autonomy. Table 1 illustrates the Development of Regional Revenue and Expenditure of Central Java Province from 2014 to 2018.

Table 1. The Development of Regional Revenue and Regional Expenditure
of Central Java Province from 2014 to 2018

<table>
<thead>
<tr>
<th>Year</th>
<th>Regional Revenue</th>
<th>Regional Expenditure</th>
<th>Contribution Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>9,916,358,231,432</td>
<td>15,086,065,034,422</td>
<td>66%</td>
</tr>
<tr>
<td>2015</td>
<td>10,904,825,812,504</td>
<td>17,820,760,495,342</td>
<td>61%</td>
</tr>
<tr>
<td>2016</td>
<td>11,541,029,720,310</td>
<td>19,354,374,825,983</td>
<td>60%</td>
</tr>
<tr>
<td>2017</td>
<td>12,547,513,389,400</td>
<td>22,884,713,018,754</td>
<td>55%</td>
</tr>
<tr>
<td>2018</td>
<td>12,994,933,643,000</td>
<td>24,478,632,557,339</td>
<td>53%</td>
</tr>
</tbody>
</table>

Source: DJPK (Directorate General of Fiscal Balance) Ministry of Finance (processed) [7].

Table 1 shows that regional revenue and expenditure in Central Java Province increase from 2014-2018. However, the contribution percentage of regional revenue to the regional expenditure dropped at the same time. In 2014, the regional revenue contribution was 66%. In 2018, the regional revenue contribution was lowered to 53%. According to Ambariani et al. [8], the decline of regional revenue contribution indicates that the regional revenue resource management was not optimal.

The regional revenue can be from regional tax, retribution and other legitimate wealth. To increase the regional revenue, and prevent the declining regional revenue, maximizing the regional tax revenue is necessarily carried out. The regional tax becomes one of the potential and significant regional revenue resources. The regional tax and retribution have essential roles in financing the regional government development.

Marian and Toth [9] stated that regional tax is an important revenue source for districts and cities to provide more public services. Moreover, the tax also accelerates economic growth in a provincial area. The increasing contribution and tax role in economic growth and development oblige the government to increase the tax revenue. Besides, the number of tax contributions can benchmark the government's success in managing and exploring the potency and existed sources in a region to finance the regional expenditure. Table 2 shows the average of regional tax contribution percentage to the regional revenue in Central Java from 2014 to 2018.

Table 2. The Average Percentage of Regional Tax Contribution to Regional Revenue
in Central Java Province from 2014 to 2018

<table>
<thead>
<tr>
<th>Districts/Cities</th>
<th>Regional Revenue Average</th>
<th>Regional Tax Revenue Average</th>
<th>Contribution Percentage Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banjarnegera District</td>
<td>219,348,362,395</td>
<td>44,014,346,733</td>
<td>20.07%</td>
</tr>
<tr>
<td>Banyumas District</td>
<td>549,465,193,286</td>
<td>159,677,295,515</td>
<td>29.06%</td>
</tr>
<tr>
<td>Batang District</td>
<td>203,934,429,545</td>
<td>57,462,934,425</td>
<td>28.18%</td>
</tr>
<tr>
<td>Blora District</td>
<td>191,125,886,166</td>
<td>40,235,018,000</td>
<td>21.05%</td>
</tr>
<tr>
<td>Boyolali District</td>
<td>302,286,455,446</td>
<td>90,605,448,759</td>
<td>29.97%</td>
</tr>
</tbody>
</table>
In five years (from 2014-2018) the average regional tax contribution to regional revenue reached 35.77%. Based on contribution criteria developed by Research and Development Team of the Department of Internal Affairs-Faculty of Social and Political Sciences, Gajah Mada University, a region with a contribution of 30.1% is categorized as a region with good contribution and a region with very good if the contribution is more than 50%. Further, an area with a contribution of less than 30% can be categorized as moderate; low if the contribution is 10.1% to 20%; and very low if its contribution is 0% to 10%. Table 2 illustrates 12 of 35 districts or cities in Central Java have a good or outstanding contribution. Semarang is the capital city of Central Java has the average regional tax contribution of 69.55% to regional revenue.

On the other hand, 23 districts/cities are categorized as moderate or poor. The cities with the lowest contribution are Magelang city with 13.24% and Temanggung with 14.18%. Generally, based on the data, there is a tax gap between regions. Further, many cities or districts have low tax contribution to the regional tax.

<table>
<thead>
<tr>
<th>District</th>
<th>Tax Contribution</th>
<th>Regional Revenue</th>
<th>Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brebes District</td>
<td>355,889,826,573</td>
<td>72,906,692,137</td>
<td>20.49%</td>
</tr>
<tr>
<td>Cilacap District</td>
<td>477,627,359,241</td>
<td>144,292,561,374</td>
<td>30.21%</td>
</tr>
<tr>
<td>Demak District</td>
<td>282,809,843,000</td>
<td>100,642,520,812</td>
<td>35.59%</td>
</tr>
<tr>
<td>Grobogan District</td>
<td>312,684,903,321</td>
<td>60,690,435,227</td>
<td>19.41%</td>
</tr>
<tr>
<td>Jepara District</td>
<td>303,859,039,433</td>
<td>79,751,782,098</td>
<td>26.25%</td>
</tr>
<tr>
<td>Karanganyar District</td>
<td>306,070,248,688</td>
<td>127,637,990,892</td>
<td>41.70%</td>
</tr>
<tr>
<td>Kebumen District</td>
<td>314,782,206,788</td>
<td>67,484,288,290</td>
<td>21.44%</td>
</tr>
<tr>
<td>Kendal District</td>
<td>292,160,749,661</td>
<td>89,072,635,402</td>
<td>30.49%</td>
</tr>
<tr>
<td>Klaten District</td>
<td>272,069,035,582</td>
<td>85,492,332,976</td>
<td>31.42%</td>
</tr>
<tr>
<td>Kudus District</td>
<td>294,398,478,564</td>
<td>88,896,726,472</td>
<td>30.20%</td>
</tr>
<tr>
<td>Magelang District</td>
<td>304,230,755,716</td>
<td>100,449,006,518</td>
<td>33.02%</td>
</tr>
<tr>
<td>Pati District</td>
<td>347,620,560,498</td>
<td>67,701,183,688</td>
<td>19.48%</td>
</tr>
<tr>
<td>Pekalongan District</td>
<td>286,770,202,464</td>
<td>45,148,394,909</td>
<td>15.74%</td>
</tr>
<tr>
<td>Pemalang District</td>
<td>289,922,772,157</td>
<td>52,766,556,137</td>
<td>18.20%</td>
</tr>
<tr>
<td>Purbalingga District</td>
<td>261,714,085,821</td>
<td>47,377,621,851</td>
<td>18.05%</td>
</tr>
<tr>
<td>Purworejo District</td>
<td>255,074,012,143</td>
<td>47,377,621,851</td>
<td>18.57%</td>
</tr>
<tr>
<td>Rembang District</td>
<td>237,963,554,433</td>
<td>57,908,752,239</td>
<td>24.34%</td>
</tr>
<tr>
<td>Semarang District</td>
<td>329,298,899,739</td>
<td>121,472,172,596</td>
<td>36.89%</td>
</tr>
<tr>
<td>Sragen District</td>
<td>311,630,658,388</td>
<td>68,834,066,118</td>
<td>22.09%</td>
</tr>
<tr>
<td>Sukoharjo District</td>
<td>367,995,644,866</td>
<td>178,587,862,432</td>
<td>48.53%</td>
</tr>
<tr>
<td>Tegal District</td>
<td>324,316,520,729</td>
<td>78,097,812,739</td>
<td>24.08%</td>
</tr>
<tr>
<td>Temanggung District</td>
<td>243,007,983,090</td>
<td>34,464,012,036</td>
<td>14.18%</td>
</tr>
<tr>
<td>Wonosobo District</td>
<td>202,531,742,743</td>
<td>27,951,515,047</td>
<td>16.17%</td>
</tr>
<tr>
<td>Magelang City</td>
<td>211,071,205,743</td>
<td>27,951,515,047</td>
<td>13.24%</td>
</tr>
<tr>
<td>Pekalongan City</td>
<td>169,188,352,220</td>
<td>54,872,083,765</td>
<td>32.43%</td>
</tr>
<tr>
<td>Salatiga City</td>
<td>193,139,254,087</td>
<td>44,986,779,805</td>
<td>23.29%</td>
</tr>
<tr>
<td>Semarang City</td>
<td>1,488,951,077,788</td>
<td>1,035,507,756,532</td>
<td>69.55%</td>
</tr>
<tr>
<td>Surakarta City</td>
<td>437,849,005,125</td>
<td>264,046,064,603</td>
<td>60.31%</td>
</tr>
<tr>
<td>Tegal City</td>
<td>276,546,713,806</td>
<td>60,320,055,079</td>
<td>21.81%</td>
</tr>
</tbody>
</table>

**Central Java**

|                | 13,581,304,339,149 | 4,858,377,098,166 | 35.77% |

Source: DJPK (Directorate General of Fiscal Balance) Ministry of Finance (processed) [7].
Nastiti [10] proposed the factors that impact the regional tax are GNP, inflation and total population. The research finding shows that GNP and total population influence the regional tax positively and significantly. Meanwhile, total population impacts negatively and considerably to the regional tax. Velaj and Prendi [11] researched the factors that affect the Albania's tax revenue: GDP, inflation, unemployment, and import. Their finding shows that GDP, inflation and import give positive impact to the tax. Solot [12] also found that GRDP, number of hotels, CPI, etc. influence the regional tax. Number of hotel influence tax revenue positively through the tax levied on a hotel. Maličká et al. [13], viewed that inflation and population impact regional tax revenue in the European Union states. Terefe & Teera [14] wrote that GNP per capita and inflation affect East Africa countries' tax revenue. Velaj and Prendi [11] noted that GNP and inflation can impact the tax revenue in Albania.

This study aims to identify the factors that influence regional tax revenue in Central Java Province, Indonesia. Independent variables in this study include gross regional domestic product, Consumer Price Index, Total Population, and Number of hotels. This paper is structured as follows; section 2 presents the research methods, section 3 shows and review about results and discussion and section 4 presents conclusion.

2 Research Methods

This study used secondary data from government organization such as Directorate General of Fiscal Balance (DJPK) [7] and Central Bureau of Statistics (BPS) [15][16]. This study also employed time-series data and cross-section data. Time series data used were from 2014 to 2028, and cross-section data were from 35 districts or cities in Central Java province. The following is the model regression equation of panel data with the independent variables written as follow tax revenue, gross regional domestic product (GRDP), Consumer Price Index (CPI), Total Population (POP) and Number of hotel (HO):

\[ \text{TAXREV}_i = \beta_0 + \beta_1 \text{GRDP}_i + \beta_2 \text{INF}_i + \beta_3 \text{POP}_i + \beta_4 \text{HO}_i + \varepsilon \]  

\[ \text{(1)} \]

3 Results and Discussion

The preliminary test done is to determine the best model used to estimate the model. The test result indicates the best model for the next estimation is fix effect model. The following is the estimation result by implementing the fix effect model:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Error Standard</th>
<th>t-statistics</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-672065.2</td>
<td>232506.5</td>
<td>-2.890522</td>
<td>0.0045</td>
</tr>
<tr>
<td>GRDP</td>
<td>0.014633</td>
<td>0.001261</td>
<td>11.60746</td>
<td>0.0000</td>
</tr>
<tr>
<td>CPI</td>
<td>-2605.433</td>
<td>448.0651</td>
<td>-5.814852</td>
<td>0.0000</td>
</tr>
<tr>
<td>POP</td>
<td>0.745657</td>
<td>0.286477</td>
<td>2.602852</td>
<td>0.0103</td>
</tr>
<tr>
<td>HO</td>
<td>524.0144</td>
<td>143.7920</td>
<td>3.544253</td>
<td>0.0004</td>
</tr>
</tbody>
</table>

Source: Processed data. *level of significance (\(\alpha\)) = 5%.
The estimation test yields the R-squared value of 0.990648. The score means that GRDP, CPI, total population and hotel can explain the variable of tax revenue which is 99.06%. Simultaneously, other variables that are not under the study also contribute to influencing the tax revenue, 0.94%. The independent variables affect the dependent variable with a significant value of 0.05, and f count is greater than f table (376.3296 > 2.43). Thus, it can be inferred that GRDP, CPI, total population and hotel influence regional tax revenue significantly and simultaneously.

The coefficient value of GRDP variable is 0.014333. If there is a rise of 1 rupiah, it will raise the tax revenue as many as 0.14633 rupiahs. The GRDP value can describe the economic growth condition in an area. That result supports the researches carried out by Terefe & Teera [14] and Velaj & Prendi [11]. The GRDP value, which is increasing and increasing, reflects society's income, rising too. In other words, society's living standard, the ability to meet daily life and ability to pay increase.

Consumer Price Index (CPI) influence regional income negatively and significantly. The coefficient of CPI variable is -2605.433. It means that one increasing point of CPI will decline the tax revenue of 2605.433 rupiahs. The finding supports Gobachew [17], Terefe & Teera [14] and Velaj & Prendi [11], who argued that the increase of daily life will drop purchasing power and finally it will lead to committing tax evasion. High inflation occurs in a long time and will affect society's awareness of paying taxes [18].

Lumy et al. [19] explained that an increase in the price of goods and services can positively and negatively impact regional tax avenue. The duration of the increasing price occurrence also contributes to the tax revenue. A short run increasing price will enhance economic growth. However, if the rising cost lasts for a long time, it will weaken economic growth.

On the contrary, some other researches do not support this study. Wildan [20] and Sania (2018) stated that CPI does not affect the tax revenue as tax is obliged. The government has issued rules about taxes so that every citizen registered as a taxpayer must pay the insured tax even though the price of goods and service increase.

Total population affect the regional tax income positively and significantly. The positive coefficient value of 0.745657 indicates that the entire population positively influences regional tax revenue. An increase in the population of one person will raise the tax revenue of 0.745657 rupiahs. The increasing total population will enhance the rising number of taxpayers. However, the negative effect will also appear if the quality of human resources does not improve.

Hansen theory (secular stagnation) explains that a high total population and increasing total production will push society's income. The raising society's productivity will affect their income and ability to pay tax. Thus, the raising of the total population does not always trigger economics problems. Arianto [21] viewed that increasing population in each year will raise the tax payer's number. However, Maličká [13] proposed that in the long run, the raising of tax revenue will occur if the number of productive age is greater than the non-productive.

Number of hotel variable also influences the regional tax income positively and significantly with the coefficient value of 524.0144. If there is a one hotel unit raise, it will raise the regional income tax revenue as many as 524 rupiahs. The hotel's number in an area reflects whether other people living outside the area demand the site. The number of a hotel that is always raising indicates that the sources exist in the area can be managed optimally to attract other society of other regions. Solot [12] stated that the hotel's number significantly influences the tax revenue through the tax levied on hotel and regional revenue. One of the factors that enhances the raise of a hotel in an area is the tourism sector. Tourists' visits to the tourism object motivate new hotels built to meet the market demand. Regional government levies tax on each amenity provided. It is as the contribution of business people to the government. Therefore, the
study's implication argued by Castro and Camarillo [22] is that the government should have a relevant effort to increase the tax revenue in a developing country that is structural reformation implementation.

4 Conclusion

Based on the discussion on the factors that affect the regional tax revenue in districts or cities in Central Java Province, it can be inferred that GRDP influence regional tax revenue positively and significantly. In other words, the raise of GRDP will raise regional tax revenue. To maximize the PDRB, the government should stimulate the existed economies potency. CPI influence the regional tax revenue negatively and significantly in districts/cities in Central Java. It means that the increase of CPI can decline the regional tax revenue in districts or cities in Central Java. To decrease and prevent the negative effect of CPI triggers inflation, the government should control the availability of goods and services; and stabilize the price of basic needs.

Total population affects the regional revenue positively and significantly. It indicates that high total population will increase the regional tax revenue. Next, the increase will occur if the population productivity grows. It will then lead the society to have higher income and finally increase the ability to pay tax. The role of government in providing job vacancies and work training is necessary to encourage society’s productivity. The number of hotels also influences positively and significantly to the regional tax revenue. The government can maximize this revenue by supervising and listing all the hotels, include the new ones in an area.

References


Coercion Behind the Implementation of Accrual-based Accounting System in the Government Financial Statements

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Abstract. This study aims to socially construct the phenomenon of the accrual-based accounting systems implementation on Government Financial Statements from the perspectives of preparers Government Financial Statements. Then, the specific objectives of this study are to deeply understand 1) the responses of the preparers on the accrual-based accounting systems implementation in Government Financial Statements; 2) the meaning behind the responses of prepares on such implementation in the context of the Central Government of Indonesia. This qualitative research was carried out within interpretive paradigm and used phenomenological methods. Data were collected by conducting interviews, observation and documentation. Then, data were analyzed by adopting the analytical method developed by Sanders (1982) with several modifications. The study found that preparers have loyalty response. The study also found that the implementation of accrual-based accounting system does not only have meanings from the technical aspects but also coverts a coercion process.

Keywords: Loyalty, Coercion, Accrual-based Accounting System, Government Financial Statements

1 Introduction

The government of the Republic of Indonesia has been adopting an accrual-based accounting system as part of political and economic reform post-financial and –political crises of 1998 [1]. In order to overcome the crises, the government provided legal instruments on which the reform based on.

Similarly, public accounting practice has experienced a significant reform since 1998, in which government performance in doing its public service has become the major theme. Public financial statement preparation has shifted its purpose towards responsibility and accountability reporting of each interested party as well as government performance [2]. The essence of accountability reflects a responsible relation between two different players, i.e., accountant and accountee. The accountant is responsible for financial management activities and their consequences to the accountee [3].

The government institution accountability is more broadly manifested in its responsibility for the financial management and to the citizens who own the money. In a narrower definition, accountability means a responsible manner from agent to superior. Managers at the lowest tier are responsible to the middle-tier manager and those in the middle-tier are in turn responsible for the top-tier managers. Accounting records and financial statement are prepared in detail.
according to the degree of responsibility. As this mechanism holds, the construction of the accounting system becomes much more important than the numbers and digits presented within the financial statement [4].

Performance is one of aspect to measure how successful the government in governing, how capable it discovers and manages financial sources to fulfill the necessities to support the public service activities. A good performance means successful governing endeavors [5].

Dramatical changes in public sector management from traditional system guided by rigid and hierarchical spirit to market-flexible and –accommodating system is an integral part of the role of the state to perform analyses and to prepare regulations on how the accrual-based accounting system should be properly implemented according as the citizens expect towards the government accountability and performance [6].

Public financial management in Indonesia has been stipulated on legal instruments, such as Law 17/2003 on Public Finance, Law 1/2004 on Public Treasury, and Law 15/2004 on Surveillance on Public Financial Management and Responsibility. Furthermore, Law 17/2003, in article 36 (1), requires that acknowledgement and measurement of income and spending applies an accrual-based accounting system, which is performed in a five-year term since the Law 17/2003 has taken effect. Under such requirement, the accrual-based accounting system internalization is distributed to all public institutions nationwide, including those at the local level of governments. The Law 17/2003 also considers the Public Accounting Standard (Standar Akuntansi Pemerintahan, SAP) as a mandatory requirement as the basis on which the accrual-based accounting system should be implemented at the public institutions under the SAP (stipulated in the Government Act 24/2005, which, in turn, has been amended by the Government Act 71/2010).

The Government Act 71/2010 clearly legitimates the phase of the public management in Indonesia using the accrual-based accounting system at both central and local governments. Its promulgation gives a consequence to all government institutions to prepare their Financial Statements according to the accrual-based accounting system. The Public Financial Statement is an important part of the effort towards accountability, efficiency, and effectiveness of the government performance.

This study had an objective to capture a phenomenon of the accrual-based accounting system implementation in the Public Financial Statement preparation through the response of the Public Financial Statement preparers. The study applied a phenomenological method to find out the essence of meaning of a response [7][8][9][10]. The essence of response meaning discovered in the Financial Statement in this study dealt with a coercion of the Public Financial Statement preparers as the ones in charge of and responsible for the Financial Statement preparation.

2 Research Questions

This study proposes the following research questions:

a) How was the response of the Public Financial Statement preparers to the accrual-based accounting system implementation in the Public Financial Statement preparation?

b) How was the meaning behind the response of the Public Financial Statement preparers to the accrual-based accounting system implementation in the Public Financial Statement preparation?
3 Method

This study was a qualitative research with an interpretive paradigm using a phenomenological method. The method explains an expression of the meaning behind the phenomenon by digging into the depth of actor’s consciousness to obtain the essence of the phenomenon to be exposed [11][12]. Phenomenology explains subjective ‘lived experience’ instead of generalization, in which the most important aspect is how the ‘lived experience’ speaks up free of intervention and methodological simplification, which tends to deviate the experience naturalization.

The above definition led this study to the way of understanding response and meaning behind the phenomenon of the particular actor concerning the accrual-based accounting system implementation at the public sector (i.e., the preparers of the Public Financial Statement). In doing so, the study needed a method far beyond informant’s consciousness and investigation of direct experience to gain the meaning of the phenomenon in question. It was the prime reason for this study to apply the phenomenological method.

Sanders [7] presents the stages of research using phenomenological method as follows: 1) data description, in which informant interviews are transcribed into narrative; 2) phenomenology reduction, where statements within the interviews are interpreted; 4) noetic/noematic correlate, in which research meaning is synthesize; and 4) eidetic reduction, where the study discovers the essence of the research meaning.

This study limited its unit of analysis to the central government to bring the research more focused on the implementation of the national government of Indonesia in implementing the accrual-based accounting system during the preparation of the Public Financial Statement. The study attempted to discover holistic meaning in the public context of the national level.

Research object of this study were the responses of the Public Financial Statement preparers. Retrieval of informants compiling the Government Financial Statements because they are the parties directly related to policies regarding the obligations of government agencies to implement an accrual-based accounting system in preparing their financial statements. The preparers consisted of those who worked at the Ministry of Finance (Department of Treasury) as the preparers of technical guidance and Central Public Financial Statement Consolidation (LKPP), the Ministry of Education and Culture, the Ministry of Health, and the Ministry of Public Works as the contributors for the LKPP prepared by the Ministry of Finance. Table 1 enlists the research informants.

Table 1. List of Research Informants

<table>
<thead>
<tr>
<th>No</th>
<th>Name (Aliases/Pseudonyms)*</th>
<th>Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ersa</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>2</td>
<td>Hafidudin</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>3</td>
<td>Maya</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>4</td>
<td>Agus</td>
<td>Ministry of Finance</td>
</tr>
<tr>
<td>5</td>
<td>Adi</td>
<td>Ministry of Public Works</td>
</tr>
<tr>
<td>6</td>
<td>Asih</td>
<td>Ministry of Public Works</td>
</tr>
<tr>
<td>7</td>
<td>Rahmat</td>
<td>Ministry of Education and Culture</td>
</tr>
<tr>
<td>8</td>
<td>Yanti</td>
<td>Ministry of Health</td>
</tr>
</tbody>
</table>

*Names were in aliases or pseudonyms for the informants’ confidentiality.
The informants were selected under the terms that they were relevant to the Public Financial Statement and they agreed to provide complete and accurate information. The selection used a technique namely snowball sampling, in which the informants were decided without determining the exact numbers by discovering information relevant to the research questions. The informants search ended after the need for research information had been considered adequate.

Research data were collected by way of in-depth interview with the informants to grab the research phenomenon through a phenomenological analysis and of outreached participant observation on the research phenomenon. Document collections then supported the data collection activities.

4 Results and Discussion

This study had undergone stages of analysis of the phenomenological research to find out the results. The first stage was performing data description of the interviews with the informants. It was then followed by phenomenology reduction stage, in which the study performed interpretation of the statements in the interviews, resulting in 43 different meanings. These 43 meanings were then divided into 15 major categories.

The third stage was noetic/noematic correlate analysis, which resulted in three meaning syntheses. These three meaning syntheses were important branches for constructing understanding of the meaning of the accrual-based accounting system implementation in the Public Financial Statement. The eidetic reduction analysis stage then followed to find out the essence of the research meaning. According to the integration of the three data sources, i.e., interviews, observation, and document recording, the study obtain the findings as follows:

Answering research questions regarding the response of compilers of Government Financial Statements, this study uses response levels according to Blake et al. [13] which categorizes responses ranging from the loudest to the softest. The first states disagreement or reject and exit from the organization. Both actively and constructively provide aspirations to improve conditions (voice). Third, build loyalty, namely passively but still optimistic waiting for the improvement of conditions (loyalty). The fourth is passively letting things get worse (neglect).

Based on the results of interviews with research informants, the response that can be captured from the compilers of the Government Financial Statements to the implementation of an accrual-based accounting system in the preparation of Government Financial Reports is “loyalty”, namely the compilers of Government Financial Statements build loyalty passively but remain optimistic waiting for the improvement of conditions. This can be seen from their understanding of the regulations that require the implementation of an accrual-based accounting system. Research informants stated that they carried out all regulations regarding the obligation to use an accrual-based accounting system in preparing pragmatic Government Financial Statements as a form of responsibility and work professionalism.

Government financial report compilers also believe that many obstacles that still arise in implementing accrual-based accounting systems will slowly be resolved and resolved. They believe that the constraints that arise solely because of the accrual-based accounting system are new things that are still foreign to them. However, over time, and with various efforts made by the government to make this accrual-based accounting system easy to understand and all obstacles will pass.
Meanwhile, to answer research questions regarding the meaning of the responses of compilers of government financial statements to the implementation of the accrual-based accounting system, this study found the results of interviews proved that the informants did not voluntarily implement the regulations and the laws issued by the government, in particular SAP 2010. Mr. Adi, a financial statement preparer at the Ministry of Public Works, reported as follow:

"Ya mau gimana lagi mbak, mau setuju atau tidak setuju, kita tetap harus melaksanakannya, karena ini kan sudah diatur dalam Undang-Undang dan Peraturan Pemerintah”. [Like or dislike, we had to obey and to implement it as the Law and the Government Regulation require].

Similarly, Mr. Agus from the Ministry of Finance added the following statement:

"Namun mau bagaimana lagi, ini kan sudah diatur pemerintah dengan Undang-Undang”. [The Law says so…. What can we do?].

Both informants stated that they did not have any choice but obeying the mandatory requirements for the accrual-based financial system in the Financial Statement preparation. It was proven that they did not do it voluntarily.

This non-voluntary response tended to indicate that the state was a repressive political group, which enforced the accrual-based accounting system in the financial statement preparation. This phenomenon was likely to distract civil society discourse towards state power discourse. The civil society movement was powerless to make a bargaining with the government in the SAP 2010 implementation. The informants implied a hopelessness to accept the government policy on the accrual-based accounting system without question.

The non-voluntary stance towards the accrual-based accounting system implementation led to pragmatic attitude. As employees, the informants only do what the superiors asked them to do strictly based on the laws and regulations.

The informants believed that once the accrual-based accounting system implementation in the Public Financial Statement had been in effect, the requirement did not apply as it had to be. They supposed that the Law had been constructed in such way that nothing they could ever do to despise it. Mr. Hafidudin, the financial staff at the Ministry of Finance, reported as follow:

"Kita lebih profesional saja mbak dalam melaksanakn tugas, ini adalah bagian dari tanggung jawab dan tugas kita dalam bekerja menyusun Laporan Keuangan Pemerintah”. [We are required to be more professional. This is part of our duty as the preparers of the Public Financial Statement].

Similarly, Mr. Adi from the Ministry of Public Works stated the following:

"Kita harus melaksanakan tugas dan tanggungjawab ini dengan sebaik-baiknya”. [He had to finish the duty and do our responsibility at our best].

Mr. Rahmat from the Ministry of Education and Culture added the following statement:

“Sekarang kita tinggal melaksanakannya dengan baik, tugas kita sebagai karyawan yang bertanggung jawab menyusun laporan keuangan kementerian pendidikan dan
kebudayaan, ya itu saja dilakukan dengan sebaik-baiknya". [We are the employees at the Ministry of Education and Culture who are in charge of preparing the public financial statement. We must do that].

Citations from the informants, i.e., the preparers of the Public Financial Statement, indicated that they prepared the Financial Statement according to the accrual-based accounting system merely for fulfilling the responsibility as good employees. They did the job as much as they could take it amid obstacles and problems that continued to grow as the preparation process went on. The informants as the preparers did the best, they could to show their professionalism as the superiors and the central government required during the preparation of financial statement using the accrual-based accounting system.

To the informants, problems had to arise during the implementation because it was a new system, therefore, more knowledge had to be learned. However, the informants were confident that someday the problems would be much easier to solve. The accrual-based accounting system, to the informants’ awareness, would become a perfect system for the Public Financial Statement.

Such pragmatic attitude led the informants to implement the accrual-based accounting system as a ritual method of financial recording. The public financial reporting practice had to be understood as an effort of recording and reporting the economic reality according to the real-life situation. In practice, it turned out to be the perfect way to fulfill the responsibility and to obey the regulations. Mr. Agus from the Ministry of Finance explained about this:

“Yaa...ini sudah menjadi amanat Undang-Undang, kita memiliki kewajiban untuk menjalankannya, kita memegang prinsip profesional kerja saja mbak". [As the Law requires. We are responsible for it. We must hold professionalism at work].

Mr. Adi from the Ministry of Public Works agreed with Mr. Agus and Ms. Ersa by commenting as follow:

“Ya mau gimana lagi mbak, mau setuju atau tidak setuju, kita tetap harus melaksanakannya, karena ini kan sudah diatur dalam Undang-Undang dan Peraturan Pemerintah. Kita harus melaksanakan tugas dan tanggungjawab ini dengan sebaik-baiknya”. [We have no choice. The Law and the Government Act ask us to do so. It is our responsibility].

These citations express the fact, which indicated that the obedience towards formal regulation on the financial statement preparation under the Government Act and Law in practice had been reduced into a ritual. The public accounting standard, which should had been a guidance for preparing and presenting the financial information in the form of the Public Financial Statement, could only become a bunch of “mantra”, which had to follow for the sake of stakeholders. Accordingly, the presentation of the Public Financial Statement was driven into a meaningless calculative-mathematical way-of-thinking.

Amid such deteriorating situation the government continued its effort to internalize the accrual-based accounting system in the Public Financial Statement preparation in order to implement the good accrual-based accounting system. The internalization process is useful for understanding the employees (the preparers) about the accrual-based accounting system. This effort had been made through socialization, training, and workshop. Ms. Ersa from the Ministry of Finance explained as follow:
“Upaya yang sudah dilakukan banyak sekali mbak, dari yang tadi saya sampaikan, untuk mengatasi persoalan sumber daya manusia, kita sudah melakukan berbagai macam sosialisasi, workshop, bintek dan juga inhouse training, semua itu sudah kita lakukan”. [Plenty of efforts have been done. Socialization, technical guidance, in-house training. We did all].

Mr. Rahmat from the Ministry of Education and Culture agreed that they attended the socialization and workshop on the accrual-based accounting system:

“Informasi mengenai sistem akuntansi berbasis akrua saya peroleh dari sosialisasi dan pelatihan-pelatihan yang dilakukan di lingkungan kementerian pendidikan dan kebudayaan ini mbak”. [Socialization and training help me get further information about accrual-based accounting system for this institution, Ministry of Education and Culture].

The above citations indicated that the government had performed internationalization process of the accrual-based accounting system to enrich the knowledge of the relevant employees about the truth and objectivity of the system (Berger and Luckman, 2013). The internalization process took place when the social reality had experienced objectification, dragging it back to the consciousness during the socialization. At this stage, the internalization had a function of transmitting the accrual-based system as an independent reality for the employees who just knew about it. Therefore, the accrual-based accounting system continued to exist over time.

The interviews with the preparers of the Public Financial Statement indicated that the government actually had prepared anything from regulations and standards, from system to information technology, and from socialization to workshop and training. All were done for the sake of better and more competent accrual-based accounting system over time.

Despite all efforts that had been done, the real-life implementation was overshadowed by problems so the delay had to be done. The accrual-based accounting system in the Public Financial Statement, however, implied poorly planned change in the public accounting system.

The poorly planned mechanism in the accounting system and the public financial statement was elaborated by the informants, in which he presented three major problems, i.e., inconsistent regulation, inadequate information system, and inadequate human resource. Mr. Adi from the Ministry of Public Works explained:

“Iya, memang berkaitan dengan kesiapan segala hal mengenai implementasi sistem akuntansi berbasis akrual memang masih sangat perlu dipersiapkan mbak, aturannya berubah-ubah, ganti berkali-kali, sosialisasi dilakukan berkali-kali kalau sistemnya juga diganti-ganti terus, itu bikin kita bingung malahan mbak”. [It is still inconsistent. It changes over time so we get confused of what should be or should not be done].

In addition, Ms. Asih from the Ministry of Public Works added the following:

“Ini kalau dari sisi kementerian PU, sebenarnya untuk sarana penunjangnya memang masih perlu ditingkatkan lagi, walaupun sebenarnya ada sistem aplikasi penunjangnya mbak, tetapi sistem ini kadang juga masih bermasalah, sehingga kadang kita mengalami keterlambatan dalam menyampaikan laporan keuangan
Mr. Hafidudin from the Ministry of Finance also gave his statement about the problems surrounding the accrual-based accounting system as follow:

"Dalam hal sumber daya manusia, pemerintah juga seperti tadi yang sudah saya sampaikan mbak, masih belum merata secara kualitas dan kompetensinya". [Human resource becomes the priority for the government. It has not been distributed equally though].

The above statements indicated that the accrual-based accounting system in Indonesia remained problematic. The government still had a lot of things to do it right in order to prepare the good Public Financial Statement by the accrual-based accounting system.

Based on the findings regarding the compulsion of the compilers of the Government Financial Statements to the implementation that was not planned so that there were various obstacles, in fact accounting practice is a social interaction within a country in response to transaction and people need for accounting information [14][15]. Therefore, accounting practice is an integral part of national interest to enforce regulations to create harmony and legal stand for the people in performing the practice.

State is an institution with the most adequate understanding of the will of individuals within society. It has authority to organize structural order for the citizens in economic, social, and political lives. In terms of accrual-based accounting system implementation in the Public Financial Statement preparation, the state has an interest to prepare regulations and standards which all public institutions rely on during the Financial Statement preparation.

To create a mandatory requirement to all public institutions in the implementation of the accrual-based accounting system in the Financial Statement, the national government needs to formulate Laws and other government acts. Indonesia has stipulated Law 17/2003 on Public Finance. This Law is the milestone of the proposed financial management system regulations.

Once the Law 17/2003 had been stipulated, the government then took the follow-up action by issuing some other Laws and Acts, as far as Government Act 71/2010 on SAP, which contains mandatory requirements for all public institutions to cope with as late as 2015. In support of all of these legal products, the government had also taken strategic measures and implementation, such as by providing workshops, as well as training and education, for public institutions, ministries, in particular at the central level of government. Efforts had also been made to provide more sophisticated infrastructures and facilities.

Law 71/2010 applies as a regulatory standard for financial statement prepared by public institutions, reflecting a correlating characteristic between power of regulation and power of authority in terms of legislation of authority and regulation enforcement. It indicates the power possessed by the dominant class (the state) or the order for suppressing other classes to obey the regulations. Based on this, it can be concluded that there is coercion carried out by the State behind the implementation of the accrual-based accounting system in the preparation of Government Financial Statements. Figure 1 describes the coercion behind the implementation of the accrual-based accounting system.
5 Conclusion

Accounting practice is a social interaction within a country in response transaction and people need for accounting information [14][15]. Therefore, accounting practice is an integral part of national interest to enforce regulations to create harmony and legal stand for the people in performing the practice.

Accounting practice in Indonesia has been stipulated within the Government Act 71/2010, which requires all public institutions to implement the accrual-based accounting system. This Act was in practice involuntarily accepted and implemented by any relevant employees and institutions. The response to the mandatory accrual-based accounting system in the Public Financial Statement was pragmatic in nature as the employees did it only to fulfill the responsibility and for the sake of obedience.

This study found the response from the compilers of the Government Financial Statements to the implementation of the accrual-based accounting system as a loyalty. The loyalty response shown by the compilers of this Government Financial Report can be seen from a pragmatic attitude only to carry out job duties and responsibilities in responding to regulations issued by the government.

This pragmatic attitude distracted the true meaning of the system implementation. The employees tended to give their understandings to the way of fulfilling the responsibility and doing their job. The obedience toward the standard requirements of the public accounting standards were no more than simply a ritual. No understanding and further knowledge whatsoever that the system was truly necessary to support the public financial statement. It was the economic reality that overshadowed the implementation of the accrual-based accounting system.

On the other hand, the government of Indonesia had made efforts to succeed the implementation of the accrual-based accounting system in the public financial statement by
providing workshops, training and education, as well as socialization. However, changes in regulation, inadequacy in information system and human resource quality continued to give problems to the implementation of the system in the public spheres.

In the midst of various obstacles that occur in the process of implementing an accrual-based accounting system and the compulsion and pragmatic attitude of the compilers of Government Financial Statements, law 71/2010 applies as a regulatory standard for financial statement prepared by public institutions, reflecting a correlating characteristic between power of regulation and power of authority in terms of legislation of authority and regulation enforcement. It indicates the power possessed by the dominant class (the state) or the order for suppressing other classes to obey the regulations. Based on this, it can be concluded that there is coercion carried out by the State behind the implementation of the accrual-based accounting system in the preparation of Government Financial Statements.

References

Enterprise Risk Management (ERM), Corporate Governance Mechanism and Firm Value of the Financial Sector Company in Indonesia

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{lovelyraudha@yahoo.com¹}

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Universitas Diponegoro, Indonesia², ³
Universitas Negeri Semarang, Indonesia⁴

Abstract. Firm value is the investor's perceptive of the company's success rate. Many factors affect the high value of the firm. This study aimed at examining the effect of Enterprise Risk Management (ERM) and corporate governance mechanisms on firm value. Research population consisted of financial sector companies listed on the Indonesia Stock Exchange, which were selected by a purposive sampling technique. This study performed an Ordinary Least Square (OLS) Regression analysis. The study proved significant effects of ERM and corporate governance mechanisms (managerial ownership, institutional ownership, independent commissioners and audit committees) on firm value.

Keywords: ERM, Corporate Governance Mechanism, Firm Value

1 Introduction

Firm is established to give maximum advantage and welfare to its stakeholders. Both aspects are made possible when the stock price is high and the firm puts its value highly. According to Husnan [1], firm value is a value that potential buyers are willing to pay when the firm is sold. The firm value is an investor’s perception of its degree of success. When stock price is high, so is the firm value. The high stock price will create trust on both firm’s current and future performance.

Value of a firm can be built and sustained by a good corporate governance (GCG). Once the GCG is established, the firm is on the right track towards reducing risk of the future losses, which may affect its value.

This study applies four mechanisms to measure the GCG, i.e., managerial ownership, institutional ownership, independent commissioner, and audit committee. Managerial ownership help managers to be responsible for their firm because they are not only hired externalities, but also the ones who contribute to other stakeholders in the firm’s decision-making process. This managerial ownership creates a work in concert between the managers and the stakeholders, in which both affects the management performance.

Institutional ownership helps improve the firm’s monitoring on the insiders’ performance [2]. Any action taken by the manager that may cause the firm’s benefit can be reduced by the managerial ownership and institutional ownership, in which independent commissioner plays a significant part. Independent commissioner acts impartially in order to help create the GCG to avoid any possible fraud by the management in presenting the financial statement.
Independent commissioner plays its role in monitoring the firm performance by establishing an audit committee. Once the audit committee has been put into action, an optimal performance will tend to materialize. The independent commissioner and the audit committee create transparency in the management responsibilities for the corporate financial statement.

Previous studies on the Corporate Governance have been done by Suyanti et al. [3], which results in the effect of the CG mechanism on the firm value, Rupilu [4], which indicates the significant effect of the CG on the firm value.

Furthermore, in a study of the effect of the CG and financial leverage on the firm value in the United States, Gill and Obradovich [5] finds that the effect is significant. Finally, having examined the effect the CG on the firm value, Perdana and Raharja [6] report as follows: a positive and significant effect of the managerial ownership on the firm value; a positive but not significant effect of the institutional ownership on the firm value; a positive and significant effect of the independent commissioner proportion on the firm value; and a positive but not significant effect of the external auditor on the firm value.

This current study has its own standing position by examining the effect of the CG on the firm value and the effect of the Enterprise Risk Management (ERM) on the firm value. The study uses different samples, i.e., firm that runs in financial sector.

Financial sectors play a significant role in stimulating economic growth of a country [7]. Globalization has been creating an integrated financial market that leads to vast growing external and internal environments of the financial sector. Banking industry has been popularly trusted as performing an intermediating function, in which it is expected to help minimize potential losses amid business risks.

Risk Management is an ultimate part of the banking industry in Indonesia in order to improve risk awareness. The Risk Management application within the banking industry relates to the increasing risks the bank must deal with. Effort in improving the risk management application is possible through integrated risk management by means of Enterprise Risk Management (ERM).

Bertinetti, Cavezzali and Gardenal [8] find that the ERM application has a positive and significant effect on the firm value, in which the ERM is considered more likely as a value driver, instead of a cost. The study supports the previous findings, which indicates a positive correlation between the firm value and the ERM and the empirical results that ERM helps improve the firm value [9].

## 2 Hypotheses

This study proposes the following hypothesis:

H1: Managerial Ownership has a significant effect on Firm Value  
H2: Institutional Ownership has a significant effect on Firm Value  
H3: Independent Commissioner has a significant effect on Firm Value  
H4: Audit Committee has a significant effect on Firm Value  
H5: Enterprise Risk Management (ERM) has a significant effect on Firm Value
3 Method

Population of this study consisted of banking firms enlisted in the 2017-2019 Indonesia Stock Exchange, which were collected by a purposive sampling technique [10].

Three criteria applied to the sampling mechanism, as follows: 1) the ISX-listed banking forms had to publish annual report for the period ended on December 31st for three consecutive years (2017-2019); 2) the firms disclosed the ERM and informed their value; and 3) the firms had complete and clear data within their annual financial statement during the research observation. These criteria resulted in 75 firms eligible for the research samples.

<table>
<thead>
<tr>
<th>Variabel Name</th>
<th>Abbreviation</th>
<th>Variable</th>
<th>Measurement</th>
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</thead>
<tbody>
<tr>
<td>Managerial Ownership</td>
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<td>Exogenous</td>
<td>Number of shares owned by manager x 100%</td>
</tr>
<tr>
<td>Institutional Ownership</td>
<td>KEI</td>
<td>Exogenous</td>
<td>Number of shares owned by institution x 100%</td>
</tr>
<tr>
<td>Independent Commissioner Audit Committee</td>
<td>KOI</td>
<td>Exogenous</td>
<td>Number of independent commissioner x 100%</td>
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<tr>
<td></td>
<td>KA</td>
<td>Exogenous</td>
<td>Number of boards of commissioner members</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Number of independent commissioner x 100%</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>Number of independent commissioner x 100%</td>
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<tr>
<td>Firm Value</td>
<td>TOB</td>
<td>Endogenous</td>
<td>Tobin’s Q = (MVS + MVD)/RVA</td>
</tr>
</tbody>
</table>

This study used secondary data from audited financial statement and annual report already listed in the 2017-2019 ISX. The study analyzed these data by using Ordinary Least Square (OLS) Multiple Regression operated by the Statistical Product and Service Solutions (SPSS) Version 24.

Fig. 1. Research Model.
4 Results

Regression analysis applied to examine the effect of exogenous variables on the endogenous ones.

This study applied a multiple regression to find out the exogenous variables, i.e., CG and ERM, and the endogenous variable, i.e., Firm Value.

Results of the regression are as the followings:

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
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<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
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<td>1,873</td>
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</tr>
<tr>
<td>KEI</td>
<td>0,531</td>
<td>0,074</td>
<td>0,172</td>
<td>3,207</td>
</tr>
<tr>
<td>KOI</td>
<td>1,639</td>
<td>0,310</td>
<td>0,351</td>
<td>5,102</td>
</tr>
<tr>
<td>KOA</td>
<td>0,784</td>
<td>0,096</td>
<td>0,164</td>
<td>3,097</td>
</tr>
</tbody>
</table>

The above regression output resulted in the following regression equation:

\[ \text{Tobin'Q} = 1,873 + 0,438 \times \text{ERM}_{it} + 1,086 \times \text{KEM}_{it} + 0,531 \times \text{KEI}_{it} + 1,639 \times \text{KOI}_{it} + 0,784 \times 0,784 \]

4.1 Determination and Correlation Coefficients

The regression test resulted in the following determination and correlation coefficients:

<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>0,530</td>
<td>0,291</td>
<td>0,273</td>
<td>0,60127</td>
</tr>
</tbody>
</table>

4.2 Hypothetical Test

The research hypotheses were subject to partial test (t-test) as presented in the following table 4.

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficient</th>
<th>Standardized Coefficient</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1,873</td>
<td>0,587</td>
<td>2,798</td>
<td>0,002</td>
</tr>
<tr>
<td>ERM</td>
<td>0,438</td>
<td>0,082</td>
<td>0,109</td>
<td>3,503</td>
</tr>
<tr>
<td>KEM</td>
<td>1,086</td>
<td>0,209</td>
<td>0,310</td>
<td>4,965</td>
</tr>
<tr>
<td>KEI</td>
<td>0,531</td>
<td>0,074</td>
<td>0,172</td>
<td>3,207</td>
</tr>
<tr>
<td>KOI</td>
<td>1,639</td>
<td>0,310</td>
<td>0,351</td>
<td>5,102</td>
</tr>
<tr>
<td>KOA</td>
<td>0,784</td>
<td>0,096</td>
<td>0,164</td>
<td>3,097</td>
</tr>
</tbody>
</table>
The above table indicates that t-test on the ERM variable on the firm value was 3.503 with significance rate of 0.000. This rate was less than 5%, therefore H0 was unacceptable. In conclusion, the ERM had a positive and significant effect on the firm value.

The t-test resulted 4.965 rate for managerial ownership with significance rate of 0.001, indicating a positive and significant effect of the managerial ownership on the firm value, and 3.207 rate for institutional ownership with significance rate of 0.000, indicating a positive and significant effect of the institutional ownership on the firm value.

Furthermore, the t-test resulted in 5.102 rate for independent commissioner with significance rate of 0.000, indicating a positive and significant effect of the independent commissioner on the firm value, and 3.097 rate for audit committee with significance rate of 0.003, indicating a positive and significant effect of the audit committee on the firm value.

5 Discussion

5.1 Effect of Managerial Ownership on Firm Value

Manager is responsible for firm sustainability. Managerial ownership makes possible for the manager to express his or her sense-of-belonging in performing the firm management. The managerial ownership puts management’s interest and stakeholder’s interest at the same level, so there is going to be a mutual responsibility should there be any incorrect decision-making [3].

Research observation found that managerial ownership had a significant effect on the firm value, in line with agency theory, which states that managerial ownership is an effective mechanism to resolve agency conflicts of interest between the principal (owner) and the agent (manager). The results support the previous studies that managerial ownership has a significant effect on the firm value [11][6][12].

5.2 Effect of Institutional Ownership on Firm Value

Institutional ownership is capable of performing an effective monitoring mechanism for each decision made by the manager [13]. The higher the institutional ownership rate, the stronger monitoring the institutional investors have to avoid the manager’s opportunistic behaviors [14].

Test on the effect of the institutional ownership on the firm value in this study had a significant result, in line with the agency theory, which states that institutional ownership plays a very important role in minimizing agency conflicts. The agency conflicts cause agency cost. The higher rate of institutional ownership leads to the stronger control of the externalities over the firm, so that the agency cost can be reduced while increasing the firm value [4].

The current study agrees with one that of Suyanti et al. [3] in terms that institutional ownership has a positive effect on firm value. However, it does not accord with another study performed by Perdana and Raharja [6], which finds no significant effect of the institutional ownership on the firm value.

5.3 Effect of Independent Commissioner on Firm Value

Independent commissioner is the most appropriate position for performing a monitoring function towards a good corporate governance [3]. The higher the proportion of the independent commissioner within the firm, the more empowered the board of commissioner in performing
its effective and efficient monitoring and advocacy functions for the board of directors to contribute the added value to the firm.

The test on the effect of the independent commissioner on the firm value in this study is in line with that of Perdana and Raharja [6] in terms of the positive and significant effect of the independent commissioner on the firm value. However, the result goes to the opposite direction from Nathania [15] who has proven that the independent commissioner had a negative and not significant effect on the firm value.

5.4 Effect of Audit Committee on Firm Value

Audit committee is useful for improving integrity and credibility of financial statement. An independent audit committee helps control the transparency of the firm management reporting, leading to trust and belief from stock market actors.

This study indicated that audit committee was one of indicators that affected firm value, supporting the agency theory, which predicts that the establishment of the audit committee helps agency problem-solving mechanism. The audit committee plays its role as a controller in the financial statement development. Therefore, it affects the increase in the firm value.

On one hand, this study agreed with the previous findings that audit committee had a significant effect on the firm value [5][4]. On the other hand, it was against Suyanti et al. [3], Felmania [11], and Perdana and Raharja [6], who found a non-significant effect of the audit committee on the firm value.

5.5 Effect of ERM on Firm Value

As a non-financial information, ERM becomes a signal for investors concerning their invested capital security. The better and the clearer ERM presentation within the firm’s report, the stronger the motivation of the investors to make the investments. The quality of the ERM also motivates the investors to get the firm’s certificate of the property rights and to make a competitive price on the stock market.

The test on the ERM’s effect on the firm value accorded with Hoyt and Liebenberg [9] in terms of the significant effect the ERM had on the firm value, but did not agree with Tahir and Razali [16] and Sekerci [17] who found non-significant effect of the ERM on the firm value.

6 Conclusion

This study examined the effects of the corporate governance mechanisms and the ERM on the firm value, which resulted that the firm value of the research samples, i.e., financial sector companies listed in the 2017-2019 ISX, were affected by the corporate governance mechanisms (managerial ownership, institutional ownership, independent commissioner, and audit commissioner) and the ERM. The contribution of this study made both theoretical and empirical contributions. The theoretical realm supported the agency theory, whereas the empirical realm supported the effect of the CG mechanisms and the ERM on the firm value.
7 Recommendations

This study gives direction of how firm management acknowledges the correlation of the CG mechanisms and the ERM to the firm value. It warns the management to pay attention to CG mechanisms by examining managerial ownership and institutional ownership composition, as well as finding out whether independent commissioner and audit committee exist within the firm. A firm must have well-planned consideration to minimize agency cost while increasing its value.

Firms are necessary to increase the frequency of the ERM disclosure to prove that they have been “prepared for the worst” (i.e., failure risk) and for minimizing the loss. Once the loss has been overcome, the firms are not going to bother themselves by manipulating the financial statement, creating a stronger investors’ trust and a higher firm value.

In terms of science and knowledge development, this study expands the empirical evidence on the firm value, opening doors for further research on other factors, either those strengthening or weakening, the firm value. Further research may include dividend policy, corporate social Responsibility, financial performance ratio, and investment opportunity set.

The study also recommends a further research on the ERM based on other aspects than implementation items. It recommends Likert scale that inclines more to the smaller intervals. The research observation period must also expand beyond three-year term to enrich the data for the sake of a better decision-making.

References


Micro Small and Medium Enterprises Facing the Industry 4.0 Era in Semarang City

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Universitas Negeri Semarang, Indonesia¹,²,³

Abstract. The MSMEs sector contributes significantly to the economy of Semarang City. Besides contributing to the Semarang City gross regional domestic product, it also absorbs a significant amount of labor. Along with the development of industry 4.0, which leads to high-tech and the use of the Internet of Things (IoT), the MSMEs sector in Semarang City must adjust and prepare for changes. This research is an explorative study that focuses on identifying internal and external conditions, assessing readiness, and recommended strategies to the MSMEs facing the industry 4.0 era in Semarang City. The data used are quantitative data and qualitative data. In this study, the samples taken following the sampling technique are 100 micro and small business units. Quantitative descriptive analysis and Assessment Tool developed by Warwick University in England are used in the analysis method of this study. The results show that from three aspects of assessment, namely aspects of products and services, aspects of business models, and aspects of strategy and organization, the results of the readiness analysis are at level 2 (intermediate). With details on each aspect, namely aspects of products and services has a value of (1,7). The business model aspect has a value of (2,6) and the strategic and organizational aspects have a value of (1,7).

Keywords: MSMEs, Industry 4.0, Semarang City, Economy, Aspects

1 Introduction

The evolution of the industry is developing rapidly over time. Prasetyo and Sutopo [1] state that the Industrial Revolution occurred four times, starting with the first industrial revolution in 1784. Industrial revolution 1.0 occurred in England with the invention of steam engines and manufacturing machines that replaced the role of human labor. Then, the 2.0 industrial revolution occurred when the use of electric power shifted to be the leading force driving production machines. The 3.0 industrial revolution occurred in the mid-1970s when the invention of computer technology affected the automation of the use of industrial machines. The industrial revolution 4.0 was first introduced in 2011 in Germany. The use of industrial technology in this era is more directed to the high-tech industry.

According to Marsudi and Wijaya [2], industrial revolution 4.0 has a significant impact on the results of the Mckinsey Global Institute study, specifically the use of robots and machines that impact the use of human labor. Regional governments have a strategic role in dealing with the development of industry 4.0, especially preparing industries in the region in order for them to continue having the strength to be competitive. One of them is Semarang City as a city based on trade and services following the initial plan of RPJMD of the Semarang City 2016-2021. With these development plans, it is expected that all stakeholders in the Semarang City,
especially industry players, can be more adaptive in adjusting the times, especially industrial evolution, that increasingly focuses on the use of technology and computerization.

Businesses in big cities in Indonesia, especially Semarang City, are increasingly aware of the power of the internet and digital devices in improving business performance [3]. However, in reality, business people presently using the internet are indeed solely medium and large industries. Although these industries also have not implemented 100% of the internet. Website, social media, and mobile messaging applications are crucial media for MSMEs in interacting with consumers [3]. These tools have a role in advancing MSMEs in the era of disruption, yet MSMEs players have not fully realized them. The number of MSMEs increases every year, of course, becoming an excellent opportunity to develop the application of industry 4.0. The increase in the number of MSMEs in Semarang City is presented in table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Sub-District</th>
<th>Year 2015</th>
<th>Year 2016</th>
<th>Year 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Banyumanik</td>
<td>79</td>
<td>328</td>
<td>206</td>
</tr>
<tr>
<td>2</td>
<td>Cantisari</td>
<td>24</td>
<td>149</td>
<td>219</td>
</tr>
<tr>
<td>3</td>
<td>Gajahmungkur</td>
<td>27</td>
<td>235</td>
<td>171</td>
</tr>
<tr>
<td>4</td>
<td>Gayamsari</td>
<td>24</td>
<td>287</td>
<td>413</td>
</tr>
<tr>
<td>5</td>
<td>Genuk</td>
<td>31</td>
<td>325</td>
<td>271</td>
</tr>
<tr>
<td>6</td>
<td>Gunungpati</td>
<td>34</td>
<td>126</td>
<td>191</td>
</tr>
<tr>
<td>7</td>
<td>Mijen</td>
<td>18</td>
<td>79</td>
<td>144</td>
</tr>
<tr>
<td>8</td>
<td>Ngaliyan</td>
<td>56</td>
<td>123</td>
<td>187</td>
</tr>
<tr>
<td>9</td>
<td>Pedurungan</td>
<td>175</td>
<td>1,378</td>
<td>621</td>
</tr>
<tr>
<td>10</td>
<td>Semarang Barat</td>
<td>65</td>
<td>315</td>
<td>416</td>
</tr>
<tr>
<td>11</td>
<td>Semarang Selatan</td>
<td>155</td>
<td>185</td>
<td>368</td>
</tr>
<tr>
<td>12</td>
<td>Semarang Tengah</td>
<td>23</td>
<td>206</td>
<td>378</td>
</tr>
<tr>
<td>13</td>
<td>Semarang Timur</td>
<td>27</td>
<td>424</td>
<td>370</td>
</tr>
<tr>
<td>14</td>
<td>Semarang Utara</td>
<td>70</td>
<td>235</td>
<td>474</td>
</tr>
<tr>
<td>15</td>
<td>Tembalang</td>
<td>117</td>
<td>409</td>
<td>578</td>
</tr>
<tr>
<td>16</td>
<td>Tugu</td>
<td>71</td>
<td>102</td>
<td>145</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>996</td>
<td>4,906</td>
<td>5,152</td>
</tr>
</tbody>
</table>

Source: Semarang in figure (2018).

Based on table 1, the number of MSMEs in Semarang City has increased every year, where the number of MSMEs in 2015 only amounted to 996, proceeded to increase to 4906 in 2016, and in 2017 to 5152 MSMEs. The existence of information and communication technology will create networking, thus minimizes the distance and time constraints and can be used to perform beneficial economic activities for its users. MSMEs can interact with consumers more easily if they utilize existing technology. Considering the many benefits that can be obtained from the existence of this technology, information, and communication, industries must implement it, especially in the Industry 4.0 Era. However, not all MSMEs can apply technology with a variety of obstacles encountered, such as the low level of human capital and performed innovations. In anticipating all of these problems, a study is necessary to assess the preparedness and strategies of MSMEs in Semarang City in facing the Industry 4.0 Era.
From the problem formulation, this study aims to determine the internal and external conditions of MSMEs in Semarang City in overlooking the development of the Industry 4.0 Era and strategies that can be recommended.

2 Research Methods

This research is a quantitative descriptive study and uses primary data. The primary data used is a sample of MSMEs in Semarang City. The number of samples for MSMEs is 99 respondents. The respondent will fill out a questionnaire regarding the readiness of MSMEs in industry 4.0. The sample is distributed in 16 sub-districts throughout Semarang City. The aspects of Semarang City's MSME readiness to be analyzed refer to the industry 4.0 readiness assessment tool (An Industry Assessment Tool) developed by Warwick University in England [4]. Of the ten aspects, only three aspects will be assessed, considering that the three aspects are common conditions of the MSMEs in Indonesia. The three aspects are:

2.1 Product and Services Aspect

This aspect has several sub-indicators and readiness levels categorized into four levels from beginner to expert, including:

<table>
<thead>
<tr>
<th>Readiness Level</th>
<th>Level 1-Beginner</th>
<th>Level 2-Intermediate</th>
<th>Level 3-Experienced</th>
<th>Level 4-Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital features of products</td>
<td>Only displaying products physically</td>
<td>A small number of products are displayed digitally</td>
<td>Most products are displayed digitally</td>
<td>All products are displayed digitally</td>
</tr>
<tr>
<td>Data-driven services</td>
<td>There is no data-based service</td>
<td>There are data-based services without integration with customers</td>
<td>There are data-based services with limited integration with customers</td>
<td>Data-based services which fully integrated with customers</td>
</tr>
<tr>
<td>Level of Product Data Usage</td>
<td>Product information is not displayed at all</td>
<td>The delivery level of product information is 0-20%</td>
<td>The delivery level of product information is &gt;20%-%50%</td>
<td>The delivery level of product information is &gt;50%</td>
</tr>
</tbody>
</table>

2.2 Strategy and Organization Aspect

This aspect has several sub-indicators and readiness levels which are categorized into four levels from beginner to expert, comprising:

<table>
<thead>
<tr>
<th>Readiness Level</th>
<th>Level 1-Beginner</th>
<th>Level 2-Intermediate</th>
<th>Level 3-Experienced</th>
<th>Level 4-Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of Strategy Implementation</td>
<td>Industry 4.0 is still in discussion</td>
<td>Industry 4.0 is included in the strategy plan</td>
<td>Industry 4.0 has been applied and</td>
<td></td>
</tr>
</tbody>
</table>

| | | | |
|---|---|---|
| | | | |
2.3 Business Model Aspect

This aspect has several sub-indicators and readiness levels which are categorized into four levels from beginner to expert comprising:

<table>
<thead>
<tr>
<th>Readiness Level</th>
<th>Level 1 - Beginner</th>
<th>Level 2 - Intermediate</th>
<th>Level 3 - Experienced</th>
<th>Level 4 - Expert</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data-Driven Decision</td>
<td>Data is not analyzed</td>
<td>A small portion of data is analyzed</td>
<td>Most of the data is analyzed</td>
<td>All relevant data are analyzed and inform the company's business decisions</td>
</tr>
<tr>
<td>Real-time Tracking</td>
<td>Limited product tracking</td>
<td>Product tracking extends to the production process and</td>
<td>Product tracking extends to the market</td>
<td>Complete product tracking throughout the business cycle</td>
</tr>
<tr>
<td>IT-supported Business</td>
<td>IT systems do not yet support business processes</td>
<td>Business processes are supported by IT systems yet not integrated</td>
<td>Complete IT support for all processes yet not fully integrated</td>
<td>IT systems support all company business processes and are integrated</td>
</tr>
</tbody>
</table>
3 Results and Discussions

3.1 The readiness of MSMEs of Semarang City in the Industry 4.0 Era

3.1.1 Business Fields

The distribution of business fields for Semarang City MSMEs is as follows:

![Bar Chart](image)

**Fig. 1.** MSMEs Business Fields in Semarang City.

Based on the graph above, of the 100 MSMEs respondents in Semarang City, the majority or 53% are culinary businesses, then trading businesses, such as grocery stores as much as 13%. Service businesses such as laundry and salon services as much as 12%. Fashion businesses such as tailors and small clothing stores as much as 10%. Production business of 10% and handicraft business of 2%.

3.1.2 Evaluation of MSMEs Readiness of Product and Service Aspects

Product and service aspects consist of four indicators, specifically (a) delivery of complete product information, (b) collaboration with large start-ups, (c) payment methods utilizing EDC (Electronic Data Capture), (d) payment methods through fintech. Based on the processing results, the following table shows the analysis of MSMEs' readiness in the aspects of products and services.

From the results Table 5 of primary data processing of respondents in Semarang City, from 100 MSMEs as many as 77% had submitted complete information about products to customers, while 23% of UMKM players had not submitted complete information. The next indicator is cooperation with big start-ups, only 25% of MSME players have collaborated, while the remaining 75% have not collaborated. The third indicator in the assessment of product and service aspects is the use of the EDC (Electronic Data Capture) payment method. The result shows only 22% of MSMEs in Semarang City have used the EDC payment method.
Table 5. Evaluation of MSMEs Readiness of Product and Service Aspects

<table>
<thead>
<tr>
<th>No.</th>
<th>Product &amp; Service Aspects</th>
<th>Percentage of Answer for Yes</th>
<th>Percentage of Answer for No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Complete information delivery regarding the product to the customer</td>
<td>77%</td>
<td>23%</td>
</tr>
<tr>
<td>2.</td>
<td>Collaborate with big start-ups</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>3.</td>
<td>Payment methods utilize EDC (Electronic Data Capture)</td>
<td>16%</td>
<td>84%</td>
</tr>
<tr>
<td>4.</td>
<td>Payment methods through fintech</td>
<td>12%</td>
<td>84%</td>
</tr>
</tbody>
</table>

Source: Primary data, processed (2020).

The last indicator is the use of payment methods through fintech. From the results of the respondents’ data, it is known that only 9% of MSME actors use the fintech method, while the remaining 81% have not used the fintech payment method. There are several fintech companies that offer payment services to retail or small and medium enterprises (SMEs) at low cost. Most of the MSME in Semarang City cannot take advantage of this due to limited knowledge, skills and abilities.

3.1.3 Evaluation of MSMEs Readiness from Business Models Aspect

The business model aspect consists of 10 indicators, such as (a) franchises, (b) computer use, (c) laptops, (d) internet network facilities, (e) websites, (f) automatic machinery and equipment, (g) report recordings of sales transactions, (h) bank accounts and (i) online banking facilities. Based on the processing results, the following table shows the analysis of MSMEs' readiness in the aspect of the business model presented in the following table 6.

Table 6. Evaluation of MSMEs Readiness of Business Models Aspect

<table>
<thead>
<tr>
<th>No.</th>
<th>Business Models Aspect</th>
<th>Percentage of Answer for Yes</th>
<th>Percentage of Answer for No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Franchise business</td>
<td>17%</td>
<td>83%</td>
</tr>
<tr>
<td>2.</td>
<td>Utilization of computer equipment</td>
<td>55%</td>
<td>45%</td>
</tr>
<tr>
<td>3.</td>
<td>Utilization of laptop equipment</td>
<td>64%</td>
<td>36%</td>
</tr>
<tr>
<td>4.</td>
<td>Internet network facilities</td>
<td>42%</td>
<td>58%</td>
</tr>
<tr>
<td>5.</td>
<td>Owning a personal website</td>
<td>5%</td>
<td>95%</td>
</tr>
<tr>
<td>6.</td>
<td>Utilization of automatic machinery and equipment</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>7.</td>
<td>Transaction report of recorded sales</td>
<td>66%</td>
<td>34%</td>
</tr>
<tr>
<td>8.</td>
<td>Business financial transaction reports have been presented periodically</td>
<td>88%</td>
<td>12%</td>
</tr>
<tr>
<td>9.</td>
<td>Owning a bank account</td>
<td>81%</td>
<td>19%</td>
</tr>
<tr>
<td>10.</td>
<td>Utilization of online banking facilities</td>
<td>64%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Source: Primary data, processed (2020).

Based on the results of processing, the following table shows the analysis of the readiness of MSMEs in the aspects of the business model shown in table 6. From primary data processing from respondents, it can be seen that most of the MSMEs in Semarang City do not yet have a franchise system, this of course will hamper the market expansion process of these MSMEs. However, most MSME also have computers/laptops, business financial transaction reports have
been made regularly, already have bank accounts, and use online banking facilities such as mobile banking or internet banking.

3.1.4 Evaluation of MSMEs Readiness from Strategic and Organizational Aspects

The aspects of strategy and organization include nine aspects, which are presented in the following table 7.

<table>
<thead>
<tr>
<th>No.</th>
<th>Strategic and Organizational Aspects</th>
<th>Percentage of Answer for Yes</th>
<th>Percentage of Answer for No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Business owners possess skills in utilizing technology</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>2.</td>
<td>Employees possess skills in utilizing technology</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>3.</td>
<td>Planning to invest in providing internet facilities</td>
<td>23%</td>
<td>77%</td>
</tr>
<tr>
<td>4.</td>
<td>Planning to purchase automated machinery and equipment</td>
<td>12%</td>
<td>88%</td>
</tr>
<tr>
<td>5.</td>
<td>Connected online with raw material suppliers</td>
<td>58%</td>
<td>42%</td>
</tr>
<tr>
<td>6.</td>
<td>Connected online with consumers</td>
<td>39%</td>
<td>61%</td>
</tr>
<tr>
<td>7.</td>
<td>Owning a personal social media account</td>
<td>48%</td>
<td>52%</td>
</tr>
<tr>
<td>8.</td>
<td>Utilization of non-cash transactions</td>
<td>22%</td>
<td>78%</td>
</tr>
<tr>
<td>9.</td>
<td>Employee’s salary payout utilizing non-cash</td>
<td>20%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Source: Primarily data, processed (2020).

Based on the table 7, it explains the readiness of MSMEs from the strategic and organizational aspects. Business owners have proficiency in the use of technology by 58% of the total respondents, while employees who have skills in the use of technology are slightly lower by only 48%. This shows that most actors and employees have not been able to properly utilize technology for the development of their business. In addition, non-cash payment of employee salaries was only 20% of the total respondents. This was also followed by the use of non-cash transactions, only 22% of the total respondents.

3.1.5 The Readiness of MSMEs in the Industrial Era 4.0

From the analysis of the MSME readiness assessment, seen from the aspects of products and services, aspects of business models, and aspects of strategy and organization, it can be concluded that the readiness of the MSMEs sector in facing the industrial era 4.0 is at level 2. As can be seen in Figure 2.
From three aspects of assessment, namely aspects of products and services, aspects of business models, and aspects of strategy and organization, the results of the readiness analysis are at level 2 (intermediate). With details on each aspect, namely aspects of products and services has a value of (1,7). The business model aspect has a value of (2,6) and the strategic and organizational aspects have a value of (1,7).

4 Conclusions

The readiness of the industrial sector of Semarang City in facing the Industry 4.0 Era is at level 2 or intermediate. With details on each aspect, namely aspects of products and services has a value of (1,7). The business model aspect has a value of (2,6) and the strategic and organizational aspects have a value of (1,7).

With details on each aspect, namely aspects of products and services has a value of 1.7. This means that most MSME respondents have not collaborated with large start-ups, and have not utilized EDC (Electronic Data Capture) or fin-tech payment methods. Most MSMEs are reluctant to collaborate with start-ups such as Gojek, Grab or other start-ups, this is because MSMEs do not have complete information about cooperation with start-ups, besides that there is a sharing of the profits from sales with start-up companies. ups if doing cooperation.

The business model aspect has a value of 2.6, this is indicated by most of the respondents of MSMEs already have a recorded sales transaction report, business financial transaction reports have been made periodically, besides that MSME also already have bank accounts and use online bank facilities such as mobile banking or Internet banking. However, most MSMEs do not have a franchise business, do not have their own website, and do not use automatic machines and equipment. This will make it difficult for MSME to develop if they want to expand their business.

The strategic and organizational aspects have a value of 1.7, this is indicated by more than 58% of the respondents of MSME business owners have proficiency in technology and are connected online with raw material suppliers. However, most MSME respondents have not used non-cash transactions either in running their business or for employee payroll, besides that,
MSMEs have not invested in purchasing automatic machines and equipment, and have not been connected online with customers.

5 Recommendations

1. It is necessary to socialize the concept of industry 4.0 more massively to MSME players in the city of Semarang.
2. Efforts should be made to increase investment in industry 4.0 by using more high-tech machines or tools. Provision of funds for investment can work with the banking sector.
3. There needs to be an increase in industrial literacy 4.0 to the people of Semarang City, such as the use of applications to help with daily activities, such as the use of electronic money or electronic wallets.

References

Human Capital Disclosure Practices: Do Performance and Budget Controlling Matter? (Evidence from Indonesian Local Governments)

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Abstract. This study aims to explore the effect of performance and budgeting control on human capital disclosure in Indonesian Local government in accordance with institutional theory. The reason for doing this study is the big budget allocation for employee expenditure in Indonesian local government and the existence of a Law on State Civil Apparatus but the lack of human capital disclosure in local government financial statement. It is a study on 140 local governments with cluster sampling and the hypothesis was proved by multiple regressions. The results showed that there was an effect of performance on human capital disclosure, while the budget controlling was not significant. Further statistical tests show there are differences in the local governments performance which located at Java Island and outside of Java. Future studies can also try to test the disclosure of human capital using only the four items index which widely expressed by local governments in Indonesia. There are about employee pay and benefits, employee awards, pension/old age insurance, and employee protection.

Keywords: Human Capital Disclosure, Performance, Budget Controlling, Institutional Theory

1 Introduction

Human capital disclosure is very important to overcome organizational, community and environmental problems. This is in accordance with the perspective of institutional theory. Previous study by DiMaggio & Powell [1] and Scott [2] which is useful to increase transparency and disclosure can also strategically improve the alignment between goals and norms of the organization with community norms, facilitate the sustainability of the organizational operations in order to improve the reputation of the company and goodwill. Abeysekera [3] states that companies use disclosure to reduce tensions between organizations and stakeholders and based on Dillard, Rigsby & Goodman [4] which states that organizations express voluntarily because of the strength or pressure exerted on the organization to resemble other units in dealing with the same environmental conditions. Dagilienė & Nedzinskienė [5] stated that if companies tend to express one of the non-economic aspects voluntarily in their report, the company tends to reveal more about other non-economic problems in the perspective of institutional theory.

Burke, Noblet & Cooper [6] stated that the strategy of managing human resources (HR) has an important role in ensuring public institutions provide services to the public with high standards of service consistently. Disclosure of human capital in financial statements is needed
by stakeholders in making decisions for both companies and local governments. This is consistent with the study of Kansal & Joshi [7] which found that there is no difference between the average disclosure of human capital from one industry to another and the disclosure practices of private companies and the public sector. The reality is that local governments have not shown uniformity (isomorphic) according to institutional theory in terms of human capital disclosure in local government financial statement. The followers of institutional theory states that organizations adapt isomorphic processes in the form of acceptance of values, norms, regulations, and others.

Human capital problems often occur in every organization. These problems certainly cause various decisions making and the achievement of organizational goals and even accountability and also transparency become questionable [8]. The problem with local governments related to human capital disclosure is the existence of high employee (related to human capital) expenditure budget. The personnel expenditure budget for paying the salaries of central and regional civil servants in 2017 is 495.7 trillion rupiah [9]. The employee expenditure budget for paying the salaries of central and regional civil servants is high because a quarter of the budget for the budget and the average increase to 22% per year.

Salaries of civil servants (PNS) have been budgeted in a quite big number by the government. In 2017 state budget (APBN), according to Kemenkeu [10], employee expenditure for salary reached Rp 343.3 trillion and goods expenditure was Rp 296.6 trillion from a total of Rp 1.13 quadrillion (thousand trillion). Employee expenditure covers 26.1 percent of the total central government budget, or about a quarter of the budget is used to pay salaries and fringe benefits of bureaucrats [11]. Expenditures for central and regional government employees have increased every year (Fig. 1).

In the 2016 APBD, 131 districts had a ratio of employee expenditure and fringe benefits to the total state budget reaching above 50 percent. So, most of the state budget is only for employee expenditure [12]. Based on data from the Directorate General of Fiscal Balance, the average portion of employee expenditure in the 2015 APBD, both provincial and district/city
up to 40 percent. The allocation of employee expenditure at the district/city government level was recorded at an average of 46 percent.

Several studies on the level of disclosure to local governments in Indonesia also show inconsistencies. The inconsistency can be seen from the results of several studies. First, study by Suhardjanto & Yulianingtyas [13] show the average value of mandatory disclosures in the regional government balance sheet shows 10.49 or 30.85 percent of 100 samples. Second, study by Setyowati [14], the average disclosure rate of 314 local governments in 2014 showed 64 percent. Third, the level of disclosure of provincial government in Indonesia from 2006 to 2009 showed an upward trend [15]. Fourth, the average level of human rights disclosure in Indonesia is around 7% lower than in developed countries [16].

Similar to studies on human capital disclosure in go public companies, human capital disclosure is also very important in the government. The importance of disclosing human capital in each sector is certainly different. This is consistent with the results of a study by Kansal & Joshi [7] which found that accountability in terms of human resource reporting in the public is higher than the private sector. Disclosure of human capital has not been regulated explicitly and specifically in Government Regulation Number 71 of 2010 concerning Government Accounting Standards (SAP), Law of the Republic of Indonesia No. 5 of 2014 concerning State Civil Apparatus (ASN) shows that ASN has the right to receive: salary, benefits, and facilities; paid leave; pension insurance and old age insurance; protection; and competency development, and Study Number 14 of International Public Sector Accounting Standards (IPSAS) which is published by the IPSAS Board (2011). Even though there is a statement that the information presented in accrual-based accounting in financial statement make it possible for stakeholders.

Three isomorphic components only the coercive component (measured by the number of members of parliament) has a significant influence on the level of disclosure [17][18]. It proves that in Indonesia, coercive pressure is still needed to increase transparency [19]. This is consistent with the argument of Graham & Woods [20] that coercive pressure is suitable for developing countries. Arifin et al. [17][18] tested three isomorphic components with variables of the number of DPRD, the location of local government by distinguishing Java or Outside Java, the proportion of opposition parties. A study by Iliya Nyahas et al. [21] state that coercive and normative isomorphic mechanisms are positively related to voluntary disclosure, whereas mimetic mechanisms are not. Study by Iliya Nyahas et al. [21] organizational culture partly mediates the relationship between isomorphic influences and voluntary disclosure practices of registered companies in Nigeria. This is in accordance with social processes with the existence of isomorphic forces such as coercive, normative and mimetic clearly carried out by the external environment, so that public entities can directly adopt integrated report.

Tagesson et al. [22] show that internet-based social disclosure is related to company size, profitability, ownership and industry in companies registered in Sweden. Ali, Frynas & Mahmood [23] find that company characteristics such as company size, industrial sector, profitability, and corporate governance mechanisms drive the CSR reporting agenda. In addition, political, social, and cultural factors influence the CSR disclosure agenda. Sahari & Hamzah [24] and Yau, Chun & Balaraman [25] found that profitability had no effect on human rights disclosure. Profitability is usually used to measure financial performance. Lajili & Zéghal [26] found a positive and significant relationship between disclosure of labor costs and the market value of equity. Financial performance has various measurements. So, financial performance is positively related to human capital disclosure.

A study by Toorchi, Asiaei & Dehghan [27] implies that companies with a high level of intellectual capital have sophisticated accounting systems and management controls. The relationship between the internal control system (including budgeting control) and the
Disclosure of human capital (intellectual capital) was also carried out by Möller, Gamerschlag & Guenther [28]. The internal control system is good, so reporting to the outside parties (including disclosure) is also good. Thus, budgetary control also affects the disclosure of human capital.

Capital innovation indirectly affects disclosure if measured by the cost of ownership information and in other organizations it is often called as cost of software (investment). So, if the intensity of research and development is high then it affects disclosure. It is also in accordance to a study by Wright [29] which states that capital innovation has a positive effect on government policy. This study identifies the effect of performance and budget controlling on human capital disclosure. This study compiles the human capital disclosure index and uses institutional theory in identifying the determinants of human capital disclosure in local governments in Indonesia which make it different from other studies.

2 Methods

The type of this study is a quantitative study, which use secondary data obtained from the State Audit Board (BPK) in Jakarta, the annual report of the regional government in Indonesia in 2016. The population in this study is 513 Local Government in Indonesia. The analysis unit of this study is the organization so that each city or Regency. This study analyzes the annual financial statements from 2016 because that year shows the period after Presidential decree No. 71 of 2010 concerning Government Accounting Standards, about the implementation of accrual basis reports. This study used proportional sampling technique. This financial statement data was obtained from a data base (BPK) which is published in the form of CD in February 2017.

The dependent variable of this study is human capital disclosure (HCD). Human Capital Disclosures are words or sentences about human capital disclosed by organizations in financial statements [3][30]. Thus, this study refers to the definition of human capital disclosure that was used Abeysekera [3][30], because it is more suitable with the definition of the civil service (ASN) and employees in the financial statements of local governments in Indonesia. This study uses index analysis to measure human capital disclosure which is developed based on the framework of Beattie & Thomson [31], Pisano, Lepore & Lamboglia [32], Bontis [33], Guthrie & Petty [34], Guthrie et al. [34], Guthrie, Petty & Ricceri [35], Adelowotan [36] and others (attached). The steps to prepare the index as follows

a. Mapping theory and previous study on human capital disclosure. The results found 211 indicators of human capital disclosure.

b. Those indicators are arranged in a questionnaire and distributed (surveys) to several stakeholders. The stakeholders are auditors (BPK and BPKP), Actors (Local Government), Academics (researchers), and policy makers (MOHA).

c. The survey results are identified by and carried out as a basis for interviews to see their consistency. After surveys and interviews related to 211 indicators were categorized using factor analysis, there are obtained 51 items.

d. Fourteen keywords were obtained from the categorization of indicators. The next process is analyzing another factor based on the keywords adopted in the Law on State Civil Apparatus which amounted to 14 (fourteen) keywords. The keywords that were used to identify human capital disclosure including the preparation and determination of needs, procurement, rank and position, career development, promotion, transfer, performance appraisal, payroll and benefits, awards, discipline, dismissal, retirement guarantees and
guarantees old age, as well as protection. Each keyword if disclosed is given a score of 1 (one).

e. This study also tested the validity and reliability testing with the intercoder by experts in public accounting.

Financial performance in this study was defined as a performance measure that uses financial indicators. It was developed from the definition of performance according to Gimzauskiene & Klovienė [38], which is a feature of achievement level of the implementation of an activity or program and policy in realizing the goals, objectives, mission and vision of the organization as outlined in the strategic planning of an organization. This study uses the performance score of government administration in the Decree of the Minister of Home Affairs No. 100-53 of 2018 concerning the Ranking and Status of National Government Implementation Performance. The performance score of the government administration is the ranking and status of the performance of local government administration in 2018.

Budget controlling is the effectiveness of budget controlling which includes planning, feedback and control interactions that are important to improve government performance in the implementation of performance-based budgeting. Thus, budget controlling is measured by the amount of the revenue budget target minus the realization of the revenue budget minus the amount of the expenditure/expenditure budget target after deducting the realization of the government expenditure/expenditure.

The control variables in this study are capital innovation and size (total assets). Capital innovation shows the creation of something new, which has been studied for decades [39][40]. Capital innovation in this study is measured by the intensity of capital innovation that is the cost of research and development divided by total assets. Size is a measure of local government that can be indicated by the number of assets owned. Size in this study was measured by the natural logarithm of total assets.

3 Results and Discussion

3.1 Descriptive Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Obs</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>HCD</td>
<td>140</td>
<td>0,287</td>
<td>0,027</td>
<td>0,142</td>
<td>0,5</td>
</tr>
<tr>
<td>KK</td>
<td>140</td>
<td>31,050,79</td>
<td>3,194,328</td>
<td>13,619</td>
<td>35,926</td>
</tr>
<tr>
<td>PP</td>
<td>140</td>
<td>0,067</td>
<td>0,047</td>
<td>-0,018</td>
<td>0,244</td>
</tr>
<tr>
<td>INOV</td>
<td>140</td>
<td>1,920</td>
<td>5,453</td>
<td>0,019</td>
<td>54,965</td>
</tr>
<tr>
<td>Size</td>
<td>140</td>
<td>28,686</td>
<td>0,686</td>
<td>27,471</td>
<td>31,272</td>
</tr>
</tbody>
</table>

Source: Secondary processed data, 2018.

The maximum human capital disclosure value is owned by the Regional Government of Puncak Jaya Regency. This can be interpreted that the Puncak Jaya Government in 2016 has a high level of human capital disclosure. The minimum value of the variable level of human capital disclosure owned by the Regional Government of Toba Samosir Regency, it means that the Regional Government of Toba Samosir Regency in 2016 has a low level of human capital disclosure. The average value is greater than the standard deviation value, so that it can be interpreted as the spread of variable data on the human capital disclosure level to spread heterogeneously.
The minimum performance value was owned by the Puncak Jaya Regency in 2016, so it can be interpreted that the Puncak Jaya Regency in 2016 had a low performance score or the performance of the local government as measured by a relatively low performance score. The maximum value of the local government performance variable from this study was 35,926. This value is owned by the local government in Sidoarjo which means that in 2016, Sidoarjo has a high local government performance. The resulting average value is greater than the standard deviation value, so it can be interpreted as a variable spread of regional government performance data distributed heterogeneously.

The minimum budget controlling value is owned by the local government of Toba Samosir in 2016, so it can be interpreted that the Toba Samosir has low budget controlling and the local government is considered low in managing its budget as measured by the acquisition of surpluses/deficits. The maximum value of the budgeting control variable which is owned by the North Lombok Regency Government in 2016, which means that the local government of North Lombok in 2016 has a high level of budget controlling or the local government is considered as good in managing its budget so that the surplus/deficit is also high. The average value is greater than the standard deviation value, so that it can be interpreted as the data on budgetary control variable spread heterogeneously.

### 3.2 Regression Analysis

**Table 2. Results of Multiple Linear Regression**

| Variable | Coefficient | t | P>|t| |
|----------|-------------|---|----------|
| -cons    | 0.199       | 2.03 | 0.045 |
| kk       | -0.000      | -3.88 | 0.000 |
| pp       | 0.005       | 0.10 | 0.922 |
| inov     | 0.001       | 1.13 | 0.258 |
| size     | 0.006       | 1.73 | 0.085 |

| Obs | 140, Fhitung= 4.26, Sig F= 0.002, R²=0.112, Adjusted R²=0.086 |

Source: Secondary processed data, 2018.

Table 2 shows the coefficient of determination of the adjusted R square of 0.086 or 8.6%. This shows that 8.6% of human capital disclosure variable in local governments explained by the independent variables in this study which is the performance, and budgeting control. The remaining 91.4% is influenced by other variables which is not included in this study model. Table 2 shows the significant value in the F significant test showing the number of 0.002, that is 0.002 <0.05 so it can be concluded that the independent variables in this study affect the dependent variable.

\[
\text{HCD} = 0.991 - 0.001P + 0.004BC + 0.001IC + 0.006SIZE + \varepsilon
\]

### 3.3 Effect of Performance on Disclosure of Human Capital

Performance variables obtained by t count of -3.88 a significant level of 0.000 (0.000<0.05). These results indicate that the performance has a significant negative effect on human capital disclosure in local governments, so the first hypothesis is not rejected. Higher performance led to lower human capital disclosure level in Indonesian local governments in and
lower performance of government implementation led to higher level of human capital disclosure.

The results of this study emphasize that the relationship between performance and human capital disclosure is still diverse. The results of this study are in line with Abdulla & Mamun [41] and Souza et al. [42] who found a significant relationship with profitability of the company (one of the indicator is performance and the reporting of human capital. The results of this study differ from the studies of Alam & Deb [43] and Eddine et al. [44] which show that there is a positive relationship between performance and human capital disclosure. This study shows a negative influence between performance and human capital disclosure. Other research results that show that according to Melloni [45] which find that positive intellectual capital disclosure tone is associated with decreased performance, greater size, and level of intangibles that support the use of intellectual capital disclosure as impression management. While the results of Wang & Chang [46] also found different results that there is no effect of human capital on performance, but human capital affects performance through innovative capital and process capital. This study shows that most local governments disclose human capital regarding employee payroll and benefits, employee awards, pension/old age insurance, and employee protection. This indicates that the regional government suspicion only discloses that it is closely related to monetary matters. Items related to soft skill or attitudes are rarely disclosed. The research findings differ from the findings of Khan & Khan [47] which shows the most frequently disclosed human capital items are information about employee training, number of employees, career development, opportunities provided by the company, and employee recruitment policies.

3.4 Effect of Budget Controlling on Human Capital Disclosure

Budget controlling variable obtained t count of 0.10 significant level of 0.922 (0.922> 0.05). The second hypothesis (H2) which states budget controlling affects human capital disclosure in Indonesian local governments is rejected. The results of this study do not support a study by Toorchi et al. [27] and Möller et al. [28] which does not support study by which states there is a relationship between budget controlling (internal control system) and the disclosure of human capital. The internal control system is good, so reporting to outside parties (including disclosure) is also good. So, the results of this study have not been able to prove that budget controlling also affects the disclosure of human capital. The results of this study are not in accordance with institutional theory. Local government management is not encouraged to disclose information to reduce the risk of negative views from the public.

3.5 Additional Testing

The value of Chi-Squared of these two variables is 48,247 and 26,070 with DF2, then p-value of Kruskall Wallis test is 0.000 which is less than the critical limit of 0.05 so it can be concluded that the treatment gives a significant difference mean in the value of the variable or which means H1 is accepted and Ho is declined, since the H1 is accepted then continued with Post Hoc Test or Further Test. As discussed earlier, Post Hoc after Kruskall Wallis can be done with the Mann Whitney U Test and is often called the Wilcoxon Signed Rank Test.

The analysis result shows that 117 local governments outside of Java, which had capital innovation sum rank of 7,831 lower than local governments in Java. Table 3 show that 117 local governments outside of Java, which had a capital innovation sum rank value of 1,979, higher than local governments in Java.
Table 3. The Result of Kruskal Wallis Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>City/Regency</th>
<th>Local Government in Java or Outside</th>
<th>Java</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Chi-Squared</td>
<td>P value</td>
<td>Chi-Squared Ties</td>
</tr>
<tr>
<td>hcd</td>
<td>0.010</td>
<td>0.921</td>
<td>0.068</td>
</tr>
<tr>
<td>kk</td>
<td>0.229</td>
<td>0.633</td>
<td>0.229</td>
</tr>
<tr>
<td>pp</td>
<td>5.365</td>
<td>0.205</td>
<td>5.365</td>
</tr>
<tr>
<td>inov</td>
<td>0.535</td>
<td>0.464</td>
<td>0.535</td>
</tr>
</tbody>
</table>

Source: Secondary processed data, 2018.

Based on the results of the calculations Wilcoxon Signed Rank Test according to table 4, the Z value obtained for the variable performance of 10.265 and capital innovation of -6.149 with p values each of 0.000 less than the critical limit of the study 0.05 so that hypothesis (H1) is accepted or its mean there are differences in performance and capital innovation between local governments which located on Java and local governments located outside Java. A further non-parametric test is testing the differences of each variable in this study compared to the local governments (regencies and cities) as well as local governments which are located in Java and outside of Java. The results of the statistical analysis show that only capital performance and innovation differ (mean) between local governments in Java and Outside Java. This indicates that the performance and capital innovation of local government in Java whose government is close to technological and information development and close to the center of the capital city are thought to be more advanced than local governments outside Java.

4 Conclusion

The results of the study indicate that performance affects human capital disclosure in Indonesian local governments. The influence is seen from the performance of the implementation of increasing human capital disclosure; so that the H1 which states the performance affects human capital disclosure is not rejected, while budgeting control variables do not affect human capital disclosure. It shows that higher budgeting control does not increase human capital disclosure, so the second hypothesis (H2) which states that budgeting control affects the disclosure of human capital is rejected.

The results of this study produce a human capital disclosure index that can be a measuring tool about human capital that reflects more reliable and quality financial statement so as to reduce the risk of trust in financial statements that are wrong or less accountable. Local government financial statement should contain or disclose human capital because it is in accordance with the mandate of the Law on State Civil Apparatus and most of the budgetary allocation to local governments in Indonesia is related to human resources. The implementation can be carried out by local governments in accordance with institutional theory in isomorphism coercive, normative and mimetic. Therefore, this research is able to provide input on the policy to determined regulations regarding human capital disclosure and performance.

In practice, most local governments only disclose human capital related to employee payroll and benefits, employee awards, pension/old age insurance, and employee protection. The financial statement of local government that has been regulated in presidential decree No. 71 of 2010 has not been able to regulate generally what is in the Law on Civil Service. In
particular there is a disclosure related to human resources or the state civil apparatus. Since it is voluntary, human capital disclosure of in Indonesian local government is still very minimal. The diversity of reporting format document in local government (for example pdf not picture/jpeg) shows weak regulation in technical point of view.

Further study is recommended to reexamine the research variables which prove other variables that influence human capital disclosure in Indonesian local governments. Future studies can also try to test the disclosure of human capital using only the four items index which widely expressed by local governments in Indonesia, it is about employee pay and benefits, employee awards, pension/old age insurance, and employee protection. Based on additional analysis also raises the implication that future study can explore the relationship of capital innovation with performance and budgeting control. For capital innovation the next study can try to use other measurements, for example the development of fixed asset investment, growth of fixed assets, and others.

References


Work from Home (WFH) during Covid-19 MRO: Overview and Suitability for Malaysian Tourism Industry Employees

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Abstract. Due to Movement Restriction Order (MRO), public and private organisations have optimised the Work from Home (WFH) policy to most of their staff, including employees in the tourism industry. This paper investigates the situation faced by the tourism employees working from home, identifying the challenges and opportunities during the enforcement. The empirical results from 217 respondents identified the situation and suitability of WFH during MRO among tourism employees in Malaysia. The respondents disagree that the job responsibilities are suitable to be conducted from home, especially when it requires the system that could not be assessed from home and in-person interactions. WFH affects employees’ work effort when finding a balance between work, home life (health, friends, family, leisure, children, and home maintenance) and at the same time to stay productive. Even WFH give a high autonomy in scheduling tasks, not all tourism work is suitable to be conducted from home. Moreover, WFH has given room for improvements in knowledge development and organisation. Practically, this study provides insights for the management in organisations by highlighting the factors causing the challenges to the staff, promoting satisfaction, productivity, and opportunity for a better quality of working from home in the future.

Keywords: Covid-19, Tourism Management, Work from Home

1 Introduction

There are about 3.5 million employees in Malaysia working in the tourism industry. Over the years, this field has significant advances in the rate of employment due to progressive tourism activities in the country. The Department of Statistics Malaysia [1] reported the total employment in the tourism industry grew by 4.9%, equivalent to 3.5 million employees in 2018 that contributed 23.5% compared to 22.9%. In that notion, food and beverage serving services and retail trade recorded the highest employment in the tourism industry with a share of 34.1% and 33.1%, respectively.

Nevertheless, the recent outbreak of Covid-19 pandemic has dramatically changed the landscape of tourism industry in Malaysia. The unexpected and overpowering pandemic triggers multi-sectoral business operations and the closures of many non-essential businesses, including the tourism industry. The negative effect of the pandemic is evident in the dramatic statistical data of tourism activities in the first quarter of the year 2020. Malaysia recorded 4,233,425
tourist arrivals for the first quarter of 2020, a decrease of 36.8% compared to the same period in 2019, and a decline of 41.5% tourist expenditure for the first quarter a total of RM12.5 billion, compared to RM21.4 billion registered for the same period last year. Furthermore, the per capita expenditure showed 7.4% declined, from RM3,201.8 in 2019 to RM2,964.5, and a drop off 1.9 nights, which was 6.0 nights in 2019 to 4.1 nights on the average length of stay (ALOS) in Malaysia [2].

The global pandemic forces the concerns for widespread practise of social distancing to ensure limited physical contact of tourism employees and customers in the endeavour to curb the spread of Covid-19. Due to the very reason, many tourism organisations, both public and private, have answered to the call for Work from Home (WFH) policy to ensure the Movement Restriction Order (MRO) enforced by the government could be objectively achieved. It is expected that by increasing the number of employees who apply WFH as a new working norm would be more likely help to reduce the number of infections at an economical cost that is lower than other containment policies.

WFH has always been a topic of interest in various fields for the past decades. However, it does not represent an important topic to study because many believe that it has a significant number of flaws, including employee management, access to work system and productivity. Nevertheless, the Covid-19 pandemic outbreak has provided urgency for studies to look into this new working routine as an alternative to remaining productive in the time of needs.

Previous scholarly work on WFH implementation has documented many advantages of WFH including workplace flexibility, reduction of office overheads, saving energy consumption and a significant increase in worker’s productivity. Another identified advantages are the improved recruitment opportunities particularly for female employees, reduction in travel fatigue, travel time, travel cost, parking fees, savings on petrol, promotion of opportunities for dual-income household, effective management of child care arrangements, increased family contact, ability to care for family illnesses, creation of employment opportunities in rural areas, positive environmental impacts by the reduction in petrol consumption, pollution, traffic congestion and accident rates, flexible work arrangement for working mothers and job opportunities for disabled. However, existing literature on WFH is limited to a subset of a specific group of people in a low urgency level for its implementation. With the enforcement of MRO, WFH is no longer an option for tourism employees. Much needs to be learnt from this new working norm as it remains unexplored specifically in the tourism industry.

2 Problem Statement

WFH is defined by working day spent in the home environment [3]. Saludin, Karia and Hassan [4] note that there are also different terms used interchangeably with WFH which are ‘Teleworking’, ‘Telecommuting’, ‘Homeworking’, and ‘Working at Home’. Nonetheless, WFH is used in this paper as a term to refer to the definition as mentioned above.

The concept of WFH has been well documented in the existing literature. An overview of the literature that relates to the present study could be seen in the practice of WFH in the United States of America (USA). Nearly 7.6 million employees practise WFH in the USA, representing approximately 4.8% from the total USA workforce [4]. The industries which had taken a big step in WFH include banking, insurance, financial services, and legal industry. In another example, in the United Kingdom (UK), about 1.27 million telecommuters are representing about 4.6% of the UK workforce [4]. Meanwhile, it is not a preferable option in Japan because of the
high cost of home residences in urban areas around cities like Tokyo [4]. The small size of most of Japanese houses and the cost of utility make it inconvenient for the work at home.

Even WFH has been promoted in Malaysia since 1990, still, there is little acknowledgement for WFH implementation [5] and it remains unpopular in Malaysia despite the many benefits that can be obtained from it [6]. The mobile workforce is relatively a new concept for the Malaysian workers [7]. Evidently, there are a few multinational companies had adopted WFH concepts such as Amway International, IBM, American Insurance of Associates (AIA), Grand soft link computers, Motorola, and Texas Instruments. However, the WFH concept still not be widely implemented by business organisations in Malaysia.

The introduction of WFH policy due to Covid-19 outbreak to the employees in performing their jobs is something very new, especially in these challenging times. Since the enforcement of MRO on 18th March 2020, WFH has been the primary option for employees to minimise physical contacts. WFH demands employees to remain productive, and at the same time attention have to be given to take care of the household and family every day during the quarantine. It forces the use of an extensive amount of physical energy and emotions where they are accustomed to working in the office every day, but now shifted to WFH. Even though many empirical pieces of evidence have pointed out the positive impact of WFH in curbing the spread of the Covid-19, however, Malaysia still has limited in-depth studies on WFH [5][7][8]. Instantaneous implementation, lack of preparation and readiness might result in different reactions from the employees. There are many factors to be considered in order to be productive in performing work-related tasks, especially the location and surroundings. Some employees might be able to shift to WFH relatively quickly and for some employees, however, performing regular work from home is challenging.

Therefore, this paper intends to present an overview of WFH situation faced by employees, specifically in the tourism industry and investigate their perceptions on the suitability of WFH in the months after the pandemic outbreak. Specifically, the objectives of this study are:
1. To identify the overview of WFH among tourism employees in Malaysia during MRO.
2. To identify the suitability of WFH among tourism employees in Malaysia.

3 Research Methodology

The current study is a descriptive quantitative and employed convenience sampling techniques. Data were collected from 217 respondents from both public and private organisations in the tourism industry practising WFH during the enforcement period. The sectors that the respondents attached include tourism destination, accommodation, tourism product, transportation, food and beverages, tourism services, business tourism, and spa. The responses were collected through online questionnaires distributed via Google form platform. For triangulation purpose, qualitative data were collected through open-ended questions on the same platform and was analysed thematically. The data collection was conducted in April 2020 during the MRO implementation when all the employees are compelled for WFH.

Secondary data were also collected from relevant academic articles and journals. In the review, more than 20 articles and journals were identified, and 11 of them were critically reviewed to address the formulated questions. Finally, by charting the data, assembling, summarising and reporting the results based on the authors' experience, existing theories and models, incorporating statistical data, reports and proceedings published by Ministry of Tourism, Art and Culture Malaysia (2020).
4 Results and Discussion

4.1 Profile

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Female</td>
<td>129</td>
<td>59.4</td>
<td>59.4</td>
<td>59.4</td>
</tr>
<tr>
<td>Male</td>
<td>88</td>
<td>40.6</td>
<td>40.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

The study was participated by 40.6% (n=88) males and 59.4% (n=129) females’ respondents. The majority of the respondents are from the two different groups of age which are 38.7% (n=84) of the respondents belonging to the age group of 18 to 30 years, and 33.2% (n=72) 31 to 40 years respectively. 18.4% (n=40) of the respondents are in the age group of 41 to 50 years; 8.3% (n=18) are 51 to 61 years of age, and 1.4% (n=3) respondents are 61 years of age and above.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>%</th>
<th>Valid %</th>
<th>Cumulative %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid Single</td>
<td>85</td>
<td>39.2</td>
<td>39.2</td>
<td>39.2</td>
</tr>
<tr>
<td>Married without children</td>
<td>18</td>
<td>8.3</td>
<td>8.3</td>
<td>47.5</td>
</tr>
<tr>
<td>Married with children</td>
<td>108</td>
<td>49.8</td>
<td>49.8</td>
<td>97.2</td>
</tr>
<tr>
<td>Single parents</td>
<td>6</td>
<td>2.8</td>
<td>2.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>217</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

In the marital status context, 49.8% (n=108) of the respondents are in the group of married with children who represent the majority of the population, followed by single 39.2% (n=85), married without children 8.3% (n=18) and single parent 2.8% (n=6). The majority of respondents, 76.5% (n=166), live in the urban area, and 23.5% (n=51) of them live in the rural residential area. 149 respondents are work in private organisations and 68 work in the public sector.

4.2 The Suitability of Job Responsibility to be Performed at Home

The study reveals that 43.8% (n=95) respondents agree that their job responsibilities are suitable to be conducted from home meanwhile, 56.2% (n=122) respondents disagreed with it based on several reasons as below:

“Tourism is a personalised industry, always feels better when one has a face-to-face discussion.”

“Impossible to handle important issues on the spot, especially human relationships, matter in between employees.”

“Nobody is travelling, so no income, no salary / No incoming sales for travel demand and no job to do.”
4.3 Efficient Working Hours

In general, 53% (n=115) respondents stated that the time between 10 am-2 pm considered as their efficient working hours of doing their tasks. Meanwhile, 19.45% (n=52) of respondents prefer to work between 2 pm-6 pm daily. Interestingly only 4.1% (n=9) respondents preferred to work 6 am-10 am, and 4.6% (n=10) to work at 6pm-0pm respectively.

Some of the respondents stated that the time between 10 am – 2 pm is the perfect time to do their office tasks because:

“After doing mornings chore and break.”
“Good time to connect with colleagues, clients, etc.”
“The most active and productive time to work.”

4.4 Remain Productive at Home

A descriptive statistic illustrates how the respondents remain productive work from home (WFH). Respondents revealed that they could be productive by working from home (M=3.09, SD=1.155). However, the majority of respondents expressed that work from home challenges their ability to perform routine tasks (M=3.53, SD=1.110). As evident, some of the respondents stated that the demand to complete tasks during WFH stressed them out (M=3.21, SD=1.193).

Other initiatives that are stated by the respondents to remain productive are:

“Set a specific office time at home.”
“Clear time management in doing work, house chores and taking care of kids.”
“Reorganise and keep in touch with colleagues regarding works.”

Several respondents also stated that they did yoga, running, cooking, planting, and reading to stay productive at home.

4.5 Challenges Working at Home

The respondents agreed that they had to do extra household chores while working from home (M=3.71, SD=1.263). Additionally, the respondents responded that they had to entertain the children (M=3.25, SD=1.416) and had to manage the household needs (M=3.69, SD=1.171) while performing their tasks at home. Furthermore, the majority of the respondents also agreed that it is challenging to manage working time when working from home (M=3.64, SD=1.147).

On the technical aspects, most of the respondents stated that they have insufficient reference documents at home (M=4.10, SD=1.161) and limited office equipment (computer/laptop) (M=3.91, SD=1.311) available to accomplish tasks. Notably, the respondents also struggled
with poor internet access ($M=3.87$, $SD=1.328$) to perform tasks online. The unavailability of application ($m=3.93$, $SD=1.240$, item 8) also became of the challenges faced by the respondents. The majority of respondents disagreed that they have a lack of skills in using online software ($M=2.98$, $SD=1.359$, item 9) but agreed that they face a challenge to deal with the non-operational tourism-related services ($M=3.87$, $SD=1.155$, item 10) during MRO.

5 Conclusion

This study addresses a need in the current literature to understand the experience of employees working from home for the first time during Covid-19 pandemic. It includes the opinion of tourism employees towards work from the home policy during the implementation of MCO. An important finding of this research is that not all kinds of jobs or industries are suitable to be conducted from home. It needs a particular approach, especially when it relates to the situation, readiness, system, and technologies use in performing the jobs.

In reality, it is a puzzle when home becomes a place of work. The distractions from personal life often stand in our way to fulfil work responsibilities. Understanding the challenges and the needs of employees provides employers with an opportunity to understand better and help their employees set up a supportive and controlled work environment.

6 Limitation and Future Research

This study is not free from limitations where it is limited to study the perceptions of employees in tourism industry pertaining to the implementation of WFH in the early period of MRO enforcement based on statistical data gathered from a specific group of respondents. The study does not measure the relationship of independent variables to dependent variables to ascertain the satisfaction level of WFH. In addition to that, this study did not compare the perceptions between different genders. Therefore, it is suggested that in the future, research can be carried out to investigate empirically with a larger group of respondents as well as the differences in satisfaction level of WFH based on gender. The results of the present study provide several potential avenues for future research. Due to Covid-19, employees of all the sectors are introduced to the concept of WFH for the first time. Hence a comparative study of the perceptions of employees in different sectors can be conducted.

References


Job Satisfaction Components and Turnover Intention at Selected Automotive Manufacturing Facility in Malaysia

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Abstract. Turnover has become a crucial problem in organization and it has impacted the employee performance as well as the whole organization’s performance. The objectives of this study aim to focus on the turnover issue of the employee at selected automotive manufacturing facility in Malaysia. Questionnaires and document analysis were blended to capture authenticity and exhaustiveness of the data. 80 participants were selected from employees of the said organization. Both inferential and descriptive statistics were used to present the results. Next, the data collection in this study was also analyzed by using frequency, descriptive analysis, reliability, Pearson’s Correlation analysis and Multiple Regression Analysis in order to answer the research questions. The researchers have found that out of four components of job satisfaction that were chosen for this study, the only one factor that is significant on the employee turnover intention is nature of work. Another three-factor (supervision, salary and welfare) have no significant impact on employee turnover intention in the case of this organization. In other words, this organization needs to put serious effort in order to have a better nature of work thus will reduce turnover intention among its employees.

Keywords: Job Satisfaction Components, Turnover Intention, Organization, Nature Of Work

1 Introduction

Employee turnover has been a concern for all businesses, especially in the 21st century [1]. There are several impacts with this turnover and one of this impact is related with employee replacement costs that normally range from 90%-100% of an employee’s annual salary [2]. The general business problem is that business owners often faced is unable to retain employees, which negatively impacts company profits [3]. The specific business problem is that some small business owners still do not understand the relationship between employee turnover intentions and job satisfaction of their employees. When workers are dissatisfied, they tend to move elsewhere to seek satisfaction. Large number of employees’ turnover can lead to a lot of problems, such as cost increase in recruiting and training new employees, increase in workload and organizational inefficiency. To achieve high performance and high productivity levels, organizations must receive the contributions and support of their employees. Several literatures have been widely discussed the idea of employee job satisfaction because few researchers and experts believe that it can affect employee productivity and turnover.
The automotive manufacturing industry is a major industrial and economic force worldwide. The industry is made up of companies and workers who are involved in the production of passenger automobiles, light trucks, pickups, vans, and sport utility vehicles (SUV). In addition to manufacturers, this sector includes the manufacturers and resellers of auto parts, engines and bodies, third-party servicing companies, manufacturers of trailers and tire stores, sales and after sales care. On a global basis, world leaders of car production include Toyota, Mercedes-Benz, Ford, Audi, Honda and Volkswagen. The industry also has created high technology value in businesses and talented individuals, who now can participate in vehicle & component design, manufacturing, quality management, vehicle service & repairs as well as new sectors such as recycling and remanufacturing.

According to business advising firm Schneider Downs, one of the biggest human resources challenges in the auto industry is the fact that many automotive businesses lack a “comprehensive, step-by-step action plan to become an employer of choice”. In other words, automotive businesses struggle with major human resources functions because they do not have a strategic, focused plan that involves hiring, training, delegating, promoting and releasing employees. Because they do not have strategic plans, Schneider Downs argues that most automotive businesses operate without both the strategies needed to find the right talent and the processes required to maximize their impact [4].

Employee turnover in an organization is a very common issue. People or employees will come and go from one company to another for many factors. In the automotive industry, employee turnover costs dealers billions [5]. Wilson also added that few dealers are trained on how to hire, but as more face up to the implications of the problem. They are starting to search for new perspective with the task and experiment with new approaches. In addition, high staff turnover has been a serious phenomenon facing management in many organizations. Clarke [6], shows that employment in manufacturing industry heavily contribute to job dissatisfaction and significantly contribute for high turnover which will affect the firm’s goal and objectives in a long run. With regards to several issues that have been highlighted before, this study explores the components of job satisfaction and tries to established its relationship with employee’s turnover intentions, in return will retain long-term business success in automotive manufacturing industry in Malaysia.

2 Literature Review

Turnover of employee is the rate of staff recruitment and rate of staff leaving an organization. According to Aydogd and Asikgil [7], turnover intention is based on behaviour of employees that has an intention to withdraw from their organization. Referring to Medina [8], that turnover intention is the employee’s consideration to look for a new job opportunity. It can be a measurement of whether a business or organization's employees plan to leave their positions or whether that organization plans to remove employees from positions. Job satisfaction is seen as a common behaviour of employees and normally it based on several factors related to their nature of work, place and some approaches of work that they conducted, in which this level of satisfaction also will influence to the performance [9]. This study focused on the four factor of job satisfaction namely supervision, nature of work, welfares and pay/salary which influence the employee turnover intention.
2.1 Supervision

Supervision as defined by Winston and Creamer [10] as “a management function intended to promote the achievement of institutional goals and enhance the personal and professional capabilities of staff. Supervision interprets the institutional mission and focuses human and fiscal resources on the promotion of individual and organizational competence” (p. 42).

As referred to Alkhateri et al. [11], the perceived supervisor support become the main backbone to reduce the turnover intention among the employees and the organization need to enhance the support among the staff, in return self-efficacy also will be supported. Perceived supervisor support is valuable factor that have the potential to create strategic ways for turnover management and organizations must pay attention to foster this support in order to reduce turnover intentions [12]. In addition, the quality of supervision also plays such an important to meet the employee satisfaction. According to Shukla [13] the quality of the supervision that an employee receives is critical to employee retention and some people leave the top-level managers and immediate supervisors more often than they leave job or the organizations. The character of supervisor is crucial even though they have a very good character any pleased by others, every single supervisor need to have clear expectations and critical role of the employee, in return to spur retention among employees. Other than that, it will contribute to turnover if the supervisors do not play important roles to enhance the positive value to the subordinates.

H1: There is a relationship between supervision and employee turnover intention.

2.2 Nature of work

The nature of work covers the work environment and types of job responsibilities and employee faced in an organization. It includes the extent of fairness and equity of the salary given [14]. According to Jared [15], nature of work refers to the basic daily tasks carried out as part of a job and refer to other non-routine tasks that may be required. Employee performs their duties and daily activities in workplace environment. Commonly noise level, fresh air and incentives like child care also become a part of work environment. Workplace surroundings may have positive or negative impact on the satisfaction level of employee’s subject upon the nature of working environment [16]. Nature of work that might associate with working condition may influence the employee’s emotion and resulted intention to leave the organization voluntarily [17]. Many researchers hold the point that employees leave their jobs when their needs are not being satisfied and the nature of work are not meet their expectation during their current job and an alternative job becomes available.

H2: There is a relationship between nature of work and employee turnover intention.

2.3 Salary

Salary is primary concern to both employers and employees. For employees, salary is importance in term of satisfying their economic needs [18]. Thus, the satisfaction with regards to this pay system need to be achieved as this factor might contribute to the positive attitude and behavior towards organization. Heneman and Judge [19] stated that salary dissatisfaction can have important and undesirable impacts on numerous employee outcomes. Employees who are dissatisfaction with their salary, for instance, can decrease commitment to the job and cause turnover.
The higher the salary that employee received, the higher the job satisfaction and lower their intention to leave the organization. It is supported by Lee et al. [20], the finding of the research showed that the higher the salary level will lead to higher satisfaction and organizational commitment level. In return, this will be indirectly resulted to the lower the employee turnover intention. These finding are in line with other previous studies carried out by Hayes [21] that employee’s level of income and turnover intention has a significant relationship that when income increased, turnover intention decreased. Iqbal et al. [22] found that a high level of salary resulted higher job satisfaction. Hence, in return this will become a point of attraction for organization to retain quality employees. Salary satisfaction means comprehensive personal attitude or feeling toward their own salary, whether it was a positive or a negative feeling. Salary satisfaction is often thought to affect behaviour, such as absence and turnover intention. In the research studied by Hung et. al. [23], they found that there has a significant relationship between salary satisfaction and turnover intention and this relationship also associated with the working pressure and its effect to turnover intention among the employees.

H3: There is a relationship between salary and employee turnover intention.

2.4 Welfare

According to Todd [24] employee’s welfare means anything made for comfort and improvement, intellectual or social of the employees more than wages paid which is not a necessity of the industry. Employee welfare is the non-cash compensation that provides to all employees, such as health insurance, retirement plan, vacation pay, life insurance and rewards. Many employees are expected to receive this kind of benefit from their employer, which is failure to provide this benefit to the employee can make them to more likely to leave for a better opportunity. Employee’s welfare is important that lead to the job satisfaction in the workplace.

Employee welfare is considered valuable to the organization as this element will become one of the sources of job motivation and will turn into job satisfaction. Each organization urged to enhance on employee welfare by channeling some resources and at last will created the good organizational value and become one of the organizational identifications to retain the employees [25].

Employee welfare is the benefits that the company provides to all the employees in the organization, including health and safety, compensation, remuneration and rewards. There are several studies shows that employee welfare such as benefit and job safety are related to the job satisfaction thus will become as one of the factors that lead turnover intention. As mentioned by Javed et al. [26], rewards also are very strongly correlated to job satisfaction. A reward has been mentioned by many researchers that it was a part of employee welfare, that it was a factor that may lead to the turnover intention among employee of an organization. This study also supported by Sukriket [16] that benefit has a significant relationship that influenced employee’s turnover intention in organization. Moreover, another element of welfare related to employees can also be viewed in terms of occupational safety and health system in organization. In the study by Liu et al. [27], providing good employee welfare such as a better health and safety system in the organization tends to increase their commitment in organization and have low turnover intention.

H4: There is a relationship between welfares and employee turnover intention.
3 Methodology

3.1 Sample

In this study, the referred sample comprises of a total of 80 employees from one selected automotive manufacturing company in Melaka, Malaysia. 100 questionnaires distributed to the respondents. However, 20 questionnaires were unable to be retrieved back, in which the respondent failed to return. The collection periods of this study conducted from 15th April 2019 to 15th May 2019.

This study uses non-probability sampling in collecting data from the sample. Based on the certain limitation, quota sampling technique was chosen without affecting/interfering much of the accuracy of the data.

3.2 Data Collection and Instruments

This research has chosen to use questionnaire. The variables in the questionnaire are in close-ended set of questions and analyzed using statistically and numerically. The questionnaire formed was designed in paper form and distributed in accordance to the availability and preference of the approached employee as respondents. To analyze the data from the preliminary study, the IBM SPSS Statistic version 22 was employed. Three statistical analysis were executed including Descriptive Analysis for the respondent profile, Cronbach’s alpha analysis for reliability and multiple regression analysis for hypotheses testing.

The questionnaire prepared in this research consists of five sections and a total of 36 items altogether. The first section of the questionnaire is Section A, represents the Demographic questions to obtain respondents’ profiles. It includes age, gender, level of education, monthly salary, years of working experience and intention to leave status. Section B comprises questions regarding the dependent variable of this study in which is turnover intention. Whereas, Section C, D, E and F represents questions pertaining the independent variables – supervision, nature of...
work, salary and welfares, respectively. Section B to F were designed in the form of five-point Likert Scale ranging from 1 to 5, with 1 = Strongly Disagree, 2 = Disagree, 3 = Neither Agree nor Disagree, 4 = Agree, 5 = Strongly Agree. All items were adapted from previous researches for instance Bothma & Roodt [28], San Park & Kim [29], Azanza et al. [30], Sukriket [16], Mbah & Ikemefuna [31], Nceede [32], Njeru [33].

4 Result and Discussion

4.1 Reliability Analysis

Table 1 shows the value of Cronbach’s Alpha and all variables are accepted as the Cronbach alpha more than 0.6 [34]. The highest is salary with alpha value 0.895 and the lowest is Nature of Work with alpha value 0.677 but still accepted. Overall, based on the Cronbach’s alpha coefficient for all constructs are more than 0.6, it can indicate that the measurement scales for various constructs were reliable and consistent for each variable in measuring the constructs.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of items</th>
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<tbody>
<tr>
<td>Turnover Intention</td>
<td>6</td>
<td>0.860</td>
</tr>
<tr>
<td>Supervision</td>
<td>6</td>
<td>0.884</td>
</tr>
<tr>
<td>Welfare</td>
<td>6</td>
<td>0.868</td>
</tr>
<tr>
<td>Salary</td>
<td>6</td>
<td>0.895</td>
</tr>
<tr>
<td>Nature of Work</td>
<td>6</td>
<td>0.677</td>
</tr>
</tbody>
</table>

4.2 Demographic Profile of Respondents

Table 2 below shows the profile of respondents. First dimension of measurement in the demographic profile indicates the respondent’s age. All the respondents had been grouped into four (4) categories to determine the precision of the respondent’s age. 77.5 % of the respondents are 20-30 years old. 11.3% of the respondents are 31-40 years old. 6.3% of the respondents are less than 20 years old and the lowest one is more than 40 years which is only 5% of the total respondents. This shows that majority of the respondents is in the age of 20-30 years old. Next distribution of respondent is gender. It shows most of the respondent is female (57.5%) and the remaining respondent is male (42.5%). It shows that the number of the female respondents is more than the male respondents. Third dimension is the respondent’s education level. All the respondents had been grouped into four (4) categories to determine the precision of the respondent’s education level. 35% of the respondents have a Degree. 31.3% of the respondents have a Diploma. 26.3% have SPM. This shows that the highest number of respondent’s education level is from Degree. Next is the intention to leave among employees. 71.3% of the respondents have intention to leave the company the remaining 28.8% have no intention to leave. This means that majority of the respondent’s intent to leave the company. As for the working experience, it shows that most of the respondents (66.3%) are within the range of 1 to 5 years and only 5% of the respondents worked more than 10 years. The last one is salary. 85% of the respondents’ salary within the range of RM1, 000-RM3, 000 and the lowest percentage is 1.3% which is more than RM5, 000. All in all, it is also showing that less than RM3, 000 monthly salary is the higher contributor in this table.
### Table 2. Respondents profile

<table>
<thead>
<tr>
<th>Items</th>
<th>Frequency</th>
<th>Percentage</th>
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<tr>
<td><strong>Age</strong></td>
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<td>Less than 20</td>
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<td>20-30</td>
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<td>31-40</td>
<td>9</td>
<td>11.3</td>
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<td>More than 40 years</td>
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<tr>
<td><strong>Gender</strong></td>
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<td>Male</td>
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<td>Female</td>
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<td>57.5</td>
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<td><strong>Education</strong></td>
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<td>Others</td>
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<td><strong>Intention to leave</strong></td>
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<td>Yes</td>
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<td>71.3</td>
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<tr>
<td><strong>Working Experience</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>14</td>
<td>17.5</td>
</tr>
<tr>
<td>1 – 5 years</td>
<td>53</td>
<td>66.3</td>
</tr>
<tr>
<td>6 – 10 years</td>
<td>9</td>
<td>11.3</td>
</tr>
<tr>
<td>&gt; 10 years</td>
<td>4</td>
<td>5.0</td>
</tr>
<tr>
<td><strong>Monthly Salary (RM)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1000</td>
<td>5</td>
<td>6.3</td>
</tr>
<tr>
<td>1001 – 3000</td>
<td>68</td>
<td>85.0</td>
</tr>
<tr>
<td>3001 – 5000</td>
<td>6</td>
<td>7.5</td>
</tr>
<tr>
<td>&gt; 5000</td>
<td>1</td>
<td>1.3</td>
</tr>
</tbody>
</table>

### 4.3 Multiple Regression Analysis

The multiple regression analysis was analyzed through the questionnaire distributed to the employees. The result of the analysis measured by the value of $R^2$, the value of F-test in Anova table and the value of standardized coefficient beta, $\beta$. The results of multiple regressions are presented in Table 3.

From the regression result, the value of $R^2$ is 0.326 which showed that only 32.6% of the changes in the turnover intention were explained by the changes in the independent variables included in this study which are nature of work, supervision, welfares and salary. This means that the remaining 67.4% of the predictors is determined from other variable factors to explain dependent variable that are not included in this research. While, for the F value, the value is 9.074, it indicated that the model is significant due to the F value is significant at 1 percent significant level and the significant value is less than 0.05.

| Table 3. Result of multiple regressions
<table>
<thead>
<tr>
<th>Dependent variable: Turnover Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Independent variables</td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Supervision</td>
</tr>
<tr>
<td>Welfares</td>
</tr>
<tr>
<td>Salary</td>
</tr>
<tr>
<td>Nature of Work</td>
</tr>
<tr>
<td>F value</td>
</tr>
<tr>
<td>R square</td>
</tr>
</tbody>
</table>
Based on the Table 3 above, the only variable having significant relationship is Nature of Work which is the significant value is 0.029 as it is less than 0.05. The beta value of nature of work ($\beta = -0.257$) also indicated that nature of work is the highest predictor among the other independent variables. The result also specifies the negative relationship of the nature of work toward the turnover intention which the increase of one unit of nature of work may decrease some value of turnover intention.

However, for the other three independent variables – supervision, welfares and salary, the results turned out to be not significant at the value of 0.930, 0.703 and 0.110 respectively, as they are not within $p<0.01$ or even $p<0.05$. These variables also had low beta value with welfares being the lowest at a negative value (-0.051). This means that those three variables were not significantly influence the dependent variable, turnover intention in this research.

5 Implication and Conclusion

Based on this empirical evidence, this is proved that nature of work is the only factor that leads to turnover intention for this case. This is also consistent with other previous studies (for instance; Sukriket [16] and Ahmad [17] in which the nature of work having significant impact toward turnover intention. This is also can be concluded that, if the employer can provide a better work environment, employee job satisfaction can be effectively improved, thus reducing the turnover rate.

Meanwhile, the first independent variable which is Supervision, it indicates no significant relationship towards turnover intention. This result is consistent to the research by Adebayo and Ogunsina [35] that found there is no interaction influence of supervision on turnover intention. This might be due to the nature of this organization had a good leader with effective leadership styles that the employees did not feel any lack of supervision by their superior. This is also similar to welfares; this research shows no significant relationship on welfares and it indicates that the employee will not be influenced by the welfare in having the turnover intention. It means that they are satisfied with the welfare given by this organization. As for the salary, this factor also insignificant with turnover intention and consistent with findings from the previous research by Ikatrinasari et al. [36], Sukriket [16] and Chepchumba and Kimutai [37]. This may because referring to the location of this organization in which the factory is located in low living cost area and their salary may enough for their expenses for basic need and lifestyles.

With regards to the nature of work that influence turnover intention, there are several actions need to be taken in order to reduce this issue among automotive workers given in this setting. For instance, by improving working facilities via the assistance of government funding that is allocated for SME and Bumiputera company such as Bumiputera Enterprise Enhancement Program (BEEP), Micro Enterprise Fund (MEF) and SME Scheme (Service, Manufacturing and Enterprise) and utilize it for the improvements of the company facilities thus will overcome their nature of work issues. It is important for each manufacturer to put more attention on the facilities as a healthy work environment brings safety to employees’ physical and mental capabilities in performing their daily routine. In addition, the enhancement of research and development learning center is needed in bringing a better knowledge and improvise their daily work routines and at last will reflect productivity. Training not only ensures that employees and managers can perform their jobs competently, but it is also may create a productive environment this increases the satisfaction of their nature of work. Last but not least, the impact of lean culture also will spur to the better nature of work in organization.
Lean cultures will not just be addressing the need to pursue improvements in individuals but it is also meant for the company through waste removal and innovation culture. This leader engagement in lean setting is more than just walking around to ask how things are going done, but they actively engaging and empowering the worker to identify, resolve defects and eliminating waste. Example of measure that can be taken is work on teambuilding and communicate the structure of culture change to get them involved in the real situation and working on solutions of the issues arise. All in all, this finding is only covered on selected automotive manufacturing in Malaysia, thus it may have some limitation with regards to generalizability for a whole organization in Malaysia.

References

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Assessing the Determinants of Exchange Rate Stability: An Empirical Evidence in Malaysia

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Abstract. This study empirically examined the effect of macroeconomic variables on the exchange rate of Malaysia Ringgit against the US dollar for the past 14-year on monthly basis from July 2005 to July 2019. The Real Exchange Rate of Malaysia Ringgit against the US dollar (EXC) has been used as a dependent variable where the other four macroeconomic components had been classified as the export (EXP), import (IMP), inflation (INF), and interest rate (INT) as independent variables. The result shows that the export (EXP) is positively significant at level 5%, the import (IMP) is negatively significant at 5% level of significance with the real exchange rate (EXC), the inflation (INF) is also negatively significant at 1% level of significance, and interest rate (INT) is not significant. The EXP has positively forced the exchange rate means that when the values of this variable increase the value of exchange will be increasing but in the case of IMP and INF is vice versa. The inflation is the most significant macroeconomic determinant of the exchange rate. These findings may give some overview of policy implications to the policymakers in optimizing the effects of macroeconomic variables towards the stability of the exchange rate.

Keywords: Macroeconomic Variables, Exchange Rate, Multiple Linear Regression

1 Introduction

The exchange rate could be a profoundly sensitive economic variable for internal and external factors, particularly because of the extension of the part of foreign trade in economic growth and the development of international financial markets. This cost is drastically diverse in its substance and its significance from other economic variables. A high currency exchange rate is also seen as an indication of economic growth. This may transform into a sign of national pride. The government also worry if they see the exchange rate weakening. They refer to a high rate of exchange as a sign of economic prosperity. Monetary policy also can be defined as accommodative in this respect if the interest rate is intended to produce economic growth. Whether it is meant to counter growth (or, more often, counter inflation), it may increase interest rates to curb borrowing. Those steps balance economic growth and keep inflation low. The macroeconomic indicators have a large impact on the exchange rate, through its direct and indirect relationship. In this study, the economic variables are namely interest rate, inflation, export, and import. It is of incredible significance as an instrument of macroeconomic apparatuses, even though the degree of impact on the economy varies depending on the connected exchange systems, which is due to the variety of the determinants of each framework. Besides, most of the countries were set their currencies based on the gold prices and changed...
into the basis of USD after the Second World War. The currency devaluation has a variety of implications for economic growth. The exchange rate for USD against MYR means that the quantity of one currency can be exchanged for another currency unit, while the real exchange rate defines how many products or services can be sold for one of those goods or services in another country.

Management of exchange rates has long been a topical concern among economists and policymakers. It began largely with the fall of the Gold standard in the 1930s and the subsequent introduction of the Bretton Wood Adjustment Program from the 1940s, through the adoption of the developing nation's flexible exchange rate in 1970 and economic changes in the 1970s. Flexible exchange rates are followed by exchange rate fluctuations, making it the key subject in the debate due to its effect on the business result as business partners of nations will prefer a steady exchange rate to a variable one. Previous studies also recognized the importance of maintaining a stable exchange rate in boosting economic development. Exchange-rate volatility creates confusion and risk in investment decisions with destabilizing macroeconomic output impacts [1].

According to Devereux’s [2] survey result, under short-run sticky prices and high capital mobility (Mundell–Fleming–Dornbusch type models), the nominal exchange rate is more volatile than its underlying fundamentals over the short-term, but as long-term costs change, the real exchange rate relies on its long-term equilibrium level to the same magnitude. In conjunction, the real exchange rate merges with the Purchasing Power Parity (PPP) which implies that the fundamental macro-economic variable of the inflation rate has no impact on the real exchange rate. In addition to Chowdhury [3], Australia's real exchange rate is increased in the long run by trade, government expenditures, and net foreign liabilities, but in contrary, the rate is depreciated by interest rate differential adjustments, trade openness, and long-term technological and productivity improvements. Furthermore, export and import are also important variables that give an impact on the exchange rate [4]. The result shows that the MYR exchange rate was positively impacted by trade openness, current account balance, and sovereign debt and negatively impacted by the crude oil price. Based on these findings, policymakers must consider planning favorable trade arrangements that propose these trade accomplices to increase trade relations with Malaysia, particularly within the domain of Malaysia’s goods and services trades. Choudhry and Hassan [5] found that exchange rate volatility significantly impacted UK imports to China, South Africa, and Brazil. They also suggested exchange rate volatility as a significant determinant of trade. Nishimura and Hirayama [6] also contended the same through their study on volatility in the exchange rate between Japan and China. Their results showed that exchange rate volatility negatively impacted China's exports to Japan. Given these arguments, the motivation of this study is to assess the determinants of interest rate, inflation rate, export, and import on the Malaysian exchange rate.

2 Research Method

The study used monthly data collected from various sources such as the DataStream and Thompson Reuters for fourteen (14) years, from the period of 2005 to 2019. The time-series data were analyzed using Econometric Views (E-views 9) software to test the regression analysis and to answer the research objectives. The data was converted into a logarithm to standardize the entire figures. The model employed a clearer understanding of the strengths and structures of the data observed. The tests list includes the Unit Root test, Descriptive Statistics,
and Multiple Linear Regression. The Unit Root Test was conducted using the Augmented Dickey-Fuller (ADF) statistics to test the stationarity of the data. Many economic and financial time series data show a trendy or non-stationary trend in the mean and an infinite variance [7]. Thus, unit-roots can cause unpredictable and bias results in time series analysis; and spurious correlations are very likely to emerge in non-stationary data. The smaller the value (negative value), the stronger the evidence for the data to be stationary [7][8]. A multiple regression model was used to test the study hypothesis. The empirical model that was used for the analysis was developed as follows:

\[ EXC = \alpha + \beta_1 \text{EXP} + \beta_2 \text{IMP} + \beta_3 \text{INF} + \beta_4 \text{INT} + \epsilon \]

Where,
- \(EXC\) = Real Exchange Rate MYR against USD
- \(\alpha\) = Intercept
- \(\beta_1, 2, 3, 4\) = Estimated parameters
- \(\text{EXP}\) = Export
- \(\text{IMP}\) = Import Rate
- \(\text{INF}\) = Inflation rate
- \(\text{INT}\) = Interest rate
- \(\epsilon\) = Normally distributed error term

The observation of the dependent variable (Y) was represented by the Real Exchange Rate of Malaysia Ringgit against the US dollar (EXC). Meanwhile, the independent variables were represented by the selected macroeconomic determinants (INT, INF, EXP, and IMP) based on previous literature. The associated regression coefficients were represented by beta (\(\beta\)). Several diagnostic studies have been done to ensure that the proposed model in this analysis closely resembles the time series under consideration by subjecting the calibrated model to a set of analytical measures, such as the Jarque-Bera Normality Test, the BreuschGodfrey LM Test, the White Test, the Ramsey Reset Test, and the Multicollinearity Test.

### 3 Result and Discussion

#### 3.1 Unit Root Test

Firstly, the Unit Root Test was conducted using the Augmented Dickey-Fuller (ADF) statistics to test the stationarity of the data. The outcomes obtained from the Augmented-Dickey Fuller Test, as presented in Table 1, indicates that the data regarding The Real Exchange Rate of Malaysia Ringgit against US dollar (EXC), export (EXP), import (IMP), inflation (INF), and interest rate (INT), are all stationary at the level of significance at first difference whereby all the p-values are less than 0.01 of critical values.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Augmented Dickey-Fuller Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
</tr>
<tr>
<td></td>
<td>Intercept</td>
</tr>
<tr>
<td>EXC</td>
<td>-0.880079</td>
</tr>
<tr>
<td></td>
<td>(0.7926)</td>
</tr>
</tbody>
</table>
The mean for all variables is positive ranging from 1.096225 to 10.99758. The mean for all the variables is greater than the median value. This indicates that the distribution of data for all the variables appears to be skewed to the left. The dispersion of the data is reflected by the measure of standard deviation. All the variables are spread within the range of 0.095732 to 0.230123. The import (IMP) variable recorded the highest at 0.230123 while the inflation rate (INF) has the lowest at 0.118015. In terms of skewness, the inflation and interest rate are negatively skewed at 0.097407 and 1.575917 respectively while for the other variables they are positively skewed. The Kurtosis result for the exchange rate, export, import, and inflation show that the variables are measured as a platykurtic distribution with a value of less than 3, at kurtosis values of 1.821173, 2.106185, 2.426962, and 1.879419 respectively. The platykurtic distribution is represented with less peaked in the mean and thinner tails compared to the normal distribution (i.e., flatter distribution). Meanwhile, the leptokurtic distribution was reflected in the interest rate with the values of 5.226920; which is more than 3. This indicates that the distribution of the data has fatter tails and sharper peak compared to the normal distribution (i.e., peaked distribution). Finally, based on the Jarque-Bera test, the data for export and import are normally distributed since the p-value is more than 0.1. However, the data distribution of the

3.2 Descriptive Statistics

Table 2 shows the summary of descriptive statistics of monthly data on macroeconomic variables from the year 2005 to 2019 with a total number of 169 observations.

<table>
<thead>
<tr>
<th>Variable</th>
<th>LEXC</th>
<th>LEXP</th>
<th>LIMP</th>
<th>LINF</th>
<th>LINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>1.269587</td>
<td>10.99758</td>
<td>10.83320</td>
<td>4.656219</td>
<td>1.096225</td>
</tr>
<tr>
<td>Median</td>
<td>1.250274</td>
<td>10.98614</td>
<td>10.82422</td>
<td>4.652054</td>
<td>1.098612</td>
</tr>
<tr>
<td>Maximum</td>
<td>1.499511</td>
<td>11.48372</td>
<td>11.29646</td>
<td>4.799914</td>
<td>1.258461</td>
</tr>
<tr>
<td>Minimum</td>
<td>1.085628</td>
<td>10.51874</td>
<td>10.21692</td>
<td>4.473922</td>
<td>0.688135</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>0.118015</td>
<td>0.194357</td>
<td>0.230123</td>
<td>0.095732</td>
<td>0.146509</td>
</tr>
<tr>
<td>Skewness</td>
<td>0.308126</td>
<td>0.200903</td>
<td>0.001434</td>
<td>-0.097407</td>
<td>1.575917</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.821173</td>
<td>2.610185</td>
<td>2.426962</td>
<td>1.879419</td>
<td>5.226920</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>12.45953</td>
<td>2.206880</td>
<td>2.312349</td>
<td>9.109491</td>
<td>104.8731</td>
</tr>
<tr>
<td>Probability</td>
<td>(0.001970)***</td>
<td>(0.331728)***</td>
<td>(0.314688)***</td>
<td>(0.010517)***</td>
<td>(0.000000)***</td>
</tr>
<tr>
<td>Sum</td>
<td>214.5603</td>
<td>1858.591</td>
<td>1830.811</td>
<td>786.9010</td>
<td>185.2621</td>
</tr>
<tr>
<td>Sum Sq. Dev.</td>
<td>2.339838</td>
<td>6.346132</td>
<td>8.896714</td>
<td>1.539649</td>
<td>3.606084</td>
</tr>
<tr>
<td>Observations</td>
<td>169</td>
<td>169</td>
<td>169</td>
<td>169</td>
<td>169</td>
</tr>
</tbody>
</table>

Note: ***Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level.
exchange rate, inflation, and interest rate are not normally distributed since the p-value is less than 0.1. This reflects that the data for EXC, INF, and INT might have outliers and therefore should be cautiously interpreted.

3.3 Regression Analysis

Based on the regression analysis result shown in Table 3, the export has a positive and significant relationship with the exchange rate with less than 0.05 critical values. However, the interest rate is found to be an insignificant determinant in influencing the exchange rate as the p-value is more than 0.10. The inflation and import have a negative and significant relationship with the exchange rate with less than 0.05 critical value. The inflation has the highest coefficient beta value at 0.607062, indicating that inflation is the most significant macroeconomic determinant of the exchange rate. Precisely, 25.71% of the variation in the exchange rate can be explained by the export, import, inflation, and interest rate. The subsequent 74.29% of the difference in MYR performance versus USD is explained by other variables, such as GDP, oil price and the financing rate, which are excluded from the model to be generalized for the future analysis. Overall, the proposed model of this study is fit and acceptable since the p-value of the F-test is 0.00000 in which the value is lower than 0.01. The output of the regression analysis is presented as per below equation:

\[ \text{EXC} = -2.414772 + 0.387994 \times \text{EXP} - 0.324959 \times \text{IMP} - 0.607062 \times \text{INF} + 0.101342 \times \text{INT} + \varepsilon \]

<table>
<thead>
<tr>
<th>Item</th>
<th>Coefficient Value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>β0</td>
<td>-2.414772</td>
<td>0.0000</td>
</tr>
<tr>
<td>Export (EXP)</td>
<td>0.387994</td>
<td>0.0216***</td>
</tr>
<tr>
<td>Import (IMP)</td>
<td>-0.324959</td>
<td>0.0446**</td>
</tr>
<tr>
<td>Inflation (INF)</td>
<td>-0.607062</td>
<td>0.0035***</td>
</tr>
<tr>
<td>Interest Rate (INT)</td>
<td>0.101342</td>
<td>0.1101</td>
</tr>
<tr>
<td>R-Squared</td>
<td>0.283871</td>
<td></td>
</tr>
<tr>
<td>Adjusted R-Squared</td>
<td>0.257100</td>
<td></td>
</tr>
<tr>
<td>Number Observation</td>
<td>169</td>
<td></td>
</tr>
<tr>
<td>F-statistics</td>
<td>16.25223</td>
<td>0.00000</td>
</tr>
</tbody>
</table>

Note: ***Significant at the 1% level, ** Significant at the 5% level, * Significant at the 10% level

To answer the research objectives, Table 4 below shows the list of hypotheses and the verdicts of the hypotheses testing.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: There is a significant relationship between the export (EXP) and the exchange rate (MYR against USD).</td>
<td>The first hypothesis for this study is accepted. The result of the export is significant and has a positive relationship with the exchange rate. This is due to the escalating trend of export for Malaysia. The result of this study is similar to previous studies done by Atta [9].</td>
</tr>
</tbody>
</table>
H2: There is a significant relationship between the import (IMP) and the exchange rate (MYR against USD). The second hypothesis is accepted for the study and aligned with some previous studies done by Butt et al. [10]. The result for the import is significant and has a negative relationship with the exchange rate. This is due to the rising trend in the volatile price of oil, which permits the Malaysian oil industries to import more than just a dollar to pay for the higher cost of imported oil, which ultimately contributes to the deterioration of the Malaysian Ringgit.

H3: There is a significant relationship between inflation (INF) and the exchange rate (MYR against USD). The third hypothesis for this study is accepted. The result for inflation is significant and has a negative relationship with the exchange rate. The result of this study is similar to previous studies done by Mahammad et al. [11], Honohan et al. [12]. The inflation rate has a negative influence on the exchange rate which is consistent with literature either theories or applied cases. An increase in the inflation rate means a decrease in the purchasing power of the currency and consequently, it depreciates against the other countries' currencies.

H4: There is a significant relationship between the interest rate (INT) and the exchange rate (MYR against USD). The fourth hypothesis is rejected. The interest rate does not appear to be materially significant towards the exchange rate.

Several analytical tests were performed to ensure that the proposed model in this study accurately reflects the time series under consideration by subjecting the calibrated model to a variety of statistical tests as outlined in Table 5.

<table>
<thead>
<tr>
<th>Diagnostic Tests</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Jarque-Bera Normality Test</td>
<td>0.0052</td>
</tr>
<tr>
<td>(ii) Breusch-Godfrey LM Test</td>
<td>0.0000</td>
</tr>
<tr>
<td>(iii) White Test</td>
<td>0.0000</td>
</tr>
<tr>
<td>(iv) Ramsey's Reset Test</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

The data were subjected to a normality test because the regression analysis assumed that the data were normally distributed. If the data is not normal, then the results will be misleading. Hence, the first diagnostic checking that was conducted was the Jarque-Bera test to determine
whether the model error terms were normally distributed [13]. It can be concluded that the multiple linear regression model error terms were normally distributed with a p-value of 0.0052, which was at 1% significant level with 99% confidence level.

After conducting the Jarque-Bera test, the Breusch-Godfrey LM Test was conducted to find out the existence of any autocorrelation problem between variables. Autocorrelation refers to time series correlation and can be alluded to as lagged correlation or serial correlation [13]. The result in Table 5 shows a p-value of 0.0000 which was a 1% significant level with a 99% confidence level. The result indicates that no autocorrelation problem existed. Therefore, the data used were serially independent of the error term.

Next, the White Test was performed to discover heteroscedasticity problems. When the error term differs across the observations, heteroscedasticity is present [13]. The standard errors of the estimates are distorted if heteroscedasticity exists. Based on Table 5, the p-value for this test was 0.0000, which was significant at the 1% level with a 99% level of confidence. The outcome of the white test provides evidence that the null hypothesis was not rejected. This indicates that the model is estimated to have a heteroscedasticity problem. Therefore, the findings produced by the model may be distorted and should be cautiously interpreted.

Next, the Ramsey’s Reset Test was carried out to determine whether the model was correctly specified. Based on the result in Table 5, the p-value for t-statistic was at 0.0000 and shows the evidence fails to reject the null hypothesis at a 99% confidence interval. It means that is misspecification of the functional form used on the model. Therefore, the results estimated from the model could be biased and should be cautiously interpreted.

Finally, the Multicollinearity Test was conducted using the variance inflation factors (VIF) to determine the correlation between independent variables. The result of VIF for all variables was less than 10, indicating a high-quality result where there was no serious multicollinearity problem [13].

4 Conclusion

One of the country's most significant determinations is the exchange rate relative to economic development. The exchange rate plays a vital role in a country to level the trade which is essential for every competitive market economy. The empirical findings revealed that the exchange rate (MYR against USD) is driven primarily by three economic variables which are export, import, and inflation. Inflation has been identified as the most significant factor that leads to the fluctuation of the exchange rate. However, the interest rate does not give any significant impact on the exchange rate (MYR against USD).

Based on the empirical results, this implies that export has a positive significant relationship towards exchange rate (MYR against USD). This is an indicator of economic openness relating to export and its degree of globalization, implying that the more economies open to international trade, the stronger the currency. That can be justified as the country becomes much more prominent in international trade in this scenario, resulting in a positive economy and a stronger local currency as a consequence. Besides, encouraging exports by giving support either directly or indirectly to the export industries will give them a competitive advantage over the other countries' products as well as improve the performance of the home currency.

On the other hand, the results show that the import had a negative effect on the exchange rate. Higher import levels and a rising trade deficit can have a negative impact on the country's exchange rate. If too many imports originate in a country as opposed to its exports, the trade
balance of a nation may be skewed and its currency may be devalued. In particular, a country must maintain an acceptable balance of imports and exports. The import and export activity of a country will affect the country's GDP, exchange rate, inflation and interest rates.

Nevertheless, inflation has a negative significant relationship with the exchange rate and the most significant macroeconomic determinant of the exchange rate. Traditional currency theory states that a currency with higher inflation rates (and therefore higher interest rates) will depreciate against a currency with lower inflation and lower interest rates. The inflation rate of a country can have a significant impact on the value of the country's currency and the foreign exchange rate that it retains with other countries' currencies. Inflation, however, is only one factor among many that affect the exchange rate of one country. Inflation is more likely to have a significant negative effect on currency than a considerable positive effect. Low inflation is driving demand. Long-term decisions are typically the most critical decisions made by individuals and companies alike: a decision to create a house, start a business, seek an education, own one's home. The degree of ambiguity about the future depends crucially on these decisions. Low and stable inflation is a macroeconomic stability indicator that largely contributes to people's and businesses' conviction in making investment decisions.

Certainly, this research had addressed many concerns for further review. Nevertheless, caution should be taken when interpreting the results, particularly given the limited availability, consistency, and comparability of the data. This would be useful if the data were made publicly accessible so that it could be used to get better results. Data in this study were limited to only 14-year on monthly basis from July 2005 to July 2019. It is also highly recommended to expand the observation period and includes more variables which are relevant for future research such as economic growth, trade balance (which demonstrates the level of demand for the goods and services of the country), government expenditure, and the debt level of the country all influence the value of a currency in question. The most influential interest determiner and currency exchange rate of a country is the currency's perceived desirability.

References


Determinants of Saving Behavior Among Private Sector Employees in Malaysia: An Empirical Investigation

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Universiti Teknologi MARA, Malaysia1, 2, 3, 4, 5, 6
Universiti Utara Malaysia, Malaysia7

Abstract. Malaysian's savings rate has declined in recent years. The last generation was more disciplined about savings. However, it seems that nowadays, Malaysians, in general, tend to save less. The growth of individual savings has been declined since 2017. According to a survey conducted in Malaysia in 2019, 35 percent of respondents saved less than 500 Malaysian Ringgit monthly. In 2018, the highest group of respondents who saves money frequently was people between the age of 15 to 24 years, with around 73 percent. Therefore, the purpose of this research was to investigate the determinants of saving behaviour of private-sector employees in Malaysia. Questionnaires were distributed to the 150 employees at a local financial institution. The sampling procedure adopted in this research was purposive sampling. Mean and standard deviation were computed for descriptive analysis as well as reliability analysis were also tested to examine the internal consistency of the items in the respective factors. Multiple regression analysis was used primarily to test the hypothesis proposed. The results of this study posited that financial knowledge and retirement planning have a strong influence on saving behaviour, while financial planning was found to be the least important factor in saving behaviour.

Keywords: Saving Behaviour, Financial Knowledge, Retirement Planning, Financial Planning

1 Introduction

Personal debt issues are not globally unusual. Excessive debts have brought default payments and ended up with the declaration of personal bankruptcy. Although personal bankruptcy files in Malaysia have gathered to 124,708 cases from 2005 to 2012 (AKPK 2015), the increase number of individual insolvency cases was because of the decline in the credit assessment process. Previously, bankruptcy filings are because of a heightened number of individual debts to their level of income [1], and this calculation is regularly utilized as a measurement by numerous analysts. Zywicki [2] stated that the debt-to-income ratio looks unbalanced because of mortgages and loan instalments allude to long haul obligation, however the proportion of pay will be the transient pay. Meanwhile, Brown and Taylor [3] contended that a few families with high debt levels are responsible with negative total assets and end up with short-term bankruptcy filing.
Unfortunately, young adults who are presently in their university life have inadequate abilities in dealing with their own financing. This is a general public's concern as it could be a factor of the disparity in the distribution of income and wealth, insufficient resources for retirement, low investment and capital aggregation because of the limited financial knowledge and skills [4]. A report of spending trends of employees in Malaysia, sourced by Malaysia's official statistics indicated that most Malaysians spent on residential water, energy gas and other fuels.

Malaysia's saving rate has declined as of late. According to data from the World Bank, Malaysia's Gross Domestic Savings (percentage of GDP) ranged from 42% to 43% from 1999 to 2008 but fell abruptly to 36% in 2009. An “Asian Survey Monitor” done by HSBC Bank in 2010 also discovered a lower personal savings rate among Malaysians as they found that average Malaysians spared only 25 per cent of their income and 79 per cent were for excessive expenses rather than other purposes, e.g., health care, retirement or investment. Furthermore, 60% of respondents revealed that they did not save adequately and 15 per cent of respondents did not save at all. Studies have indicated that inadequate savings are commonly due to their spending forecast [5], insufficient self-control [6], harping on the present instead of things to come [7], or the consequences of culture [8]. In a survey conducted in Malaysia in 2019, around 35 percent of respondents saved below 500 Malaysian Ringgit per month. In 2018, the highest number of respondents saving money was among individuals aged between 15 and 24 years, with around 73 percent.

Saving if usually observed as a significant commitment to promote long-term economic development. It is also a major aspect in establishing an economic link between a nation’s past, current and future. The amount of savings accessible in a nation restricts the level of its gross investment and its rate of development. Lower savings would result in huge investments opportunities that can improve economic growth. To boost saving, government policies should concentrate on giving more incentives and saving opportunities by offering wide-ranging investments. When families save too little, emotionally and without emergency savings, this will lead to anxiety and serious health problems [9].

Therefore, the objective of this paper is to examine the determinants of saving behaviour among employees in Malaysia. Understanding the determinants of saving behaviour among employees at the current situation will assist various parties such as heads of departments in the organization, top-level management, employees as well their families, friends as well colleagues for a better administration their calculation now and future to minimize mistakes in handling money. The rest of the paper is structured as follows. In the next section, we highlight related empirical studies and theoretical frameworks suitable for this subject. Section 3 outlines the research methodology used in this study. Section 4 presents the results of the data analysis collected through multiple regression analysis. Lastly, section 5 concludes by giving a review of all the data analysis mentioned in the previous section, hence validating the significant findings and implications of the study and provides the limitations of the study along with some suggestions or recommendations for further research.

2 Literature Review

Initiatives on financial education have been recognized as essentials in improving financial knowledge and nurturing personal financial responsibility for individuals without financial experience [10]. While current literature has shown a positive link between improved financial knowledge and successful saving behaviors, studies have also shown that students do not have
enough financial knowledge and training in management [11]. On the other hand, in a comparative study conducted by Koposko et al. [12] on the United States and Mexican undergraduates, they possessed only marginally assured of financial knowledge and financial education during their study periods. The study also noted despite that; the participants were conscious or worried about the value of actively preparing their future financial and most important, pension or retirement. Kotlikoff and Bernheim [13] stated that increased awareness led to increased savings. Shim et al. [14] added by stating that having financial knowledge is crucial to foresee financial behaviors that eventually lead to excellent financial behaviour. They confirmed through a study that financial knowledge is directly linked to financial behaviour. Sang et al. [15] mentioned that the level of financial knowledge has no direct impact on financial decisions, but to result in a positive attitude to financial conduct. The discussion proved to be critical in this regard in financial terms. It is also necessary to address the possible implications of subjective financial knowledge (or self-assessed knowledge). Courchane [16] noted that one of the critical factors in determining financial attitudes is self-assessed knowledge. Nevertheless, the results of the study showed that people do not always need to have a full financial understanding [16]. Therefore, the following hypothesis is established:

H1: Financial knowledge has a significant relationship towards saving behaviour

Governments all over the world have started to promote a new, more responsible approach to individual finance over the last decade to enable people to be more accountable for their financial well-being. The 2008 global financial crisis and the subsequent recession have severely affected households, pushing public policies away from the most commonly used economic support to improve consumer investment and raise consumer awareness of individuals long-term financial needs and resources. The shift in policy intensifies the value of households’ capability to be financially responsible and saving for their future needs. With the present-day situation whereby more personal savings are required, it is vital to realize why some are making suitable investments while others are struggling. According to Campbell [17], not many are well informed and able to make well educated economic decisions. Lusardi and Mitchell [4] mentioned that based on their study, 45% of baby boomers aged 51–56 years have little or no financial planning thus hitting their golden years in low wealth and depending only on the pension savings as the Employment Provident Fund. (EPF). Therefore, the following hypothesis is developed:

H2: Financial planning has a significant relationship towards saving behaviour

Retirement planning is a strategy a person makes so that they can be prepared for life after paid work, not only in terms of finances but in all aspects of life. One example is preparing how to live and prosper in retirement for the rest of their lives. In Malaysia, most of the employees will be retired in the age between 55 or 60. After their retirement, they will lose their monthly source of income and continue their living using their savings money. Mitchell [18] has highlighted that planning is the primary indicator for saving enough for retirement. In this case, people will start to save money for retirement to get through the retirement phase. During the retirement period, households also need to spend money similarly as when they were still working time. Previous research has shown that older people tend to have a significantly positive attitude towards money than the younger generation [19]. Thus, to avoid suffering in retirement planning troughs, people need to budget financially. The retirees need to be able to prevent
having outstanding loans once they leave the workforce. Hence, the following hypothesis is developed:

H3: Retirement planning has a significant relationship towards saving behaviour

This study adopts the theory of planned behaviour (TPB) to explain the proposed framework. Based on the theory of planned behaviour, supposed behavioral control can be used to forecast actions directly. This inference may be supported by the influences of perceived regulation of behavioral performance, which some people regard as a control locus that can account for a large variance in actions. For example, past study shows that by linking the financial resource model with the planned behaviour theory, the overall view of the relationship between saving behaviour, financial planning, financial knowledge, and control location will be revealed [20]. Moreover, the theory of planned behaviour describes the connection between beliefs, desire, and behaviour [21]. Based on the discussion in the previous section, the following theoretical model has been developed (Figure 1).

Fig. 1. Proposed theoretical framework.

3 Methodology

The respondents in this study are employees currently working in XXX companies. In regards to the sampling technique, a non-probability sampling known as purposive sampling is used in this study. This study uses questionnaire as its data-gathering instrument in which the question items are adapted from several previous studies and consists of five sections namely: section (A) “demographics profile”, section (B) “saving behaviour”, section (C), “financial knowledge” section (D) “financial planning” and section (E) “retirement planning”. In the questionnaire, saving behaviour will be measured using ten items adapted from Washington et al. [22]; financial knowledge will be measured using ten items adapted from Bongomin et al. [23]; financial planning will be measured using 11 items adapted from Rehman et al. [24]; and retirement planning will be measured using ten items adapted from Ridgway [25]. The items are measured using a 5-point Likert scale ranging from (1) strongly disagree to (5) strongly agree. Frequency analysis will be employed to extract percentage-based data from the profiles of respondents regarding age, gender, race, income level, educational background, marital status and amount of dependency. Mean, and standard deviation will then be computed for descriptive
analysis. Next, the reliability test will be used to examine the internal consistency of the items in their respective factors, and multiple regression analysis will be used primarily to test the hypotheses proposed earlier.

4 Results

<table>
<thead>
<tr>
<th>Demographic Factor</th>
<th>Categories</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>21 – 30</td>
<td>85</td>
<td>56.0</td>
</tr>
<tr>
<td></td>
<td>31 – 40</td>
<td>57</td>
<td>38.0</td>
</tr>
<tr>
<td></td>
<td>41 – 50</td>
<td>9</td>
<td>6.0</td>
</tr>
<tr>
<td>Gender</td>
<td>Female</td>
<td>104</td>
<td>69.3</td>
</tr>
<tr>
<td></td>
<td>Male</td>
<td>46</td>
<td>30.7</td>
</tr>
<tr>
<td>Race</td>
<td>Malay</td>
<td>117</td>
<td>78.0</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>19</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>India</td>
<td>12</td>
<td>8.0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>2</td>
<td>1.3</td>
</tr>
<tr>
<td>Income Level</td>
<td>&lt;RM 1000</td>
<td>7</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>RM 1000 – RM 2000</td>
<td>19</td>
<td>12.7</td>
</tr>
<tr>
<td></td>
<td>RM 2001 – RM 3000</td>
<td>68</td>
<td>45.3</td>
</tr>
<tr>
<td></td>
<td>RM 3001 – RM 4000</td>
<td>26</td>
<td>17.3</td>
</tr>
<tr>
<td>Education Background</td>
<td>SPM</td>
<td>7</td>
<td>4.7</td>
</tr>
<tr>
<td></td>
<td>Certificate</td>
<td>10</td>
<td>6.7</td>
</tr>
<tr>
<td></td>
<td>Diploma</td>
<td>58</td>
<td>38.7</td>
</tr>
<tr>
<td></td>
<td>Degree</td>
<td>53</td>
<td>35.3</td>
</tr>
<tr>
<td></td>
<td>Master</td>
<td>13</td>
<td>8.7</td>
</tr>
<tr>
<td></td>
<td>PhD</td>
<td>6</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>3</td>
<td>2.0</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>62</td>
<td>41.3</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>81</td>
<td>54.0</td>
</tr>
<tr>
<td></td>
<td>Divorce</td>
<td>7</td>
<td>4.7</td>
</tr>
<tr>
<td>No. of Dependency</td>
<td>0</td>
<td>55</td>
<td>36.7</td>
</tr>
<tr>
<td></td>
<td>1 – 2</td>
<td>60</td>
<td>40.0</td>
</tr>
<tr>
<td></td>
<td>3 – 4</td>
<td>25</td>
<td>16.7</td>
</tr>
<tr>
<td></td>
<td>More than 4</td>
<td>10</td>
<td>6.7</td>
</tr>
</tbody>
</table>

As presented in Table 1, a total of 150 respondents participated in this study, resulted in 100% return rates. Out of 150 respondents, 56% of respondents aged between 21-30, 38% of respondents were between 31-40, while only 6% of respondents were between 41-50. Moreover, 69.3% of the respondents were female, while only 30.7% of the respondents were male. Most of the respondents were Malay (78%), followed by Chinese (12.7%), India (8%) and others (1.3%). Most of the respondents have monthly income level ranges between RM2000-RM3000 (45.3%) followed by 17.3% of respondents have monthly income level ranging between RM3001-RM4000, followed by 12.7% of the respondents have monthly income level ranging RM1000-RM2000 and the least number of respondents (4.7%) earned less than RM1000 (4.7%). As for their educational background, 38.7% of the respondents, which is the highest percentage possessed diplomas, followed by degree (35.3%). Other qualifications were SPM
(secondary school level) (4.7%), postgraduates such as masters (8.7%) and PhD (4%) and other non-specified qualifications (2%). Out of 150 respondents, 54% were married, followed by unmarried (41.3%) and divorced (4.7%). Next, for dependency, the highest percentage of participants with one or two dependencies was 40%, followed by respondents with no dependency (36.7%), three to four dependencies (16.7%) and the least percentage of respondents with more than four dependencies was 6.7%.

4.1 Descriptive Analysis

Next, the results of the descriptive analysis are presented. Comparing price behaviour obtained the highest mean score (3.84), which indicated that it is the most influential item of saving behaviour among the participants. However, saving at the end of the month received the lowest mean score (3.60), which showed that most participants did not favor the item as a preferable saving behaviour. On the next variable, which is financial knowledge, participants' knowing on personal budget received the highest mean score (3.69) while getting acquainted with current financial news obtained the lowest mean score (3.48). This shows that these participants were aware of the importance of planning for a personal budget. As for the third variable; Monthly Financial Planning, financial planning attained the highest mean score (3.74). This indicated that they were doing their financial planning monthly, but they did not focus on recording their expenses as it received the lowest mean score (3.59). Finally, under the retirement planning variable, having a clear vision on retirement received the highest mean score (3.68) which showed that the respondents acknowledged they already have a clear view of how their life will be in after their retirement. Nevertheless, failure in preparation obtained the lowest mean (3.52). This showed that the respondents agreed that they were insufficiently prepared for retirement due to various of commitment.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>Beta</th>
<th>t-value</th>
<th>p-value</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 Saving Behavior</td>
<td>2.382</td>
<td>.019</td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>H2 Financial knowledge has a significant</td>
<td>.776</td>
<td>8.347</td>
<td>.000</td>
<td>Yes</td>
</tr>
<tr>
<td>relationship with saving behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3 Financial Planning has a significant</td>
<td>-.129</td>
<td>4.434</td>
<td>.225</td>
<td>No</td>
</tr>
<tr>
<td>relationship saving behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H3 Retirement Planning has a significant</td>
<td>.171</td>
<td>7.123</td>
<td>.030</td>
<td>Yes</td>
</tr>
<tr>
<td>relationship saving behaviour</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2 demonstrated the study's regression results. The p-value should be less than 0.05 to describe the importance of the relationship. Financial knowledge obtains the highest value for beta (standardized coefficient) with 0.77, and the p-value is 0.00, which is less than 0.05. Hence, H1 is supported. The second highest value for beta is retirement planning with 0.17, and the p-value is 0.03, which also less than 0.05, which shows that H3 is supported. The lowest beta value in table 4 is retirement planning (-0.12), and the p-value is 0.22, which is more than 0.05. Hence, H2 is not supported.
5 Conclusion

This study aimed to investigate the factors affecting saving behaviour among private-sector employees. The results suggested that financial knowledge and retirement planning have a great influence on saving behaviour and it is consistent with the previous study conducted by Reay [26] which proved that saving have an essential role in improving economic growth over the past period. Furthermore, this study also shared the same results with Hilgert, Hogarth and Beverly [27] previous study on financial knowledge which revealed that there is a significant relationship between financial knowledge and saving behaviour. Mitchell [18] stated that planning is the primary indicator for saving enough for retirement. However, this study found that planning has no significance to be an indicator for retirement saving.

This study has several important implications for practitioners. Firstly, financial knowledge is an essential factor that should be considered by employees which can give an impact on saving behaviour. Employees can manage their finances well if they have the sufficient knowledge as well as being able to practice when making financial decisions. Ultimately, as far as government agencies are concerned, they need to organize more financial conferences, seminars and workshops to educate people on the importance of knowing financial management, including saving. However, financing planning is found insignificant in this study thus shows that in the context of this study, having no implementation on planning does not cause significant effects on saving. Next, retirement planning is found to be essential. To allow employees to feel satisfied with their financial condition, they must have a high level of confidence in managing their funds as it will help to protect their future.

The present study has some limitations. Since the study has been used the primary data, the sample size might be inaccurate, bias, as well as the data collected, may be unreliable and vague. This is because the sample size is too small to represent a large population. Future research requires a larger sample size to ensure an even representative distribution of a population in which the results can be generalized or transferred.

References


The Effect of Company Size and Audit Opinion on Auditor Switching with Moderated by the Auditor's Reputation

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Abstract. This study aims to examine the effect of company size and audit opinion on auditor switching with KAP turnover indicators and add auditor's reputation as a moderating variable. Population of this research is 39 mining companies listed on the Indonesia Stock Exchange (IDX) in 2015-2018. The sample selection is done using a purposive sample method and produces 125 samples are processed. Data analysis method that used in this study are descriptive statistics analysis and inferential statistics analysis with absolute difference test for moderation with IBM SPSS 21 software. The results showed that company size has no effect on auditor switching, while audit opinion has a significant negative effect on auditor switching. The auditor's reputation strengthens the influence of company size on auditor switching, but the auditor's reputation is unable to strengthen the effect of audit opinion on auditor switching. The conclusion is a good opinion will minimize the practice of auditor switching and the large company supported by a good auditor reputation also can minimize the practice of auditor switching.

Keywords: Company Size, Audit Opinion, Auditor Reputation, Auditor Switching, KAP Switching

1 Introduction

Auditor switching is an action taken by a company or business entity to replace the auditor and the Public Accounting Firm (KAP) whom is given the task of conducting an audit of its financial statements. Auditor switching can be mandatory due to government regulations that govern or are voluntary based on the decisions of the company's management. Obligatory change of auditors in Indonesia is regulated in Government Regulation No. 20 of 2015 concerning the Practice of Public Accountants which no longer limits the Public Accounting Firm (KAP) to provide audit services on the financial statements of an entity, but Public Accountants (AP) are limited to conducting audit maximum of 5 years in a row. Even though KAP is no longer restricted, there are still many companies doing KAP changes. Whereas voluntary auditor turnover is usually based on dissatisfaction with the opinion given by the auditor on his financial statements.

The gap phenomenon in this study is the case of PT Garuda Indonesia Tbk (GIAA), who manipulated financial statements in 2019. It started with the results of the 2018 financial statements which posted a net profit of USD 809.85 thousand or around Rp 11.33 billion. That number jumped sharply compared to 2017 which suffered a loss of USD 216.5 million. Then it was discovered that the financial statements of GIAA were not presented in accordance with the
Statement of Financial Accounting Standards (PSAK). The reason is, Garuda Indonesia includes profits from PT Mahata Aero Teknologi which has a debt to GIAA related to the installation of Wi-Fi that has not been paid. From this case, KAP Tanubrata Sutanto Fahmi Bambang & Partners (BDO International Members) as an independent auditor of GIAA was found guilty because based on the results of the meeting with the KAP, it was concluded that the audit allegedly was not in accordance with accounting standards.

It is known that prior to using KAP Tanubrata Sutanto Fahmi Bambang & Partners, from 2014-2017 PT Garuda Indonesia Tbk, was audited by KAP Satrio Bing Eny & Partners affiliated with one of Deloitte's international big four auditors. Then after the case surfaced to the public, Garuda replaced its KAP with KAP Tanudirenda, Wibisana, Rintis & Rekan in 2019 and was affiliated with one of PWC's international big four auditors. After entering into a four-year engagement with KAP Satrio Bing Eny & Partners, Garuda decided to change the KAP in 2018 with KAP Tanubrata Sutanto Fahmi Bambang & Partners who were non-big four KAPs. However, after the case was revealed, Garuda chose to use the big four KAP again. With the change of KAP from the big four KAP to non-big four KAP, it is feared that the fraud has been planned by management regarding the manipulation of its financial statements. Big four KAP is considered more capable of detecting fraud and with good credibility, the audit results on its financial statements are also considered to be of higher quality so that the opinions given are also more trusted. Therefore, in the year of fraud, Garuda chose a non-big four KAP with the hope that the fraud could not be detected. The change in KAP that is too frequent is also feared to be caused by company management trying to find auditors who can be invited to work together in manipulating financial statements.

This study seeks to examine the factors expected to have an influence in the practice of auditor changes made by a company. With the issuance of Government Regulation No. 20 of 2015 concerning the practice of public accountants which no longer limits KAP engagement with clients, it is expected that companies will not replace their KAPs too often to minimize fraud by the company's management.

The results of previous studies related to the factors used in this study still indicate inconsistencies, such as in researches Hartono & Rohman [1], Gharibi & Geraeely [2] and Saidin, Arifati & Andini [3], which show the influence of company size on auditor switching, while researches Fakhri, Majidah & Nurbaiti [4], Winata & Anisykurlillah [5] and Fauziyyah, Sondakh & Suwetja [6], state that company size has no effect on the occurrence of auditor changes in the company. In addition, the results inconsistency also occurs in the audit opinion variable, where the researches Fauziyyah, Sondakh & Suwetja [6], Faradila & Yahya [7] and Putra & Suryanawa [8], indicate the influence of opinion audit of auditor switching, while researches Hartono & Rohman [1], Winata & Anisykurlillah [5] and Pawitri & Yadnyana [9], show the results that audit opinion has no effect on the auditors’ change .

Thus, researchers are interested in reviewing the effect of company size and audit opinion on auditor switching. The added value in this study is to augment the auditor's reputation variable as a moderating variable that is expected to strengthen or weaken the independent variable’s influence on the dependent ones. In addition, this study uses objects of mining companies listed on the Indonesia Stock Exchange (IDX), which are still relatively rarely used in previous studies.
2 Literature Review and Hypotheses Development

This study uses two basic theories namely agency theory and signal theory. Agency theory describes the relationship between shareholders acting as principals with management who act as agents. An agency relationship is a shareholder contract (principal) that carries out management's orders (agent) to perform a service on behalf of the principal and authorizes the agent to make the best decision for the principal. If both parties have the same goal to maximize the value of the company, then it is believed the agent will act in a manner that is in accordance with the principal's interests [10].

Management, which is an internal party of a company providing financial reports, tends to try to take action in the personal interests by abusing power. On the other hand, the shareholders want the financial statements to be presented properly so that it reflects the actual state of the company for retrieval. This has led to the emergence of agency costs, namely by presenting an independent third party and is considered capable of bridging these differences in interests and preventing the occurrence of information asymmetry, which is a situation where agents are superior in knowing and understanding information than other parties (principals and stakeholders).

The link between agency theory and company size is that large companies will have more business complexity. With that complexity, it can cause agency costs in the form of independent auditor services that are able to bridge the differences in interests between principals and agents. Agency theory is related to audit opinion, independent auditors as third parties are expected to be able to resolve conflicts between agents and principals by assessing the fairness of a company's financial statements by assigning an opinion on its audit.

Signal theory, developed by Spence [11], illustrates that companies with good performance will deliberately give signals to the market using financial information. The management will provide information related to the company's performance and prospects to investors. This information is considered as a signal to investors to be used as a reference in making investment decisions.

The relationship between signal theory and company size is that the greater the total sales, the greater the net profit so that dividends distributed to shareholders are also expected to be even greater. This is able to provide a positive signal to attract potential investors. The relationship between signal theory and audit opinion, that is, an unqualified audit opinion will give a good signal because the financial statements are considered to have been presented fairly and in accordance with established standards. The linkage of signal theory with the auditor's reputation is that auditors having a good reputation are believed to have good credibility and competence so that the audit results are quality and can be trusted more.

The size of the company can be assessed from total assets, total sales, market capitalization, number of workers and so on [12]. The large size of the company will have complex business activities requiring experienced KAPs who have an audit engagement with clients in the long run because they already know the business operations or industry specialization of the client so that the larger the size of the company, the less likely it is to replace the KAP [5].

H1: Company size has a negative effect on auditor switching.

An audit opinion is a statement of opinion or auditor’s opinion on a company's financial statements, after the auditor has examined the fairness of a company's financial statements [9]. According to the Professional Standards of Public Accountants as of March 31st, 2011 (PSA 29
SA Section 508), there are five types of audit opinions, namely unqualified opinion, modified unqualified opinion, qualified opinion, adverse opinion, and disclaimer opinion. Management will be satisfied if the auditor gives a good opinion on the financial statements presented. Unqualified opinion is the opinion most desirable by management because it is believed to give a positive signal to potential investors. An audit opinion can be a cause for a client to change auditors when the client disagrees with the opinion given by the auditor in the previous year [13].

\[ H_2: \text{Audit opinion has a negative effect on auditor switching.} \]

Large companies will tend to try to retain their auditors because they think that auditors already know the company's industry specialization so well that the audit will be conducted properly. Meanwhile, if changing auditors will take more time for new auditors to study the client's industry. This is reinforced if the auditor conducting an audit of the financial statements is an auditor who has a good reputation. The auditor's reputation is a big-name view held by the auditor for the achievements and public trust of the auditor and the Public Accounting Firm where the auditor works. Auditor's reputation is one proxy for assessing audit quality, therefore investors tend to entrust their money to be invested in companies that have accounting data generated by reputable auditors [14]. Auditors' reputation is proxy in KAP Big Four and Non-Big Four. Large companies tend to have used KAP affiliated with The Big Four KAP. KAP affiliated with one of The Big 4 KAP is considered to have good credibility and competency so that they are able to learn the client's industry specialization well and will increase investor confidence in the audited financial statements.

<table>
<thead>
<tr>
<th>KAP Indonesia</th>
<th>International Cooperation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tanudireja, Wibisana, Rintis and Partners</td>
<td>Pricewaterhouse Coopers (PwC)</td>
</tr>
<tr>
<td>Satrio Bing Eny and Partners</td>
<td>Deloitte Touche Tohmatsu (Deloitte)</td>
</tr>
<tr>
<td>Purwantono, Sungkoro and Surja</td>
<td>Ernst dan Young Global (EY)</td>
</tr>
<tr>
<td>Siddharta Widjaja and Partners</td>
<td>Klynveld Peat Marwick Geordeler (KPMG)</td>
</tr>
</tbody>
</table>


\[ H_3: \text{The auditor's reputation strengthens the effect of company size on auditor switching.} \]

According to Juliantari & Rasmini [15], clients who have received unqualified opinion tend not to replace their auditors, until the time limit set by the government because the opinion is in line with the expectations of the company's management. This will be further strengthened if the audit opinion is given by a reputable auditor. A reputable auditor is an auditor in the KAP affiliated with The Big Four KAP. In accordance with signal theory, that the auditor's opinion given by a reputable KAP will be more trusted by the public because it is considered to have high credibility and better audit quality on the financial statements compared to a small KAP so that the audit opinion given the company is deemed appropriate or reflects the real situation.

\[ H_4: \text{The auditor's reputation strengthens the effect of audit opinion on auditor switching} \]
Based on the theoretical framework, the research model can be illustrated in Figure 1.

![Research Model Diagram]

### 3 Research Methods

The research design used in this study is a hypothesis study. This research is a type of quantitative research. The data used in this study are secondary data obtained from audited financial statements of public companies in 2015-2018 which are listed on the Indonesia Stock Exchange (IDX) by accessing the official website of the Indonesia Stock Exchange (www.idx.co.id). Data collection method used in this study is the documentation method.

The population in this study are mining companies listed on the Stock Exchange and sample selection using purposive sampling technique and produced 125 sample that processed using SPSS 21 software.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>All mining companies registered in 2015-2018 on IDX</td>
<td>39</td>
</tr>
<tr>
<td>Companies that do not publish annual reports/do not publish audited financial statements for 2015-2018</td>
<td>4</td>
</tr>
<tr>
<td>Companies that do not have the required data for the period of 31th of December 2015-2018</td>
<td>2</td>
</tr>
<tr>
<td>Number of sample companies</td>
<td>33</td>
</tr>
<tr>
<td>Observation Year</td>
<td>4</td>
</tr>
<tr>
<td>The Number of Observation Samples</td>
<td>132</td>
</tr>
<tr>
<td>Outlier data</td>
<td>(7)</td>
</tr>
<tr>
<td>The final number of samples</td>
<td>125</td>
</tr>
</tbody>
</table>


This study uses independent variables of company size and audit opinion. The auditor's reputation as a moderating variable and auditor switching as the dependent variable.
Table 3. Operational Definitions and Measurement of Research Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Definition</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Auditor Switching (Y)</td>
<td>Auditor switching is a change in the Public Accounting Firm (KAP) or auditor conducted by a client company [16]. The size of a company can be based on total assets, sales, market capitalization, number of workers and others [12]. An audit opinion is a opinion statement or the auditor’s opinion on a company's financial statements, after the auditor has examined for the reasonableness of a company's financial statements [8]. Auditor's reputation is a view on the good name, achievements, and public trust of the auditor and KAP where the auditor works [17].</td>
<td>Switch KAP (1) Not Switch KAP (0)</td>
</tr>
<tr>
<td>Company Size (X1)</td>
<td>The size of a company can be based on total assets, sales, market capitalization, number of workers and others [12].</td>
<td>natural logarithm of total sales</td>
</tr>
<tr>
<td>Audit Opinion (X2)</td>
<td>An audit opinion is a opinion statement or the auditor’s opinion on a company's financial statements, after the auditor has examined for the reasonableness of a company's financial statements [8].</td>
<td>Unqualified opinion (1) Other Opinion (0)</td>
</tr>
<tr>
<td>Auditor's Reputation (Z)</td>
<td>Auditor's reputation is a view on the good name, achievements, and public trust of the auditor and KAP where the auditor works [17].</td>
<td>Big Four KAP (1) Non-Big Four KAP (0)</td>
</tr>
</tbody>
</table>


Analysis of the data used in this study is to use descriptive statistical analysis and logistic regression analysis. Descriptive statistical analysis to describe a data that is seen from the mean (standard), standard deviation, variance, maximum, minimum, sum, range, kurtosis, and skewness [18]. While logistic regression is use to analyze the independent variables to determine the effect directly on the dependent variable. Logistic regression analysis used to test the hypothesis of the dependent variable consisting of two values representing the occurrence or absence of an event which is usually given the number 0 or number 1. Data is processed using IBM SPSS Statistics 21 software.

4 Results and Discussion

4.1 Research Result

4.1.1 Descriptive Analysis

From this analysis, it is explained that from a total of 125 units of samples, there are 10 units that do auditor switching while the remaining 115 units do not. The minimum value of the company size is 23 which is the logarithm of total sales from PT Bara Jaya International Tbk (ATPK) in 2016, whereas the maximum value of 32 (natural logarithm of total sales) is owned by Adaro Energy Tbk (ADRO) in 2018. There are 79 units getting a fair opinion without exception, while the remaining 46 units get an opinion other than fair without exception (qualified opinion). A total of 63 units of analysis or 50.4% of the total that use Big Four Public
Accounting Firms, the remaining 62 units of analysis or 49.6% use non big four Public Accounting Firms.

4.1.2 Inferential Analysis

The results of the overall model test prove a decrease in -2LL of 22,159 by comparing the initial Log Likelihood value (block number = 0) of 69,692 and the final Log Likelihood value (block number = 1) of 47,533. Decreased likelihood (-2LL) shows a better regression model or in other words the model is hypothesized fit with the data [18]. Goodness of fit tests are shown in the Hosmer and Lemeshow Test table. The results of this test show a chi-square value of 1.743 with a significance value of 0.942. Significance value is greater than 0.05 which means that there is no difference between the model and the data so that the regression model is feasible to be used in further analysis.

Nagelkerke R Square value shows a result of 0.380 which means that the variability of the dependent variable that can be explained by the independent variable is 38%, while the remaining 62% is explained by other variables outside this research model. The accuracy test of this model is used to assess how much the model accuracy, which in this study, the accuracy percentage of the model in classifying its observations is equal to 91.2%.

Based on the logistic regression test at the 0.05 significance level, the logistic regression model is obtained as follows:

\[
\text{SWITCH} = -2.037 - 2.144 \text{ZUP} - 0.967 \text{ZOA} + 1.815 \text{ZRA} - 4.620 \text{ZUP} \cdot \text{ZRA} + 0.982 \text{ZOA} \cdot \text{ZRA} + \varepsilon.
\]

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>B</th>
<th>Sig.</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₁: Firm size has a negative effect on auditor switching</td>
<td>-2.144</td>
<td>0.190</td>
<td>Rejected</td>
</tr>
<tr>
<td>H₂: Audit opinion has a negative effect on auditor switching</td>
<td>-0.967</td>
<td>0.019</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₃: The auditor's reputation strengthens the effect of company size on auditor switching</td>
<td>-4.620</td>
<td>0.021</td>
<td>Accepted</td>
</tr>
<tr>
<td>H₄: The auditor's reputation strengthens the effect of audit opinion on auditor switching</td>
<td>0.982</td>
<td>0.043</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

Source: Secondary data processed in 2020.

4.2 Discussion

4.2.1 Company Size has No Impact on Auditor Switching

The results of this study are in line with research conducted by Fakhri, Majidah & Nurbaeti [4], Winata & Anisykurlillah [5] and Fauziyyah, Sondakh & Suwetja [6], stating that company size does not affect the change of auditors in the company. This study failed to find any influence between the size of the company and the occurrence of auditor switching, allegedly because in reality the size of the company seen through its total sales tends not to change auditors by reason of avoiding agency costs and maintaining audit quality. The statement is in line with the sample of the company used that at PT Adaro Energy Tbk (ADRO) which has the largest size of the company with an average total sales during 2015-2018 valued at Rp 41,877,382,834,750.00, does not change auditors for four years namely by continuing to engage with KAP Tanudiredja, Wibisana, Rintis and Partners. In addition, PT Mitra Investindo Tbk (MITI), which has a
relatively small size of the company with an average total sales during 2015-2018 of Rp 29,717,656,618.00, also does not change its auditor for four years.

4.2.2 Audit Opinion has a Negative Effect on Auditor Switching

The results of this study are consistent with research conducted by Fauziyyah, Sondakh & Suwetja [6], Faradila & Yahya [7] and Putra & Suryanawa [8], showing the influence of audit opinion on the occurrence of auditor changes in a company. So, this research succeeded in proving that if the company had obtained an unqualified opinion on the results of its financial statement audit, then the management would tend to retain its auditors.

4.2.3 The Auditor's Reputation Strengthens the Effect of Company Size on Auditor Switching

This research successfully proves that the auditor's reputation can strengthen the influence of company size on the occurrence of auditor switching. So it can be concluded that the greater the size of the company assessed from total sales supported by a good auditor reputation with the Big Four KAP proxy, it will minimize the change of auditors made by the company management. The larger the company with the the business complexity that requires a lot of experienced and capable auditors knowing the client industry specialist well, the more they tend to retain auditors who have had a long-standing engagement with clients, and are supported by reputable auditors who are believed to have good competence and are able to learn the client's industry specialization well too.

4.2.4 The Auditor’s Reputation Unable to Strengthen the Effect of Audit Opinion on Auditor Switching

The results of this study did not succeed to prove the influence of the auditor's reputation as a moderating variable that was considered able to strengthen the influence of audit opinion on auditor switching on mining companies listed on IDX in 2015-2018. This is thought to be caused by the management who always tried to do the best for the company, so that even if the opinion given is in accordance with what is desired, that is, an unqualified opinion, but if the opinion given is not from a reputable KAP, the management is still trying to replace with a reputable KAP or in this study is proxied by a KAP affiliated with The Big Four KAP.

The results show that the auditor's reputation weakens the audit opinion of the auditor switching in accordance with the sample used in this study, namely PT Baramulti Sukses SARANA Tbk in 2015, PT Delta Dunia Makmur Tbk in 2015, PT Ratu Prabu Energi Tbk in 2016, PT Golden Eagle Energy Tbk in 2017, and PT Radiant Utama Interinsco Tbk in 2018 which showed that the unqualified opinion given by the Non Big Four KAP caused the management to change the KAP. Thus, an unqualified audit opinion will make management tend to maintain its KAP, but if the KAP used is not affiliated with the Big Four KAP, it will weaken the company's management's decision to maintain its KAP, so that management still tends to try to replace its KAP.

5 Conclusion

Based on the results and discussion of the company size effect, the audit opinion on auditor switching is moderated by the auditor's reputation in companies listed on the Indonesia Stock
Exchange (BEI) in 2015-2018. The size of the company with a logarithm of total sales has no effect on auditor switching allegedly because large companies or small companies tend not to replace their auditors to avoid agency cost.

Audit opinion has a negative effect on auditor switching because a company that has received a fair opinion without exception will cause the management to feel satisfied so that it tends to retain its auditor.

Auditor's reputation strengthens the influence of company size on auditor switching because large companies that have a lot of business complexity require experienced auditors and long-standing engagement with clients, and auditors who are in good standing are considered able to learn the client's industry specialization well and have a lot of experience.

The auditor's reputation is not able to strengthen the influence of audit opinion on auditor switching but instead weakens the influence of audit opinion on auditor switching allegedly because although the opinion given is reasonable without exception, if given by a non-big four KAP, the management tends to still want to replace its KAP so that the audit results more quality and able to be trusted by the public.

References


Does the Current Distribution of Fruit Commodities in North Sumatra Help to Enhance the Regional Economic Development?

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Politeknik Wilmar Bisnis Indonesia, Indonesia¹, ²

Abstract. Fruit commodity is one of the most imported agricultural commodities. However, the government did not pay enough attention to agricultural policies for this commodity. Farmers also prefer to plant food and plantation commodities. Meanwhile, increasing consumption of fruits creates opportunities for farmers and the government to meet domestic demand. It increases due to the consumption factor of the population. Fruit consumption is currently showing an increasing trend because public awareness to consume fruits continues to increase. To meet domestic demand, the fruit market is filled with imported fruits. We need an appropriate development plan for fruit commodities which has an impact on regional economic development. This study aims (1) to analyze potential fruit commodities in North Sumatra, (2) to analyze specialization and localization of fruit commodities, and (3) to analyze priority fruit commodities in North Sumatra. The research methodology used in this paper is quantitative descriptive using secondary data from 2017-2018. The results of the study show that (1) each district in North Sumatra has a very varied fruit commodity base, (2) there are no districts in North Sumatra that specialized in producing certain fruit commodities, (3) the priority fruit commodities are still monotonous. Planning of fruit commodities development has not been specialized so that the objectives of regional economic development based on horticultural commodities are difficult to achieve.

Keywords: Regional Economic Development

1 Introduction

Fruit commodity is one of horticulture commodity that is less considered compared to food commodities such as rice, corn, and soybeans. It happens because government policy focuses more on food commodity than horticulture commodity. Government policy about horticultural commodities only set about import restrictions, such as Minister of Agriculture Regulation (Permentan) No. 42 of 2012.

Fruit commodities import has been limited because to prevent and inhibit the new plant pests [1]. Meanwhile, in developing countries, the need for horticultural commodities continue to increase every year. Even, the needs of the world to fruits experiencing a deficit [2]. It all happens because the consumer preferences are shifting to healthy food [3]. This is an opportunity for Indonesia as a developing country with a tropical climate to increase production and meet the needs of world’s horticulture commodities. If production and export of this commodities is developed, it will give a positive impact to Indonesian economy.
The contribution of fruit commodities has not been optimal because its trade balance shown a deficit. It happens because the need for domestic fruits is dominated by imported commodities. If we increase the export of fruit commodities, it will create a surplus in trade balance [4]. Fruit commodities in Indonesia have a relatively higher price compared to the same commodity from other countries. This is due to the low efficiency in the production process and the high logistic costs of this commodity.

The contribution of those commodities in the Gross Regional Domestic Product (GRDP) of the Agricultural Sector in North Sumatra Province is only 10.8% lower than food and plantation commodities, 16.54% and 62.65% [5]. The export performance of fruit commodities in North Sumatera in recent years has tended to decrease because of the falling export quantities and commodity prices. In 2017, fruit exports were US$ 242,509,000 to US$ 208,991,000 in 2008 [6]. Meanwhile, the export of agricultural commodities has a significant effect on the economic growth [7]. Therefore, North Sumatera government needs to encourage regional economic through the development of fruit commodities by identifying high-priority of fruit commodities in each regency.

Fruit commodities can be developed if an area has a competitive advantage, comparative, and specialized for the commodity. Therefore, the aim of this study is (1) to analyze superior fruit commodities in North Sumatera, (2) to analyze specialization and localization of fruit commodities in North Sumatera, and (3) to analyze priority of fruit commodities in North Sumatera.

2 Research Methods

2.1 Sample

The sample of this research is all regencies or cities in North Sumatera. There are 25 regencies and 8 cities. Hance, there are 33 sample.

2.2 Data Collection

Data used in this study are secondary data from 2017 to 2019 obtained from Central Statistical Bureau and Ministry of Agriculture. The data used include production data, price, and production value of fruit commodity. Fruit commodity that being researched are Mango, Durian, Orange, Banana, Papaya, and Salak fruit. They were chosen because this commodity has increased domestic consumption, but imports of this commodity are also relatively high, resulting in a deficit in the agricultural balance.

2.3 Analysis Tools

2.3.1 Analysis of Superior Fruit Commodities in North Sumatera

Fruit commodity determined by Location Quotient (LQ) analysis. LQ analysis is a comparison between the relative share of commodity production I at the regional level to the total production area of the region with the relative share of commodity production i at the level of region to total production of the region. if LQ ≥ 1, it means that the regency/city is a commodity base. If LQ ≤ 1, it means that the district is not a commodity base [8]. LQ model has the following formula [9]:
\[ LQ = \frac{x_i/n_i}{x/n} \] ................................................. (1)

where:
\( x_i \) = total production value of fruit commodities at regency/city level  
\( n_i \) = total production of fruit commodities at regency/city level  
\( x \) = total production value of fruit commodities at provincial level  
\( n \) = total production of fruit commodities at provincial level

2.3.2 Specialization Analysis and Localization of Fruit Commodities in North Sumatera

Specialization Quotient (SQ) and Localization Quotient (LoQ) is used to determine distribution and concentration of fruit commodity production. SQ is used to determine the specialization of an agriculture activity in a district and specialization of certain fruit commodities at the level of North Sumatera. If \( SQ \geq 1 \), it means that at the district level there is specialization in agricultural activities for fruit commodities. If \( SQ = 0 \), it means that fruit commodities are not specialized in some regency. If \( SQ < 1 \) and close to 0, it indicates that at the district level there are no specialization of certain agricultural activities. Nevertheless, a positive SQ indicates that the district has a comparative advantage in producing certain agricultural commodities [10]. The formula of SQ [11] is:

\[ SQ = \left\{ \left( \frac{S_i}{\sum S_i} \right) - \left( \frac{N_i}{\sum N_i} \right) \right\} \] ................................................. (2)

where:
\( S_i \) = fruit commodities at the regency level  
\( N_i \) = fruit commodities production at the province level  
\( \Sigma S_i \) = total production of fruit commodities at the regency level  
\( \Sigma N_i \) = total agricultural production at the national level

LoQ is used to measure the distribution of agricultural commodities development activities in a region. If \( LoQ \geq 1 \), there is a concentration of agricultural activities. If \( LoQ \leq 0 \), there is no centralization in agricultural activities. Therefore, the priority of fruit commodity is determined from LQ and KS. The LoQ formula is as follows [11]:

\[ LoQ = \left\{ \left( \frac{S_i}{N_i} \right) - \left( \frac{\Sigma S_i}{\Sigma N_i} \right) \right\} \] ................................................. (3)

2.3.3 Analysis of Priority of Fruits Commodities in North Sumatera

Fruit commodities that become priority is analyzed based on the combination by looking at the highest LQ value and the highest SQ of fruit commodities in each regency. The greater the LQ of commodity, the greater the potential advantage of the commodity. And, if the quotient value is the highest in various commodity that means the commodity has a comparative advantage to be produced in the regency. Fruit commodities that have the highest LQ and highest SQ can be prioritized for better development in an area.
3 Result and Discussion

3.1 Analysis of Superior Fruit Commodities in North Sumatera

Based on the results of the LQ analysis in Table 1 shows that of the 6 fruit commodities that being analyzed, Oranges and Salak fruit are the leading commodities with the least amount for several regencies. There are only 4 regions which are the basis of oranges and 3 regions which are the basis of Sulak fruit. The rest, such as mangoes, Durians, Bananas, and Papayas are superior commodities in many regions.

<table>
<thead>
<tr>
<th>No.</th>
<th>Commodities</th>
<th>Regencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mangoes</td>
<td>Mandailing Natal, Tapanuli Selatan, Tapanuli Utara, Toba Samosir, Labuhan Batu, Asahan, Deli Serdang, Langkat, Nias Selatan, Samosir, Serdang Bedagai, Batubara, Padang Lawas, Labuhan Batu Selatan, Labuhan Batu Utara, Nias Barat, Tanjung Balai, Pematang Siantar, Tebing Tinggi, Medan, Binjai, Padangsidempuan, Gunungsitoli</td>
</tr>
<tr>
<td>2</td>
<td>Durians</td>
<td>Nias, Mandiling Natal, Tapanuli Tengah, Tapanuli Utara, Toba Samosir, Labuhan Batu, Dairi, Nias Selatan, Pakpak Bharat, Samosir, Serdang Bedagai, Padang Lawas, Labuhan Batu Selatan, Labuhan Batu Utara, Nias Utara, Nias Barat, Pematang Siantar, Tebing Tinggi, Binjai, Gunung Sitoli</td>
</tr>
<tr>
<td>3</td>
<td>Oranges</td>
<td>Tapanuli Utara, Simalungun, Dairi, Karo, Pakpak Bharat</td>
</tr>
<tr>
<td>4</td>
<td>Bananas</td>
<td>Nias, Mandailing Natal, Toba Samosir, Asahan, Deli Serdang, Langkat, Nias Selatan, Serdang Bedagai, Batubara, Padang Lawas, Labuhan Batu Utara, Nias Utara, Nias Barat, Tanjung Balai, Pematang Siantar, Tebing Tinggi, Binjai</td>
</tr>
<tr>
<td>5</td>
<td>Papayas</td>
<td>Nias, Mandailing Natal, Toba Samosir, Labuhan Batu, Deli Serdang, Langkat, Nias Selatan, Samosir, Serdang Bedagai, Batubara, Padang Lawas, Labuhan Batu Selatan, Labuhan Batu Utara, Nias Barat, Tanjung Balai, Pematang Siantar, Tebing Tinggi, Medan, Binjai, Padangsidempuan, Gunungsitoli</td>
</tr>
<tr>
<td>6</td>
<td>Salak</td>
<td>Tapanuli Tengah, Humbang Hasundutan, Padang Sidempuan</td>
</tr>
</tbody>
</table>

Source: LQ Analysis.

Orange is not a basis commodity because for optimal orange cultivation, it requires geographical condition of 400-700 masl. Karo District can be a base for oranges because the area is a plateau. It can be seen from the productivity of orange commodities in one of the districts reached 2.42 quintal/tree [12]. Besides, the expansion of oil palm plantations in North Sumatra could be one factor that makes the area of fruit commodities very limited. In 2005, the area of oil palm plantations was 894,911 hectares to 1,290,977 hectares in 2009 and in that year the portion of land area of oil palm plantations in North Sumatra reached 17.13% nationally [13].

Karo and Simalungun are areas that are well known as oranges producer. Orange production from Karo reached 56.62 percent of orange production in North Sumatera in 2017. Tapanuli Selatan is famous for Salak fruit. Even in the same year, the contribution of Salak fruit
production in Tapanuli Selatan reached 89.24 percent of total production of Salak fruit in North Sumatera.

3.2 Analysis of Specialization and Localization of Fruit Commodities in North Sumatera

3.2.1 Mango

Figure 1 shows the level of specialization and localization (distribution) of mango commodities. Based on SQ mango, it can be seen that there are more than 50% of districts/cities which has a positive SQ value. This means that more than 50% of the region has a comparative advantage for mangoes. Nevertheless, none of these 50% have a SQ ≥ 1 that indicates the specialization of the mango in a district.

The level of localization or distribution of mango commodities can be seen from the value of LoQ is close to zero and even has a minus value. This is caused by the mango produced in all regencies in North Sumatera with relatively the same level of production. Therefore, the existence of mango commodities tends to spread evenly in districts in North Sumatera.

![Fig. 1. Specialization and Localization of Mango Commodities in North Sumatera (Results of Analysis).](image)

3.2.2 Durians Commodities

Level of specialization of durians is no better than mangoes. There is a fewer comparative advantage in regencies. There are only 6 regencies that have a relatively higher SQ than other regions. Other regions have a negative value (see Figure 2). Durian has not been cultivated specifically by farmers because it is only a plant that grows in the forest without nurturing and people just wait the fruit to be harvested.

Figure 2 also shows that the average LoQ of durians in all regencies is smaller than 1 and some even have a minus value. This is also due to the fact that durian commodities are produced in North Sumatera with relatively the same level of production. Therefore, the presence of mango commodities tends to spread evenly in North Sumatera.
3.2.3 Oranges

SQ and LoQ of oranges are very different from the previous fruit commodities. There are only 5 districts that have a comparative advantage with positive SQ. There are Tapanuli Utara, Simalungun, Dairi, Karo, and Pakpak Bharat (see Figure 3). Nevertheless, in the 5 districts, citrus has not been specialized because the SQ value <1. While other regencies have SQ ≤ 0. It means that the production of oranges commodities in many regencies is still relatively small when compared to other fruit commodities.

Based on Figure 3, it can be seen that the LoQ of orange is not > 1, even the LoQ value is closer to 0. This shows the same thing as the previous fruit commodity, which is the spread of orange production in several regencies is at the same level. However, there are four districts that have relatively high LoQ scores, such as Asahan, Simalungun, Dairi, and Karo, with LoQ values of 0.06; 0.08; 0.09; and 0.13. This is because the oranges are only cultivated in these 4 regencies. Therefore, the concentration rate is relatively high.
3.2.4 Bananas

There are only 7 regencies that have a positive SQ of bananas (see Figure 4). This is better than oranges, where is only 5 regencies that have a positive SQ value. The 7 regencies are Nias, Asahan, Langkat, Labuhan Batu Utara, Nias Utara, Nias Barat, and Tanjung Balai. There are several more that have positive SQ values but the numbers are relatively very small. Bananas in 7 regencies has a comparative advantage compared to other fruit commodities. However, the same as the previous fruit commodity, the SQ value <1 means that the banana has not been specialized in the 7 regencies.

Langkat has a relatively higher LoQ value of bananas compared to other regions, which is 0.47 (see Figure 4). This is due to the fact that banana is only cultivated in one district, Langkat. Therefore, the concentration rate is high. Banana production in this district reaches 50.35 percent of total banana production in North Sumatera. Another could be due to the price of banana commodities in recent years has increased. Banana prices grow annually at an average of 10.35 percent [14]. Because high prices and production will lead to an increasing value of production of these commodities.

![Fig. 4. Specialization and Localization of Banana Commodities in North Sumatera (Result of Analysis).](image)

3.2.5 Papayas

Based on Figure 5 it shown that the SQ of papayas is much better than bananas. Many regencies have positive SQ, although they are still less than 1. This shown that papayas in some regions have a comparative advantage even it has not been specialized. The trend of papaya commodities production in North Sumatera has increased in recent years, e.g., in 2018, total production of papaya amounted to 295,698 tons then in 2019 it became 1,123,277 tons.

Similar to bananas, papayas LoQ is not > 1 but Langkat district has a relatively high LoQ value compared to other regencies. Because papaya is mostly cultivated in one regency, Langkat. Therefore, the concentration rate is high.
3.2.6 Salak

SQ and LoQ of Salak fruits commodity in each regency is very different (see Figure 6). There are only 3 regencies that dominate with positive SQ, namely Tapanuli Selatan, Humbang Hasundutan, and Padang Sidempuan, with SQ values 0.64; 0.45; and 0.56, respectively. The figure shows that 3 regencies have a comparative advantage for Salak.

Nevertheless, what’s interesting is shown by the LoQ value of Salak. In Figure 6, it can be seen that from 3 regencies above, only Tapanuli Selatan has the highest LoQ value. This is because the production of Salak in Tapanuli Selatan is very high, e.g., in 2017 production of Salak fruit in Tapanuli Selatan reached 1,453,691 tons, while in Humbang Hasundutan and Padang Sidempuan only 113,280 tons and 8,240 tons in the same year [5].
### 3.3 Analysis of Priority of Fruits Commodities in North Sumatera

The criteria for priority of fruit commodities to be developed in each district are commodities with relatively high LQ and SQ values. Based on these criteria (see Table 2):


b) Durians are only prioritized in: Tapanuli Tengah.

c) Oranges are prioritized in: Tapanuli Utara, Simalungun, Dairi, Karo and Pakpak Bharat.

d) Bananas are prioritized in: Nias, Nias Utara and Nias Barat.

e) Papayas are prioritized in: Labuhan Batu, Deli Serdang and Langkat.

f) Salaks are prioritized in: Tapanuli Selatan, Humbang Hasundutan, and Kota Padangsidempuan.

<table>
<thead>
<tr>
<th>No</th>
<th>Regencies</th>
<th>Commodities</th>
<th>LQ</th>
<th>SQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Nias</td>
<td>Banana</td>
<td>4.51</td>
<td>0.25</td>
</tr>
<tr>
<td>2</td>
<td>Mandailing Natal</td>
<td>Mango</td>
<td>3.11</td>
<td>0.19</td>
</tr>
<tr>
<td>3</td>
<td>Tapanuli Selatan</td>
<td>Salak fruit</td>
<td>4.02</td>
<td>0.64</td>
</tr>
<tr>
<td>4</td>
<td>Tapanuli Tengah</td>
<td>Durian</td>
<td>9.87</td>
<td>0.70</td>
</tr>
<tr>
<td>5</td>
<td>Tapanuli Utara</td>
<td>Orange</td>
<td>1.13</td>
<td>0.14</td>
</tr>
<tr>
<td>6</td>
<td>Toba Samosir</td>
<td>Mango</td>
<td>4.80</td>
<td>0.22</td>
</tr>
<tr>
<td>7</td>
<td>Labuhan Batu</td>
<td>Papaya</td>
<td>14.35</td>
<td>0.40</td>
</tr>
<tr>
<td>8</td>
<td>Asahan</td>
<td>Mango</td>
<td>3.78</td>
<td>0.24</td>
</tr>
<tr>
<td>9</td>
<td>Simalungung</td>
<td>Orange</td>
<td>1.94</td>
<td>0.38</td>
</tr>
<tr>
<td>10</td>
<td>Dairi</td>
<td>Orange</td>
<td>1.46</td>
<td>0.27</td>
</tr>
<tr>
<td>11</td>
<td>Karo</td>
<td>Orange</td>
<td>1.28</td>
<td>0.12</td>
</tr>
<tr>
<td>12</td>
<td>Deli Serdang</td>
<td>Papaya</td>
<td>4.27</td>
<td>0.32</td>
</tr>
<tr>
<td>13</td>
<td>Langkat</td>
<td>Papaya</td>
<td>3.29</td>
<td>0.38</td>
</tr>
<tr>
<td>14</td>
<td>Nias Selatan</td>
<td>Mango</td>
<td>7.81</td>
<td>0.47</td>
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<tr>
<td>15</td>
<td>Humbang Hasundutan</td>
<td>Salak fruit</td>
<td>2.86</td>
<td>0.45</td>
</tr>
<tr>
<td>16</td>
<td>Pakpak Bharat</td>
<td>Orange</td>
<td>1.26</td>
<td>0.12</td>
</tr>
<tr>
<td>17</td>
<td>Samosir</td>
<td>Mango</td>
<td>14.50</td>
<td>0.65</td>
</tr>
<tr>
<td>18</td>
<td>Serdang Bedagai</td>
<td>Mango</td>
<td>12.88</td>
<td>0.61</td>
</tr>
<tr>
<td>19</td>
<td>Batu Bara</td>
<td>Mango</td>
<td>17.23</td>
<td>0.77</td>
</tr>
<tr>
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<tr>
<td>21</td>
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</tr>
<tr>
<td>22</td>
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<tr>
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</tr>
<tr>
<td>24</td>
<td>Nias Utara</td>
<td>Banana</td>
<td>4.64</td>
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</tr>
<tr>
<td>25</td>
<td>Nias Barat</td>
<td>Banana</td>
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<tr>
<td>26</td>
<td>Kota Sibolga</td>
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<td></td>
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<tr>
<td>27</td>
<td>Kota Tanjung Balai</td>
<td>Mango</td>
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<td>0.61</td>
</tr>
<tr>
<td>28</td>
<td>Kota Pematang Siantar</td>
<td>Mango</td>
<td>9.40</td>
<td>0.52</td>
</tr>
<tr>
<td>29</td>
<td>Kota Tebing Tinggi</td>
<td>Mango</td>
<td>15.88</td>
<td>0.68</td>
</tr>
<tr>
<td>30</td>
<td>Kota Medan</td>
<td>Mango</td>
<td>24.62</td>
<td>0.84</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>Kota Binjai</td>
<td>Mango</td>
<td>13.56</td>
<td>0.69</td>
</tr>
<tr>
<td>32</td>
<td>Kota Padangsidimpuan</td>
<td>Salak fruit</td>
<td>3.49</td>
<td>0.56</td>
</tr>
<tr>
<td>33</td>
<td>Kota Gunungsitoli</td>
<td>Mango</td>
<td>4.03</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Source: Analysis of LQ and SQ.

There are several limitations of this study. First, only 5 fruit commodities were used as objects due to the limited data obtained. Second, there were 2 districts that did not have fruit production data. Third, data used in this research only 3 years, 2017-2019. These limitations will give different results if other studies conduct research with the same sample and objects.

4 Conclusion

Based on the results of this study indicate that (1) each district in North Sumatera has a fruit base commodity that varies greatly, (2) there are no districts in North Sumatera that specialized in producing certain fruit commodities and produced at a relatively the same in North Sumatera’s regency, (3) the priority of fruit commodity is still monotonous because almost 49 percent of regencies with mangoes as priority. Hance, the goal of regional economic development based on horticultural commodities is difficult to achieve because fruit commodities have not been specialized and evenly localized. We need a more comprehensive and specific regional horticultural commodity development plan is needed based on the study.

5 Acknowledgement

This study was supported by a research grant from Ministry of Research, Technology, and Higher Education, Indonesia. We also thank to Wilmar Business Indonesia Polytechnic for facilitating us as researchers in this study. We are also grateful for the insightful comments offered by the anonymous peer reviewers. The generosity and expertise of one and all have improved this study in innumerable ways and saved us from many errors, those that inevitably remain are entirely our own responsibility.

References


The Effect of Learning Organization and Organizational Tenure on Innovative Behaviour through Work Engagement as a Mediating Variable

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Universitas Negeri Semarang, Indonesia¹, 2, 3

Abstract. This study aimed to determine the role of work engagement in mediating the effect of learning organization and organizational tenure on innovative behavior. Phenomena showed that there were 5.6 million teachers in Indonesia; only around 2% of teachers were innovative, meaning that 98% of teachers were not innovative. SMK teachers in Central Java consisted of 116 analysis units. The sampling technique used iteration, so that all teachers who were successfully met were the research sample. Data collection techniques used questionnaires. The data used were primary data in the form of answers to questionnaire questions. The results showed that learning organization and organizational tenure had a significant positive effect on innovative behavior. Then work engagement was able to mediate the effect of organizational tenure on innovative behavior, but failed to mediate the effect of learning organization on innovative behavior.

Keywords: Learning Organization, Organizational Tenure, Innovative Behavior, Work Engagement

1 Introduction

Regulation No. 34 of 2018 of Minister of Education and Culture concerning National Education Standards of Vocational High School/Vocational Madrasah Aliyah explains that in order to improve the quality and competitiveness of Indonesian human resources it is necessary to revitalize Vocational High Schools/Vocational Madrasah Aliyah through refinement and alignment of curriculum with competencies according to the needs of graduate users, increasing competence for educators and also included in the component of creativity, explains that the graduate competency standards must have the ability to search for and produce ideas, ways of working, services and innovative work products according to their expertise. Besides that, it must also have the ability to work together to solve problems in carrying out tasks according to their expertise creatively. That is, every education or teacher must be able to accommodate every competency, so to create creative and innovative graduates, they must first begin with teachers who have creativity and innovation. Teachers must continue to update their knowledge, look for new ideas to do their work, use various technologies to improve the quality and effectiveness in carrying out their work [1]. One of the successes of school innovation is determined by the innovative work behavior of teachers [2].

The view that innovation is essential to create competitiveness in organizations has been generally agreed [3]. Innovative behavior is increasingly important for organizational survival. Therefore, many people focus on examining issues such as what affects employees 'innovative
behavior and how to encourage employees' innovative behavior [4]. To encourage employee innovation habits, organizations must make efforts to encourage employees to produce innovation. The work done by companies in learning to develop to be better is called a learning organization [5]. Rowley [6], organizational learning pays attention to individual learning itself, but that is not enough, but individual learning must be utilized to create organizational learning. Hu et al. [7]; Wang and Wang [8] revealed that organizational learning abilities and knowledge sharing (other innovative efforts) have been explored as a source of employee innovative behavior because knowledge dissemination functions as an initial idea. Skerlavaj et al. [9], organizational learning culture was found to be a significant predictor of many cultural, product and service (technical) and process (administrative) innovations in Korean companies. Other research also showed a significant positive relationship between team creativity and organizational knowledge creation practices [10].

Besides being influenced by learning organization, innovative behavior is also driven by the length of work tenure (organizational tenure). Personality job fit theory is also related to the theory of compatibility of people with organizations, where this theory accommodates the relationship between organizational tenure and innovative behavior. This theory shows that an organizational tenure can promote innovative employee behavior. Liu et al. [11] defined the length of service of an organization as the length of time someone holds a job in an organization Wright and Bonett [12] so that it can affect employee attitudes, behavior, and performance. Furthermore, he explained that through the accumulation of organizational tenure, one might have more work experience so that it is more innovative in developing strategies for organizational development. Individuals with longer tenure are generally those who perform well to survive the friction process [13]. In addition, tenure in an organization causes employees to get projects that are relevant and specific, because they have extensive organizational knowledge to facilitate performance [14].

Phenomenon on the ground showed that the quality of teachers in producing innovations was low; the data revealed that Indonesia ranked 4th- last in global talent competitiveness index 2019. Singapore ranked first with a score of 77.27. The next rank was followed by Malaysia (58.62), Brunei Darussalam (49.91) and the Philippines (40.94). Meanwhile, Indonesia ranked sixth with a score of 38.61.

![Fig. 1. Global Talent Competitiveness Index 2019 (Secondary data processed, 2019).](image)
In addition, the results of teacher competency tests in Indonesia are still far from the average figure set by the government, in 2019/2020 the government set competency standards for educators, especially teachers reaching a score of 80.00, but in reality, that number had not been reached in all provinces in Indonesia. The data showed that the average national teacher competency score was 56.69. The average was measured from a variety of teacher competencies consisting of social competencies, personality competencies, knowledge competencies and skills competencies. The low number also illustrated the low competency of teachers so it had implications for the lack of innovation created. The education expert at Universitas Muhammadiyah Surakarta (UMS), Prof. Dr. Tjipto Subadi, revealed, the quality of education in Indonesia is among the lowest in the world, among the causes is the teacher factor in the national education system. Teachers in Indonesia in general, are accustomed to working alone, teachers who are creative and innovative in teaching do not affect other teachers, the egoism of teachers is relatively high and other contributing factors include the teacher coaching model. It is strengthened by the narrative of Central Java DPRD Commission E member Yudi Indras Wiendarto said the problem of education in Central Java is not only that.

Based on data from the Directorate General of Secondary Education of the Ministry of Education and Culture, the achievement of SMA/SMK in Central Java referring to 8 National Education Standards (SNP) declined down. The most concerning was the Standard of Education and Educator Staff 3.71-4.51-3.8. Likewise with the achievement of SNP SMK, the results also showed there were 5.6 million teachers in Indonesia, only around 2% of teachers were innovative, meaning that 98% of teachers were not innovative.

2 Research Method

The population in this study was lecturers in state university in Central Java. The sample selection in this study used the iteration method, so that a sample of 116 Vocational High School teachers was obtained. The variables used in this study were innovative behavior as the dependent variable, organizational flow and organizational tenure as the independent variable, and work engagement as a moderating variable. Data collection techniques used a questionnaire while the analysis tool used descriptive analysis and moderated regression analysis.

3 Results and Discussion

3.1 Descriptive Statistics

<table>
<thead>
<tr>
<th>Descriptive Statistics</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learning Organization</td>
<td>120</td>
<td>34.00</td>
<td>70.00</td>
<td>54.7333</td>
<td>8.12066</td>
</tr>
<tr>
<td>Organizational Tenure</td>
<td>120</td>
<td>18.00</td>
<td>30.00</td>
<td>24.7667</td>
<td>3.35249</td>
</tr>
<tr>
<td>Work Engagement</td>
<td>120</td>
<td>26.00</td>
<td>50.00</td>
<td>40.9250</td>
<td>5.61385</td>
</tr>
<tr>
<td>Innovation Behavior</td>
<td>120</td>
<td>30.00</td>
<td>50.00</td>
<td>41.4667</td>
<td>5.14322</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>120</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Primary data processed, 2020
Results of descriptive analysis test showed distribution of research data in detail was explained in Table 1. The results indicated that the variable of learning organization had a minimum value of respondents from the questionnaire answers of 34 and a maximum value of 70. The mean value was 54.7333 with a standard deviation or data distribution of 8.12066. Variable Organizational tenure had a mean value of 24.7667 with a standard deviation of 3.35249, in addition the mediation variable namely work engagement had a value of 40.9250 and a standard deviation of 5.61385. Finally, the innovative behavior variable got a mean of 41.4667 and the standard deviation value was 5.14322. The results of the four variables in the calculation of descriptive statistics indicated that the mean was greater than the standard deviation. This showed that there was a good representation for data distribution.

Before testing hypotheses, classical assumptions were tested, which included normality test of the Kolmogorov Smirnov and P-Plot, multicollinearity test, and heteroscedasticity test. Based on the Kolmogorov Smirnov One-Sample test, it can be seen that the data was avoided from the normality problem where the significance value indicated a value of 0.169. The results of multicollinearity test showed that all variables used had tolerance values of more than 0.1 and VIF values of less than 10 therefore it can be said that there was no multicollinearity in the model used. The output of the park test used to test the symptoms of heteroscedasticity showed a significance value of more than 0.05 from each variable, therefore it can be concluded that the model was avoided from heteroscedasticity. Then in the third model a moderation test was carried out and the results of the description was shown in Table 2.

Table 2. Moderation Test

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>23.553</td>
<td>1.243</td>
</tr>
<tr>
<td></td>
<td>X1.Z</td>
<td>.000</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>X2.Z</td>
<td>.018</td>
<td>.001</td>
</tr>
</tbody>
</table>

In table 2. It was explained that the effect of learning organizations through moderating variable, namely work engagement on innovative behavior was not significant because the beta value of -0.036 with a significance of 0.593. Then the effect of organizational tenure on innovative behavior through work engagement had a beta value of 0.865 with a significance of 0.000, which means significant. Then the results of hypothesis testing can be seen in Table 3.

Table 3. Results of Hypothesis Test

<table>
<thead>
<tr>
<th>No</th>
<th>Hypothesis</th>
<th>Beta</th>
<th>Sig.</th>
<th>A</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning Organization has a significant positive effect on innovative behavior</td>
<td>0.114</td>
<td>0.020</td>
<td>0.05</td>
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</tr>
<tr>
<td>2</td>
<td>Organizational Tenure has a significant positive effect on innovative behavior</td>
<td>0.832</td>
<td>0.000</td>
<td>0.05</td>
<td>Accepted</td>
</tr>
<tr>
<td>3</td>
<td>Learning Organization has a significant positive effect on work Engagement</td>
<td>0.083</td>
<td>0.362</td>
<td>0.05</td>
<td>Accepted</td>
</tr>
<tr>
<td>4</td>
<td>Organizational tenure has a significant positive effect on work engagement</td>
<td>0.254</td>
<td>0.006</td>
<td>0.05</td>
<td>Accepted</td>
</tr>
</tbody>
</table>
5. Learning Organization did not have an effect on innovative behavior through work engagement
\[ -0.036 \quad 0.593 \quad 0.05 \] Rejected

6. Organizational Tenure has a significant positive effect on innovative behavior through work engagement
\[ 0.865 \quad 0.000 \quad 0.05 \] Accepted

Source: Primary data processed, 2020.

3.2 Effect of Learning Organization on Innovative Behavior

The results showed a significant effect of learning organization on innovative behavior. This can be interpreted as the higher a person did learning organization, it would increase the innovation produced. According to Marquardt and Reynolds [15] learning is a process carried out by individuals in their efforts to acquire new knowledge and insights to change their behavior and actions. Meanwhile, the characteristics of LO are the existence of a supportive climate, learning culture, human resource development strategies, and putting the organization in a process of continuous transformation. Also, it was strengthened by Fahey [16] which stated that learning is not just knowledge creation but also uses it for decision-making and action guidance. The results of this study were in line with a number of expert opinions which suggested that learning is an attempt to construct new insights and will lead to action. So, it was clear that the more often a person did learn, the more his ability to develop new insights and produce innovative behavior.

The education staff or teacher was a determining factor in the successful achievement of learning objectives. The current phenomenon of the government has encouraged teachers, especially the Vocational High School (SMK) to innovate in learning. A teacher's creative thoughts or ideas were needed to be able to change the learning scenario to be more interesting, effective and efficient, while simultaneously encouraging students to actively participate in learning activities. Conditions in the midst of a pandemic such as now encouraged teachers to do learning, for example they took part in the socialization of distance learning with technology-based media, teachers were also increasingly intense in attending seminars and training in the use of online learning media through webinar activities. With more intense teacher learning, innovations would emerge in teaching and learning activities. Schools that implemented or required teachers to use technology to share information can stimulate teachers to exchange ideas and bring up innovative actions in organizations.

Learning organization as an effort taken by the organization in the context of how to learn about new things related to the work of teachers, for example in terms of approaches, methods, learning models used in learning activities. Besides learning organization was also an effort to motivate teachers to find new ideas that would contribute to the school's reputation. Thus, it was very possible for organizations to trigger the habit of innovating for organizational members by encouraging innovative behavior of organizational members [17]. Prakoso [18] revealed that the results of testing using partial least square (PLS) showed that the learning organization had a positive effect on innovative behavior. This was in line with the findings in this study which showed the same thing. Even this result was reinforced again by Anshar [19] resulting in the finding that visionary leadership and learning organizations had a direct and positive effect on innovative behavior.

3.3 Effect of Organizational Tenure on Innovative Behavior

The results showed a significant effect of organizational tenure on innovative behavior. Organizational tenure was about the period of employment of employees. The working period...
is the whole lesson learned by someone from the events that are passed in his life journey. The working period was the period of time or length of time someone works in an agency, office and so on [20]. Meanwhile, work period or work experience is those who are deemed capable of carrying out their duties which will be given in addition to intelligence abilities which are also the basis for further consideration. From the opinion above, it can be concluded that the work period or work experience was the expertise or ability possessed by someone in a field of work obtained by learning in a certain period of time which was certainly seen from the ability of intelligence, both experience that came from outside the company or from within the company.

Organizational tenure referred to the length of work held by someone in an organization. Employees who had different organizational tenure can differ from each other in terms of psychological characteristics, cognitive level, experience and career strategies [11][21][22]. These theories indicate that organizational tenure “can” promote innovative employee behavior, but organizational tenure is a variable in the personality trait of new or old employee attributes. So that the findings in this study were in line with the opinions of experts who revealed that organizational tenure contributed to the formation of innovative employee behavior. Organizational tenure as a moderating variable affected the innovative behavior of employees.

The phenomenon on the ground showed that currently the demands of teachers to innovate were very high, the more people work, the more they would produce innovation, because they had more work experience. The results of this study also revealed that the more senior, the more innovative the teachers were. Many outstanding teachers came from those who already had a lot of experience in developing creative ideas. In addition, they had gone through many problems at work, so that the ability to find solutions to problems and better decision-making skills were formed, so that from those experiences and abilities, those teachers who had long worked would tend to be more creative and innovative at work.

3.4 Effect of Learning Organization on Work Engagement

The research findings showed that learning organization had a positive and significant effect on work engagement. Work engagement is a statement of mind about work that is intact and positive, where this is shown through passion/vigor, dedication and absorption in work [23][24]. In essence, work engagement sees how employees carry out their work; whether as something that stimulates and makes active, and something that makes them really willing to be loyal or provides full time and effort (the vigor component); as something significant and meaningful (dedication); and as something that is exciting and makes, they are truly able to concentrate (absorption) [25].

Khan [26] described an employee who is engaged as a person who is physically, cognitively and emotionally fully connected to his work. The same thing was reinforced by the statement of Bakker et al. [27] which stated that engaged employees have a positive attitude and a high level of activity, they are able to create positive feedback for themselves, in terms of appreciation, recognition, and success. They also enjoy a variety of activities outside of work, so that it is different from workaholics who work hard because of an impulse in themselves that cannot be held, for them to work is fun [27]. So, it can be said that indirectly when an employee is involved in an organization as a whole, then he has had a learning effort in the organization very well, therefore the findings in this study were in line with some of the expert opinions above.

The results showed that a good learning organization at PT Pertamina MOR V Jatim Balinus could influence the increase in employee engagement work [18]. Besides that, research
also showed a significant positive relationship between team creativity and organizational knowledge creation practices [10]. In addition, Tseng [28] and Atak [29] found that learning organization culture made a positive impact on employee commitment to the organization. Employees involved were found to display more proactive behavior [30].

The greatest demand and task of a teacher was that he must be willing to study wherever and whenever he had to be able to adjust his abilities to the current demands. The intensity of the teacher in doing learning would encourage better involvement. At present, in a pandemic situation like this, the teacher must learn continuously to adapt the learning scenario to the needs and preferences of the students, while also the involvement of the teacher in the teaching and learning process was urgently needed. Thus, when a teacher had high learning intensity, it would increase his involvement in the work.

3.5 Effect of Organizational Tenure on Work Engagement

The results of hypothesis testing indicated that organizational tenure had a positive and significant effect on work engagement. Companies were no longer only looking for prospective employees who had above average capabilities, but they were also looking for prospective employees who were able to invest themselves to be fully involved in work, proactive, and had a high commitment to quality standards of performance [27].

A long period of work would make an employee feel more at home or tend to have a sense of work attachment in an organization or company, this was because they had adapted to the work environment long enough so that someone would feel comfortable with their work. Other causes were also due to policies from agencies or companies regarding life insurance in old age [31]. They also needed employees who can be tied to their work [32]. Various expert opinions explained the relationship and direction between organizational tenure and work engagement. Kurniawati (2014) produced a finding that it can be seen that the correlation coefficient between tenure and job engagement was 0.653. Significance test showed the results of 0.000 (p 0.01) which means that the correlation of the two variables was very significant.

Each employee had a different service period, then from different service periods people often mentioned it in terms of senior and junior. Every employee who had a long service life, tend to be involved in various jobs. That was caused by the length of service of an employee that would affect his performance. They were considered to have better ability, more experience and ability to solve problems more wisely. So directly they also had a very high work involvement. Like a teacher, for those who had a long working period would get more teaching hours, be involved in various school activities and be more trusted. They were involved in more work than teachers with only a few years of service.

3.6 Effect of Learning Organization on Innovative Behavior with Work Engagement as a Moderating Variable

The results showed that work engagement was unable to mediate the effect of learning organizations on innovative behavior. Although someone had learned new things, then had been involved in an organization, but not yet able to implement the ideas they had freely. Often in an organization an employee who was diligent and often involved in many organizational activities actually got pressure from many parties. For example, cases of unfair competition in an organization encouraged someone to corner other employees, from this phenomenon someone would feel pressured, so that even though he or she was doing good learning activities, they had a high work involvement, but not necessarily able to encourage innovative behavior to employees. Kahn [33] stated that there were three psychological conditions related to the
formation of attachment at work, namely meaning, security, and willingness. It was clear here that security was one of the determinants of employee involvement in the workplace.

3.7 Effect of Organizational Tenure on Innovative Behavior with Work Engagement as a Moderating Variable

The results revealed that work engagement was able to moderate the effect of organizational tenure on innovative behavior. Organizational tenure referred to the length of work held by a person in an organization or can also be referred to as the length of service of an employee. Employees who had different organizational tenure can differ from one another from psychological characteristics, cognitive level, experience and career strategies [21][22]. The longer the work period of a person, the more they were involved in his organization. So that involvement would build a lot of knowledge and mature, skills and experience that can be used to support the formation of creative ideas in employees. Even though so many studies focused on this area, there were no consistent conclusions about the problem of how the tenure of an organization influenced employees' innovative behavior and what the authenticity of the relationship was. Literature showed a positive thing [21][34].

Besides that, Liu et al. [11] said the results showed that organizational tenure was a key factor influencing employee job involvement, job satisfaction and innovative behavior. Liu et al. [11] human resources tended to increase with the accumulation of organizational tenure, which was beneficial for employees to make innovation more effective in their contributions. So, it can be concluded that one's work period played an important role in encouraging creative ideas so as to produce innovative behavior. In addition, work tenure also increased the work involvement of employees, which then had implications for the formation of innovative behavior.

4 Conclusion

The conclusion of this study was that learning organization and organizational tenure had a significant positive effect on innovative behavior and work engagement was not able to mediate the effect of learning organizations on innovative behavior, but was able to be mediation between organizational tenure and innovative behavior. Based on this research a teacher was expected to be able to produce innovation, for example innovation in teaching and learning activities. The intended innovation can be in the form of learning methods, models and learning scenarios based on the needs and preferences of students. Besides that, innovation in the development of instructional media was also important to be mastered by the teacher. A suggestion for further research is the use of other measurements in the variable work engagement, because in this study work engagement was not able to moderate the effect of learning organization on innovative behavior.

References


Learning Microeconomics during the Pandemic: Does Digital Platform Management Matter?

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Abstract. This study aimed to analyze how student engagement affected their satisfaction, and to describe the comparison of student engagement and student satisfaction between Microeconomics online classes based on digital platform management. Two compared classes were distinguished in terms of digital platform variance. Using a quantitative approach, this study included 88 students from both classes who answered the online Likert Scale questionnaire after finishing their online Microeconomics classes during the Covid-19 pandemic. The results showed that student satisfaction and student engagement were higher if the class combined different digital platforms. However, some components of student engagement namely peer-to-peer support, student-lecturer communication, and self-learning management were not intervened by digital platform management. Meanwhile, student engagement had a strong effect to student satisfaction during online learning. The findings implicated that digital platform management was important to increase student satisfaction and student engagement in online learning but it had not changed student willingness to communicate or their learning attitude. Therefore, the related factors affecting them need to be explored more to optimize online learning benefits.

Keywords: Digital Platform, Microeconomics, Student Satisfaction, Student Engagement, Online Learning

1 Introduction

Covid-19 first appears in Wuhan, Hubei province, China in December 2019, which then spread to almost all countries in the world. That is why WHO establishes Covid-19 as a global pandemic. Recent data as of June 22, 2020, shows that this pandemic has spread to 216 countries with the number of infected cases reaching 8,860,331 people and death cases reaching 465,740 people [1]. One of the sectors that is directly affected by the policy of social restrictions is the education sector. The closure of the school is intended to reduce the risk of children and adolescents infected by the virus, as well as reduce opportunities for them to spread the virus to people who are vulnerable to the virus in the family or community.

| Table 1. Number of countries by information status as of 6/8/2020 |
|------------------------|------------------|
| Closed | 133 |
| Closed (in select area) | 4 |
| Seasonal school closures | 1 |
| Open with limitations | 50 |
| Open | 7 |

Closing schools requires educational institutions to innovate in the learning process so that class discontinuity does not occur by conducting distance learning or online learning. This online learning is carried out by utilizing the use of media and technology that enables communication and information exchange during the learning process to continue even from a distance. Dixson [2] stated that one of the main components in effective online learning was student involvement. Likewise, Chen et al. [3] argued that there was a positive relationship between the use of learning technology, student involvement and learning outcomes. The use of technology in online learning increases student involvement through increased communication and interpersonal relationships between students [4]. Meanwhile, Alquarashi [5] argued that student satisfaction was a key element for evaluating the implementation of online learning.

Convenience is the highest reason for achieving satisfaction [6]. Callaway [7] found that students in the learning system were satisfied with the quality and convenience of traditional teaching, while students in the online learning environment were satisfied with the quality of learning, but not with the convenience of online teaching. This convenience is influenced by the actions of lecturers in online lectures [8] where it is one indicator of student engagement. Even in Gray and DiLoreto [9] research, student engagement was claimed to be able to be a partial mediator between the effects of the presence of instructors on student satisfaction. Then the first hypothesis compiled in this study is as follows:

H1: there is an effect of student engagement on student satisfaction in online Microeconomics classes.

Mustafa [10] stated the success of online learning also depends on the availability of infrastructure (adequate internet network) and access to distance learning tools. Learning activities can be delivered through broadcast media (tv and radio), social media and other digital platforms (zoom, etc.). UNESCO (2020) categorizes various educational platforms based on distance learning needs and their functions as circuits: (i) digital learning management system, this platform allows to open online classes that support learning activities, discussions, and assessments such as Edmodo, Google Classroom, Schoology etc. (ii) Systems built for use on basic mobile phones, such as Cell-Ed, Eneza Education, Funzi, KaiOS, Ubongo and Ustad Mobile. (iii) Systems with strong offline functionality, platforms that allow for offline access such as the Hummingbird, Rumie, and Ustad Mobile. (iv) Massive Open Course (MOOC) Platforms, such as Alison, Canvas Network, Udemy Courses, etc. (v) self-directed learning content, such as Duolingo, British Council, and Khan Academy. (vi) Collaboration platforms that support live-video communication, platforms that allow for video conferencing with many participants such as Hangouts Meet, Skype, Teams, WhatsApp and Zoom.

Cacheiro-gonzalez [11] in his research stated that digital learning platforms increased learning independently (86.5%), facilitated the availability of subject matter (81.1%), and supported interaction between different agents in the course (78.4%). Kurucay and Inan [12] who thought that learning platforms were a means to independently manage learning content, activities and evaluations and enable communication with lecturers and colleagues.

In this long-term online lecture, we use tools in the form of a digital platform, the pedagogical ability of teachers can no longer be displayed directly, but must be reflected in their ability to manage digital platforms. Meanwhile, many studies have found that the use of technology has little effect on learning [13] because it is actually instruction or pedagogy that creates change in student learning processes [14]. Cartner and Hallas [15] argued that online classroom activities will ultimately lead teachers to question their own understanding of
pedagogical practices when reflecting and this brings conceptual changes to their behavior in teaching using social media, or in the context of this research is the online learning media.

Meanwhile, student engagement in the context of online learning is influenced by various factors. The results of the study by Lee, Song and Hong [16] showed that student engagement in online learning consisted of six factors: (1) psychological motivation; (2) peer collaboration; (3) cognitive problem-solving; (4) interactions with instructors or instructors; (5) community support; and (6) learning management. The first is psychological factor, which represents students' thoughts and feelings, such as motivation, expectations and interests related to what is learned in online learning. Second, peer collaboration factor tends to be activities where students discuss the knowledge learned. Third, cognitive problem solving is defined as the process of acquiring, understanding, and utilizing knowledge. Fourth, interactions with instructors have meaning related to behavioral involvement where students communicate with teachers online. This interaction includes asking questions, discussing the contents of the lesson, additional assistance is considered to be the most important factors of student involvement in online learning. Fifth, community support factor, it is related to the psychological state of students, such as bonding or a sense of brotherhood that is formed between students in the class. Sixth, learning management, this emphasizes behavioral involvement. Students manage learning independently and actively participate during online learning. This factor is more directed at students in managing time, place, and environment in order to create the desired online learning atmosphere such as avoiding distractions by placing yourself in a quiet room, and planning a study schedule.

It is suspected that differences in digital management platforms in the online learning process will result in differences in student satisfaction and engagement in the learning process. On the other hand, the Microeconomics class was chosen as the sample in this study because it was considered to have material with complete characteristics, including understanding concepts, calculations, drawings and graphics. The characteristics of this complete course are expected to enrich the analysis in this study. Then the second and third hypothesis compiled in this study is as follows:

H2: There is a difference in student engagement between online class that uses varied digital platforms and online class that only uses one digital platform.
H3: There is a difference in student satisfaction between online class that uses varied digital platforms and online class that uses only one digital platform.

2 Research Methods

This research is an experimental research with a quantitative approach. The population included 218 international class students majoring in Economic Education, Universitas Negeri Semarang who takes Microeconomics classes online in semester 2. The non-probability sampling used in this study is the purposive sampling technique. The sample classes were chosen based on the same number of students and the same average ability (proven by the pre-test given in the beginning of the class). The other consideration is the same teaching team of lecturers. Based on all criteria, the study sample are Office Administration Class A and Class B with 44 students in both classes.

Online learning in Microeconomics class in both classes is designed with a different digital management platform. In Class A, various digital platforms are used such as Google Classroom, YouTube, Podcast, and e-learning systems by the internal campus during learning (16 meetings)
by taking into account the characteristics of the material presented. Meanwhile, in the Class B, only one digital platform is used, namely Google Classroom. Although the digital platforms are different, the actual content presented during learning is the same, namely the provision of material in the form of files, video links, assignments and discussions.

At the end of the semester, students from both classes were asked to fill out questionnaires to measure student engagement and satisfaction levels during Microeconomics online lectures. Student engagement indicators includes (1) psychological motivation; (2) peer collaboration; (3) cognitive problem solving (cognitive problem solving); (4) interactions with instructors; (5) community support; and (6) learning management. The questionnaire is designed with a Likert scale with 5 options, namely strongly agree, agree, neutral, disagree and strongly disagree. Data from the two classes are then analyzed by using regression analysis and independent t-test.

### 3 Results and Discussion

Online Microeconomics lectures in Class A and B each has the same number of meetings, namely 16 times, including 14 meetings, 1 mid-term test and 1 final test, all of which are designed online. The target material is also the same, which consists of 7 chapters of discussion on Microeconomics. The content of the material is also the same, which includes material in the form of power points, videos and assignments. Details of the digital platform differences used can be seen in Table 2.

<table>
<thead>
<tr>
<th>No.</th>
<th>Chapters</th>
<th>Materials</th>
<th>Class A</th>
<th>Class B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The scope of Microeconomics</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td>2.</td>
<td>Demand, Supply and Market Balance</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning video</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments</td>
<td>Google Classroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment reflection</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Elasticity</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning video</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments</td>
<td>Google Classroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment reflection</td>
<td>Spotify (podcast)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Consumer Behavior Theory</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning video</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment reflection</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Producer Behavior Theory</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning video</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments</td>
<td>Google Classroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignment reflection</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Discussion</td>
<td>Telegram</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Production cost</td>
<td>Material in power point</td>
<td>Elena</td>
<td>Google Classroom</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Learning video</td>
<td>YouTube</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Assignments</td>
<td>Elena</td>
<td></td>
</tr>
</tbody>
</table>
In Table 2 it can be seen that in class A the digital platform used during learning varies greatly, adjusting to the main characteristics of the learning media that you want to display. For example, if a lecturer wishes to submit material in the form of video, he chooses to upload it on YouTube rather than on other platforms, because uploading in the form of video is more popular on YouTube than on other digital platforms. Likewise, discussion forums are mostly carried out via Telegram, which is a popular chat forum among students. Whereas in class B, only one digital platform is used, namely Google Classroom, ignoring the characteristics of the learning material used.

### 3.1 Effect of Student Engagement on Student Satisfaction

**Table 3. Descriptive Statistics**

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction A</td>
<td>44</td>
<td>2.50</td>
<td>5.00</td>
<td>4.2727</td>
<td>.69428</td>
</tr>
<tr>
<td>Satisfaction B</td>
<td>44</td>
<td>2.50</td>
<td>5.00</td>
<td>3.6477</td>
<td>.57647</td>
</tr>
<tr>
<td>SE_A</td>
<td>44</td>
<td>56.00</td>
<td>115.00</td>
<td>93.7045</td>
<td>12.00112</td>
</tr>
<tr>
<td>SE_B</td>
<td>44</td>
<td>66.00</td>
<td>106.00</td>
<td>85.8636</td>
<td>11.21376</td>
</tr>
</tbody>
</table>

From Table 3 it can be observed that the mean score of student satisfaction in class A (4.27) is higher than class B (3.64) with a difference in score reaching 0.63. Likewise, student engagement in class A (93.70) is higher than class B (85.86) with a score difference reaching 7.84. This indicates a close correlation between satisfactions with student engagement. This indication is confirmed in the correlation test that has been conducted with the result that the correlation between student satisfaction and student engagement reaches 76.60%. Meanwhile, the result of the regression test shows that student engagement has a positive and significant effect on student satisfaction with a P-value of 0.776 and a significance of 0.000 (α 0.05). Thus, H1, which states that there is an effect of student engagement on student satisfaction in online Microeconomics classes, is accepted.

This indicates that students are actively involved in learning which has a good effect on student satisfaction. Students who are actively involved and participate in learning will build good relationships. So, they will feel accepted, supported, and involved in that environment. In addition, they will gain experience and form commitments that result in low desire to leave learning. The results of this study support research conducted by Luo, Xie & Lian [17] which suggested that student engagement consisting of emotional, behavioral, and cognitive engagement had a significant positive effect on student satisfaction. This shows that students who have higher motivation will involve themselves in terms of cognitive, emotional, and behavior in the learning process. Cheong and Ong [18] student engagement systems that involve students in discussion, collaboration with others on projects or assignments, and creating ideas, and solutions to solve a problem will help develop their thinking habits. This experience will gradually increase self-capacity, which will have an effect on increasing satisfaction.
3.2 Comparison of Student Engagement in Online Microeconomics Classes based on Differences in Digital Management Platform

Independent T-Test is conducted on both classes after the online learning period is complete. Testing this difference is carried out in two stages, namely testing differences in student engagement in general and testing the differences of each indicator of student engagement separately. The prerequisite test is carried out by using the Levene's Test in which class A and class B results are declared homogeneous (Sig> 0.05). Homogeneity test data and t-test can be seen in Table 4.

<table>
<thead>
<tr>
<th>Table 4. Results of Independent Samples T-Test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Levene's Test for Equality of Variances t-test for Equality of Means</td>
</tr>
<tr>
<td>F</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Motivation</td>
</tr>
<tr>
<td>Collaboration</td>
</tr>
<tr>
<td>Problem Solving</td>
</tr>
<tr>
<td>Interaction</td>
</tr>
<tr>
<td>Community</td>
</tr>
<tr>
<td>Management</td>
</tr>
<tr>
<td>Student Eng.</td>
</tr>
</tbody>
</table>

In general, descriptive data show the mean score of student engagement in class A is higher than class B with a total difference of 2.38. This difference is confirmed statistically on the results of the different tests in Table 4. The t-count value of the student engagement variable is 3.167 with a significance (2-tailed) of 0.002, which has a significance of less than 0.05. This indicates that H2 is accepted, namely there is a difference in student engagement between class A using a varied digital platform and class B using only one digital platform.

The variety of digital platforms really allows students to learn and interact in various ways so in the implementation, students will also face challenges, which are required to solve problems both independently and in groups supported by how students organize their learning. As a result, students are increasingly skilled both in terms of cognitive and attitude in dealing with obstacles both within the scope of learning and outside the scope of learning. Thus, students in this class will be more involved than students in the class using only one digital platform.

The results of this study support research conducted by Chakraborty and Nufakho [19] which explained that student engagement in online learning could be strengthened by using appropriate technology to deliver the right material (right technology). Casey and Jones [20] stated that the use of video technology effectively increased student engagement, which had an impact on students' understanding of the material. In addition, video technology helps students who feel minority or marginalized become more active and involved in learning. Bledsoe and Simmerok [21] suggested the use of online multimedia in learning allowed students to learn important concepts with the help of texts, photos, videos, and various features for communicating to increase student engagement, even though learning was carried out remotely.
In terms of each indicator of student engagement, three indicators in the form of psychological motivation, cognitive problem-solving and community support are consistent with the results of the different tests of student engagement in general, namely there is a significant difference between the use of varied digital learning platforms with online learning only using one digital platform. However, the other three indicators namely peer collaboration, interactions with instructors, and learning management do not show significant differences from the variations of digital platforms in online learning.

Table 5. Mean Difference in Indicators of Student Engagement

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>1.00</td>
<td>44</td>
<td>20.1818</td>
<td>2.94344</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>17.7955</td>
<td>2.83319</td>
</tr>
<tr>
<td>Collaboration</td>
<td>1.00</td>
<td>44</td>
<td>24.2045</td>
<td>3.52783</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>22.9318</td>
<td>3.30889</td>
</tr>
<tr>
<td>Problem Solving</td>
<td>1.00</td>
<td>44</td>
<td>19.1364</td>
<td>2.74151</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>17.3182</td>
<td>2.67436</td>
</tr>
<tr>
<td>Interaction</td>
<td>1.00</td>
<td>44</td>
<td>6.5909</td>
<td>1.52983</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>6.1591</td>
<td>1.49329</td>
</tr>
<tr>
<td>Community</td>
<td>1.00</td>
<td>44</td>
<td>11.6364</td>
<td>1.93007</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>10.4545</td>
<td>1.78436</td>
</tr>
<tr>
<td>Management</td>
<td>1.00</td>
<td>44</td>
<td>12.0455</td>
<td>2.12356</td>
</tr>
<tr>
<td></td>
<td>2.00</td>
<td>44</td>
<td>11.2045</td>
<td>1.95982</td>
</tr>
</tbody>
</table>

Although descriptively, the mean on all student engagement indicators in class A (varied digital platform) is greater than in class B (one digital platform), statistically there are some indicators that cannot be claimed to have significant differences. Peer collaboration does not show a difference, because both class A and class B are assigned by the same type of task, namely individual assignments, so they do not provide space for students to collaborate with their classmates. Louder et al. [22] strengthened this finding with the results of their research which identified that students who studied online were more likely to expect learning support by interacting with their lecturers directly rather than collaborating or interacting with classmates.

Interaction with instructors (in this case, lecturers) also does not describe any significant differences. Bernard et al. [23] found the importance of three kinds of interactions during the online learning process, namely interaction between students, interaction with instructors and interaction with material content. Lecturers as instructors in online lectures in class A and B has the same goal of stimulating, maintaining and increasing student interest in learning. The method used is the same, namely in discussion forums with any chat platform used. Therefore, it is not surprising that in this case the difference between class A and B is not significant.

Indicators of student learning management in class A are also not different from class B. This happens because learning management is more affected by the individual's learning character, regardless of what digital platform is the learning facility. Moreover, audio-visual learning content provided in class A and class B is the same. Learning management is the personal domain of each student that is difficult to be intervened by external factors. However, Wang, Shannon and Ross [24] found that students who already had experience following online classes would tend to have more effective learning strategies and therefore, had a higher level of motivation in their online lectures.
3.3 Comparison of Student Satisfaction in Online Microeconomics Classes based on Differences in Digital Management Platform

Homogeneity test results with Levene's test for equality variances assumed equal variances obtain a significance of 0.361 (> 0.05), which means that the satisfaction data of class A and B students are homogeneous. Furthermore, the results of the independent t-test show the t-value of 4.494 with a significance (2-tailed) is 0.000 (<0.05), which indicates that there is a significant difference in student satisfaction between class A and class B. These differences are presented in Table 6.

<table>
<thead>
<tr>
<th>Class</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>44</td>
<td>4.2273</td>
<td>.74283</td>
<td>.11199</td>
</tr>
<tr>
<td>B</td>
<td>44</td>
<td>3.4773</td>
<td>.82091</td>
<td>.12376</td>
</tr>
</tbody>
</table>

Student satisfaction in Class A that uses varied digital platforms is higher than class B that only uses one digital platform in the learning process. Thus, H3, which states there is a difference in student engagement between online classes that use varied digital platforms and online classes that only use one digital platform, is accepted. The use of various digital platforms will make it easier for students to understand the material. This allows differences in the learning process at each meeting, which makes students less saturated and more active than using only one type of digital platform. This is because with one type of digital platform, students and lecturers has limited access to develop and improve learning strategies, so student satisfaction is difficult to achieve.

These results are in line with the results of Lange's [25] research that media diversity resulted in high student satisfaction and showed an increase in his intention to continue using e-learning. Liu, Liao and Pratt [26] said different and integrated media consisting of audio, video and text were positively correlated with perceived benefits. Sharma, Chandel and Govindaluri [27] stated the benefits of using diverse media in e-learning, one of which was to motivate students to learn more from relevant sites.

4 Conclusion

The findings in this study implied that variations in the use of digital platforms during the online lecture process are important points that can be optimized to increase student satisfaction and student involvement in online learning. However, not all components in student involvement can be controlled through this digital platform. The appeal to remain at home during the pandemic requires students to be more independent in learning which in fact will potentially reduce the ability of student collaboration and communication with peers. Although this can be done remotely, such as communication with video calls and working on projects online, some important points in collaboration such as personal approaches and non-verbal communication are not covered in them. The willingness of students to communicate with lecturers and their learning management is difficult to control. It is only by providing a varied digital learning platform. Therefore, the related factors that affect these indicators need to be studied further in order to optimize the benefits of online learning.
References


Qualitative Analysis of Factors Affecting Decision-Making Process of Infrastructure Project Selection

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Abstract. In practice, there are several factors affecting the decision-making process of infrastructure project selection, which may influence the decision makers in making investment decisions. Due to its significance, these influencing factors are explored in this study using a qualitative approach consisting of twenty semi-structured interviews with industry experts in the Indonesian context. Thematic coding analysis was used to analyze the collected data. Thirteen influencing factors have successfully identified and categorized based on their similarities into four groups, namely: personal attributes, cognitive abilities, technical factors, and intervention issues. Understanding these influencing factors is crucial in infrastructure project planning and selection since it will allow the decision makers to identify foreseeable problems and take precautionary steps in order to arrive at sound decisions. Finally, this paper presents the current practice of decision-making process for infrastructure project selection and highlights the influencing factors as an important issue that exists in the current practice.

Keywords: Decision-Making, Indonesia, Influencing Factors, Infrastructure Project Selection, Thematic Analysis

1 Introduction

In practice, there are several factors influencing the decision-making process related to infrastructure project selection and prioritization. In this context, influencing factors are defined as factors that influence the decision makers in making infrastructure investment decisions. Understanding how these decision makers arrive at their decisions is a cognitive process characterized by learning and problem-solving abilities. Identifying these influencing factors are crucial to understand the nature of decision-making process during infrastructure project selection and prioritization. These factors may influence the process which ultimately will impact the quality of decisions and outcomes [1][2]. Thus, it has become the aim of this paper to identify these influencing factors which have not been studied previously.

2 Method

This paper follows a systematic qualitative method to analyze the interview data collected mainly from three ministries in Indonesia, i.e., the Ministry of Public Works and Housing (MPWH), the Ministry of Transportation (MT), and the Ministry of National Development Planning (MNDP/Bappenas). The systematic interview process consisted of eight steps. The
first step is interview draft development where interview questions and protocol were designed. Interview questions were developed based on critical review of literature and is presented in a matrix shown in Table 1.

Table 1. Interview Questions Matrix

<table>
<thead>
<tr>
<th>No</th>
<th>Interview Questions</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How do you make decisions related to infrastructure project selection? / What is your current practice in making decisions related to infrastructure project selection?</td>
<td>Omar, Trigunarsyah and Johnny [3], Priemus [4], Williams and Samset [5]</td>
</tr>
<tr>
<td>2</td>
<td>Is the decision-making process more judgmental or rational?</td>
<td>Kolar [6], Priemus [4]</td>
</tr>
<tr>
<td>3</td>
<td>What are the factors influencing infrastructure project selection decision-making process?</td>
<td>Dietrich [1], Nooraie [7]</td>
</tr>
<tr>
<td>4</td>
<td>How does the politic influence the selection process?</td>
<td>Annema, Mouter and Razaei [8], Giang and Pheng [9], Lee [10], Priemus [4]</td>
</tr>
<tr>
<td>5</td>
<td>To what extent does cross sector influence infrastructure project selection?</td>
<td>Hampl [11], Hurwitz, Heaslip and Moore [12]</td>
</tr>
</tbody>
</table>

The second step is conducting a pilot interview to ensure the appropriateness of interview questions and to help the authors to understand possible interview situations. The third step is determining interview size and target respondents. Interview size mainly depends on data saturation when the actual interviews have been conducted. Meanwhile, the target respondents are those who meet these three criteria: (1) professionals working at the relevant ministries or agencies, (2) majored in a construction-related educational background, and (3) experienced in infrastructure project planning and/or selection.

This is followed by conducting the actual interviews. Twenty semi-structured interviews were conducted within four months period. Table 2 presents the profiles of expert respondents. The average interview duration was 48.45 minutes. All interviews were recorded using a voice recorder. Next, the interview records in audio files were transcribed into twenty written transcripts. Since the interviews were conducted in Bahasa Indonesia, the next step is to translate these written transcripts into English. These final transcripts were exported to NVivo12. The seventh step is to analyze these interview data using a structured thematic analysis technique which consisted of six phases: familiarization, initial coding, themes development, review, naming, and findings identification [13]. In last step, all findings were discussed and reported.

Table 2. Expert Respondents’ Profile

<table>
<thead>
<tr>
<th>Code</th>
<th>Affiliation</th>
<th>Education</th>
<th>Experience</th>
<th>Job Position</th>
<th>Gender</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-1</td>
<td>MNDP</td>
<td>Master</td>
<td>15 years</td>
<td>Planning Officer</td>
<td>Male</td>
</tr>
<tr>
<td>E-2</td>
<td>MPWH</td>
<td>Master</td>
<td>11 years</td>
<td>PPK</td>
<td>Male</td>
</tr>
<tr>
<td>E-3</td>
<td>MPWH</td>
<td>Master</td>
<td>&gt;20 years</td>
<td>Head of Department</td>
<td>Male</td>
</tr>
<tr>
<td>E-4</td>
<td>MT</td>
<td>Master</td>
<td>11 years</td>
<td>Head of Department</td>
<td>Male</td>
</tr>
<tr>
<td>E-5</td>
<td>MPWH</td>
<td>Master</td>
<td>12 years</td>
<td>PPK</td>
<td>Male</td>
</tr>
<tr>
<td>E-6</td>
<td>University</td>
<td>Doctoral</td>
<td>&gt;20 years</td>
<td>Assoc. Professor</td>
<td>Female</td>
</tr>
<tr>
<td>E-7</td>
<td>MPWH</td>
<td>Master</td>
<td>11 years</td>
<td>Head of Department</td>
<td>Male</td>
</tr>
<tr>
<td>E-8</td>
<td>University</td>
<td>Master</td>
<td>4 years</td>
<td>Lecturer</td>
<td>Male</td>
</tr>
<tr>
<td>E-9</td>
<td>MPWH</td>
<td>Master</td>
<td>8 years</td>
<td>Functional Officer</td>
<td>Female</td>
</tr>
<tr>
<td>E-10</td>
<td>MPWH</td>
<td>Master</td>
<td>13 years</td>
<td>Head of Department</td>
<td>Male</td>
</tr>
<tr>
<td>E-11</td>
<td>MNDP</td>
<td>Master</td>
<td>31 years</td>
<td>Planning Officer</td>
<td>Male</td>
</tr>
<tr>
<td>E-12</td>
<td>MT</td>
<td>Master</td>
<td>14 years</td>
<td>Head of Department</td>
<td>Male</td>
</tr>
<tr>
<td>E-13</td>
<td>MT</td>
<td>Master</td>
<td>9 years</td>
<td>Functional Officer</td>
<td>Female</td>
</tr>
</tbody>
</table>
3 Results and Discussion

Interview analysis has successfully identified 13 (thirteen) influencing factors in infrastructure project selection process. Based on the frequency, experience becomes the most frequent factor conveyed by the respondents. These influencing factors can be grouped into four categories based on their similarities, namely: (1) personal attributes, (2) cognitive abilities, (3) technical factors, and (4) intervention issues. Figure 1 below illustrates the four categories of influencing factor in infrastructure project selection process in Indonesia. These influencing factors can further be grouped into two major categories, namely: internal and external factors. Internal factors refer to influencing factors within the organization. They may influence decision makers during the decision-making process. Meanwhile, external factors refer to outside influences that can impact on the decision-making process. Because it comes from outside, these external factors are more difficult to manage than internal factors. Identification of these influencing factors will be useful in understanding how a decision is made by the decision makers.

Fig. 1. Classification of influencing factors in infrastructure project selection decision-making process.

3.1 Personal Attributes

The first category is personal attributes which refer to characteristics of a person, in this context is a decision maker. These include gender, habits & attitudes, commitment, and age. They are included as internal factors influencing.

Some respondents mentioned that gender might influence the decision-making process. This influence can be seen in the way of behaving between men and women in making decisions where men tend to be more rational than women who are more emotional. In other words,
women are more concerned with feelings and dynamism during the decision-making process, while men assign more importance to the rational aspects such as analysis and justification of the decision [14]. However, there is no significant difference in terms of cognition. Both men and women respondents agreed that the decision-making process must go through an assessment process which includes obtaining information, gaining knowledge, conducting analysis, considering alternatives, and making logical decisions.

Another personal attribute identified from the interview analysis is habits & attitudes. It refers to a regular tendency of decision makers in making decisions. This can be seen from settled way of thinking and practical habits that are always done by the decision makers. Furthermore, these habits & attitudes are also related to personal belief where if someone believes in what s/he is doing, then s/he will tend to continue doing it until it develops into a habit or an attitude. According to Haris [2], this factor is complex in nature because it is directly related to the decision makers’ personality.

Commitment is also an important factor influencing the decision-making process. With commitment, a decision maker will make decisions easier. However, the level of commitment may have a bad influence on the decision-making process. This happens when there is an escalation of commitment that forces the decision makers to make decisions based on irrational judgment because they have over-committed themselves [15]. This escalation of commitment is responsible for causing them to make risky decisions.

Last influencing factor regarding personal attributes is age differences. Age differences when making decisions can affect the quality of decisions made. This is also related to the level of maturity in dealing with problems and finding solutions. Here, older decision makers are considered more capable of carrying themselves out and calm in making decisions than younger decision makers who are more enthusiastic and not detailed. This may also be the reason why many respondents who occupy strategic positions can be categorized as older decision makers. However, older decision makers may become overconfident in making decisions [16] and thus making their decision analysis performance decline as well [17].

### 3.2 Cognitive Abilities

The second category is cognitive ability which refers to the ability to make decisions more precisely and efficiently. In this study context, if personal attributes are related to aspects that are inherently given, cognitive abilities reflect the gradual improvement of one's abilities. In other words, cognitive abilities can be learned, trained and developed. These include education, experience, and exposure.

The interview analysis provides that educational background can influence the decision-making process. This is mainly related to the education process in both formal and informal schools that emphasize thinking and reasoning skills. These skills will ultimately help the decision makers make decisions when they are working. Similarly, Kim et al. [18] found that education can improve the decision-making quality.

Besides that, experience is also one of the important factors forming cognitive abilities. In fact, it is the most frequent factor mentioned by the respondents. As an element that form a cognitive ability, experience (either good or bad) is a learning process that is obtained by making decisions. Sagi and Friedland [19] argued that people tend to avoid repeating bad experiences. By learning through past experiences, decision makers can polish their cognitive abilities so that when experiencing similar problems, they will be able to make better decisions. This finding goes hand in hand with Dietrich [1], Drury and McHugh [20] and Juliusson, Karlsson and Gärling [15] studies.
The last influencing factor in cognitive category is exposure. Different from experience, exposure refers to the state of being exposed from phenomena or experiences which ultimately affects the decision-making process. In this study, there are two ways that exposure occurred. First is through career attainment. One's career development will cause him/her to be exposed with more experiences and broader new knowledge. This ultimately sharpens the cognitive abilities s/he has. Exposure can also occur through sharing experience/knowledge. This is done when someone asks for opinions or stories of experience from other people who have experienced similar problems before. In other words, s/he became exposed by other people experience. Exposure through sharing experience/knowledge can also affect a person's cognitive abilities which ultimately affects the decision-making process.

3.3 Technical Factors

The third category is technical factors which refer to technical aspects that influence the decision-making process. In the context of this study, technical factors are relevant to practical aspects during infrastructure project selection and prioritization processes. These include data availability, duration or length of time to make decisions, and work setting.

Data availability can affect decision makers in making decisions. If during the decision-making process it turns out that the data to be processed as input material for consideration to assess alternatives is not available, insufficient or in poor quality, this can affect the duration of decision making and the quality of the decisions taken. Similarly, Drury and McHugh [20] and Haris [2] found that data availability is an important influencing factor in making decision.

On the other hand, the duration to make decisions can also influence decision makers in making decisions. Too short duration may cause the decision makers to make decisions in a hurry. Meanwhile, long duration does not mean produce better decisions. Thus, time magnitude may lead to both negative and positive consequences [21].

The last factor in the technical category is work setting. In the context of this study, work setting refers to the working environment that is formed in the organization where the decision makers work. This working environment can influence the decision-making process. For example: Is there a clear infrastructure project proposal selection procedure provided? Has authority been clearly established? or Is there a decision-making framework or decision-making tool that can be used to help infrastructure project selection and prioritization process?

3.4 Intervention Issues

The last category is intervention which refers to the factors that influence the decision-making process through interference. The factors included in this category are also external factors because intervention is usually from outside the organization involved as decision makers in selecting and prioritizing infrastructure projects. This category includes political pressure, position/status, and socio-cultural influences.

Intervention in the form of political pressure can certainly influence decision-making process for infrastructure project selection. This is quite common in Indonesia as stated by several respondents. Political pressure occurs because there are interests from political actors in Indonesia who intervene the process of selecting and prioritizing infrastructure projects. In their study, Giang and Pheng [9] argued that political leaders can use infrastructure investment to secure their political positions. This may cause politicized decision-making rather than rationalized decision-making process during infrastructure project selection.

Next, there is a job position/status factor. The higher the position or status of a person, the easier s/he may intervene. Supervisors who are outside the selection team may have undue
influence due to their seniority/status [20]. They can give interventions related to the methods, procedures and results of the selection made. If this continues to be carried out without proper justification, it can damage the existing project selection procedures.

The last is socio-cultural influences which can also influence the decision-making process. In the context of this study, socio-cultural influences refer to customs and values which become characteristic of a society. There have been many studies show that socio-cultural influences decision-making practice. As part of a community, decision makers are influenced by local socio-cultural values that may different from other places. This will ultimately influence decision-making processes such as: collectivism vs. individualism, dependent vs. independent decision-making manners, risk taking vs. risk avoidance, etc.

4 Conclusion

In conclusion, this study has succeeded in identifying several factors influencing the decision makers in selecting and prioritizing infrastructure projects in the Indonesian context. The selection and prioritization of infrastructure projects as a decision-making process is a cognitive process experienced by the decision makers. Thirteen influencing factors has been discussed with experience being the main factor conveyed by the expert respondents. However, experience is not the only factor that may determine the selection decisions. Understanding these influencing factors are important to understand how decision makers make decisions and ultimately what decisions are made. In other words, these factors may influence the decision-making process which at the end will impact the quality of decisions and outcomes. Finally, the findings of this study also facilitate further quantitative research based on the identified indicators.

5 Acknowledgments

The authors would like to express their gratitude to RMIT University, Universitas Agung Podomoro and Lembaga Pengelola Dana Pendidikan Republik Indonesia (LPDP) for supporting this research.

References


## Appendix

Table 4. Distribution of main study selections by topic, determinants, and results

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Topic</th>
<th>Determinants</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gender</td>
<td>Entrepreneurial Potential</td>
<td>Entrepreneurial Mindset</td>
</tr>
<tr>
<td>2006</td>
<td>Liñán &amp; Chen</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2009</td>
<td>Klasen &amp; Lamanna &amp; Thompson</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2011</td>
<td>Kakkonen</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2013</td>
<td>Chell &amp; Gupta, Goctan &amp; Gunay &amp; Mathisen &amp; Armulf &amp; Santos, Caetano &amp; Currall</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>UN, Women.</td>
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<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2015</td>
<td>Varamäki et al.</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2016</td>
<td>Karabulut &amp; Shabbir, Shariff &amp; Shahzad</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2017</td>
<td>Krueger &amp; Sussan</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2018</td>
<td>Bosman &amp; Fernhaber &amp; Dilli &amp; Westerhuis &amp; Mamman et al. &amp; Pauli &amp; Osowska</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<tr>
<td>2019</td>
<td>Bastian, Metcalfe &amp; Zali &amp; Cao &amp; Ngob &amp; Gieure, Benavides-Espinosa &amp; Dobón &amp; Hathakijphpong &amp; Ting &amp; Hyams-Ssekasi et al. &amp; Irawan, Syakur &amp; Maududi &amp; Madhavika, Onyeakwul &amp; Padmavathi &amp; Sargani et al. &amp; Suryawirawan</td>
<td>X</td>
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<td>X</td>
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</tbody>
</table>

Note: X indicates presence; blank indicates absence.
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<tr>
<th>Syeda et al. Ward, Sánchez &amp; García</th>
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<tr>
<td>2020</td>
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<td>X</td>
<td>X</td>
<td>X</td>
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</tbody>
</table>
The 21st Century Teacher Training Model with Online Mode: A Case Study Implementation of the Indonesian Virtual Coordinator

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Abstract. This study's objectives were to find out how the implementation of online virtual coordinators conducted by the Ministry of Education and Culture in collaboration with SEAMEO and SEAMOLEC. This study uses research and reporting done with a qualitative descriptive approach. Qualitative descriptive research conducted to explain or describe an event. The results showed that the Indonesian Virtual Coordinator Training was to provide participant skills to be able to manage to learn or manage training online. Training consists of technical activities promoting online training. Make attractive flyers and secure online registration links. Besides, there are functional materials for creating or managing rooms (using virtual spaces) using Webex, mastering hosting techniques, moderators, speakers, and how to become a participant. The final result that becomes an evaluation of Indonesian Virtual Coordinator activities is that participants can create digital flyers, make a digital presence, and record material exposure activities using room Webex. Participants who meet the graduation qualifications receive a certificate as Virtual Coordinator's Training and can become instructors for further training.

Keywords: Indonesian Virtual Coordinator, Teacher Competence, 21st Century Teachers.

1 Introduction

According to Mahmud in Hasanah [1], the importance of teacher professionalism is to achieve national education goals. Professionalism is needed so that results can be obtained. These are included in making and implementing policies in field education at the elementary school level and win, both public and private. Government efforts to improve teacher professionalism carried out by the government bring out with various kinds of training. Besides, Tomajahu [2] conducted a study showing a difference in the ability of a teacher's teaching competition who often attended the training. This is because it has a relationship between the teacher's work experience with competencies that are directly or indirectly possessed.

Thus, it is necessary to carry out various forms of education and training for a teacher equally. Teacher education and training are the basic needs of a professional teacher who is the vanguard in advancing knowledge in Indonesia. The challenge of mastering technology for educators is needed now. Educators have the responsibility and role for future improvement through education [3][4][5].
The teacher profession is a profession that demands always to develop themselves through lifelong learning. It is to support the delivery of material to students so that teachers in delivery learning always provide new knowledge and be up to date on time. Teachers are required to follow the development of science and technology and the changing times to be transmitted to their students. Ideally, teachers must appear at the forefront in terms of mastery of science, technology, and current development [6].

The industrial revolution 4.0 impact all aspects of life. Education is one of the fields affected by the industrial revolution of 4.0. Teachers are currently required to be able to do online learning. A study by Cruickshank, Jenkins, and Metcalf asserts that teachers need to master ICT for their learning needs [7].

Teacher self-development can do through functional education and functional training and teacher collective activities. Education and technical training activities are the operational activities of teachers in attending school or training to improve the professionalism of teachers concerned within a specific time. The types of events can be courses, training, upgrading, and various other forms of education and training. Teachers can participate in functional education and training activities, based on assignments either by the principal or other institutions, as well as on their own accord from the teacher concerned. In contrast, the teacher's collective activity is the teacher's activity in participating in scientific meetings or participating in joint actions undertaken by the teacher, which aims to increase the professionalism of the teacher concerned. The teacher can take part in the teacher's collective activities based on the assignment either by the principal or other institution, as well as on the teacher's wishes. The types of events can be in the form of a) Participating in workshops or activities of teacher working groups/ subject teacher deliberations or inhouse training for the preparation of curriculum tools and learning activities including ICT-based learning, assessment, development of instructional media, and other activities for teacher professional development activities. b) Attending, either as a discussant or as a participant, at a seminar, colloquium, panel discussion, or other forms of a scientific meeting. c) Participate in other collective activities by the duties and obligations of teachers related to professional development.

On the other hand, the teacher required to do his professional development and the teacher doing class learning to conduct learning and deliver material in front of the class to students. When in active learning, the teacher is required not to leave the level. So that they cannot attend functional education and training in collective teacher activities; for this reason, online teacher development solutions need to do.

Indonesia is the largest archipelago country in the world, many teachers work scattered and remote areas, which forces the problem of the mobility of teacher professional development. Teacher self-development requires schools to send only one or a small part of the assembly to be present in the subject teacher deliberations, usually carried out in cities or downtown—furthermore, financial challenges and limited human resources. The current implementation of teacher development with the conventional model provides limited space for teachers to develop and exchange knowledge with others [8]. In addition distance training makes it easy to serve many participants and a large number of trainings [9][10][11][12].

Answering this challenge, the Ministry of Education and Culture, in collaboration with SEAMEO and SEAMOLEC, held virtual training called the Indonesian Virtual Coordinator. This activity conceived in free online training. For this reason, in this study was formulated by how the implementation of online virtual coordinators conducted by the Ministry of Education and Culture in collaboration with SEAMEO and SEAMOLEC as an effort.
2 Research Methods

To achieve the objectives of this research is to know how the implementation of the online virtual coordinator conducted by the Ministry of Education and Culture in collaboration with SEAMEO and SEAMOLEC, this research was conducted by a qualitative descriptive approach. Qualitative graphic means to explain or describe something in the real sense and by the incident. Data obtained by conducting participatory documentation and research, in which the author participated in these activities.

3 Literature Review

3.1 The Definition of Competence

Competence is a description of the qualitative nature of one's behavior. According to Lefrancois, defining Competence is a capacity to do something produced from the learning process. After learning, the individual succeeds in learning or doing intricate work from before becoming better.

Thus competence can be interpreted as long-standing sustainability that causes a person or individual can perform absolute performance. Besides, Cowell defines the competency of an active skill. Competencies categorized ranging from simple or basic level to more difficult or complicated that will relate to the process of preparing materials or learning experiences which consist of: (1) Mastery of at least necessary competencies, (2) basic competency practices, and (3) addition of improvement or development towards competence or skills. All three processes can continue as long as there is still an opportunity to improve or develop their ability [1].

According to Hasanah [1], teachers who work need to have professional competence that always improves and sustainably develops qualifications and academic competencies in line with technology and arts development. A teacher's skill needs to have three competencies, namely personal, educational, and professional competencies. Personality competencies related to a teacher in interacting socially and following the norms and ethics that apply in the nation and state-society that can set as an example. Pedagogical competition of a teacher with the ability to organize a quality learning process. Whereas professional competence, namely, a teacher, must always improve and develop academic qualifications and competencies on an ongoing basis.

Based on some of the descriptions above, it can conclude that competence is something that describes the potential, knowledge, skills, and attitudes assessed related to a particular profession that can be actualized and realized in the form of actions or performance to carry out his job.

3.2 Teacher Competency

According to Government Regulation Number 19 of 2005 [13], educators must have academic qualifications and competencies as agents of learning, physically and mentally healthy, and realize national education goals. A teacher's skills include pedagogic competence, personality competence, professional competence, and social competence. The competency of a teacher must always be improved and developed by the development of science and technology.
Pedagogical competence is competency in managing quality learning and active learning. Personality competence is competence related to a teacher's ethics in social interaction, both with fellow teachers or fellow students who can use as role models. Whereas professional expertise is competence associated with the mastery of scientific material of a teacher in his field. The last is competence in interacting in social life.

3.3 Teacher Competency Improvement

Teachers' efforts to improve their competence can do through: First, continuing education levels, attending teacher working groups / subject teacher deliberations, training, upgrading workshops, seminars, and enhancing performance. Second, carried out by the principal through (a) sending teachers to attend training, upgrading, workshops and seminars, (b) disseminating training results and various government policies by inviting speakers; (c) conduct computer and English language training; (d) encourage teachers to continue their studies by government demands; (e) conduct comparative studies to other schools that are considered more advanced; (f) sending teachers for internships to other schools; g) complete the facilities and various supporting media for learning activities; (h) provide awards for outstanding teachers; i) improve teacher welfare by providing additional income from school committees and parents; (j) provide role models, encouragement, and inspire the teacher's conscience so that they are aware of the duties and responsibilities as a teacher. Three, communities have participated through school committees with fundraising to smooth the learning process, including teacher training activities, seminars, workshops, and assisting teachers to continue their studies. Fourth, an increase in the teaching profession through teacher working groups/ subject teacher deliberations, which are forums for teachers to share and improve their competence. Fifth, government efforts activities are training, upgrading, and workshops.

3.4 The 21st Century Teacher

Changes in technology and character of the society that occurred in the 21st century have implications for the characteristics of teachers. In a progressive view, changes in the character of the community need to be accompanied by the teacher in the learning process. So if the city has changed to a digital society, the teacher needs to immediately transform himself both technically and socio-culturally to adapt to existing developments.

According to the head of the division of the PGRI (Teachers Association of the Republic of Indonesia), teachers must begin to get used to feeling the digital learning that continues to grow. Because the use of technology in education is useful for facilitating quality learning.

Characteristics of 21st-century teachers include: (1) the teacher aside from being a facilitator, must also be a motivator and inspiration. (2) teachers must be able to transform themselves in a cyber pedagogic or digital era that must always increase their interest in reading or literacy. (3) the teacher must have writing skills. (4) teachers must be creative and innovative and continually improve the quality of ICT-based learning. (5) teachers must be able to carry out the cultural transformation, transforming the process of change and change from what is considered old to new [14].

The 21st-century teacher's mastery of ICT is a necessity for always developing. Because in the 21st-century, learning is not only conventionally face to face in front of the class, but it did online [15][16].

The level of ICT competencies that should be owned by a teacher or instructor must be familiar with ICT, where the teacher must quickly use ICT with the demands of learning
needs, the competencies they have. ICT plays a very important role in current educational activities [15][7][16][17].

3.5 Indonesian Virtual Coordinator

Indonesian Virtual Coordinator is the concept of adopting an Online Learning Community derived from the idea of "community of practice" or COF. COF is a community that consists of a group of people who are practically sharing and interest in achieving common goals [8]. With a particular interest group or an online forum, group members learn to explain problems associated with practice and make decisions to overcome them and improve skills [18]. In this research, the application of OLC in Indonesia is called the Indonesian Virtual Coordinator. The training activities carried out online, which in this activity utilizes the internet network with the Webex application. Indonesian Virtual Coordinator is an online education and training program like what was announced by Nisa [19] states that education and training are a training or training program that is delivered separately between lecturers and training participants more flexible in the form of online and technology utilization. University of Vermont berhasil menerapkan kursus online di Amerika [11].

The Indonesian Virtual Coordinator training activity organized to answer the challenges of 21st-century teacher self-development, which changed from regular teacher self-development to virtual teacher self-development. There are many advantages to implementing virtual training for teacher self-development. For example, it is flexible for teachers as members of subject study groups or Subject Teachers Meetings to participate in ongoing activities and collaborative learning whenever and wherever. This is also to foster a sense of sharing and provide sustainability support to teachers [8][20]. The importance of ICT to support collaboration and reflection, because using ICT-based training can facilitate access to material and collaborate with colleagues as in the real world [7][16]. Through teleconferencing the training participants maintain face-to-face interaction between the instructor and the participant [5].

Indonesian Virtual Coordinator provides a virtual environment for group members or communities to learn and interact with each other. This is to appreciate the contribution of each member regardless of his professional status and social background. Indonesian Virtual Coordinator participants share and are not dependent on an expert to provide material or knowledge. In presenting content in the Indonesian Virtual Coordinator, each respective participant gave their field of study and expertise. The primary purpose of the Indonesian Virtual coordinator's implementation is to equip participants to manage training or online seminars [21]. Today many organizations are developing remote work activities. This responds to the challenge of the rapid development of ICT [22][23][7][24].

Effective distance training is carried out to build a collaborative learning environment. Distance training has a very broad reach space. Virtual platforms are the key to collaborating with each other [25][11]. Virtual coordinator training is carried out with concepts that share with each other in the territory of Indonesia. this is done to improve the quality of education in Indonesia.

Virtual Coordinator Training is the biggest online training platform for teachers. The concept of the Indonesian Virtual Coordinator is Dr. Gatot Hari Prijowirjanto inviting 3 Indonesian Teachers to compile the idea of a Virtual Coordinator that adapted to the conditions of teachers in Indonesia. The background of the formation of Virtual Coordinator Training is the Challenge of Industrial Revolution 4.0; Indonesia, especially in the field of Education, must be prepared. Sharing broader knowledge is needed. The icon channel in
Indonesia (Tuesday Online Seminar and Workshop in the network) is not enough the Indonesian Teachers Association with its program called Saresehan in the network.

4 Results and Discussion

4.1 Teacher Competency Development Through Virtual Coordinator Training

4.1.1 History of Indonesian Virtual Coordinator

The first founder of the Indonesian Virtual Coordinator consisted of Dr. Gatot HP, Dr. Anggai Sajarwo (Seames Bangkok), Achmad Purnomo (Seames Bangkok), Khairudin, S.Pd., M.Pd (Senior High School Teachers in East Aceh), Siti Zulaiha, S.Pd (Junior High School Teacher in Wonogiri), Umi Tira Lestari, SE., M.Ak (Vocational Teacher in Bogor). From the founder of the Virtual Coordinator, which began with three Indonesian teachers who participated in the training, it grafted in the development of the Virtual Coordinator Training, which adjusted to the teachers in Indonesia [26].

4.1.2 Implementation of Indonesian Virtual Coordinator

Indonesian Virtual Coordinator is training conducted online with the aim that after completing training, participants can manage the training online. As for the registration and implementation carried out by the steps:

1) Registration also is done using a google form, where the link spread on various social media (WhatsApp, Facebook, Twitter, and website or blog), and using a digital Flyer.

2) The selection process based on the registrant through the google form link and participant restrictions. The number of instructors adjusted according to the number of comparisons between instructors and the number of participants. If the quota met, then those who cannot qualify can register in the next batch. Information on the registration link can be seen in Figure 1.

3) For participants who qualify will be created WhatsApp group to coordinate online and conduct training can be seen in Figure 2.

4) Online teleconference training using the Webex video-conferencing application. Each participant should be a Host, Speaker, and Moderator. Participants' obligation to be hosts, presenters, moderators every two times and participated in as many as six times can be seen in Figure 3.

Fig. 1. Implementation Flyer of the Virtual Coordinator Training
For proof of the implementation of the task by making digital leaflets, digital presence (with google forms and Zoho forms), and recording computer screens during presentations by screen recorder applications or laptop computers.
1) Task Collection, when the task is done, must be collected online. Where the jobs that must be received by the participants are six flyer presence as host, moderator, presenter, and attendance as a participant and a link to upload recordings of online presentations by YouTube. To display the collection of tasks figure 5.

2) An assessment of the assignment is carried out by the instructor. Participants who pass will get a certificate from Seameo and are entitled to the opportunity to become instructors in the next batch can be seen in Figure 6.

3) For a virtual flow of training, Coordinator activities can see in the figure 7.

4) The process of developing a virtual coordinator training in Indonesia carried out in stages. Which can describe in the figure 8.

![Fig. 5. Collection of VCTI Tasks](image1)

![Fig. 6. For participants have pass the task, will get an online certificate](image2)
Fig. 7. Virtual Coordinator Training Flow

Fig 8. Picture of cadre in developing Virtual Coordinator Training
5 Conclusion

The results showed that the Indonesian Virtual Coordinator Training was to provide participants' skills to be able to manage to learn or manage online training. Activities undertaken in the Indonesian Virtual Coordinator training consist of techniques to promote online training or seminars by creating attractive digital leaflets and creating online registration links, techniques for creating or managing rooms using Webex, mastering hosting techniques, moderators, speakers, and how to become a participant. The final result for evaluating the Virtual Indonesia coordinator's activities is that participants can make digital flyers, make a digital presence, and record material exposure activities using the Webex space. Participants who meet the graduation qualifications receive a certificate as Virtual Training Coordinator and have the opportunity to become instructors for further training. Suggestions for further research are to test the effectiveness of virtual coordinator training activities in Indonesia.

References

The Effect of Students' Digital Literacy Skill to the Quality of Accounting Learning in Self-Directed Learning as Moderating Variables

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Abstract. This study aims to test digital literacy's impact on the quality of accounting learning with self-directed learning as a moderation variable. The learning process is often faced with problems relating to the quality of learning. The learning process's objectives have many essential aspects of being aware of, including digital literacy and self-directed learning capabilities. Digital literacy in education, especially in higher education, has the consequences of learning design by utilizing digital media to improve learning quality. This research uses a quantitative approach type. This research population is students of the Department of Accounting Education, Universitas Negeri Semarang, the year 2017, which has 75 students. The sampling technique is a saturated sampling. Data collection and retrieval methods using questionnaire poll. Data analysis techniques using IBM SPSS Statistic 26.0 regression moderation analysis, the year 2020. The results showed that digital literacy has no a significant and positive impact on the quality of learning, and self-directed learning can moderate the positive influence of digital literacy on the quality of learning.

Keywords: Digital Literacy, Self-Directed Learning, Quality Learning.

1 Introduction

A learning process is often faced with problems relating to the quality of learning. The quality of learning depends on the educators’ ability to develop effective and efficient learning processes. In achieving these objectives, in learning activities, there are two essential aspects to be aware of. First, the learning aspect is several intellectual, emotional, and physical experiences in the students. Second, the learning aspect is the behavior change in the learners. Implementing operational learning activities is to teach students to process and acquire knowledge, skills, and attitudes.

The quality of learning is closely related to the use of optimal teaching methods to achieve learning objectives. To achieve a good quality of learning, lecture materials must be arranged with the right strategy. Furthermore, the material is delivered to the students with the appropriate delivery strategy. Learning should be able to make the material as taught attractive to affect students' process and learning outcomes. Learning quality is also influenced by learning orientation factors, internationalization, and also self-reliance on learners.

The mastery of information and communication technology by educators and learners is essential. It needs to apply in the educational process. 21st-century education demands
educational institutions to be responsive to developments and changing times by mastering information technology or digital literacy. The development of information technology became part of the emergence of the digital revolution ERA in Indonesia. Its rapid development can significantly influence and dominate the entire community life sector, including the world of education. Based on The World Summit on The Information Society (WSIS) Declaration stating that "where everyone can create, access, utilize and share Information and knowledge, enabling individuals, communities, and peoples to achieve their full potential in promoting their sustainable development and improving their quality of life...[1]. Anyone can create, access, use, and share or share information, and knowledge, with the consequences that everyone must be able to face and adequately master the information [2]. However, the ease in sharing and accessing digital information over the Internet, resulting in many students who use the information that can not account for widely circulating through various digital media publications such as blogs or WordPress that does not include the clarity of information sources as a reference in completing his academic duties.

In order to cope with the condition, a particular skill is known as the term literation pattern. Indonesia has proclaimed the National Literacy Movement to accelerate Indonesia's still-low level of literacy culture. A survey conducted by Central Connecticut State University (2016) showed that Indonesia was 60 from 61 states of PISA score. The country of Indonesia was in order to 64 from 72 country scores, still showing fewer categories. In 2003, the United Nations (PBB) held a world meeting in Prague to discuss literacy intelligence, bearing in mind the importance of literacy for world citizens facing the swift flow of information technology.

Further [3] stated that the pattern of literacy is a form or structure that occurs in a continuous state carried out by a group of people in conducting a series of learning ranging from the stage of receiving and reading to the stage of creating. One kind of literacy related to the unique ability to use various digital format information is digital literacy. According to Sholihah, Digital literacy attempts to find, use, or disseminate information effectively [4].

Academic demands on each level of education in Indonesia vary [5].

Digital literacy in education, especially in higher education, has the consequences of learning design by utilizing digital media to improve student knowledge. Digital Media can present exciting and interactive contextual, audio, and visual learning materials [6]. As part of higher education institutions, universities must adapt themselves to conduct a digital-based learning process. Digital literacy in universities can be done with the communication and collaboration step of active participation in digital networks for learning and research. As part of higher education institutions, universities must adapt themselves to conduct a digital-based learning process. Today's information and Internet technologies' progress resulted in very abundant digital information resources [7]. Such circumstances will support the program's internationalization of universities, especially in improving the quality of education.

Accounting education students, as prospective accounting educators, are responsible for practicing the knowledge gained in education. The always dynamic educational world demands students as a prospective education to always update against science and technology accounting. Based on the researcher's observation of the Department of Accounting Education Faculty of Economics Universitas Negeri Semarang phenomenon, students who succeed in the task process do not rely entirely on others. They have the initiative to keep searching, finding, and choosing what they need. Besides, they are also skilled in arranging the time to construct assignments and can arrange schedules to discuss the ideas they have made. If reviewed theoretically, these students' circumstances, such as not relying on others, have their initiatives in learning, and set the time, is an overview of self-learning skills (Self-Directed Learning).
The term Self-Directed Learning (SDL) is found in the psychology literature of adult education [8]. According to Gibbons [9], SDL is a skill where one can determine for itself and choose the objective to achieve, plan the strategy to be done, try to solve the problem, manage itself, and evaluate the thinking and performance that do. These skills will enhance personal knowledge, expertise, and achievements [9]. The research Hyland and Kranzow [10] revealed that SDL positively influences undergraduate and graduate-level students' academic performance. Self-Directed Learning (SDL) is also an essential student to complete the task [11].

One student revealed that the task process feels better when dealing directly with the digital devices they have. This is in line with Penelitian done [12]. It also shows the results that digital literacy has a positive influence on the quality of learning. Digital Literacy can contribute to more efficient task completion through software and computer programs, such as word processors or spreadsheets [13].

Grant [14] exposes research results on the implementation of digital literacy at some schools in the UK that emphasize some key points, such as giving room to students to select subject matter, triggering learners' independence to learn, and improving communication skills among students' use digital technology. It shows in a digital age like this, SDL cannot detach from digital literacy. That means the skills of SDL in the learning process can increase through excellent digital literacy skills.

The quality of learning is a strategic destination for every higher education institution. Many higher education institutions apply specific learning and have designed mechanisms and instruments to improve education quality. The use of technology and individual digital devices gave the space to develop SDL skills through various activities and existing resources such as participation in online learning groups, reflective writing activities, and online dialogue [15]. The results also showed that there was a positive correlation between digital literacy and quality Learning for learners studying in an online-based environment online [10].

The purpose of this research is twofold. The first goal is to review, analyze, and describe the positive and significant influences of digital literacy on accounting learning quality. The second goal is self-directed learning influences in moderating the positive influence of digital literacy on quality of learning.

2 Research Methods

This research is a type of quantitative study aimed at testing a predetermined hypothesis using statistical data analysis. Quantitative research was realized in numeric form and analyzed statistically to know the role of Self-Directed Learning (SDL) as moderating digital literacy guru to the quality of learning in accounting education students of Universitas Negeri Semarang, the year 2017. The design of the research used is hypothesis testing studies. The data used in this research is primary data with the data retrieval techniques using polls or
questionnaires distributed to respondents based on predetermined samples. Hypothesis testing in data analysis using IBM SPSS Statistic 26.0 analysis tools, the year 2020.

This research population is students of the Department of Accounting Education, Universitas Negeri Semarang, the year 2017, which has 75 students. The sampling technique is saturated sampling with the number of respondents equal to the population.

The binding variables used in the study are the quality of accounting learning with indicators that contribute to the quality of learning include students' characteristics, learning environment, learning facilities and infrastructure, approaches in learning, and learning outcomes [16]. The independent variables used are Digital literacy. The moderating variables used are Self-Directed Learning (SDL). Digital Literacy variables using indicators consisting of information literacy, Digital Scholarship, learning skills, ICT literacy, privacy management, Communication and collaboration, and media literacy [17]. Self-Directed Learning (SDL) variables use an indicator that is self-controlling the number of learning experiences that occur, transforming themselves into better performance, skill development, self-management, motivation, and self-assessment [8].

3 Results and Discussion

Statistic descriptive analysis of the study was obtained from the calculation of the interval scale. So we get the title of the variable quality of learning, digital literacy, Self-Directed Learning (SDL). Table 1 are the detailed results of statistic variables.

<table>
<thead>
<tr>
<th>Table 1. Descriptive statistics variable results</th>
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<tbody>
<tr>
<td>Descriptive Statistics</td>
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<td>N</td>
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<tr>
<td>---</td>
</tr>
<tr>
<td>KPA</td>
</tr>
<tr>
<td>LD</td>
</tr>
<tr>
<td>SDL</td>
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<tr>
<td>Valid N (listwise)</td>
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</table>

Source: Results of research data, 2020.

Based on the results of descriptive statistical analysis, it can conclude that the dependent variable, i.e., accounting learning quality variable has the lowest value of 28, the highest value of 59, and the average value of 45.75. The variable, independent digital literacy, has the lowest value of 47, the highest value of 5, and the average value of 54.87. The moderating variable is the variable Self-Directed Learning (SDL) has the lowest value of 40, the highest value of 45, and the average value is 41.73.

Test the moderation effect done by testing the absolute difference values. Table 2 the results of the test analysis of absolute difference values.

<table>
<thead>
<tr>
<th>Table 2. The test result of the absolute difference value</th>
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<tr>
<td>Model</td>
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<td>B</td>
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</table>
Based on the test result, the absolute difference in table 2 above then can be obtained coefficient of the independent variable of digital literacy (LD) is, the variable coefficient of Self-Directed Learning (SDL) is-24.921, the coefficient of digital literacy interaction and Self-Directed Learning (SDL) is 0.600. Based on these results, multiple regression equations can be generated as figure 1.

\[
KPA = 1399.458 - 24,921 \text{LD} + 0.600 \text{[LD-Z]} + 468,696 \epsilon
\]

*Fig. 1. Multiple regression equations*

A moderation regression model can be presented in the figure 2.

*Fig. 2. The research model of moderation regression analysis*

The above regression equation has a constant value of 1,399,458, which means that when digital literacy and digital literacy interact with Self-Directed Learning (SDL) zero (0), the learning quality is worth 1,399,458. The digital Literacy variable (LD) has a regression coefficient of-24.92 with a significance level of 0.004, meaning that digital literacy variables negatively affect learning quality. The other term, the higher the digital literacy than the lower the quality of learning and vice versa. So it is understandable that the H1 stating the digital literacy variables are positively influential towards the quality of learning, rejected.

The regression coefficient of digital literacy interactions and Self-Directed Learning (SDL) is 0.600. Suggests that Self-Directed Learning (SDL) as a moderating variable strengthens the positive influence of digital literacy on learning quality. This means that the higher the Self-Directed Learning (SDL) variable moderation role will be, the more positive the digital literacy variable is to the quality of learning, and vice versa. The variable regression coefficient of interaction between digital literacy and Self-Directed Learning (SDL) is 0.600 significant at 0.004. This fact gives the meaning that with a 5% confidence rate of Self-Directed Learning (SDL) is significantly able to moderate the influence of digital literacy on
the quality of learning. Based on these results, the H2 that states that Self-Directed Learning (SDL) strengthens the positive influence of digital literacy on learning quality is acceptable. So that the test result of the absolute difference in table 2 can be created a model in this study as Table 3.

<table>
<thead>
<tr>
<th>Model Summary</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>.380*</td>
<td>.144</td>
<td>.108</td>
<td>5.32887</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), LDSDL, SDL, LD

Source: Results of research data, 2020.

According to table 3, the magnitude adjusted R² is 10.8. Ha1 shows the variable quality learning can be described by the variable variances independent, the digit liberation. The remaining 80.2 is explained by other factors outside the model.

3.1 Influence of Digital Literacy on Learning Quality

The results showed, the first hypothesis testing (Ha1) mentioning that digital literacy has a positive and significant effect on the quality of learning, is rejected. The first hypothesis testing showed that the regression coefficient value amounted to -24.92, with a significant rate of 0.004. The value indicates the relationship between the digital literacy variable and the learning quality. It is harmful and significant because the significance value is less than that specified to 0.05. However, the result's spirit is negative, unlike the hypotheses that state a positive effect. Based on the results, it can be concluded that Ha1, rejected.

The study results were not by the theory of involvement discovered by Astin (1984), namely that involvement refers to the investment of physical and psychological energy in the case of various objects. Whatever the object, student involvement occurs along the continuum. Involvement has quantitative and qualitative features. Personal learning and development related to the education program's attitude are directly proportional to the quality and quantity of student involvement in the program. This theory explains at the same time. The input factors have a relationship that will affect the environment and affect the outcome. Astin also explains that the relationship between the environment and the outcome cannot be separated from Kelly (1996) [18]. Input as the original quality of personal students brought like learning orientation. The environment is defined as the real experience of students during university education programs. Outcomes are defined as learning qualities. The student input does not affect the environment and outcome. In Indonesia, the term literation is still considered new because all circles have not entirely understood it. Many people also know about literacy but do not have the skills to develop well in all environments, like the World education environment.

Based on digital literacy analysis, variable frequency distribution has an average value of 54.87 and is in a very high category. Learning quality variables have an average value of 45.75. It means that students active in the Accounting Education Department of Universitas Negeri Semarang, the year 2017, to perceive that he has very high digital literacy. The high quality of learning is not influenced by very high digital literacy. Mobile phones and the like in the global era have become necessary for the community's citizens, including educators and students. However, it is only to fulfill the importance of communicating, preaching something, or looking for something. The phenomenon in the field that digital literacy and mobile phones
can as learning media has not been developed proportionally, which may improve the quality of learning at the Universitas Negeri Semarang, especially the students of progressive accounting education in 2017. Digital literacy has been solely known in social media. It can convey information related to the citizens' things, but still not optimized to improve the quality of learning. Educators and students have not read much of the phenomenon well. Not able to utilize as a learning media and even learning resources, especially those associated with the implementation of curriculum and budding digital literacy. Virtual Media is now increasingly filled with news content lying, hate speech, even fraudulent practices. This is where each individual can put his consciousness into digital literate [19].

This study proved that the unity hypothesis was rejected and showed results by the Murray and Perez [20] that based on the assessment results of digital literacy carried out against final-level students at regional universities in the United States, stating that understanding of digital literacy cannot be likened to the exposure and interaction of students with digital technology in everyday life. Although students are primarily interacting with digital technology, they do not necessarily have excellent digital literacy skills in their living environment. Digital Literacy, in its implementation, has not optimally developed, and it is possible that it can contribute to improving the quality of learning in UNNES. So far, digital literacy is known as social media that can convey various information related to things needed by the community. Digital media should be empowered to develop learning synergistically to support improving the quality of learning. The phenomenon found that social Media is positioned to deliver messages/information from message senders to message recipients according to the needs [21]. This proves that high or low digital literacy does not affect high and low learning quality. To improve digital literacy on the quality of learning, there is a strategy to develop digital literacy enhancement for students who are in coherence, inclusive, and holistic student.

3.2 The Influence of Self-Directed Learning (SDL) in Strengthening the Influence of Digital Literacy on the Quality of Learning

The second hypothesis posed in this study is Self-Directed Learning (SDL), strengthening the positive influence of digital literacy on learning quality. This is based on a second hypothesis test indicating that the value of a regression coefficient of Self-Directed Learning (SDL) and digital literacy is with a significance value of 24.92 with a significant rate of 0.004. These values demonstrate Self-Directed Learning (SDL), strengthening the positive influence of digital literacy to the quality of learning in strengthening the positive influence of digital literacy to the quality of learning with the provision of a significantly smaller value than the set value of 0.05. Based on the results, it can be concluded that Ha2, accepted.

The results of this research are by the theory of involvement found by Astin (1984), namely that the isolation refers to the investment of physical and psychological energy in the case of various objects. Whatever the object, student involvement occurs along the continuum. Involvement has quantitative and qualitative features. Personal learning and development related to the education program's attitude are directly proportional to the quality and quantity of student involvement in the program. The effectiveness of each education policy relates to student involvement in student organizations attended by students. It demonstrates the relationship between the components in the theory of Astin I-E-O. The input and environment determine student outcomes. This theory explains at the same time that the input factors have a relationship that will affect the environment and affect the outcome. Astin also explains that the relationship between the environment and the outcomes cannot be separated from Kelly [18]. Input as the original quality of personal students brought in such learning orientation and
Self-Directed Learning (SDL). The environment is defined as the real experience of students during university education programs. Outcomes are defined as learning qualities. It proves that Self Direct Learning can strengthen digital literacy's positive relationship to the quality of learning. The digital literacy of every student is very high but not completely understood. The existence of Self Direct Learning to control the many learning experiences that occur, transforming yourself into better performance, skill development, self-management, motivation, and self-assessment can strengthen the effect of digital literacy on the quality of learning. This is because the understanding of digital literacy that has every student who has been in a very high category is supported by the skill and experience in his educational environment will lead to higher education quality.

Based on the variable frequency distribution results, Self-Directed Learning (SDL) has an average value of 41.73 and is in a very high category. Digital literacy variables have an average value of 54.87 and are in very high categories. Learning quality variables have an average value of 45.75 and are in the high category. It means that students active in the accounting Education Department of Universitas Negeri Semarang, the year 2017, have perceived that he has Self-Directed Learning (SDL). This means that the student is active, independent, and able to plan goals until it evaluates everything needed in learning because of the environment's experience. The awareness and independence of students in improving the skills to improve digital literacy can improve learning quality. According to Bawden [19], there are eight essential elements in developing literacy skills: cultural, cognitive, constructive, communicative, and confident, responsible, creative, critical, socially responsible. The eight elements can be improved if each student has the ability to Self-Directed Learning (SDL) or can be said to be self-learning in resolving all of his responsibilities that are also assisted by educators. The presence of Self-Directed Learning (SDL) turned out to strengthen the positive influence of digital literacy. Very high student digital literacy, reinforced by a very great Self-Directed Learning (SDL) as well as a manifestation of student self-reliance on learning experience, can strengthen the positive influence of digital literacy on improved learning quality.

This study proved that the second hypothesis was accepted and showed results by the research Grant [14] presented the results of the research on the implementation of digital literacy at several schools to engage in selecting subject subjects, triggering the independence of learners in learning and improving the ability to communicate among students through the use of digital technology. It shows in a digital age like this, Self-Directed Learning (SDL) can not detach from digital literacy. This means that Self-Directed Learning (SDL) skills in the learning process can increase through excellent digital literacy capabilities. Through the use of unique technologies and digital devices, we are given the space to develop Self-Directed Learning (SDL) skills through various activities and resources such as participation in online learning groups, reflective writing activities, and online dialogue [15]. The results also showed that there was a positive correlation between digital literacy and quality Learning for learners studying in an online-based environment online [10]. Radovan [12] also shows the results that digital literacy has a positive influence on the quality of learning. Digital literacy can contribute to more efficient task completion through software and computer programs, such as word processors or spreadsheets [13]. It can be concluded that the presence of very high digital literacy, supported by very high self-directed learning could increase the positive impact on the quality of learning.
4 Conclusion

Based on the results of the analysis and discussion discovered in this research, it can conclude that digital literacy has no definite and significant effect on the learning quality. Self-directed learning variables can moderate the positive influence of digital literacy on the quality of learning.

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Study of Alumni Engagement and its Relationship to University Curriculum Reforming

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Abstract. The need for labor after Covid-19 pandemic continues to increase the need for professional human resources. Human resources are required to be skilled in adapting to the new normal conditions, including in terms of work. Working skill is not only determined by academic, but also affected by emotional intelligence, especially soft skills. One of the efforts to optimize the soft skills of prospective graduates is through the role of alumni. The engagement of alumni in the development of education is considered important to provide learning that is relevant to the current era. Alumni, as experienced parties in the world of work, certainly understand very well what skills a prospective employee need. Based on this matter, universities are required to produce graduates who are able to answer challenges in the world of work. Through data collected by interviews and discussion with alumni who had worked, this research described the most needed soft skills in the business industry include, (1) communication skill; (2) leadership; (3) personal skill; (4) creative skill; and (5) interpersonal skill. In addition, this study also found the need for training designs related to soft skills. Training would be given by alumni who had experience in working. The training materials were adjusted to the industry conditions, according to the advice of alumni. The training was held for several times with the senior student participants who were about to graduate. We believe that the design of this training by alumni will help universities in producing graduates who are able to adapt to the world of work in the new normal era.

Keywords: Alumni, Curriculum, Human Resources, Soft Skills, Training Design.

1 Introduction

Covid-19 pandemic is challenging everyone in the world of work to survive in driving the economic wheels. Uneven modernization of society is finally urged to keep up with the changing era, including in the world of education. Graduates are expected to survive in the modern era. This ability should be supported by educational institutions to equip graduates with adequate skills. Graduates should be encouraged to be able to develop creativity and bring out their uniqueness, so as not to be swept away by the automation era [1]. The role of educational institutions is important to help students constructing knowledge and be resilient in facing the future.

One way to present an appropriate education is by involving the alumni. Barron [2] reveals that alumni are the real measure of program success and they are tangible evidence of program
integrity and competence developed in learning. Alumni become important agents that deserve attention, and can objectively convey relevant information related to their experiences in practicing learning outcomes from the previous institutions. Rafik and Priyono [3] also conclude in their research that the most important thing that affects the satisfaction and loyalty of alumni is the institution capability to develop career skills by enriching the knowledge. Previously, Guevera and Stewart [4] find that if the university presidents want their alumni to be satisfied, it is necessary to ensure that their school curriculum includes practical material that is truly relevant to the careers. The results of education are important to support the ability of alumni in developing their careers.

The engagement of alumni in the development of education is considered important to provide learning that is relevant to the current era. Its development may include inspirators and role models, career mentors, while providing expertise and opportunities to access career development, increasing student recruitments, increasing efforts to raise funds and supporting the institution's reputation [5]. In the United States, a nonprofit private academic institution (NPAI) is able to utilize the alumni relations, so the students get the opportunity to learn from the alumni fund investment [6]. Alumni have a very important role in preparing human resources, in this case, are prospective university graduates. They have emotional bonds and interests in developing the alma mater. The role of alumni in universities can be in the form of support for alumni association networks, advocacy for universities, being placed on boards, work experience, volunteering, supervision, and mentoring to prospective scholars [7][8]. Through the relationship between the university and the alumni, it is expected that it can support the university in preparing graduates or human resources who are ready to enter the world of work. Therefore, maintaining positive alumni relations is very important for the university.

So far, the participation of alumni in advancing the education in institution is still lacking. An interview with one of the college alumni shows that alumni do not have a good place yet to transfer the knowledge with their juniors. Barron [2] also says that the alumni will often sleep away after graduation if there is no way to connect them with universities. The alumni say that they want to share their experiences at work, so that their juniors are educated about the world of work, which is often different from theory. On average, the alumni feel that their studies are still lacking, especially related to the practice in the world of work. The knowledge gained in college is still inadequate to make them ready in facing the work demands. Many graduates are not ready to work because they lack in adequate soft skills [9][10]. Wesley et al. [11] state, “Knowledge is still a necessary component to be provided to students but an adequate soft skills is critical in preparing students for a work in a real world.”.

Working skill is not only determined by academic, but also emotional intelligence such as soft skills. The definition of soft skills can be seen as the level of commitment of a person that differentiates it from individuals, through skills and experience. Soft skills are related to communication and interpersonal skills [12]. Broadly speaking, soft skills are categorized into 3, namely: (1) interpersonal skills, such as teamwork and customer service skills; (2) thinking skills, such as making decisions and knowing how to learn; and (3) personal skills, such as social skills and self-management [12]. In the world of work, soft skills are as important as cognitive skills and are universal combination of interpersonal skills [13].

The soft skills required by companies include communication skills, professionalism, teamwork, leadership, interpersonal skills, customer service, and problem-solving [11]. Generally, individuals who have high rankings in soft skills are often the most wanted people by companies or employers [13]. Some of the most common indicators of soft skills required in the world of work include integrity, communication, politeness, responsibility, social skills,
positive attitude, professionalism, flexibility, teamwork, and work ethic [14][13][11]. In addition, the human resources are also required to have self-management, communication, interpersonal skills, teamwork skills, the ability to work under pressure, imagination/creativity, critical thinking, willingness to learn, attention to detail, taking responsibility, planning, and organizing skills, insight, maturity, professionalism, and emotional intelligence [15].

This research examines the need for curriculum improvement by involving alumni as the output of Higher Education. The alumni experience in the world of work is helpful to develop the curriculum that is in accordance with the modern era. Their experiences and expectations regarding their learning institutions will be accommodated in this research, and are expected to produce graduates who are suited to the needs of the world of work.

2 Research Method

This is a qualitative research using case study method. This study examines the nature of engagement and its relationship with the development of college curriculum. The types of data in this study are divided into two, namely primary and secondary data. The primary data is the result of interviews and FGDs (online and offline) with the alumni of Accounting Department, Faculty of Economics, State University of Malang who had worked in several agencies. The secondary data consists of the study of literature, research, and other sources related to this research. Several alumni as the informants were selected by purposive sampling from each study program, that were Diploma 3 in Accounting study program, Bachelor of Accounting and Bachelor of Accounting Education. The selected informants in each study program were 10 alumni who worked in various institutions. The inclusion criteria were alumni who worked according to their study programs when they were still learning at the university. This selection was conducted with the expectation that the information could be linear with the research objectives and needs. Data analysis in this study was using an interactive model proposed by Miles and Huberman [16]. The components of the interactive model were; (1) data collection; (2) data reduction; (3) data presentation; and (4) drawing conclusion.

This research was conducted through interviews and FGDs with alumni, in order to be able to answer the research objectives in depth by gathering information related to what abilities and skills that must be owned by the university graduates in facing the needs of the world of work. In addition, the results of the interview could be used as a reference in determining education and teaching policies in the university. This is in line with Wesley [11] who said that curriculum adjustments in any field of study required interactive communication between students, faculties, and industry leaders. Such collaborative communication would describe the skills needed by students to adjust the work offered by employers/industries.

3 Result and Discussion

3.1 Result

Alumni play an important role in reforming the higher education curriculum as university agents spread across the business world. Alumni become a product description of a factory that reflects the quality of a university. Samina et al. [17] stated that alumni performance has a
very important role in supporting the progress of the study program. Alumni participation is also significantly needed as an effort to improve the quality of the department. Progress for higher education cannot be separated from the evaluation of alumni regarding the improvement of the teaching and learning process, curriculum, course content, and the quality of lecturers. FGD with alumni is an implementation of alumni engagement through research activities. The realization of alumni engagement is expected to be able to generate input for continuous improvement in higher education. This continuous improvement will be a positive point in itself, given the rapid modernization of time. Graduates should be equipped with the ability to adapt to minimize skill imbalances while studying in campus and also when showing off performance in the world of work.

Based on this matter, this study attempts to examine alumni suggestions related to the curriculum through focus group discussions. FGD was held by inviting the alumni from three study programs majoring in accounting, and each study program was represented by 10 people. The results of the FGD found that students really needed soft skills when they worked. This is because the world of work is unpredictable, so one must quickly adapt to overcome various conditions. Soft skills are the combination of various skills i.e. communicational, personal, creative, leadership, interpersonal, and different personality traits that can make people navigate themselves and work well with others. Soft skills mean skills that show the ability to do work effectively and living with mature behavior [18].

“When working, we must be able to keep thinking clearly even when under pressure” (FP)

“The ability to work as a team is very important because not all tasks can be done alone” (DN)

The input from the alumni above is also supported by the results of observation on the results of the internship activities of accounting students. The internship evaluation sheet from the company states that the apprentice students have sufficiently mastered theory but lack in soft skills mastery. On the other hand, the industrial revolution has further increased the need for human resources capable of adapting to all conditions. The situation changes rapidly due to technology advancement. The industrial revolution requires quality human resources that are qualified, agile, adaptive, and responsive to rapid changes [19]. Working skill for a person is not only determined by academic aspects, but also by soft skills.

Based on the discussion results presented by the alumni, the soft skills most needed in the work industry include (1) communication skill, is the ability to express feelings and opinions in an appropriate manner. In addition, this ability also means listening to and responding to others’ opinions with appropriate gesture and language; (2) leadership, is the capacity to make decisions when needed and how one organizes the resources under his authority; (3) personal skill, is the ability to analyze conditions and problems. This ability also means a person who is able to pay attention to moral values on the problems at hand; (4) creativity, is the ability where a person can do things in a different and innovative way with careful planning; and (5) interpersonal skill, that is when a person can maintain sympathy, empathy, and affection for the surrounding environment and accept other people as they are.

“The first impression when doing the test must be neat to show work readiness. Sometimes, appearance will influence judgment.” (C)

“When working, we must be willing to listen to others’ opinions so that teamwork is maintained and the work can be completed on time” (YP)

“If there is a problem in the office, we must think creatively and innovatively in order to solve the problem immediately” (P)
3.2 Discussion

The university produces resources (alumni) who will be involved in the world of work. Therefore, to produce quality alumni, universities are required to be able to develop student potentials to be more innovative, creative, and professional. Zafarina [20] states that along with the time progress and technology advancement, the world of work and industry requires quality human resources in their respective fields. This is one of the indicators that must be fulfilled by universities in order to produce alumni as professional workers according to their expertise. The competence of graduates can be seen in several aspects. Competence in the workplace context is a combination of cognitive skills (technical knowledge, skills & abilities), and personal characteristics or behavior (principles, attitudes, values, and motives), which comprise as individual’s personality. These graduate competencies will help in adapting to the new society.

Alumni are the products of an educational institution. The quality of alumni shows the quality of the educational institution. To determine the quality of the graduates produced, it is not enough by looking at the output alone, for example from the ability to master knowledge, skills, and formal attitudes embodied in the Achievement Index (IP) but can also be detected from the output by measuring how many graduates can be employed in the world of work [20]. The employment of alumni is influenced by several factors, both internal and external factors. Internal factors are factors that exist within the alumni. One of the important internal factors in alumni is soft skill. Furthermore, Samina et al. [17] states that the inadequate soft skills of graduates and the increased level of competition between job seekers who have the same expertise/field of knowledge are two main factors for the length of time graduates (alumni) look for a job.

The results of discussion with alumni related to the development of soft skills in students are very important for the accounting department to implement. It is intended that accounting graduates are ready to face the world of work. The five skills needed are communication, leadership, creative, personal, and also interpersonal skills. Wesley [11] explains that communication skills are the most important, expressed by the three groups of industry, faculty, and students. These skills are the basics that must be possessed since the first time entering the world of work. Verbal and non-verbal communication convey the aims and objectives so that organizational goals are more easily achieved. As a superior, it is appropriate to be able to invite employees to communicate. Mintzberg [21] states that there is a skill for conveying information and also a skill for bridging individuals that a leader must master. This communication skill is actually needed by all parties, including among employees and between employees and the leaders. Communication in inseparable in human life.

Another skill that is needed in the world of work is leadership, both leading oneself and leading others. The attitude as a leader will make the person think critically, be able to overcome conflicts, respect others, and so on. This attitude is usually needed when working in a team. However, teamwork requires skill to position himself, when becoming a leader and when following the leader's direction. As an individual, the attitude to think strategically is also needed to quickly achieve the goals. Wesley [11] found that strategic thinking is the most important soft skill characteristic for an individual, in which this skill is in the soul of a leader.

Creative thinking is important in the world of work. The era of globalization that is moving rapidly, especially entering the era of the 5.0 industrial revolution, demands each individual to be adaptive. Acting creativity can accelerate the achievement of goals, so this skill is needed by each individual in it. Creativity can be used in producing solutions that are beneficial to the
organization so that the decisions taken will be correct and effective. Creative people always think out of the box and have an open mind to approach something new [22]. These skills should be trained through quality education, as an effort to encourage the ability to think creatively as a requirement to face the demands, changes, and developments of time [23]. Universities can be used as a place to teach creativity to prospective graduates so that in the future they are ready to face the changing time.

Appearing as a capable individual is another important thing that one needs to have in the world of work. The ability to position oneself will make it easier to work together with various individual characteristics. These personal and interpersonal skills will bring out the identity of an individual to be side by side in the world of work. Managing emotions, generating sympathy, empathy will help conveying messages better. Sulianta [24] explains that this intrapersonal or personal skill will enable a person to organize himself in optimal work development, with time management, changes, and creative thinking. Therefore, personal and interpersonal skills will support the achievement of organizational goals. Not only leaders, the employees should also master this skill.

The provision of the five soft skills for students can be carried out through training that will be mentored by alumni. The training schedule will be carried out three times in one semester at the senior year. The students will get a certificate from this training activity. This activity will be initiated by giving a pretest before the training and it will end with a posttest to the students taking part in the training. Before completing this training activity, the students are required to give feedback on training activities. The feedback will be analyzed by the development team to evaluate this training activity so that any shortcomings of this activity can be followed up by the team. The soft skills material that will be given includes five main types of soft skills needed by students, including (1) communication; (2) leadership; (3) personal; (4) creative, and (5) interpersonal skills. The students can obtain these soft skills through participating in the training. Speakers in soft skill training are the alumni who have worked with the aim of bringing the students closer to the facts and reality in the world of work. Soft skill training is expected to prepare the students to face the world of work not only with academic intelligence, but also with emotional intelligence. The assessment of this activity consists of 1) improvement on the pretest and posttest scores, 2) peer assessments, 3) self-report assessments, and 4) assessment of the presenters.

4 Conclusion

The research related to the analysis of needs of world of work through FGD with alumni concludes that there are five main types of soft skills required by the students, which are (1) communication; (2) leadership; (3) personal; (4) creative, and (5) interpersonal skills. These soft skills can be obtained by the students through debriefing of the world of work in the form of training. The training schedule is held three times in one semester at the senior year. The speakers in soft skill training are alumni who have worked with the aim of bringing the students closer to the facts and reality in the world of work. Soft skill training is expected to prepare students to face the world of work not only with academic intelligence, but also with emotional intelligence.
References


An Analysis of the Need of Teaching Materials Development for Financial Accounting on Character-based Conservation

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Abstract. The study's objective is to analyze the students' needs for teaching materials needed in financial accounting courses. Teaching material is one of the important components required in the learning process. The appropriate teaching materials are expected to support learning activities. The Financial Accounting Course is a compulsory course for accounting education students at Universitas Negeri Semarang. This course consists of the concepts and principles of a business's financial statements and its accounting treatment. It is a descriptive exploratory study taking the accounting education students at Universitas Negeri Semarang as the study's subject. The sample used for this study take randomly for 20 students as the samples. The research data obtained from the initial observation and questionnaire results for the desired teaching material. The observations showed that financial accounting teaching materials are still unable to explain the learning content in detail, both in terms of material and visualization. The needs analysis for developing the teaching materials showed that students need teaching materials explaining contextually to be implemented in the real world.

Keywords: Teaching Materials, Financial Accounting, Needs Analysis.

1 Introduction

Education is one of the important aspects of human life. As time goes by, it improves the quality of education to produce qualified human resources. A certain thing to be improved for the better quality of education is improving teaching effectiveness and efficiency. Education has quite complex activities, covering various components related to each other. If education is done regularly, various elements (components) must be involved in educational activities that need to be recognized. Education can be seen by students, educators, and their other interactions in the education business. The relationship between student elements and educators should not only be one-way in the form of delivering information from teachers to learners. The process of teaching-learning is better if done actively by both parties, namely teachers and students, for a balanced interaction between the two.

The lecturing process is closely related to learning media. One of the most familiar and useful learning media to use is teaching materials. The use of teaching materials of Berkua-quality can help teachers to deliver learning materials to the fullest. Teaching materials should be arranged by following a specific rule that Stamatis means that the right teaching materials
should formulate preparation tailored to establishing the teaching materials. Well-designed and structured teaching materials can affect the level of learning quality.

Stephens [1] explained that the learning quality is strongly influenced by inputs, i.e., human resources and supporting resources. The higher the input readiness, the higher the input [2]. Besides human resources, there are other supporting resources, including facilities and infrastructure, and teaching material. Teaching material is one component needed in the learning process to support the learning process.

Mudlofar [3] stated that teaching materials are all forms of materials used to help students achieve the expected competence. The design of systematic teaching materials greatly influences individual human resources and facilitates teaching and learning processes [4]. Types of teaching materials such as printed materials include books and modules, audio teaching materials, audiovisual teaching materials, and interactive multimedia teaching materials [5]. According to Kristanto [6], Teaching materials or instructional materials outline knowledge of skills and attitudes that students must learn to achieve a predefined competency standard. Some teaching materials include printing materials, such as books, print modules, student worksheets, brochures, leaflets, and wallcharts. Audio, such as video movies and VCD. Multimedia, such as Interactive CD and the Internet.

Impressive teaching materials are needed in the learning process because they can increase students' motivation and interest. Teaching materials are used by educators to teach in various science fields, one of which is financial accounting. Financial accounting is a science that discusses financial records related to transaction logging issues transaction for a company or organization and the preparation of various periodical reports from the recording results. For the science of physics to be delivered well to students, educators need useful teaching materials. Quality teaching materials are one example of useful teaching materials to use.

Then, the classroom's learning process problems are from the teacher-centered learning and ineffective implementation of learning models [7]. Teacher-centered learning makes students passive and bored. On the other hand, Che Ghani et al. [8] explained that graduates should not only understand the concepts, however, but also to practice and to solve problems in the real world.

The study program of Economics Education at the Faculty of Economics, Universitas Negeri Semarang, already applied the 2019 curriculum based on competency and conservation. One of the curriculum demands is that students have academic skills in accounting following science and technology developments. One of the subjects taken by students to support the achievement of those competencies is Financial Accounting. The teaching materials used have been compiled by authors from outside Universitas Negeri Semarang (UNNES) or external parties. It does then consider that there a mismatch of teaching materials with user needs.

The limitation of external parties' teaching materials is that not all material is relevant to the Study Program's required curriculum. It makes students purchase other reference books; it is not a single unit because they are separated from several book references. As prospective teachers, they are required to master the scientific substance related to the field of study. Moreover, they should master personal abilities reflecting the personality [9]. Life values need to be developed into a complementary part of the education curriculum because some students get high grades academically.

Nevertheless, they are failed to treat life well. Hisham [10] stated that effective educators and learning are very important in the learning process. According to Hanifah et al. [11], teachers’ quality lies in the competence of teachers and teachers to determine the quality of learning and student achievement.
The theory developed by Handoyo and Tijan [12] used in the study is regarding the conservation characters, i.e., religious, honest, caring, tolerant, democratic, polite, intelligent, and tough. Religious is an attitude and behavior that reflects submission to God Almighty. Honesty is a union of attitudes, speech, and behavior to be used as a person who can be trusted. Caring is an attitude and behavior like to share, help others, and protect the natural environment. Tolerances are attitudes and actions that can understand and accept other people's opinions. Democratic is an attitude and action which is fundamental to respect for the rights and obligations of others. Polite is an attitude that reflects the refinement of mind and behavior towards others. Intelligence is the ability to know and understand all problems quickly and precisely, and to be able to solve problems wisely. Resilience is the ability to never give up on facing all problems.

Students are problem tackler since they have high confidence, strength, endurance, and enthusiasm. The development of character values carried out by UNNES as a conservation university by inserting those characters in the teaching-learning process.

Based on the Minister of Education and Culture Nadiem Makariem, implementing the 2021 national examination will be abolished. It will be changed to a minimum competency assessment and character survey, consisting of literacy skills, numeracy skills, and strengthening character education (www.cnnindonesia.com). Therefore, there should be efforts to improve the teaching materials internalizing the character conservation values to bridge the need for a conservation-based financial accounting course. It can be done by developing new teaching materials to facilitate students’ conceptual reasoning and solve existing problems. It is expected that students can understand the concept of materials learning independently both in theory and practice and understand the conservation values in life. It means that they can support the UNNES programs with a conservation perspective.

They refer to teaching materials of financial accounting based on conservation, where concepts in essential competencies contain life values' characteristics. However, learners not only gain knowledge in theory only, besides the values of life contained. For the study's demands to produce the following expectations, these concepts must be linked to the material. Conservation-based elections will significantly contribute to the lack of students' knowledge of the environment and their life values. With conservation-based, it will improve students' character, namely indigo-value conservation, and support the program of Universitas Negeri Semarang that is insightful conservation. Therefore, the need for teaching materials that internalize the character's conservation values to bridge the needs.

The study aims to analyze the need for teaching materials in financial accounting at the Department of Economics Education, UNNES. Data are collected by conducting the initial observation and distributing the questionnaire needs sheets. The research results are expected to provide the teaching materials needed and developed to improve students' understanding and interest in learning the financial accounting materials independently and in class.

2 Research Method

2.1 Types of research

It exploratory, descriptive research.
2.2 Time and Place of the Research

The research conduct in March-April 2020 at the Accounting Education Study Program, Faculty of Economics, Universitas Negeri Semarang (UNNES).

2.3 The Research Subject

The subjects of this study are Accounting Education students in the 6th semester at UNNES taking Financial Accounting; they are 93 students. The sample used for this study amount to 20 students taking by simple random sampling.

2.4 The Research Stages

The research data obtained from preliminary observations, interviews, and questionnaires. The initial observation is used by researchers to determine the limitations of the teaching materials in the Financial Accounting subject. An interview is an instrument to determine the difficulties and suggestions given by respondents in open questions. A questionnaire is a research instrument to determine the follow-up efforts to address the research subject's problems related to the teaching materials. Then, the researchers can provide appropriate solutions as expected to the research subjects.

The research instruments observation sheets and questionnaires. The data obtained qualitative and quantitative data. The data will be analyzed descriptively using a descriptive percentage system by comparing the number of answers from the research subjects with the highest number of answers with a range of 0-100% by qualifying the data into existing categories, synthesizing, organizing certain patterns, and making the conclusions.

3 Result and Discussion

The research on analyzing student needs for the teaching materials of Financial Accounting. Data conducted using initial observation sheets, research questionnaires, and interview sheets. The instruments distribute to 20 students as the samples of the research. The first instrument is an initial observation to analyze student needs. It follows by filling out questionnaires and interviewing students’ needs for teaching materials at the Financial Accounting course.

Researchers' observations during the Financial Accounting showed that most students are difficult to understand the financial accounting courses. Most students showed less enthusiasm for learning due to several factors. Some of the students' obstacles in learning financial accounting are the lack of understanding of the basic knowledge of learning materials, the lack of student participation in class because of a monotonous learning strategy, explaining the material using PowerPoint media, and irrelevant references. The learning strategies would be better if the lecturers encourage students' engagement in the teaching-learning process. The next obstacle is the different learning experiences between senior and junior lecturers. If the learning is only one way, or one direction centering to the lecturers, it made students do not understand the materials, bored. It did not actively participate in the learning process.

The difficulties and obstacles in the teaching-learning process have an impact on students’ achievement. To overcome these problems, the lecturers should change the learning method into group presentations and discussions to make students more active and enthusiastic in the learning process. Meanwhile, it can not completely overcome the problems because it only addresses students’ activities in the class. The students’ understanding is
completely resolved because the book's language is hard to understand and does not fit the existing curriculum. It also needs more explanation and exercises on questions and answers. The results of research questionnaires can be seen in Table 1.

<table>
<thead>
<tr>
<th>No</th>
<th>Item Questions</th>
<th>Percentage of Students Answers</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>What learning resources do you use in financial accounting lectures?</td>
<td>a. Internet: 30%</td>
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<tr>
<td></td>
<td></td>
<td>b. Text Book: 60%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Modules: 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Others:</td>
</tr>
<tr>
<td>2.</td>
<td>What type of teaching material do you want to study in financial accounting?</td>
<td>a. Modules: 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. Textbooks: 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>c. Student Worksheet: 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>d. Handout: 30%</td>
</tr>
<tr>
<td>3.</td>
<td>Did you learn about financial accounting for teaching materials based on conservation characters?</td>
<td>a. Yes: 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 50%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 35%</td>
</tr>
<tr>
<td>5.</td>
<td>Do the materials of financial accounting need to be packaged more contextually?</td>
<td>a. Yes: 100%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 0%</td>
</tr>
<tr>
<td>6.</td>
<td>Are the financial accounting books/other references you use having interesting and easy to understand pictures?</td>
<td>a. Yes: 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 95%</td>
</tr>
<tr>
<td>7.</td>
<td>Is the language from the financial accounting book/other learning sources today easy to be understood?</td>
<td>a. Yes: 5%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 95%</td>
</tr>
<tr>
<td>8.</td>
<td>Can you take the character values at the materials of financial accounting lectures?</td>
<td>a. Yes: 65%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 35%</td>
</tr>
<tr>
<td>9.</td>
<td>Are the questions in the books of financial accounting easy to be understood?</td>
<td>a. Yes: 15%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>b. No: 85%</td>
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</tbody>
</table>

The analysis results from questionnaires on student needs for developing the teaching materials showed that most students are satisfied with the Financial Accounting; the subject materials are sufficient to meet their needs. 50% of students chose the supporting facilities used in financial accounting learning in contextually packed teaching materials. Good teaching materials should be self-contained and self-instruction or independent learning. Independent learning can be achieved only if the teaching materials are easy to be understood by students.

Table 1 shows that the financial accounting material's language is still classified as abstract without any direct practices; it made students difficult to understand. There is an incomplete translated book, only a few pictures to improve students’ enthusiasm, and the difficult examples of the teaching material problems. The students agreed to develop teaching materials, especially for financial accounting materials, with character conservation. The existence of models, methods, and learning strategies is expected to develop advanced teaching materials.

The analysis results showed that students needed additional teaching materials packaged interestingly to make students understand the course material and learning concepts. It can be
concluded that researchers are required to provide solutions for solving these problems by developing teaching materials. The development of effective teaching materials could be done by developing textbooks. Textbooks are one type of material used as a guide for students and lecturers in carrying out lecture activities.

The preparation of textbooks is different from reference books in general. It needs to be adjusted to the curriculum at the Study Program personalized to the student's needs, using the communicative language, arranged for the instructional process, and providing the feedback from participants. Nowadays, students only use reference material written from external parties outside Universitas Negeri Semarang. Thus, there are less suitable teaching materials with user needs. Not all material is relevant to the required curriculum in the Study Program. There are many forms of textbooks; one of them is printed textbooks. Printed textbooks are one of the teaching materials that positively impacted students' ability to understand the learning materials. It is in line with the previous study done by Irawati and Saifuddin [13] entitled “The Need Analysis on Developing the Textbook Materials for Biology Prospective Teachers at Biology Education Ahmad Dahlan University, Yogyakarta. The research analysis results showed that students' teaching materials are in textbooks, with teacher history, teacher regulations, teacher competencies, biology teacher competencies, teacher certification, and teacher profiles in other countries.

According to the rules of writing materials issued by the Directorate of Vocational Middle School Directorate General of Primary and Secondary Education Department of National Education year 2003, teaching materials must have several characteristics: self-instructional, self-contained stand-alone, adaptive, and user-friendly [14]. First, self-instructional teaching materials can make students able to teach themselves with developed teaching materials. The teaching materials must be formulated objectives to fulfill the self-instructional character, both the final goal and the objective between. Second, self-contained is that all of the lesson material from one unit of competency or sub competency learned is in a whole material. Third, stand-alone is a teaching material developed not depending on other teaching materials or should not be used in conjunction with other teaching materials. Fourth, adaptive teaching materials should have high adaptive power in the development of science and technology. Fifth, user friendly is every instruction and display of information that appears helpful and friendly with the wearer, including the ease of users responding and accessing by the wishes.

Then, research is conducted by Kurniawan et al. [15] entitled “The Need Analysis for Teaching Materials as a Reference for Developing the Ball and Tube Wave Physics Models.” The research results showed that module teaching materials on the Wave and Tubes course at the University of Jambi are needed to explain the learning material in detail, supplemented with simulations using the MATLAB application.

Accounting education students expected that financial accounting should be aligned with the curriculum, easy to be understood, and fit to the world of work. Students assumed that if the teaching materials are up-to-dated, they could adapt easily to the work environment. The study results show that students likely wanted the values of conservation characters inserted in the lecture. When students studied financial accounting, they wanted values, e.g., creative, honest, caring, tolerant, humane, innovative, and inspirational values in the lecture. The Universitas Negeri Semarang is a conservation university. The character values of Yang developed by Universitas Negeri Semarang are a breath of conservation. The value of conservation character expressed by Handoyo and Tijan [12] is religious, honest, caring, tolerant, or Tepa Slira, democratic, polite, intelligent, and robust. Based on research data, students likely expect teaching materials to visualize the concepts of financial accounting
courses. The researchers would compile more contextual and interesting teaching materials and complement them with character values to fulfill these needs.

According to Santyasa [16], the benefits of learning with the application of teaching materials are 1) increasing the motivation of students; 2) educators and students know the extent of understanding of the material; 3) students get results according to their abilities; 4) teaching materials are divided more evenly; 5) more efficient because the teaching materials are arranged according to academic levels.

Development of the teaching materials to be carried out refers to the Borg development Procedure and Gall. The scheme of research flows used adapted from the Borg Development Research and Gall [17], namely 1) Research and Information, 2) Planning, 3) Develop a preliminary form of product, 4) preliminary field testing, 5) Operational field testing, 6) Operational product revision, 7) Main field testing, 8) primary product revision, 9) Final product revision, 10) Dissemination and implementation. The model selection is based because allowing the teaching materials maker to continuously revise the evaluation at every stage that can produce better teaching materials. The Borg development Model and Gall is also systematic, yet straightforward in implementing it.

4 Conclusion

Based on research data on the need analysis, it can be concluded that teaching materials need to be developed in the Financial Accounting course at the Faculty of Economics, Universitas Negeri Semarang. According to the curriculum, the textbook is contextual learning materials with a clear language to make it easily understood. It complements the values of character conservation to be implemented in the real world.

References

perspektif gagasan islamisasi ilmu moden,” 2011.


The Effect of Celebrity Endorser Perceived Credibility and Country of Origin Image towards Purchase Intention of Skecher Apparel in Indonesia

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Institut Teknologi Bandung, Indonesia¹, ²

Abstract. As the global competition is intensifying, the strategy implemented by producers and retailers should be pertained globally to achieve the purchase intention of customers. Purchase intention can be made by using country of origin strategy and celebrity who was employed to be endorsers of a brand. Skechers is a brand that originated from United States, which is known as one of the centers of fashion, and they collaborate with well-known celebrities to promote their products in Indonesia. The purpose of this paper is to investigate the effect of country of origin image and three dimensions of celebrity endorser credibility (attractiveness, trustworthiness, and expertise) towards purchase intention of Skechers apparel in Indonesia from the customers perspective. Quantitative research design with survey method was employed in collecting the data from 214 desired respondents who have been chosen by using purposive sampling technique with some criteria. Then, researchers use multiple regression analysis to test the hypotheses. The result indicates that country of origin images and all three dimensions of celebrity endorser perceived credibility significantly influence the purchase intention. Furthermore, country of origin image, celebrity perceived trustworthiness, and celebrity perceived expertise give positive effect on purchase intention. However, the impact of celebrity perceived attractiveness on purchase intention delivers a negative impact. Therefore, researchers suggested that Sketchers management in Indonesia should utilize the Sketchers country of origin, which is United States in their marketing communication strategy, as well as celebrity perceived trustworthiness and expertise of their endorsers since these potentially increase customer purchase intention.

Keywords: Country of Origin Image, Celebrity Endorser Perceived Credibility, Purchase Intention, Quantitative, Multiple Regression Analysis.

1 Introduction

As the global competition is intensifying, all companies need to develop a marketing orientation which is international in nature [1]. The main objective of the companies is to get high profit or high sales [2]. High sales or profit can be achieved by companies when the extent of purchase intention of the customer is also high.

One approach that retailers can do is to use the concept of COO or Country of Origin [3]. In Indonesia, Country-of-origin is seemingly one of the influencing factors in the purchase decision. According to Ali Charisma, Chairperson of the Indonesia Fashion Chamber (IFC) in CNBC Indonesia, “60% of (Indonesian) consumers are still pursuing
foreign brands because I admit (that) their quality is good and the prices are affordable”. Furthermore, according to Badan Pusat Statistik (BPS), one of the biggest imported products are sneakers.

Skechers is a brand that is running in footwear industry that is based in Manhattan Beach, California. They design, develop, and provide more than 3000 shoe styles for men, women, and kids. Skechers is a brand that originated from United States which is known as one of the centers of fashion.

They are running in the sportswear industry that is acknowledged as the specialized industry from America. As stated by Benatti [4], sportswear is recognized as the specialization of the United States, where this type of apparel requires a lot of technology and it fits the United States country well because in terms of culture it is a very sporty country.

Whilst, the best-selling shoe brands in Indonesia in 2018 according to APRISINDO, Adidas was ranked first with a demand of 98,902 units, followed by Nike with 96.481 units, Reebok with 41.362 units, New Balance with 25.215 units, and Under Armour with 34.721 units. From here, the sneakers market share holders in Indonesia are still dominated by overseas brands.

However, Skechers was not included in the top 5 best-selling shoe brands in Indonesia. This indicates that Skechers has not been dominating the market share in Indonesia, even though Skechers originated from United States that is known as one of the centers of fashion and specialized in sportswear. Therefore, Skechers needs to assure the effect of their COO to the purchase intention of Indonesian consumers.

In marketing their products, Skechers also collaborates with well-known celebrities to promote their products. According to their website, seven notable figures are currently ambassadors of Skechers for the lifestyle division collection including platinum award-winning singer Camila Cabello. This strategy intends none other than to influence consumers to purchase their products. Advertisers assume that by using celebrities will make the consumers respond positively towards the products featuring celebrities and it is worth the money [5].

Furthermore, from the previous events, celebrity endorsements became effective when the sports brands collaborated with sports celebrities, such as Michael Jordan with Nike and Messi with Adidas. The impact of symbolic communication can be maximized preferably between consumer and product when there is compatibility between characteristics of the endorser and the product [6]. Therefore, Skechers needs to understand the effect of using a singer celebrity endorser in their marketing strategy towards purchase intention of Indonesian customers since the background of the celebrity is not related with brand’s nature.

Consequently, researchers wanted to study about 3 issues of Skechers in Indonesia, namely Country-of-origin Image, Celebrity endorsement perceived credibility, and Purchase Intention. Hence, research questions can be defined as follows:

1) How is the effect of Country-of-Origin towards Purchase Intention of Skechers sportswear apparel?

2) How is the effect of Celebrity perceived credibility towards purchase intention of Skechers sportswear apparel?
2 Theoretical Foundation

2.1 Country of Origin Image

Country-of-origin image is defined as the image of the country that consumers are associated with a particular brand or product as its origin regardless of the place or manufacture [7]. For instance, the products of Nike brand are manufactured in many countries but customers are still considering America as the Country of origin [8].

The main advantage of a strong Country of origin of a product is that it serves as a clue of product quality and influences the tendency of purchase immediately [9]. Country of origin image does play a very important role when a consumer makes a purchase decision [10].

The study undertaken by Hien et al. [11] revealed that Country-of-origin is determined as a significant information in evaluating the brand of the product, specifically in influencing customer’s purchase intention which indicates that COO plays an essential role in the purchase decision’s process. This study supports Hanzae and Khosrozadeh [10] who indicated that COO image has a significant effect on purchase intention of consumers. Moreover, Kim et al. [8] explained that a stronger country of origin image of fashion collection will result in higher purchase intention of consumers.

2.2 Celebrity Perceived Credibility

Based on Ohanian [12], three global characteristics can make a celebrity more effective, namely: attractiveness; expertise; and trustworthiness. Furthermore, The source-credibility model indicates that the efficiency of the message communicated by an endorser relies on perception of the consumers towards brand endorser’s expertise, trustworthiness, and attractiveness [13][14].

According to Ketchen et al. [15], Trustworthiness indicates to the extent in which a celebrity, while transferring a message of honesty, integrity, and believability through advertising, is perceived by customers. Trustworthiness refers to the message audience’s degree of confidence in, and the level of acceptance of, the endorser and the message [12].

Expertise is defined as the compatibility between the celebrity endorser and the product so that a celebrity endorser can have special knowledge or experience with the category to have special expertise [16]. Whilst, Attractiveness involves outward physical appearance of someone, that is, someone who is considered as beautiful, elegant, or classy [13][17][18].

The study done by Pornpitakpan [5] indicated that those three celebrity credibility dimensions influence the purchase intention of Singaporean, where they seem to give more weight to the celebrities’ attractiveness and trustworthiness.

The study of Osei-Frimpong, Donkor, and Owusu-Frimpong [19] also suggested that the endorser’s characteristics that include the level of familiarity, attractiveness, and trustworthiness on consumers’ perception influence their purchase intention. Additionally, Ohanian [12] discovered that celebrity endorsers’ perceived expertise explained significantly the purchase intention of the subject on the product.

2.3 Purchase Intention

Purchase intentions reveal consumers’ predicted or planned future behaviors, or the chance that behavior and belief will be translated into behavior of buying [20]. Consumer purchase intention refers to the “possibility of consumers’ willingness of purchasing some specific products” [21].
2.4 Hypotheses

Based on the explanation above, the hypotheses can be defined as follows:

**H1.** There is a significant relationship between country-of-origin towards purchase intention of Skechers brand in Indonesia.

**H2a.** There is a significant relationship between Celebrity Endorser’s Perceived Attractiveness towards Purchase Intention of Skechers brand in Indonesia.

**H2b.** There is a significant relationship between Celebrity Endorser’s Perceived Trustworthiness towards Purchase Intention of Skechers brand in Indonesia.

**H2c.** There is a significant relationship between Celebrity Endorser’s Perceived Expertise towards Purchase Intention of Skechers brand in Indonesia.

2.5 Conceptual Framework

Consequently, based on the previous studies and hypotheses, the new conceptual framework can be built as follows:

![Conceptual Framework Diagram](image)

Fig. 1. Conceptual Framework

3 Research Methods

3.1 Types of Research

This research is categorized as quantitative research in terms of data collection technique. The data collection technique used was survey as the method of collecting data. This research is classified into causal associative research which is a study by looking for a relationship or effect of cause and effect, namely the relationship or influence of the independent variable (X) on the dependent variable (Y) [22]. The type of survey method was questionnaire, where it is defined as a data collection technique that is done by giving a set of questions or written statements to respondents to be answered [22].
3.2 Operational Variable

There are 2 kinds of variables in this study, namely: Independent variables (country of origin image and celebrity perceived credibility) and Dependent variable (purchase intention). All indicators of questions of each variable is derived from previous studies. According to Hien et al. [11], country of origin image consists of 7 indicators and purchase intention consists of 5 indicators. Whilst, based on Pornpitakpan [5], celebrity perceived trustworthiness, celebrity perceived attractiveness, and celebrity perceived expertise consists of 3 indicators each. For the subject of celebrity perceived credibility, Camila Cabello was selected. For the scaling method, Likert scale method was employed by using 5 categories (1= “strongly disagree”, 2= “Disagree”, 3= “Undecided”, 4= “Agree”, and 5= “strongly agree”).

3.3 Population and Sample

Researchers used a non-probability sampling method. The type of non-probability sampling used is purposive sampling technique. The criteria of the respondents of this study, namely: Know the Skechers brand; Know about the singer Camila Cabello who is a brand endorser from Skechers; Live in Indonesia, focusing on Jakarta, Bandung, Medan, Yogyakarta, and Surabaya since these areas before and these areas have the highest number of Skechers stores. According to Hair [23], the number of samples is the number of questionnaire indicators multiplied by 10. Therefore, the minimum sample in this study is 210 samples.

3.4 Data Analysis

Since, this research intends to explain the influence of country of origin image, celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise on purchase intention of Skechers, hence Researchers used multiple regression analysis. Regression analysis is used to see how the influence that exists between the independent variables on the dependent variable [24]. The data is processed statistically to analyze and test the hypotheses using SPSS 23.0. The multiple regression method is formulated as follows:

\[ Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e \]

Y = Purchase intention
X1 = Country of origin image
X2 = Celebrity perceived attractiveness
X3 = Celebrity perceived trustworthiness
X4 = Celebrity perceived expertise
\( \beta_1, \beta_2, \beta_3, \beta_4 \) = Regression Coefficient
a = Constant
\( e \) = Standard Error

4 Results and Discussion

4.1 Validity and Reliability Test

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>r statistics</th>
<th>Significance</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>XA1</td>
<td>0.804</td>
<td>0.000</td>
<td>Valid</td>
</tr>
<tr>
<td>Y</td>
<td>XA2</td>
<td>0.653</td>
<td>0.000</td>
<td>Valid</td>
</tr>
</tbody>
</table>
The Results of Data Processing Using SPSS.

Based on the table that estimates the value of the Product correlation coefficient moment, the results show that all variables’ questions have a r statistic greater than r table (N=30, \( \alpha = 0.05 \)) 0.361. Therefore, the questionnaire can then proceed to the reliability test.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach’s Alpha</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>COOI</td>
<td>0.716</td>
<td>Valid</td>
</tr>
<tr>
<td>XA4</td>
<td>0.792</td>
<td>Valid</td>
</tr>
<tr>
<td>XA5</td>
<td>0.701</td>
<td>Valid</td>
</tr>
<tr>
<td>XA6</td>
<td>0.407</td>
<td>Valid</td>
</tr>
<tr>
<td>XA7</td>
<td>0.548</td>
<td>Valid</td>
</tr>
<tr>
<td>XA1</td>
<td>0.879</td>
<td>Valid</td>
</tr>
<tr>
<td>XA2</td>
<td>0.865</td>
<td>Valid</td>
</tr>
<tr>
<td>XA3</td>
<td>0.808</td>
<td>Valid</td>
</tr>
<tr>
<td>CPA</td>
<td>0.879</td>
<td>Valid</td>
</tr>
<tr>
<td>XA4</td>
<td>0.865</td>
<td>Valid</td>
</tr>
<tr>
<td>XA5</td>
<td>0.908</td>
<td>Valid</td>
</tr>
<tr>
<td>XA6</td>
<td>0.939</td>
<td>Valid</td>
</tr>
<tr>
<td>XA7</td>
<td>0.923</td>
<td>Valid</td>
</tr>
<tr>
<td>XA1</td>
<td>0.664</td>
<td>Valid</td>
</tr>
<tr>
<td>XA2</td>
<td>0.832</td>
<td>Valid</td>
</tr>
<tr>
<td>XA3</td>
<td>0.827</td>
<td>Valid</td>
</tr>
<tr>
<td>XA4</td>
<td>0.865</td>
<td>Valid</td>
</tr>
<tr>
<td>XA5</td>
<td>0.835</td>
<td>Valid</td>
</tr>
<tr>
<td>XA6</td>
<td>0.872</td>
<td>Valid</td>
</tr>
<tr>
<td>XA7</td>
<td>0.895</td>
<td>Valid</td>
</tr>
<tr>
<td>XA1</td>
<td>0.860</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Based on the results of the reliability test, it can be seen that the value of all variables’ Cronbach Alpha coefficient are greater than 0.6. These reflected that the research instruments are reliable and can be applied to measurements of the sample.

4.2 Test Assumptions

The classic assumption test was done by testing normality, heteroscedasticity and multicollinearity. These tests are conducted to meet the requirements so that the equations obtained by multiple linear regression can be accepted. The results revealed that:

- Normality assumption is fulfilled since the skewness and kurtosis values are still in the cut-off point in z score range of \(-1.96 \leq z \leq 1.96\) for 95% confidence interval.
- Since all of the VIF<10 and Tolerance>0.10, there is no multicollinearity between independent variables.
- The standardized residual and standardized prediction in the scatterplot is not creating a
pattern, this means it does pass the homoscedasticity assumption test.

### 4.3 Multi Linear Regression

Table 3. *Coefficients*<sup>a</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>1 (Constant)</td>
<td>2.597</td>
<td>2.184</td>
<td>1.189</td>
</tr>
<tr>
<td>COO</td>
<td>.193</td>
<td>.080</td>
<td>.161</td>
</tr>
<tr>
<td>CPA</td>
<td>-.473</td>
<td>.168</td>
<td>-.248</td>
</tr>
<tr>
<td>CPT</td>
<td>.705</td>
<td>.179</td>
<td>.356</td>
</tr>
<tr>
<td>CPE</td>
<td>.667</td>
<td>.221</td>
<td>.298</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: PI

The Results of Data Processing Using SPSS.

Based on the table 3, the regression model can be defined as follows:

\[
Y = 0.193X_1 - 0.473X_2 + 0.705X_3 + 0.667X_4 + 2.597
\]

According to the result, it can be concluded that all independent variables, namely country of origin image, celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise, significantly influence the purchase intention since all the significance levels are below 0.5. The constate indicates that if there are no COO, celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise variables that affect purchase intention, then purchase intention is 2.597 units.

Furthermore, if the Country of origin image variable increases by one unit, then the purchase intention will increase by 0.193 assuming the other independent variables are fixed. If the Celebrity perceived trustworthiness variable increases by one unit, then the purchase intention will increase by 0.705 assuming the other independent variables are fixed. If the Celebrity perceived expertise variable increases by one unit, then the purchase intention will increase by 0.667 assuming the other independent variables are fixed. However, the relationship between celebrity perceived attractiveness and purchase intention is a negative relationship, where if the Celebrity perceived attractiveness variable increases by one unit, then the purchase intention will decrease 0.473 assuming the other independent variables are fixed.

### 4.4 Hypotheses Testing

- **F Test**

Table 4. *ANOVA*<sup>a</sup>

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1385.564</td>
<td>4</td>
<td>346.391</td>
<td>22.219</td>
<td>.000&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>1 Residual</td>
<td>3258.230</td>
<td>209</td>
<td>15.590</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4643.794</td>
<td>213</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: PI
b. Predictors: (Constant), CPE, COO, CPA, CPT

The results of Data Processing Using SPSS.

The outcomes of the analysis using multiple linear regression signify that there is a significance value of 0.000 (0.009 < 0.05). This value can prove the research hypothesis can be accepted, which implies that "There is a significant effect of country of origin image, celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise, simultaneously on the Purchase Intention".

- **T Test**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
</tr>
<tr>
<td>2 (Constant)</td>
<td>2.597</td>
<td>2.184</td>
<td></td>
</tr>
<tr>
<td>COO</td>
<td>.193</td>
<td>.080</td>
<td>.161</td>
</tr>
<tr>
<td>CPA</td>
<td>-.473</td>
<td>.168</td>
<td>-.248</td>
</tr>
<tr>
<td>CPT</td>
<td>.705</td>
<td>.179</td>
<td>.356</td>
</tr>
<tr>
<td>CPE</td>
<td>.667</td>
<td>.221</td>
<td>.298</td>
</tr>
</tbody>
</table>

a. Dependent Variable: PI

The results of multiple linear regression analysis test indicate that:

- The significance value of Country of origin image towards purchase intention is 0.017 (0.017 < 0.05). This value can prove the hypothesis is accepted, which means that "There is a significant Effect of Country of origin image on Purchase Intention". Furthermore, the regression coefficient value is 0.193 that means country of origin image gives a positive effect on purchase intention.

- The significance value of Celebrity perceived attractiveness towards purchase intention is 0.005 (0.005 < 0.05). This value can prove the hypothesis is accepted, which means that "There is a significant Effect of Celebrity perceived attractiveness on Purchase Intention". However, the regression coefficient value is (-0.473) that means celebrity perceived attractiveness gives a negative effect on purchase intention.

- The significance value of Celebrity perceived trustworthiness towards purchase intention is 0.000 (0.000 < 0.05). This value can prove the hypothesis is accepted, which means that "There is a significant Effect of Celebrity perceived trustworthiness on Purchase Intention". Furthermore, the regression coefficient value is 0.705 that means celebrity perceived trustworthiness gives a positive effect on purchase intention.

- The significance value of Celebrity perceived expertise towards purchase intention is 0.003 (0.003 < 0.05). This value can prove the hypothesis is accepted, which means that "There is a significant Effect of Celebrity perceived expertise on Purchase Intention". Furthermore, the regression coefficient value is 0.667 that means celebrity perceived expertise gives a positive effect on purchase intention.
The R Square value is 0.298 that means 29.8% of the total variation of purchase intention is explained by the regression model consisting of country of origin image, celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise. The other 70.2% of total variation is explained by other factors.

4.5 Discussion

According to the hypotheses testing, there is a significant and positive influence of country of origin image on purchase intention. This result is in line with the study undertaken by Hien et al. [11] stated that Country of origin image provides a significant information in evaluating the brand of the product, specifically COO image is influencing customer’s purchase intention positively. This result also supports, Hanzaee & Khosrozadeh [10] indicated that COO image has a significant effect on purchase intention of consumers and Kim et al. [8] who explained that a stronger country of origin image of will result in higher purchase intention of consumers.

Regarding the influence of the three dimensions of celebrity perceived credibility on purchase intention of Skechers brand in Indonesia. This study reveals that there are positive and significant impact of celebrity perceived expertise and celebrity perceived trustworthiness on purchase intention, celebrity perceived attractiveness also has a significant relationship with purchase intention yet the influence is negative.

Therefore, two of the dimension of celebrity perceived credibility, namely celebrity perceived expertise and trustworthiness who have positive and significant effect on purchase intention, are in line with the study of Pornpitakpan [5], who indicated that celebrity perceived attractiveness, celebrity perceived trustworthiness, and celebrity perceived expertise are positively and significantly influence the purchase intention of Singaporean, where they seem prioritise the celebrities’ perceived attractiveness and celebrities’ perceived trustworthiness. While, in this study, celebrity perceived attractiveness has negative and significant influence on purchase intention.

According to Ohanian [12], an influencer that has been perceived as an expert tends to be more persuasive and able to drive purchase intention of consumers. Furthermore, trustworthy celebrity who provides effective endorsement should reinforce the credibility of the brand image, alleviate negative attitudes against the brand [15][25].

The negative relationship between celebrity perceived attractiveness and purchase intention is in accordance with the study of Hassan and Jamil [26] indicated that attractiveness of celebrity gives negative effect on purchase intention in Pakistan. Hassan and Jamil [26] further implied that the reason behind this negative relationship is because well-known products have strong images in the perspectives of consumers, hence consumers are least concerned about the celebrity attractiveness and most famous products are collaborating with

---

**Table 6. Model Summary**

<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>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.546a</td>
<td>.298</td>
<td>.285</td>
<td>3.94837</td>
<td>1.810</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), CPE, COO, CPA, CPT
b. Dependent Variable: PI

The Results of Data Processing Using SPSS.
well-known personalities as their endorser. So, the purpose of physical outlook is to attract consumers’ attention towards Ads, not affecting purchase intention. Another reason is because consumers are conscious about the quality and hold on practical knowledge in deciding any negative or positive behavior towards the products instead of considering the physical appearance of celebrity [26].

Johansson and Bozan [27] suggested that research has revealed that celebrity endorser with an attractive image could decrease the self-esteem of consumers and has a negative influence towards intention to buy. On the other hand, using an unattractive celebrity endorser could conceivably increase the self-esteem of consumers and has a positive impact on intention to buy [28].

5 Conclusion

In accordance with the research question, the conclusions that can be taken from this study are:

- There is a positive and significant influence between the country of origin image variable on the purchase intention of Skechers brand in Indonesia, meaning that the greater the Country of Origin image, the greater the purchase intention of customers.
- There is a negative and significant influence between the celebrity perceived attractiveness variable on the purchase intention of Skechers brand in Indonesia, meaning that the greater the celebrity perceived attractiveness, the lower the purchase intention.
- There is a positive and significant influence between the celebrity perceived trustworthiness variable on the purchase intention of Skechers brand in Indonesia, meaning that the greater the celebrity perceived trustworthiness, the greater the purchase intention.
- There is a positive and significant influence between the celebrity perceived expertise variable on the purchase intention of Skechers brand in Indonesia, meaning that the greater the celebrity perceived expertise, the greater the purchase intention.

5.1 Recommendations

In practical terms, the suggestions given to Skechers brand management are:

- Skechers should consider to implement and take the advantage of their country of origin image, which is United States, since it significantly and positively influences the customers’ purchase intention.
- In deciding which celebrity to be collaborated with Skechers, to be their ambassador or endorser, Skechers should examine the perceived expertise and perceived trustworthiness of the celebrity instead of choosing celebrity that is known for their attractiveness.

References


Exploring the Technological Pedagogical and Content Knowledge (TPACK) of Vocational High School’s Accounting Teachers

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Abstract. This study aims to discover the level mastery of Technological Pedagogical and Content Knowledge (TPACK) of vocational high schools in Kebumen and to find out the difference in the TPACK mastery level of accounting teachers based on gender, education level, and teaching experience. The research method used is the descriptive method with a quantitative approach. The population in this study is all accounting teachers as many as 65 people, and the instrument used was questionnaire. The results show that all TPACK of the Accounting teachers are in a good category; there is no difference in the mastery of TPACK between male and female teachers. In addition, there is a difference in TPACK mastery from teachers' level of education except in PK and PCK. Based on teaching experience, there is a significant difference in TK, TCK, and TPK. From the results of this study, it can be concluded that the Accounting teachers of vocational high schools in Kebumen have a good category level of mastery of TPACK that has been implemented in the learning process. Besides, there is no difference in the mastery of TPACK from gender, and there are differences in terms of education level and teaching experience.

Keywords: Accounting Teachers, Gender of teachers, Level of education, Teaching experience, TPACK, Vocational High School

1 Introduction

Quality Education is one of the goals formulated in the Sustainable Development Goals (SDGs) or sustainable development agreed upon by the UN forum, because quality education can determine the development of country. Developed countries are countries whose educational systems are capable of producing human resources that can compete in disruptive era. One of factors that influences the quality of education is teacher. Teacher is an important factor in the learning process because teacher is at the forefront in the process of implementing education. The skills possessed by a teacher become an important factor determining the quality of learning which will later affect the quality of students learning outcomes.

According to Constitution Number 14 of 2005 concerning Teachers and Lecturers it has been mentioned that the competencies that must be possessed by a teacher include: pedagogical competencies, professional competencies, social competencies, and personality competencies. Teachers are required to master the combined competence between content knowledge and pedagogical knowledge into new knowledge called Pedagogical Content Knowledge. PCK is a term to refer to the teacher's unique knowledge about how to teach content by considering the characteristics and conditions of students.
The outbreak of the covid-19 pandemic has changed the learning system that used to be done face-to-face into online learning. For teacher, mastery of technology is a very important requirement in order to continue being able to carry out learning. Therefore, knowledge about technology is one of the competencies that must be possessed by teacher, not only competence in Pedagogical Content Knowledge (PCK) alone. Additional technological knowledge to supplement pedagogical knowledge and content knowledge (PCK) is needed because technological development requires the world of education to use technology in learning activities. This additional aspect of technology is known as the Technological Pedagogical and Content Knowledge (TPACK).

Accounting teacher is a subject that must always keep abreast of development and improve his/her knowledge given the rapid development of accounting. The inclusion of village government accounting subject becomes one of the new subjects where this subject had never existed in previous curricula. Accounting teacher must know and be able to understand well about the latest accounting standard that applies in Indonesia. An accounting teacher must also be aware of the challenge of the accounting profession, understand the blueprint to be faced as an accountant, understand the theory and practice of applying Village Government Accounting Standard so that later teacher can teach the students properly and correctly, and all of these are closely related to Technological Pedagogical and Content Knowledge (TPACK).

TPACK is a new type of knowledge that teacher must master to be able to integrate technology well in learning. TPACK is originally developed by Shulman’s [1] who described Pedagogical and Content Knowledge (PCK), then to describe how teacher’s understanding of learning technology is linked to PCK and with others to produce effective learning using technology. TPACK is formed on a combination of 3 basic types of knowledge, namely Technological Knowledge, Pedagogical Knowledge, Content Knowledge. The result of the integration of 3 basic knowledge, produces 4 new knowledge, including Pedagogical Content Knowledge, Technological Content Knowledge, Technological Pedagogical Knowledge and Technological Pedagogical Content Knowledge. The following is an overview of the TPACK framework:

![Fig. 1. TPACK Framework [2].](image)
Figure 1, clearly shows the interrelation between 3 basic knowledge which results in 4 knowledge. The interaction of the three main components of knowledge, namely PK, CK, and TK requires the teacher to have an intuitive understanding of it, the way is to deliver the material using appropriate teaching method and technology. The TPACK framework forms a Venn diagram with three overlapping levels [2].

Research on TPACK has been carried out, both on teacher and prospective teacher. The TPACK framework has provided a means for researcher and practitioner of educational technology to examine teacher’s TPACK. Baran, Chuang and Thompson [3] states that in addition to knowing the knowledge of teachers and prospective teachers, TPACK can provide clarity on specific intervention in research and development project and thus can improve the ability to design and test good technological approach in learning. The TPACK framework has offered several possibilities for conducting research in teacher’s education, teacher’s professional development, and teacher’s use of technology. In addition, it has enabled teacher, researcher, and lecturer to build interactions between technology, content, and pedagogy while they are in class [2]. The TPACK framework developed by Koehler et al. [2] includes 7 important components:

Pedagogical Knowledge (PK). PK is teacher's in-depth knowledge about learning strategy. General knowledge about pedagogy includes understanding how students learn, class management skill, learning plan, and student’s assessment. Chai, Koh and Tsai [4] explains that PK is knowledge about student learning, teaching method, different theory of education, and assessment of learning to teach material to a subject matter. Koehler et al. [2] reveals that PK is a set of skills that teacher must develop to manage and organize teaching and learning activities for desired learning outcomes.

Content Knowledge (CK). CK refers to the knowledge or special nature of a discipline or subject matter. Shulman [1] explains CK is knowledge of the actual subject matter that must be learned or taught to students, including knowledge of the main facts, concepts, theories, and procedures in a given subject, knowledge of the explanation of the framework that organizes and connects ideas, and knowledge of the rule of finding clue and evidence.

Technological Knowledge (TK). TK used in the TPACK framework is associated with understanding of Information and Communication Technology. TK is defined as teacher knowledge about the latest technology used in the educational environment. Chai, Koh and Tsai [4], Can, Erokten and Bahtiyar [5] mentions that TK is knowledge about how to use hardware and software of ITC.

Pedagogical Content Knowledge (PCK). The PCK framework developed begins with the belief that teaching is not only about transferring knowledge to students but also about how to teach good content until students understand. PCK is knowledge about representing content knowledge and adopting pedagogical strategy to make specific content or topic easier for students to understand [1][6].

Technological Content Knowledge (TCK). Chai et al. [6] defines TCK as knowledge about how to use technology to convey learning material differently. TCK refers to knowledge of how technology can create new representation for certain content. Teacher who has knowledge of technology and content understand that by using certain technology, they can change the way of students learn to understand the content of lesson. The technology in question is ICT whose use can support accounting learning in vocational high school.

Technological Pedagogical Knowledge (TPK). TPK refers to knowledge of how various technologies can be used in learning and understanding that using technology can change the way of teacher teaches. TPK is the teacher’s understanding of how the learning process can change when technology is used in certain way [2][7]. This knowledge enables teacher to
understand what technology can be used in achieving learning objective, and to understand the selection of tool that is most appropriate in the pedagogical approach.

Technological Pedagogical Content Knowledge (TPACK). TPACK is understanding of how technology can be used creatively to meet pedagogical need in delivering certain content [2]. TPACK refers to the knowledge needed by teacher to integrate technology into learning according to the discipline that teacher teaches. The teacher must have this knowledge in order to understand intuitively about the complex interaction between the three basic components of knowledge (CK, PK, TK) by teaching content using appropriate pedagogical method and technology.

Research using the TPACK framework has been conducted to measure the use of ICT in various learning [6][8]. Research on understanding TPACK is also related to gender, level of education, and teaching experience [9][10][11][12][13] where these three factors affect several components of TPACK. This research focuses on the analysis of TPACK mastery of accounting teachers of vocational high schools in Kebumen Regency and the factors that influence it from gender, education level, and teaching experience.

2 Research Methods

This research is a descriptive study with a quantitative approach. Descriptive research is a type of research used to describe facts and phenomena related to conditions that occur in the field. This study describes the mastery of accounting teacher’s TPACK. While the quantitative approach is used to obtain the significance of the relationship between the variables studied, namely the relationship between TPACK mastery with gender, education level, and teaching experience.

The population in this study were all accounting teachers of vocational high schools who are subject teachers conference of accounting in Kebumen Regency, Central Java, Indonesia consisting of 65 people. The sampling technique used is the saturation sampling technique. The instrument used to collect research data is questionnaire. The data obtained are analyzed descriptively and inferentially. Inferential analysis with the Independent Sample t-test was used to determine the TPACK mastery level of accounting teachers by gender, education level, and teaching experience.

3 Result and Discussion

The results of the descriptive analysis of the TPACK mastery of Accounting teachers at vocational high schools in Kebumen is explained in detail in the following table:

<table>
<thead>
<tr>
<th>Component</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Dev</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>TK</td>
<td>1</td>
<td>5</td>
<td>3,56</td>
<td>0,75</td>
<td>Good</td>
</tr>
<tr>
<td>CK</td>
<td>2</td>
<td>5</td>
<td>3,25</td>
<td>0,65</td>
<td>Good</td>
</tr>
<tr>
<td>PK</td>
<td>1</td>
<td>5</td>
<td>3,71</td>
<td>0,59</td>
<td>Good</td>
</tr>
<tr>
<td>PCK</td>
<td>2</td>
<td>5</td>
<td>3,71</td>
<td>0,57</td>
<td>Good</td>
</tr>
<tr>
<td>TCK</td>
<td>1</td>
<td>5</td>
<td>3,54</td>
<td>0,71</td>
<td>Good</td>
</tr>
<tr>
<td>TPK</td>
<td>2</td>
<td>5</td>
<td>3,58</td>
<td>0,73</td>
<td>Good</td>
</tr>
</tbody>
</table>
Based on table 1, it can be seen that the level of TPACK mastery of Accounting teachers at vocational high schools in Kebumen as a whole which includes 7 components are all included in good category. In TK, PK, TCK, and TPCK components, the minimum score is 1 and the maximum score is 5. While for CK, PCK, and TPK components, the minimum score is 2 and the maximum score is 5. The average score of each component with the highest score is found in PK and PCK components with each score of 3,71 with standard deviation of 0,59 and 0,57 while the lowest average values are found in CK component with value of 3,25 and standard deviation of 0,65.

PK is the teacher's special knowledge in creating and facilitating effective teaching and learning environment for all students, regardless of subject matter, while PCK relates to content knowledge related to the teaching process. PCK is different from various types of content, because PCK is combination of content and pedagogy with the aim of developing better teaching practice for content.

Scores on the PK component obtain higher mean results when compare with other components which means that mastery related to the use of learning strategy carried out by accounting teachers of vocational high schools in Kebumen is appropriate. In addition, in the learning process the teacher also helps students and monitors learning independently. The teacher also helps students reflect on the learning strategy that has been applied to the learning process, has planned structured group activities for students, and is accustomed to guiding students during the group learning process.

In addition to the high PK score, the same score is also obtained on the PCK component. The acquisition of mean score of high enough PCK components can be interpreted that without the use of technology by accounting teachers of vocational high schools in Kebumen can still overcome common misconception that is sometimes experienced by students and teacher can choose effective teaching approach to guide students to think and learn from subject matter that is delivered.

The lowest mean score is in the CK component. This component is related to knowledge about scientific material taught by the teacher to students. The scientific material referred to in this case is related to accounting material in vocational high schools. The acquisition of this low CK score is due to many accounting teachers of vocational high schools in Kebumen who have not used the latest sources such as new textbook, the use of journal in supporting learning, and to the scientific treasure not yet widely practiced by teachers. In addition, some of these teachers also rarely take part in activities or seminars related to the fields of accounting.

Other TPACK components are almost the same for the mean score obtained, namely TK (3,56), TCK (3,54), TPK (3,58), and TPCK (3,43) and the four components are included in good category. The TK component relates to teacher knowledge about the latest technology used by teacher in supporting the learning process [2][14]. The average accounting teachers of vocational high schools in Kebumen can be said to have a good understanding of technology and have been able to use it in accounting learning in the classroom.

The TCK component deals with how to use technology to convey learning material differently [2]. Submission of material differently means conveying material creatively so that the learning process is fun for students [14]. So, it can be interpreted that the average accounting teachers of vocational high schools in Kebumen have mastered TCK (3,54) and are included in good category.
In addition, result of 3.58 is obtained for TPK component. This component refers to knowledge of how various technologies can be used in learning and understanding that using technology can change the way of teacher teaches. Mastery of TPK makes the understanding of accounting teachers about how the learning process can change when technology is used in certain way [2][14].

The last component is TPCK with mean score 3.43. This component is related to how technology can be used creatively to meet pedagogical need in delivering certain content [2][14]. It can be interpreted that the mastery of TPCK in accounting teachers of vocational high schools in Kebumen is in good category, such as the ability to integrate accounting knowledge, pedagogic knowledge, and technological knowledge possessed to realize effective learning.

The difference in the mean level of TPACK mastery of Accounting teachers at vocational high schools in Kebumen is also analyzed based on gender difference, difference in educational level, as well as difference in teaching experience. The statistical test used is the independent sample t-test using SPSS software 21 version. The following are the results of the independent sample t-test for the average TPACK mastery results of Accounting teachers based on gender:

<table>
<thead>
<tr>
<th>Component</th>
<th>Male</th>
<th>Female</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TK</td>
<td>38.64</td>
<td>34.93</td>
<td>0.059</td>
</tr>
<tr>
<td>CK</td>
<td>18.27</td>
<td>17.46</td>
<td>0.286</td>
</tr>
<tr>
<td>PK</td>
<td>22.55</td>
<td>22.20</td>
<td>0.708</td>
</tr>
<tr>
<td>PCK</td>
<td>15.36</td>
<td>14.80</td>
<td>0.368</td>
</tr>
<tr>
<td>TCK</td>
<td>11.64</td>
<td>10.41</td>
<td>0.073</td>
</tr>
<tr>
<td>TPK</td>
<td>11.55</td>
<td>10.56</td>
<td>0.118</td>
</tr>
<tr>
<td>TPCK</td>
<td>14.82</td>
<td>13.52</td>
<td>0.181</td>
</tr>
</tbody>
</table>

Source: Data processed in 2020.

In table 2, all TPACK components for male teachers receives higher average scores compared to female teachers but with not too large difference. The independent sample t-test results show that all components of TPACK include TK, CK, PK, PCK, TCK, TPK, TPCK, value sig. > 0.05 for all components. These results indicate that there is no difference in the mastery of TPACK between male and female teachers. Therefore, it can be concluded that based on the gender of TPACK mastery of accounting teachers at vocational high schools in Kebumen that there is no difference. This is consistent with the results of research conducted by Koh and Sing [13], Restiana and Pujiastuti [11], Jang and Tsai [9], Ozudogru and Ozudogru [8] which stated no significant difference based on gender found in the seven components TPACK.

The difference in the TPACK mastery of accounting teachers in addition to being differentiated by gender, is further differentiated based on the level of education. The level of education is divided into two categories, namely teacher with postgraduate degree qualification and teacher with undergraduate education qualification. The following is the table of TPACK mastery level based on education level:

<table>
<thead>
<tr>
<th>Component</th>
<th>Undergraduate</th>
<th>Postgraduate</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TK</td>
<td>35.03</td>
<td>40.67</td>
<td>0.026</td>
</tr>
<tr>
<td>CK</td>
<td>17.42</td>
<td>19.33</td>
<td>0.049</td>
</tr>
</tbody>
</table>
In Table 3, it is known that the average score of teachers with qualification of postgraduate obtains higher scores when compared to undergraduate in all TPACK components. While the results of the independent sample t-test show that the two TPACK components in the form of PK and PCK obtain significance values of 0.594 and 0.133. Both have sig values > 0.05 which means there is no difference in the two groups over the mastery of the PK and PCK components of accounting teachers at vocational high schools in Kebumen Regency. It can be concluded that teachers with undergraduate and postgraduate level have the same pedagogic mastery and pedagogical content. Teachers with undergraduate and postgraduate level education are equally able to apply accounting learning method, technique, strategy and are able to develop lesson plan well. This is because the knowledge of learning planning has been obtained at the undergraduate level of education, so that both undergraduate and postgraduate teachers have mastered knowledge related to PK and PCK.

The results of the independent test of other TPACK components in the form of TK, CK, TCK, TPK, and TPCK show the value sig. <0.5. These results indicate there is difference between the two groups on the TPACK mastery of accounting teachers at vocational high schools in Kebumen. The difference in mastery of the components of TK, CK, TCK, TPK, and TPCK is strengthened [10][15].

Aside from being based on gender and teacher education levels, TPACK mastery is also tested based on teacher teaching experience. Teaching experience can be divided into two categories, namely <10 years teaching experience and >10 years teaching experience. The following is the TPACK mastery table based on teaching experience:

<table>
<thead>
<tr>
<th>Component</th>
<th>&lt;10 Years’ Experience</th>
<th>&gt;10 Years’ Experience</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>TK</td>
<td>38,48</td>
<td>33,95</td>
<td>6,227</td>
</tr>
<tr>
<td>CK</td>
<td>17,48</td>
<td>17,83</td>
<td>2,402</td>
</tr>
<tr>
<td>PK</td>
<td>22,26</td>
<td>22,26</td>
<td>2,829</td>
</tr>
<tr>
<td>PCK</td>
<td>10,14</td>
<td>14,71</td>
<td>1,991</td>
</tr>
<tr>
<td>TCK</td>
<td>11,09</td>
<td>15,22</td>
<td>1,802</td>
</tr>
<tr>
<td>TPK</td>
<td>10,33</td>
<td>11,43</td>
<td>1,946</td>
</tr>
<tr>
<td>TPCK</td>
<td>13,33</td>
<td>14,72</td>
<td>2,534</td>
</tr>
</tbody>
</table>

Source: Data processed in 2020.

Based on teaching experience in Table 4, the mean CK, PCK, TCK, TPK, and TPCK scores are higher for teachers who have >10 years of teaching experience. While the PK component obtains the same score between teachers who have <10 years and >10 years teaching experience. TK component has different results because teachers with <10 years of teaching experience get higher scores than teachers who have >10 years of teaching experience.

While the results of the independent sample t-test show that TPACK components in the form of CK, PK, PCK, and TPACK obtain sig. > 0.05. These results indicate that there is no
difference in the mastery of TPACK in the CK, PK, PCK, and TPCK components of accounting teachers at vocational high schools in Kebumen.

The results of the independent test t-test of other TPACK components in the form of TK, TCK, and TPK show value sig. <0.05. These results indicate that there is difference in the TPACK mastery of accounting teachers at vocational high schools in Kebumen based on their teaching experience. The difference in the components of TK, TCK, and TPK is because teachers with teaching experience <10 years are young teachers whose age is <35 years. This age is included in the category of millennial who are accustomed to using technology and have high technological literacy. In addition to mastering technology, groups of teachers with <10 years of teaching experience have the ability to develop student activities and tasks by involving the use of technology, being able to use computer applications in accounting learning (such as the use of MYOB Accounting software, Accurate software, and the application of the Village Financial System (Siskeudes) as well as skillfully using internet facilities to communicate with students. This is in accordance with the results of research conducted by Lin et al. [10], Jang and Tsai [9], Ozudogru and Ozudogru [8], Jang and Tsai [16], Eliyanto and Wibowo [17] which stated that teaching experience affects teacher competency and TPACK mastery.

4 Conclusions

The results of this research state that the level of TPACK mastery of accounting teachers at vocational high schools in Kebumen all its components are included in good category. Based on the independent sample t-test, there is no difference in the mastery of TPACK between male and female teachers. From the teacher education level, based on the results of the independent sample t-test, the components of TK, CK, TCK, TPK, and TPCK have value sig <0.05, which means that there is a difference in the two groups between undergraduate and postgraduate towards TPACK mastery. While based on teaching experience, the results of the independent sample t-test show that the components of TK, TCK, and TPK have value sig <0.05, which means that both groups between teachers who have teaching experience <10 years and teachers who have teaching experience >10 years there is a difference in TPACK mastery of accounting teachers at vocational high schools in Kebumen. What can be recommended for future researchers related to this research is to add other factors such as age, certification status, or other factors that can measure more deeply related to teacher’s TPACK.

References


Analysis of Non-Professional Investor's Intention to Use XBRL-based Financial Statements Using Social Influence and Effort Expectancy Variables from the Unified Theory of Acceptance and Use of Technology (UTAUT) Model

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Abstract. This research aimed to examine non-professional investors’ behavior who are confronted with presenting financial statements using XBRL. We try to apply two variables from the unified theory of acceptance and use of technology (UTAUT) model (Social Influence and Effort Expectancy). As we know lately, the current global economic condition, the internet, and derivative products, and other products that use computing technology continue to evolve. The one with rapid progress is applying any kind of technology like XBRL in the presentation of financial statements. It is hoped that globally, the XBRL implementation can be mandatory. XBRL can reduce the cost of capital and information asymmetry in the capital market. It is more easily processed or analyzed, and allowing better decision making also enhances financial information transparency. It will enable users to integrate data from various locations in the financial statements. However, there is a problem due to the nature of productivity of information technology itself. Each new technology will require a sufficient amount of time to be implemented effectively and certainly without forgetting the general obstacles that may occur according to each country’s character.

Keywords: XBRL, Non-professional Investor, Social Influences, Effort Expectancy

1 Introduction

In the current global economic period, when using the internet and derivative products and other products that use computing technology continues to evolve increasingly sophisticated. One that continues to experience rapid progress is applying XBRL (eXtensible Business Reporting Language) to present financial statements [1]. The implementation of XBRL itself globally is mandatory or voluntary. Initially, the countries included in the compulsory jurisdiction of XBRL included Denmark, Japan, Singapore, South Korea, and the United States of America, and included in the voluntary administration include Australia, Germany, and the Netherlands. However, a number of these countries whose applications are mandatory to continue to grow over time. XBRL can continue to grow since it was first introduced because, following Arnold [2], the use of XBRL will allow the use of standard marking systems for quantitative and qualitative information. This can improve the reliability and efficiency of
financial and non-financial reporting while making it easier for shareholders to extract all the necessary information [3].

Fig. 1. Jurisdiction of XBRL 2020 (blue color) [4].

Yon et al. [5] also argues that the use of XBRL can reduce capital costs and information asymmetry in the capital market. Besides, the XBRL report's information is easily read by computers, so it is more easily processed or analyzed [6]. These conditions allow users of financial statements to do many things, from viewing to analyzing data [7][8][9]. Systematicity is that XBRL has unique tags that define labels and provide relevant information for each line item in the financial statements. This allows users to understand each line item from the financial statements [10][11]. Apart from that, XBRL also will enable users to easily comparing company performance based on periods, and allowing better decision making [12][13]. Furthermore, XBRL will allow users to obtain relevant information more efficiently for decision-making purposes [12].

Transparency of financial information is also enhanced by XBRL because the data is clearly marked and well documented and allows users to integrate information from various locations in financial statements [14]. XBRL also provides information to be retrieved at the right time. These features specifically only exist in the XBRL reporting format, not in the non-XBRL reporting format. All conveniences offered by XBRL certainly are also inevitable from problems, because following Liu et al. [13], the application of XBRL can be hampered due to the nature of productivity of information technology itself, where each new technology will require a sufficient amount of time to be implemented effectively and certainly without forgetting the general obstacles that might occur according to the character in each country that applies. The application of XBRL itself in Indonesia became mandatory in November 2015. The level of XBRL usage in Indonesia continues to increase every year. Following Indonesia Stock Exchange [15], the level of use of XBRL for quarterly financial statements in 2019 reached 95%, compared to 78% when it was first applied in 2015. In February 2020, IDX released a new XBRL taxonomy to replace Indonesia's XBRL taxonomy in 2014. This proves that BEI is very committed to implementing XBRL to provide full services for all its users.

Why IDX implements XBRL because BEI wants to reach different types of investors from existing ones, the kind of investor referred to here is non-professional investors. The description
of the non-professional investors themselves is the type of investor who has risk avoidance
preference or laypeople who have not been exposed to knowledge of the capital market. In this
study, the authors want to examine the behavior of non-professional investors. The latter are
confronted with presenting financial statements that will be hypothesized that the sample will
get financial information marked XBRL to be more relevant, understandable, and comparable
to their decision making compared to the traditional reporting format. The originality of this
research is, the author tries to apply two variables from the unified theory of acceptance and use
of technology (UTAUT) model, which is adjusted to the main objective of this study, which
aims to examine the intention of XBRL use behavior on non-professional investors.

1.1 eXtensible Business Reporting Language (XBRL)

The understanding of XBRL itself, following Lai [16], is an international financial
reporting code and XML (eXtensible Markup Language) application used to tag financial and
non-financial data, making it easier to analyze various advanced needs. The XBRL concept first
primary purpose of XBRL, following Cohen [17], is to establish global reporting specifications,
making it easier for authorities, companies, and investors to collect, exchange and analyze
information, and overcome the problems of various approaches used in multiple countries.

![XBRl Diagram](image)

Fig. 2. eXtensible Business Reporting Language [15].

XBRL was explicitly created to communicate business information between businesses
and financial information users, such as analysts, investors, and regulators, by presenting a
general electronic format for business reporting.

XBRL is not a software or application brand that will replace the existing system. XBRL
is not a new accounting standard, and its application does not require changes in accounting
standards that have been applied in a country. XBRL will not change the XBRL reporting format
is not an accounting chart and is not a tool for translating account charts.

1.2 Unified Theory of Acceptance and Use of Technology (UTAUT)

UTAUT is one of the integrated technology acceptance models, resulting from modeling
developed by Venkatesh et al. [18]. The UTAUT model combines several elements synthesized
from several existing technology acceptance theories. These theories are the theory of reasoned
action (TRA), technology acceptance model (TAM), motivational model (MM), the theory of
planned behavior (TPB), combined TAM and TPB, a model of PC utilization (MPTU),
innovation diffusion theory (IDT), and social cognitive theory (SCT). Following Venkatesh et
al. [18], the UTAUT model has been shown to have a higher chance of success than other
technology acceptance theories because it can explain up to 70% of user variants. A significant
finding from the UTAUT model is the production of four (4) constructs/dimensions that can be used as significant direct determinants of behavioral intention or use behavior in one or more of each model. These constructs/dimensions include:

1. Performance expectancy,
2. Effort expectancy,
3. Social influence,
4. Facilitating conditions.

In addition to the four dimensions, the UTAUT model also has four variables that can be positioned as moderating: gender, age, voluntariness, and user experience.

![Fig. 3. Unified theory of acceptance and use of technology][18].

For this research, not all dimensions in the UTAUT model are used. Specifically, there are two (2) dimensions/constructs, i.e., Effort expectancy (EE) and Social Influence (SI). Only those two variables are used because the target population used is Mostly the millennial generation so that the things chosen are the closest to the most likely issue or concern for the millennial generation. The moderating variables used are those that are attached to each dimension/construct. They are gender, age, and experience.

Based on the above description, the research drawings can be made as follows:

![Fig. 4. Research drawing.][19]
2 Conceptual Framework and Hypothesis Development

Following Venkatesh et al. [9], the UTAUT Model has proven its validity can be used in research in communication and technology to investigate individuals' readiness to use technology/information systems in various contexts. Based on the description above.

2.1 Effort Expectancy (EE)

Business expectations are defined as the level of ease associated with using the system. Three constructs of the existing model capture the concept of business expectation: perceived ease of use (TAM/TAM2), complexity (MPCU), and ease of use [19].

H1: The positive influence of business expectations on non-professional investors’ intention to use XBRL is moderated by gender.

H2: Positive influence of business expectations on the intention of non-professional investors to use XBRL is moderated by age.

H3: The positive influence of business expectations on the intention of non-professional investors to use XBRL is moderated by experience.

2.2 Social Influence (SI)

Social influence is defined as the extent to which an individual considers others to be important so that they believe he must use a new system/technology. As a direct determinant of intention behavior, social influence is represented as a subjective norm [20].

H4: Social influence positively impacts non-professional investors' intention to use XBRL with gender as a moderator.

H5: Social influence has a positive influence on the intention of non-professional investors to use XBRL with age as a moderator.

H6: Social influence has a positive impact on the intention of non-professional investors to use XBRL with experience as a moderator.

2.3 Individual Intentions to Use Technology

Individual intention behavior is explained using the TA model. The use of a technology or system should be determined by the user's attitude, who, in time, will determine whether the system or technology is useful or easy to use or not [21]. Normative pressure or subjective norms become influential because an individual may be exposed to outside influences, such as other people or their environment [9]. The UTAUT model explores how individuals accept and use technology in their environment, using four dimensions: individual performance expectations, business expectations, social influence, and facility conditions [9]. Based on the above arguments, the following hypotheses are formulated

H7: The intention of non-professional investor behavior influences the use of XBRL with effort expectancy and social influence as variable construct.
3 Research Method

3.1 Research Design

This research is a quantitative research method, namely, a study that emphasizes its analysis of numerical data or numbers obtained for statistical purposes and testing hypotheses to get the significance of the relationship between the variables studied. The analytical tool used is the PLS Warp. The flowchart for this research is as follows:

![Research Design Flowchart]

Fig. 5. Research Design.

3.2 Population and Research Samples

This study's population is non-professional investors, which means investors are not or have never been but only a little knowledgeable about investment science. Using a purposive sampling technique, several requirements were determined to be included in the non-professional classification of investors. The sample used can be college students from the Faculty of Economics, UNNES, or the general public. We defined the students' classification as there should already minimum at second semesters.

3.3 Research Variable

The research variables consist of independent variables, moderation variables, and dependent variables. The following is an operational explanation of each variable.
### Variable Independent

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Operational definition</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| 1  | Effort expectancy | Individuals feel that the technology (XBRL) has a level of effort to be used | 1. Complexity  
2. Perceived of use  
3. Easy to use |
|    | Social influence | Individuals believe that external social values can support the acceptance and use of XBRL | 1. Subjective norm  
2. Social factors  
3. Image |

### Variable Moderating

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Operational definition</th>
<th>Indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Gender</td>
<td>Individual gender of XBRL user</td>
<td>Male and female</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>Age of each XBRL user</td>
<td>Age</td>
</tr>
<tr>
<td></td>
<td>Experience</td>
<td>Knowledge and skills possessed by XBRL users</td>
<td>Experience using financial information</td>
</tr>
</tbody>
</table>

### Variable Intervening

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Operational definition</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| 3  | The intention of non-professional investor behavior | Trends in the behavior of an individual, non-professional investors using XBRL | 1. Likely to continue  
2. Habit  
3. Happy to use |

### Variable Dependent

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Operational definition</th>
<th>Indicators</th>
</tr>
</thead>
</table>
| 4  | Use Behavior XBRL | Individual, non-professional investors accept and use technology in XBRL | 1. Regularly use  
2. Informativ  
3. Flexible to use |

### 3.4 Data Collection and Analysis Methods

The data collection method used was a questionnaire. The questionnaire was used to explore XBRL usage behavior. This study uses statistical analysis to answer research questions and test hypotheses by analyzing and testing empirical models, examining the research hypothesis using structural equation modeling (Structural Equation Modeling/SEM) with the WarpPLS approach. The consideration of using a structural analysis model is to explain the relationship and interdependence of research variables. This model was developed as an alternative to situations where the theoretical basis for designing the model is weak or has not been found, and or some indicators do not meet the reflective measurement model, so it is formative. PLS is a powerful analysis method because it does not require many assumptions, and the sample size can be small or large. Besides, PLS can be used as a confirmation of theory (hypothesis testing) can also be used to build relationships that do not yet have a theoretical basis or to test propositions [22].

### 4 Result and Discussion

The Sem image model to test the Moderation Hypothesis produces the following image.
The construct used is a reflective construct with each indicator attached because what is tested in hypotheses 1 through 6 is the effect of moderation. After running using the Warp PLS software, the PLS image is produced as follows.

The picture above can be drawn to the results associated with several hypotheses related to the moderation relationship. That SI (social influence) in its direct connection to intent (intention to use XBRL) is definite; this is evidenced by the amount of P-Value, which is <0.05. Also obtained results that EE (effort expectancy) indirect relationships with intent (intention to use XBRL) positively affects. This can be proven by the results of the P-value <0.05. Whereas the moderation relationship can be explained as follows in the case of H1, business expectations did positively affect non-professional investors’ intention to use XBRL. Still, in testing, it was found that the relationship between sex and intent was not significant.
P Value > 0.05, gender as a moderating variable between business expectations influence on intent is a potential moderation relationship. This also happens to H2, which, as already known about EE, has a positive effect on intention, but age is used as a moderating variable. P values are also > 0.05, so the relationship is also potential moderation.

In H3, the same case also occurs because P value > 0.05, then the experience variable's moderation relationship is a potential moderation relationship. As for H4, social influence positively affects non-professional investors' intention to use XBRL, and the relationship between sex and intent is not significant. P Value > 0.05, gender as a moderating variable between the influence of social influence on intent is the potential moderation relationship. This also happens to H5, which, as has been known that SI has a positive effect on intention, but the age used as moderating variable P values are also > 0.05.

The relationship is a type of potential moderation. Finally, on H6, because of P value > 0.05, the moderating relationship of the experience variable to the relationship of social influence to intention to use XBRL is a potential moderation relationship.

For testing H7, the technique used is slightly different, although still using the Warp PLS 5.0 software. Why is it different due to the nature of the relationship in H7 itself? The association is a second-order construct relationship that seeks to explain how the influence of the relationship between non-professional investors intends to use XBRL with XBRL usage behavior. So here, Social influences and effort expectancy become dimensions/constructs of intention variables. SI and EE are formed as reflective variables, while intent and use behavior are used as formative variables. Tests carried out are two (2) times. The first is to test the outer model, while the second is the inner model. Testing the outer model has obtained the following results.

The results of measurements and readings of the outer model are two things: construct validity, in which there is convergent validity and discriminant validity. Second is Construct reliability is measured by Cronbach Alpha and composite reliabilities. Further explanation is as follows:

1. Convergent validity with the expected score is ± 0.7 and has a P-value < 0.05. For both variables, EE and SI have fulfilled both of these requirements.
2. Correlation among latent Variables (VAL's) for the EE and SI reflective variables must be higher than the score per column, i.e., the scores are 0.727 and 0.618.
3. Construct reliability. To be able to find construct reliability is to look at the value of Cronbach's alpha (CA) and composite reliabilities (CR) with a score of > 0.70. The results for CR and CA for the EE and SI variables are for EE, CA = 0.850 CR = 0.886 and for SI, CA = 0.904 CR = 0.927.

Based on these results, the EE and SI variables have met the construct reliability. With the three points above already fulfilled, Effort expectancy (EE) and Social Influence (SI) have met the requirements to become REFLECTIVE variables. Furthermore, after measuring the outer model, then what is measured next is the inner model or the so-called structural model. This model is a continuation of the outer model that clearly illustrates the relationship between non-professional investors' intention to use XBRL to use XBRL behavior with EE and SI as the second-order construct dimension of the non-professional investor's intention to use XBRL. The resulting model is as follows.
The picture above can be read as follows. When viewed from the weight indicator, to be a variable that meets the formative construction concept, P Values must be <0.05. As an illustration, the two variables, intent and behavior, have different indicators for each variable. For the intent, the variable has two indicators, namely LvEE and LvSI. Both of these indicators have a P-value of P <0.001, which is compliant because <0.05. Simultaneously, the behavior variable has three indicators, namely, UB1, UB2, and UB3.

Every indicator has a P-value of <0.001, which is according to because it is <0.05. The next is the multicollinearity test. All of the existing indicators are according to the requirements. Because of the VIF value <10. Each indicator has the following VIF value: LvEE = 1.841; LvSI = 1.841; UB1 = 4.959; UB2 = 5.323; UB3 = 4.983. The latest reading to answer the 7th hypothesis is path coefficients analysis or path coefficient analysis of the relationship between variables of non-professional investors' intention to use XBRL with behavioral variables using XBRL. As a second-order construct model, the intention variable in the relationship affects the behavior of using; the intention variable has two (2) dimensions, namely Effort Expectancy (EE) and Social influences (SI). The path coefficient analysis results are an effect of 0.755 and a significant positive with a P-value <0.001.

5 Conclusion

From the results and discussion above, it can be concluded that the use of age, sex, and experience as a moderating variable in the relationship between Effort expectancy and intention to use and social influences to use is in the form of potential moderation, as for the submission of social influences and effort expectancy as a second-order construct of the intention of non-professional investors to use XBRL about behavior using XBRL, positive and significant results are obtained. Further research can use other variables outside the UTAUT model.

References


Preference of Use of Transportation Mode in Travelling

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Universitas Negeri Semarang, Indonesia¹, ²

Abstract. Mode of transportation facilities have an important role for the development of the tourism sector. However, there are several regions in Central Java, not showing this. There are some regions that have more complete modes of transportation facilities and a greater number compared to other regions, but do not have as many tourist arrivals as other areas with fewer facilities. The guess is that there is a preference for certain modes of transportation in traveling to tourist attractions. Therefore, it is necessary to study how individual preferences in using modes of transportation in traveling in Central Java. The objective of this study is to identify and analyze individual preferences in using modes of transportation when traveling in Central Java. The analytical method used is the mix method, which is a combination of qualitative analysis and quantitative analysis. In detail, the analytical method used is the Analysis Hierarchy Process and Descriptive Analysis. The results obtained priority scale of preference in the use of transportation modes in traveling. Furthermore, there are criteria that serve as reasons for choosing transportation modes. Then the criteria are known to be the priority of individuals in a tour.

Keywords: Modes of Transportation, Individual Preference, Analysis Hierarchy Process, Priority Scale, Traveling

1 Introduction

The tourism industry has an important role, because it can increase economic growth, the country's foreign exchange, and employment, which ultimately can reduce inequality of individual income and between regions. The size of the tourism industry's income is influenced by the number of tourist visits.

Tourist arrivals to Indonesia experienced an upward trend in 2015-2018, both for foreign and domestic tourists. The following Table 1 shows the target and realization of the number of tourist visits to Indonesia during 2015-2018.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreign Tourists</td>
<td>10</td>
<td>10.41</td>
<td>12</td>
<td>12.02</td>
<td>15</td>
<td>14.04</td>
<td>17</td>
<td>15.81</td>
</tr>
<tr>
<td>(in Million Visits)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 1 shows that the number of foreign and domestic tourists has an upward trend. However, in 2017 and 2018 the number of foreign tourists did not reach the target. The underachievement of targets can be caused by several factors, one of which is a supporting transportation system or facility. This is as stated by Seetanah [1], that the mode of transportation has contributed positively to the number of tourist arrivals in the short and long term.

Transport facilities and tourist visits should have a positive relationship, but in Central Java there are variations in the relationship data. There are cities with a small number of transport infrastructure facilities, but the number of tourist visits is more than cities that have more transportation infrastructure. Table 2 shows the number of transportation infrastructure and the number of tourists in the regencies/cities in Central Java in 2018.

<table>
<thead>
<tr>
<th>District/City</th>
<th>Total Transportation Mode Infrastructure</th>
<th>Amount of Infrastructure</th>
<th>Number of Tourists</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Airport</td>
<td>Harbor</td>
<td>Bus Station</td>
</tr>
<tr>
<td>Banjarnegara District</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Banyumas District</td>
<td>2</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Batang District</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Blora District</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Boyolali District</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Brebes District</td>
<td>1</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Cilacap District</td>
<td>1</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>Demak District</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Grobogan District</td>
<td>1</td>
<td>16</td>
<td>17</td>
</tr>
<tr>
<td>Jepara District</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Karanganyar District</td>
<td>8</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Kebumen District</td>
<td>3</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Kendal District</td>
<td>5</td>
<td>5</td>
<td>1</td>
</tr>
<tr>
<td>Klaten District</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Magelang District</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Magelang City</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Pati District</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pekalongan District</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pekalongan City</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Pemalong District</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Purbalingga District</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Purworejo District</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Rembang District</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Salatiga City</td>
<td>0</td>
<td>0</td>
<td>106,347</td>
</tr>
<tr>
<td>Semarang District</td>
<td>0</td>
<td>0</td>
<td>3,042,482</td>
</tr>
<tr>
<td>Semarang City</td>
<td>1</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Sragen District</td>
<td>1</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>Sukoharjo District</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Surakarta City</td>
<td>1</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The data shows a condition in which districts/cities in Central Java that have more transportation facilities do not necessarily have more tourist visits. Therefore, there is a suspicion that there is a preference of tourists for certain modes of transportation in conducting tourist visits to an area in Central Java. This paper aims to identify tourist preferences in using modes of transportation in conducting tourist visits in Central Java.

According to RI Law No. 10 of 2009, tourists are people who travel. Tourism is a variety of tourism activities and is supported by various facilities and services provided by the community, business people, and the government, and local governments. Tourism can be interpreted as an activity of traveling a person or group of people in traveling to areas outside their place of residence for the purpose not to work or find work. AJ Burkart and S. Malik in their book entitled Tourism, Past, Present, and Future, explained that tourism is a temporary and short-term movement of people to destinations outside the place where they usually live and work, and activities their activities while staying at the destination [2].

The type of tourism according to Spillane [3] based on the purpose of the destination tour can be divided into several types of special tourism, namely tourism to enjoy travel (pleasure tourism), tourism for recreation (recreation tourism), tourism for culture (cultural tourism), tourism for sports (sport tourism), tourism for trade businesses (business tourism) and tourism for conventions (convention tourism). Spillane [3] continues that there are five important aspects of tourism, namely attractiveness, facilities needed in tourism (facilities), infrastructure, transportation, and hospitality.

Tourist trips require transportation. Transport is a means to move people or goods from one place or origin to another place or destination, with the intention of helping people or groups of people to reach various places they want, or sending goods from the place of origin to the destination. Passenger public transportation is passenger transportation using public transportation which is carried out using a rental or pay system. Passenger public transportation includes city transportation (bus, minibus, etc.), train and air transportation [4].

Sudarta [5] said that transportation access can improve tourism development and increase the number of tourists because access to urban areas is becoming smoother and the costs incurred will be cheaper. Geoltom [6] also states that transportation is very important in tourism. So, it can be concluded that access to transportation is also a criterion for tourists in choosing modes/types of transportation in making a tour. Haradongan [7] states that there are several criteria in the selection of transportation modes used, namely fares, travel time, safety, comfort, security and frequency.

Mankiw [8] states that if other things are fixed, then the amount of demand for an item will decrease when the price of the item rises. When this relationship is applied to transportation, the relationship between the goods demanded (modes of transportation) and the price of goods (the cost of using transportation equipment) is inversely proportional. This means that when the
price of using a mode of transportation increases, the amount of goods demanded (demand for the use of a mode of transportation) will decrease and vice versa.

Thus, it is concluded that there are criteria used in choosing the type/mode of transportation for tourism. These criteria are the price/cost of transportation, travel time, access to transportation, comfort and safety/security.

Types of transportation that are often used to travel in Indonesia and Central Java include trains, buses, private vehicles, ships and airplanes. Gross and Grimm's research [9] shows that 64% of domestic tourists travel by car, 22% use e-bike bicycles, 22% use public transportation, 8% use cruise ships, 5% use ferries, and 3% use trains long distance rail. Research Gutiérrez et al. [10] show that tourists who travel in large groups are most likely to use a taxi, while those traveling alone tend to use a private car. Travelers who stayed at hotels exhibited a greater proportion to use taxis or public transport services. In contrast, those who stayed in their own second residences, or with friends or relatives, showed the greatest tendency to use private vehicles for their transfers. This no doubt happened precisely because these were the people with the access to this mode of transport.

Based on this background, it is necessary to further review the factors that are the priority of tourists in making a tour in Central Java. It also sought out modes of transportation which are the choices/preferences of tourists in traveling.

2 Research Methods

This research uses primary data types. Primary data used in the form of criteria in the selection of transportation modes and tourist preferences in the selection of transportation modes. Primary data were obtained from respondents and key persons. Key persons consisted of domestic/Nusantara tourists, academics, and people working in the tourism sector. The basis for choosing a keyperson is a person who does, understands and is an expert in travel. Keyperson is taken from 35 districts/cities in Central Java. Each region is represented by one keyperson.

The data collection method of this study is a questionnaire method to obtain and confirm preference data from individuals/users of transportation modes. The questionnaire method was also used to obtain priority scale data which was then processed by the Analysis Hierarchy Process method.

The analytical method used is Descriptive Analysis and Analysis Hierarchy Process. Descriptive analysis methods in the form of activities of grouping, separating, managing, sorting, summarizing data, so they can provide descriptive information that can answer questions from the problem [11]. According to Mason et al. [12], descriptive analysis is used to describe or provide information, which in this research describes the mode of transportation preferences chosen by the user along with the variables on which the choices/preferences are based.

Analysis Hierarchy Process is chosen as the next analysis tool to determine the priority scale of user preferences for the choice of transportation mode based on certain criteria. If the priority scale is known in the selection of transportation modes, then it can be used as a reference in the development of transportation modes to support the tourism sector in an area, especially in Central Java Province. Analysis Hierarchy Process method according to Saaty [13], shows how to determine the priority of elements in a decision problem, by making pairwise comparisons. The scale of pairwise appeals is done in a way that each element is compared in pairs to a specified criterion. Paired comparison scale is used to determine the priority scale of
criteria chosen by key person in choosing the use of transportation modes in conducting tourism, and to determine alternative priority modes of transportation based on the existing criteria.

3 Result and Discussion

The results of the confirmation of respondents, obtained criteria - the basis or reason for them to choose the mode of transportation used in travel. These criteria are cost, time, access, comfort and security/safety. The modes/means of transportation that become an alternative for them to use in tourist trips are trains, buses, private vehicles, ships and airplanes.

Based on the criteria and alternatives obtained, then an Analysis Process Hierarchy framework can be prepared as follows.

![Analysis Hierarchy Process Framework](source: Primary data, processed.)

3.1 Priority Criteria in Choosing a Mode of Transportation

Data processing using Expert Choice obtained priority scale criteria that become the basis in the choice of transportation modes in conducting tourist trips. The priority scale of the criteria obtained based on the analysis of pairwise comparison scale data is as follows.

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Combined Priorities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comfort</td>
<td>0.326</td>
</tr>
<tr>
<td>Cost</td>
<td>0.215</td>
</tr>
<tr>
<td>Safety</td>
<td>0.208</td>
</tr>
<tr>
<td>Time</td>
<td>0.153</td>
</tr>
<tr>
<td>Access</td>
<td>0.098</td>
</tr>
</tbody>
</table>

Inconsistency = 0.07 with 0 missing judgments.

![Criteria Priorities with Respect to Goal](source: Primary data, processed.)
The results in Figure 2 show that tourists choose comfort as the first priority in choosing the mode of transportation for tourism. The second rank is cost, security is ranked third, time in the fourth and final rank is access to the mode of transportation.

### 3.2 Priority Scale of Transportation Based on Comfort Criteria

Next, we look at the results of data processing when looking at the priority of using modes of transportation to travel if from the standpoint of comfort criteria. The results are shown in Figure 3 as follows.

The priority of choosing the mode of transportation for tourism when viewed from the criteria of comfort is obtained by the private vehicle as the first priority, the train is the second priority, the plane is the third priority, the bus is the fourth priority and the ship is the last priority.

### 3.3 Priority Scale of Transportation Mode Based on Cost Criteria

The priority scale for selecting modes of transportation in conducting tours based on cost criteria, private vehicle is ranked first. Then the bus is ranked second, train is ranked third, plane is ranked fourth and ship is ranked last. In detail, it can be seen in Figure 4 below.
Private vehicle was chosen because according to keyperson it has a greater weight compared to other modes of transportation such as buses. The comparison takes into account the large number of people who can take advantage of this mode of transportation and other costs. In accordance with the theory of demand, the cheaper the cost of using the mode of transportation, the more tourists will take advantage of the mode of transportation.

### 3.4 Priority Scale of Mode of Transportation Based on Safety Criteria

The results of data processing based on safety criteria, obtained the priority scale for the selection of transportation modes as follows.

<table>
<thead>
<tr>
<th>Goals: Transportation Mode Priority</th>
<th>Combined</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Vehicle</td>
<td>.493</td>
</tr>
<tr>
<td>Plane</td>
<td>.235</td>
</tr>
<tr>
<td>Train</td>
<td>.170</td>
</tr>
<tr>
<td>Bus</td>
<td>.060</td>
</tr>
<tr>
<td>Ship</td>
<td>.043</td>
</tr>
</tbody>
</table>

Inconsistency = 0.12
with 0 missing judgments.

Based on the results of data processing and as in figure 5, then based on safety criteria, private vehicle becomes the first choice in making a tour. Furthermore, plane on the second priority, train on the third priority, the bus is the fourth priority and the ship is the last priority when compared to other transportation modes.

### 3.5 Priority Scale of Transportation Mode Based on Travel Time Criteria

The choice of keyperson for transportation modes in conducting travel based on travel time criteria, places the private vehicle in the first priority. The second priority is plane, train is the third priority, bus is ranked fourth, and ship is the last priority when compared to other transportation modes. The ranking of priority scales and the weighting of pairwise comparison scale values in detail can be seen in Figure 6 below.
The choice of transportation mode is based on access criteria, it is found that private vehicle is the first priority. Furthermore, train successively followed by train on the second priority scale, bus in third, plane in fourth position and ship in last position.

The result was caused by the availability of transportation modes in the people of Central Java. Most of the community is easy to access private vehicle transportation modes because many have these modes of transportation. In addition, many private vehicle rentals are also available. As for other types of transportation modes such as train, bus, plane and ship, their existence is very limited. All areas in Central Java have a bus station, but to reach the place is not as easy as a private vehicle. Not all regions in Central Java have train stations, airports and harbor. In accordance with these conditions, it is appropriate if the private vehicle is the first priority scale chosen by tourists in making a tour.
3.7 **Priority Scale of Mode of Transportation is based on All Criteria**

The results of the selection of transportation modes when considering all the existing criteria, then obtained a private vehicle as the first priority chosen by tourists in making a tour. The second priority after private vehicles is occupied by the train transportation mode. Furthermore, the third priority position is occupied by the plane transportation mode. Buses are the fourth priority, and ship as the last priority based on consideration of all criteria. The details are shown in Figure 8 below.

![Figure 8](image)

*Synthesis: Summary*

<table>
<thead>
<tr>
<th>Mode</th>
<th>Inconsistency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private Vehicle</td>
<td>.407</td>
</tr>
<tr>
<td>Train</td>
<td>.179</td>
</tr>
<tr>
<td>Plane</td>
<td>.171</td>
</tr>
<tr>
<td>Bus</td>
<td>.110</td>
</tr>
<tr>
<td>Ship</td>
<td>.044</td>
</tr>
</tbody>
</table>

![Inconsistency Chart](image)

*Fig. 8. Synthesis of Transportation Mode Priorities with Respect to all criteria.*

This result is in accordance with the research by Steg [14] which states that the car is especially more attractive than public transportation because of its convenience, independence, flexibility, comfort, speed, reliability and because driving is perceived to be more pleasurable. The car also offers more status than public transport does. These results also support the study of Gross and Grimm [9] showing that, 64% of domestic tourists travel by car.

3.8 **Performance Sensitivity of Criteria in Transportation Mode**

Clarifying the scale of priority modes of transportation which are the preferences of tourists in making a tour, then seen how the Performance Sensitivity of criteria in each transportation mode. Sensitivity performance can be used as an approach in sensitivity analysis which is a fundamental concept in the multi-criteria selection method that can be used to measure the stability of the optimal solution selection if there are changes to several parameters. Sensitivity analysis is a common approach and can be done after the calculation process for selecting alternatives to measure the consistency and stability of a calculation result. The results of this sensitivity can be known which criteria are the most critical [15]. The results of performance sensitivity can be seen in Figure 9 below.
The value of the sensitivity of the performance criteria based on Figure 9 shows that comfort has the highest value, cost at second place, safety at third place, time at fourth place and access at last place. If seen from its stability, the real stable private vehicle always ranks first on all criteria. While the ship is relatively stable in the selection of all criteria but at the last rank. The train, plane and bus are relatively unstable on all criteria.

4 Conclusion

The choice of transportation mode in conducting a tourist trip in Central Java is based on several criteria, namely comfort, safety, cost, time and access. Keypersons choose the comfort factor as the main basis in choosing the mode of transportation in traveling. The alternative modes of transportation that travelers can choose are private vehicles, trains, planes, buses and ships. The transportation mode that is a priority for tourists when they travel is a private vehicle/car, because in terms of low cost, time is also flexible and there is no dependency, access is also easy to obtain.

References


Financial Literacy Education in Museum: Investigating the Relationship between Students’ Motivation, Satisfying Experiences and Generic Learning Outcomes

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Abstract. Over the last several years, the issue of financial literacy seems to have risen on the agendas of the young generation. For youth in the Malaysian context, the needs for financial literacy are increasingly significant. The Bank Negara Malaysia Museum Art and Gallery (BNM MAG) fortunately educates the public through exhibitions that encourage financial literacy understanding by visitors. The research explored the links between motivation, satisfying experiences and generic learning outcomes of BNM MAG’s visitors. The study showed four important satisfying experiences which had major and positive effects on young visitors’ generic learning results, including affective, cognitive, sensory and social experiences. In addition, it indicated that motivation positively affected generic learning outcomes and lead to knowledge gains. The researchers anticipate that lawmakers or museum directors should be consulted to manage the use of museums for the young generation, which more likely to value the satisfying aspects of the experience, especially during the museum tour. This study gives a glimpse into the links between museum learning and ideas for future studies.

Keywords: Museum, Motivation, Satisfying Experiences, Generic Learning Outcomes

1 Introduction

Achieving economic well-being and improving financial capability are firmly set within current national policy agendas. Financial education is, therefore, a crucial element of creating citizens who will make a positive contribution to the world around them. However, financial education is more than just being aware of saving strategies. According to Pereira and Coelho [1], students need to understand the role of money, both at a personal level and within society. This includes appreciating the power, responsibility, benefits and challenges that money can bring and feeling confident in managing these very different associations.

Monetary museums and museums with access to a monetary collection are perfectly placed to provide a learning experience that will facilitate this appreciation. They have the unique opportunity to deliver financial education in a historical context [2], stressing money growth in culture, diverse cultural connections to the money and its role in the formation and dissolution of institutions. Taking inspiration from the collection in the Bank Negara Malaysia Museum and Art Gallery (BNM MAG) allows themes surrounding money, such as financial planning,
economics, foreign currencies and history of money, to be explored. From this, students can develop an understanding that these apparent modern concepts have actually been experienced and evaluated over centuries.

Contextualized understanding is therefore paramount in developing an appreciation of money and the social impacts it can have, rather than simply gaining an isolated knowledge of the functions of money. This study will further explore the relationship between students’ motivation, satisfying experience and generic learning outcomes contextualized financial education and the roles museum exhibitions experience play in facilitating this.

1.1 Contextual Model of Learning

A substantial body of literature relating to studying in physical museums and other free-choice learning contexts is now available in many cases, guided by education psychology, learning philosophy and hundreds of visitor studies. Falk and Dierking [3] formed a structure to reflect on learning, which was then called the Interactive Experience Model, and which sought to address the variety and difficulty of learning. This model was developed and improved, which led to the Contextual Model of Learning. This model has been developed by Falk and Dierking [3] and comprises 12 essential suites of factors that are classed into three contexts (Personal, Physical and Sociocultural), which influence visitors’ processes of free choice education environment such as museums, both individually and collectively. There is no dominant factor, and the relationship between these factors is different to any individual. The twelve-factor suites are:

a. Personal Context
   - Motivation and expectations
   - Prior knowledge and experience
   - Prior interests and beliefs
   - Choice and control

b. Physical Context
   - Advance organizers
   - Orientation to the physical space
   - Architecture and large-scale environment
   - Design of exhibits and content of labels
   - Subsequent reinforcing events and experiences outside the museum

c. Sociocultural Context
   - Within group social mediation
   - Facilitated mediation by others
   - Cultural background and upbringing

1.2 Motivation, Satisfying Experiences and Generic Learning Outcomes

Motivation is a complex topic that involves understanding intrinsic versus extrinsic motivation. Intrinsic motivation is characterized by something that is inherently interesting or enjoyable, while extrinsic motivation is due to an external force or self-regulation that leads to a separable outcome [4].

Ryan and Deci [5] further mentioned that motivation is when an individual is moved to do something and can vary based on level and orientation, the reasons for behaviour are concerned with the fundamental attitudes and goals leading to action, that is.

Rowe and Nickels [5] argued that every visitor comes to the museum with a mixture of motivations such as the desire to learn something new, a social interaction, or have a relaxing
experience, but certain motivations are more important depending on the context of the visit. Rowe and Nickels [5] identified the motive as an overarching hypothesis that was articulated during a visit that would directly affect the way visitors perform their visits and the meanings they will conclude from experience. Anderson and Ellenbogen [6] focused that motivation, along with the physical environment, social context, and personal interest, is one factor that can influence how a museum visit will impact a visitors’ experience and learning.

Meanwhile, satisfying experiences in museums have the potential to influence visitors’ learning and, therefore, long-term overall well-being. Pekarik et al. [7] created a structure for satisfying encounters that incorporates four categories of valuable museum guest experiences: object experiences, cognitive experiences, introspective experiences, and social experiences.

Doering [8] suggested that museums should design spaces to specifically elicit these four experiences as they produce beneficial outcomes for the visitor [9]. These four types of satisfying experiences are also dependent on experiencing various positive emotions such as experiencing beauty, feeling a sense of connectedness, or recalling memories [7][8]. The presence of positive emotions within these four satisfying experiences strengthens their impact on visitors’ learning.

Thus, creating a well-managed customer experience gives museums a competitive edge [22]. Asquith [10] argued that by creating an overall ‘experience,’ a museum can attract visitors, encourage repeat visitation, and hold visitors’ attention in exhibit elements. Ensuring that visitors have positive social interactions increases the likelihood of positive overall experiences.

Additionally, different content has varying intrinsic value to visitors based on their own personal connections and ability to have meaningful experiences [11]. Engaging with an exhibit can create a positive experience, and visitors may recall pleasant memories to make sense of an exhibit [12]. Interactive exhibits facilitate hands-on experiences [12], which allow visitors to try new things, be good at something, or participate in a satisfying experience [13].

Falk and Dierking’s [3] tourist experience have also been an important and complicated research area for many years. Given that discovering and acquiring new skills is one of the primary motivations for visiting museums [14], this article reflects on the visitor’s learning experience. It is worth pointing out in this sense that museum learning is optional, accessible and driven by the choices made by the visitor.

Several scholars, including Gammon [15] and Hooper-Greenhill et al. [16], suggested models that quantify visitor learning. This study focuses on Hooper-Greenhill et al. [16] model of GLO (Generic Learning Outcomes. In reality, this model highlights two dimensions: analytic and sensitive, in conformity with the work discussed in Tillon, Marchal and Houlier [17]. These dimensions shape the perspective of the tourist resulting from the encounter with exhibits. The UK Museum, Library and Archives Ministry (MLA) introduced GLO. It is also used extensively in many UK museums and has been successfully implemented by the MLA mediation services [18]. GLO’s paradigm has been identified as an experience for Hooper-Greenhill et al. [16], which include: enhanced knowledge and comprehension, extra skills, changing attitudes and values, feeling of enjoyment, motivation and creativity, and incentives for activity and advancement.

The thesis focuses on a particular visiting encounter: the learning experience since research has been conducted in museology with Pekarik, Doering and Karns [7], Kotler [19] and Packer and Ballantyne [14] in various kinds of visitor encounters. In fact, the writers of these articles regard learning experience as one of the most important post-experiences in museums, including generic learning. There are no published reports on the motivation, satisfying experiences, and generic learning outcomes research to our knowledge; in the context of financial literacy in museums, despite the fact that some monetary and financial exhibition in museums commenced
emerging in the recent years, which motivated us to construct a research framework (Figure 1) as follow:

- **Motivation** → **Satisfying Experiences** → **Generic Learning Outcomes**

**Fig. 1.** Research Framework (developed by authors for current study).

Therefore, two objectives of this study were:

- **Objective 1:** To investigate the relationship between motivation towards satisfying experiences
- **Objective 2:** To investigate the relationship between satisfying experiences towards generic learning outcomes

## 2 Research Methods

The results of the data analyzed by the approach are seen in this section, as discussed in the last section. It has a demographic profile, reliability analysis and evaluation of hypotheses in three main sections. The study results highlighted the list of observations on the motivational interaction and satisfactory experiences of students’ generic learning outcomes. The mean value for each of the variables shows the students’ answer to generic results by running the data through SPSS version 21. In order to test the mentioned theories, a correlation and a multiple regression analysis are used on variables.

During the trip to the Bank Negara Malaysia Museum and Art Gallery (BNM MAG) under the subject code FIN435 (Financial Market and Banking Services), the respondents were sampled as they took part in the project. Their input on some of the motivation issues and satisfactory experience were recorded using a Google Form. They also spoke about their opinions about the generic outcomes of learning. Thus, the data on the questions posed in the questionnaires have analytical credibility.

## 3 Result and Discussion

Out of the 80 questionnaires distributed, 62 respondents responded, resulting in a 77.5% response rate. From the total number of responses, all were returned in full feedback. Figure 2 shows the demographic features of the respondents.

**Fig. 2.** Gender of respondents.
Figure 2 shows gender representation by students who were selected to respond to their museum experiences at BNM MAG. A large portion of the respondents were females, represented by 53 students or 85.5%. The remaining nine students, or 14.5%, were males who participated in this study.

### 3.1 Reliability Analysis

For each independent and dependent variable to answer stability, Cronbach’s Alphas were measured. This test is conducted before further research to check the accuracy of variables.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Reliability Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Independent Variable</strong></td>
<td></td>
</tr>
<tr>
<td>Motivation</td>
<td>0.750</td>
</tr>
<tr>
<td>Satisfying experiences</td>
<td>0.883</td>
</tr>
<tr>
<td><strong>Dependent Variable</strong></td>
<td></td>
</tr>
<tr>
<td>Generic learning outcomes</td>
<td>0.902</td>
</tr>
</tbody>
</table>

All three variables, as seen in table 1, have a score of more than 0.7 in their alpha Cronbach with the highest Generic learning outcome rating (0.944), followed by Motivation variable results of 0.856. The other variable represented by Satisfying experiences (0.837). In a nutshell, all of the variables mentioned above were found to be reliable, and hypothesis testing was performed.

### 3.2 Hypotheses Testing

Two theories were suggested on the basis of the aim of this analysis. Every one of the hypotheses was reiterated below, and the results were then submitted for statistical review. The correlation analysis and multiple linear regression analysis have been used to evaluate all the hypotheses.

### 3.3 Correlation Analysis

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Motivation</th>
<th>Satisfying experience</th>
<th>Generic Learning Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td></td>
<td>0.650**</td>
<td>0.557**</td>
</tr>
<tr>
<td>Satisfying experiences</td>
<td>0.650**</td>
<td></td>
<td>0.725**</td>
</tr>
<tr>
<td>Generic learning outcomes</td>
<td>0.557**</td>
<td>0.725**</td>
<td></td>
</tr>
</tbody>
</table>

The magnitude of a linear between two variables was determined by a correlation coefficient. The intensity of a linear between generic learning results and two determinants was calculated in a Pearson correlation coefficient (Motivation and Satisfying experiences). Table 2 showed a favorable and meaningful correlation between overalls of independent and dependent variables at 0.01 (2-tailed) for some values between 0.5 and 0.8, which suggests that they were a moderately strong link. The Satisfying experience correlation was 0.725 (p= 0.000) which was
the strongest relationship, followed by Motivation ($r=0.557$, $p=0.000$). Hence, the research showed that there were relationships between Motivation, Satisfying experience and Generic learning outcome.

### 3.4 Multiple Linear Regression Analysis

The statistical analysis used for examining relationships between independent variables and the dependent variable is multiple linear regression analysis. Two theories were tested, specifically:

- **H1:** There is a significant relationship between motivation towards satisfying experiences
- **H2:** There is significant relationship between satisfying experiences towards generic learning outcomes

| Table 3. Relationship between Motivation towards Satisfying Experiences |
|-----------------------------|--------|--------|
| **Determinant** | **B**  | **Beta** | **Sig.** |
| Motivation       | 0.690  | 0.650  | **  |
| R-Square         | 0.422  |        | ** significant |
| Adjusted R-Square| 0.412  |        | $p < 0.001$  |

The enter approach was used in this standard multiple linear regression analysis to evaluate the relationship between Satisfying experience, which is called an aggregated variable, and Motivation, which acts as an independent variable. As a result, 42.2 per cent of the overall variances in the dependent variable (Generic learning outcomes) with R-Square 0.422 is explained in Table 3 in the independent variables (Motivation). Therefore, the association between Motivation and Satisfying experience was strong.

Motivation emerged as a significant determinant in explaining the Satisfying experiences, which received a p-value of 0.001 described as highly, positively and significantly linked to the dependent variable at a 1% significant level. Hence, these findings fail to discard H1 of the research.

| Table 4. Relationship between Satisfying Experiences towards Generic Learning Outcomes |
|-----------------------------|--------|--------|
| **Determinant** | **B**  | **Beta** | **Sig.** |
| Satisfying experiences | 0.733  | 0.725  | **  |
| R-Square         | 0.526  |        | ** significant |
| Adjusted R-Square| 0.518  |        | $p < 0.001$  |

The independent variables (Satisfying experiences) described 52.6 per cent of the overall variances in the dependent variable (Generic learning outcomes) with R-Square 0.526, as seen in Table 4. As a result, the relation between Satisfying experience and Generic learning outcomes was also strong.

Satisfying experiences emerged as a significant determinant in explaining the Generic learning outcomes, which received a p-value of 0.001 conveyed as highly, positively and
significantly associated to the dependent variable at a 1% significant level. Hence, these findings fail to discard H2 of the research.

4 Conclusion

The previous literature showed different types of satisfying experiences every time they visit the museum. The literature review scenario achieved the main aim of this paper, which is to investigate the relationship between motivation towards satisfying experiences and to investigate the relationship between satisfying experiences towards generic learning outcomes.

The findings of this study are consistent with ElDamshiry and Khalil [20], which revealed the following information twofold: a significant relationship between motivation and satisfying experiences and a significant relationship between satisfying experiences and generic learning outcomes. Furthermore, this study revealed affective, cognitive, sensory and social experiences foster visitors’ learning of financial knowledge.

The instrument for assessment has been created for curators and educators to use when evaluating and understanding their museum visitors within exhibits. They may find this instrument useful in examining the constructed type of visitors’ experience tally with the significance of the exhibit and the items chosen for display.

This study can be used to inform museum practices in multiple ways. Motivation as a construct is related to satisfying experiences, and therefore, visitors’ satisfying experiences could be reflective of generic learning outcomes. Paying attention to visitors’ satisfying experiences in museums is critical in aspects of marketing and membership [21]. Enabling students to experience financial exhibitions in such a broad context will directly contribute to a deeper appreciation of it. This will further enable the outcomes of contextualized financial education sessions to be transferred to everyday interactions with financial decisions, creating more robust and reflective learning experiences.

Marketing benefits from visitors who are satisfied since they are more likely to recommend their experience to others [22]. This means that the more visitors that are recommending their positive satisfying experiences, including affective, cognitive, sensory and social experiences, the more potentials the museum will see an increase in visitor ship. Moreover, the more satisfied someone is, the more likely they are to have a return visit [22]. This means additional revenue as well as opportunities for them to become members, which increases funding and support for the museum [21]. Therefore, the museum benefits across multiple areas when visitors satisfied and learnt during their museum visit. Future research should address the issue of reflection of learning, which is currently beyond the scope of this research. Furthermore, the study audiences’ interpretations and responses in relation to the use of new media and technologies in museum exhibitions can be incorporated for future studies.

Following this, the research findings are instrumental for policymakers, educationist, and those involved in developing and administering initiatives geared toward improving youth financial literacy at every level. Additionally, the findings elicited will also assist the Malaysian government in achieving the aspirations detailed in the National Strategy for Financial Literacy 2019-2023.

References

Abstract. With the expanding trend in the cosmetic industry, today’s consumers are overflowed with various brands of beauty care products. In such circumstance, it may be an exorbitant undertaking for cosmetic companies to guarantee brand loyalty among the existing customers [1]. Therefore, it has become a vital need for companies to have a more noteworthy information on the determinants of brand loyalty of a specific brand of cosmetic. The purpose of this study is to investigate the factors that influence cosmetic brand loyalty among Generation Y women. A stratified random sampling was adopted in distributing questionnaires to 250 respondents. The data were analyzed using SPSS 18.0 which involved scale reliability, descriptive and multiple regression analyses. This study revealed that four key independent variables which are promotion, brand name, price and product quality had positive significant effects towards cosmetic brand loyalty among Generation Y women. Based on the results, some recommendations are suggested for future direction.

Keywords: Generation Y, Brand Loyalty, Promotion, Brand Name, Price, Product Quality

1 Introduction

Cosmetic products have become a necessity among Generation Y, especially among young and adult women, whereby it is also a typical and mainstream category of necessities that recognizes them with a more loosened up way of life, more noteworthy adaptability, and comfort [2]. Due to increasing numbers of consumers in the world, many businesses that are related to cosmetic products have grown rapidly. This reason acts as their needs in consumers’ daily basis. Meanwhile, with the increasing number of competitions in the cosmetic industry, consumers are repeatedly flooded with information on different brands of the same product category of cosmetics. In such circumstance, it could be useful undertaking for a company to guarantee brand loyalty among existing customers. As an outcome, it has become an important step for marketers to have a more prominent information on the determinants of brand loyalty. Brand loyalty is one of the significant perspectives which is noteworthy for the management in sustaining its competitiveness in the market [3].

According to Alhedhaif et al. [4], the American Marketing Association defines brand loyalty as “the situation in which a consumer generally buys the same manufacturer-originated product or service repeatedly over time rather than buying from multiple suppliers within the category” or “the degree to which a consumer consistently purchases the same brand within a product class”. It means customers will repeat purchasing the same product when the brand offers a high quality and convenient price.
The individuals who were born during the ’80s and the mid ’90s are also called as the Generation Y, a name that is given based on the preceding generation which is the Generation X. The Generation Y cohort is likewise alluded to as Millennials, the Internet generation, iGen and/or the Net generation. Also called the Echo Boomers, Generation Y are the offspring of Baby Boomers, or the individuals who were born during the time of expanded birth rates that happened somewhere between the years of 1946 and 1964. As indicated by Deal et al. [5], they are generally more educated than the previous generations, profoundly competent users of data and communication innovations (ICTs) and acclimated with the universe of social media applications and platforms. By and large, this cohort prefers to convey information through emails and instant messages instead of real face-to-face contact. In addition, learning for them is something beyond customary physical lecture rooms and physical seminars whereby they are mostly exposed to oral presentations by means of online courses, webinars, and online classes. Since the youngsters of this era have consistently had steady access to present day’s innovation, for example, laptops, tablets, and smartphones since their childhood, their employment and public activity are continually characterized by or required to join the latest updates of such kinds of advancements.

There are numerous variables that impact brand loyalty, for example, brand name, product quality, price, features or design, store environment, promotion, and service quality [6]. These factors determine consumers’ decision to purchase a superior item and appropriate for their countenances and body. Keeping loyal customers is important for firm performance and it relies upon on how the products of the company can attract customers and at the same time will increase the company’s profit too. Promotion is important to attract customers buying the products and to gain trust from customers regardless of the products’ prices. Promotion is a significant component which is a sort of communication with customers regarding item contributions and it is an approach to support purchase or sales of an item or service [7]. Promotion incorporates the utilization of advertising, personal selling, direct marketing, public relations, and sales promotion. Advertising through mass media platforms such as television and radio is one of the effective ways to approach customers. It can help to encourage positive perceptions in the customer’s mind as well can help them differentiate the products [6]. Promotion through media is also suitable to encourage visual persons where they are easily affected through attractive advertising. According to De Chernatony [8], advertising is a useful instrument to create practical and emotional qualities of the brand and is utilized fundamentally by the organizations to accomplish sales by revealing the customers about the new or improved items. A brand name is a symbol for a product that makes the company’s products differentiated from other competitors.

At the point when a brand name is carrying out its responsibility, it inspires positive pictures or feelings in buyers, which is the reason why branding can be so significant. According to Mansoor and Jalal [9], a global brand is defined as products that are produced globally and known in multiple countries while local brand means products that are produced domestically in a specific region. Brand name is significant for marketing specialists and clients, especially for the marketing specialists to utilize brand names in separating items from different contenders, taking the best situation in market to put their items and broadening the brand [3]. Furthermore, according to Hanzae & Andervazh [10], brand name does not only help identify the products but also acquires a rich set of symbols and meanings embodied by the products. These sets of symbols lead to customers’ attraction to repeat purchasing the brand and reduce customers’ switching behaviour. Customers tend to buy a familiar and well-known product or product that gives many benefits to them.
Pricing determines what amount a customer is willing to pay in return for the product. Companies differ in their approach to this [11]. Price of the product is important to influence customers to buy the product. Customers are willing to pay at any price if the product gives a high quality and satisfies the customers’ expectations. According to Alhedhaif et al. [4], price satisfaction has a direct impact on consumer behaviour and customer loyalty. By increasing loyalty among customers, it will prevent customers from switching to other brands thus will increase profit as well. As per Ong et al. [12], price is one of the aspects considered made by Malaysian customers to pick either local or imported items, where most Malaysians emphasise less on the price of products as they consistently see a superior benefit from high prices compared to lower ones. Basically, customers will seek for a high-quality product before they look at the price. It is because high quality products will give high impact towards the customers’ experience. If the product does not have the expected quality, customers will switch to another brand. This implies the nature of a product might be characterized as its capacity to fulfil the consumer loyalty’s and desires [4]. Product quality comprises of highlights and attributes of a product and service that bears on its capacity to fulfil expressed or inferred needs.

Materials used in a product is essential because it will affect to hand feel, texture and other performance aspects of the products. As for cosmetic products, the materials should not harm the consumers because the main reason to use cosmetic is for long shelf life and natural ingredients are needed in every cosmetic so that it does not harm consumers’ health. Product quality is a main concern in firms’ internationalization. They characterize product quality as a key trait that clients use to assess the products [10]. Product quality is generally a perceptual build as there are plenty of factors that impact a product’s performance, toughness, fitness and other related matters. Besides, if the product can satisfy customer needs and wants, it is considered as high quality of product and gives high satisfaction to the consumers.

2 Research Objectives

a. To determine the relationship between promotion and brand loyalty among generation Y women.
b. To examine the relationship between brand name and brand loyalty among generation Y women.
c. To analyse the relationship between price and brand loyalty among generation Y women.
d. To identify the relationship between product quality and brand loyalty generation Y women.
e. To investigate the most factor that influencing brand loyalty towards cosmetic products among generation Y women.

3 Research Questions

a. Is there any relationship between promotion and brand loyalty among generation Y women?
b. Is there any relationship between brand name and brand loyalty among generation Y women?
c. Is there any relationship between price and brand loyalty among generation Y women?
d. Is there any relationship between product quality and brand loyalty generation Y women?
e. What is the most factor that influences brand loyalty towards cosmetic products among generation Y women?

4 Theoretical Framework

![Diagram showing the relationship between Independent Variables (Promotion, Brand Name, Price, Product) and Dependent Variable (Brand Loyalty).]

Source: Factors that affect consumers' brand loyalty towards cosmetic products [3].

5 Hypotheses

a. Hypothesis 1
   H0: There is no relationship between promotion and brand loyalty among generation Y women.
   H1: There is a relationship between promotion and brand loyalty among generation Y women.

b. Hypothesis 2
   H0: There is no relationship between brand name and brand loyalty among generation Y women.
   H1: There is a relationship between brand name and brand loyalty among generation Y women.

c. Hypothesis 3
   H0: There is no relationship between price and brand loyalty among generation Y women.
H1: There is a relationship between price and brand loyalty among generation Y women.

d. Hypothesis 4

H0: There is no relationship between product quality and brand loyalty among generation Y women.

H1: There is a relationship between product quality and brand loyalty among generation Y women.

6 Methodology

The purpose of this study is to ascertain the factors affecting brand loyalty among Generation Y women. The respondents were Malaysian women in the state of Malacca aged between 26 to 39 years old. A stratified random sampling was used for this study. 250 sets of questionnaires were distributed to 250 respondents but only 212 sets were returned. All instruments were adapted from past research. In the questionnaire, brand loyalty consisted 4 items, promotion items consisted 4 items, brand name questions consisted 4 items, pricing questions consisted 4 items and product quality items consisted 4 questions. All variables used 5 Likert scale point from one (1) strongly disagree to five (5) strongly agree. SPSS 18.0 was utilized to record the data. Content validity was evaluated utilizing the reliability test, Cronbach alpha, while the theories were evaluated utilizing the regression analysis.

7 Findings

7.1 Frequency Statistics

A total of 212 respondents accommodated by returning the questionnaires that developed in 85% rate of return. As shown in Table 1, based on the demographic information, the sample was varied in several features. Approximately, 56.6% (120) of the samples were Malay, followed by Chinese 20.3% (43), Indian were 16.5% (35) and 6.6% (14) were others. For marital status, 32.1% (68) were single, 67% (142) were married, meanwhile 0.9% (2) were divorce. A majority of the respondents (107) aged between 31-35 years old (50.5%), followed by 56 respondents aged between 26-29 years old (26.4) and (49) respondents aged between 36-39 years old (23.1%). The table also shows that 61.8% (131) of them earned RM2,501-RM3,500 per month, followed by 25.5% (54) earned RM1,501-RM2,500 per month, 8.5% (18) of the samples earned more than RM3,501 per month, followed by 4.2% (9) earned below RM1,500 monthly. The highest number of monthly expenditures is RM201 – RM300 with 50.4% (107) from the total respondents while the monthly expenditure between RM101 - RM200 scored the second highest by 30.1% with 65 respondents. It is followed by RM100 monthly expenditure by 11.8% (25) respondents. The lowest monthly expenditure is above RM301 with 7.7% (15) respondents. On the other hand, 57.5% (122) of the respondents worked in the government sector followed by 39.2% (83) worked in private sector and only (3.3%) 7 respondents were in other sectors such as self-employed and worked at other sectors than public, private, self-employed. The most preferable cosmetic products are Others by 29.2% (62) respondents. The second preferred brand is Maybelline and followed by Silky Girl with 20.3% (43) and 17.9% ((38) respondents respectively. Next is Sephora with 14.6% (31) respondents. Other than that,
Catrice, SimplySiti and Avon which were 5.2% (11), 4.2% (9) and 3.3 % (7) respectively. Meanwhile, Qu Puteh has 2.4% (5) and D’Herbs and D’Nars shared the same result of 1.4% (3).

<table>
<thead>
<tr>
<th>Respondent’s Profile</th>
<th>Response Set</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Race</td>
<td>Malay</td>
<td>120</td>
<td>56.6</td>
</tr>
<tr>
<td></td>
<td>Chinese</td>
<td>43</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>Indian</td>
<td>35</td>
<td>16.5</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>14</td>
<td>6.6</td>
</tr>
<tr>
<td>Marital Status</td>
<td>Single</td>
<td>68</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Married</td>
<td>142</td>
<td>67.0</td>
</tr>
<tr>
<td></td>
<td>Divorce</td>
<td>2</td>
<td>0.9</td>
</tr>
<tr>
<td>Age</td>
<td>26-29 Years Old</td>
<td>56</td>
<td>26.4</td>
</tr>
<tr>
<td></td>
<td>31-35 Years Old</td>
<td>107</td>
<td>50.5</td>
</tr>
<tr>
<td></td>
<td>36-39 Years Old</td>
<td>49</td>
<td>23.1</td>
</tr>
<tr>
<td>Income Per Month</td>
<td>Below RM1,500</td>
<td>9</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>RM1,501-RM2,500</td>
<td>54</td>
<td>25.5</td>
</tr>
<tr>
<td></td>
<td>RM2,501-RM3,500</td>
<td>131</td>
<td>61.8</td>
</tr>
<tr>
<td></td>
<td>Above RM3,501</td>
<td>18</td>
<td>8.5</td>
</tr>
<tr>
<td>Monthly Expenditure</td>
<td>Below RM100</td>
<td>25</td>
<td>11.8</td>
</tr>
<tr>
<td></td>
<td>RM101-RM200</td>
<td>65</td>
<td>30.1</td>
</tr>
<tr>
<td></td>
<td>RM201-RM300</td>
<td>107</td>
<td>50.4</td>
</tr>
<tr>
<td></td>
<td>Above RM301</td>
<td>15</td>
<td>7.7</td>
</tr>
<tr>
<td>Working Sector</td>
<td>Government</td>
<td>122</td>
<td>57.5</td>
</tr>
<tr>
<td></td>
<td>Private</td>
<td>83</td>
<td>39.2</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>7</td>
<td>3.3</td>
</tr>
<tr>
<td>Most Preferable</td>
<td>Silky Girl</td>
<td>38</td>
<td>17.9</td>
</tr>
<tr>
<td>Cosmetic Products</td>
<td>Catrice</td>
<td>11</td>
<td>5.2</td>
</tr>
<tr>
<td></td>
<td>Maybelline</td>
<td>43</td>
<td>20.3</td>
</tr>
<tr>
<td></td>
<td>Sephora</td>
<td>31</td>
<td>14.6</td>
</tr>
<tr>
<td></td>
<td>Avon</td>
<td>7</td>
<td>3.3</td>
</tr>
<tr>
<td></td>
<td>SimplySiti</td>
<td>9</td>
<td>4.2</td>
</tr>
<tr>
<td></td>
<td>D’Herbs</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Qu Puteh</td>
<td>5</td>
<td>2.4</td>
</tr>
<tr>
<td></td>
<td>D’Nars</td>
<td>3</td>
<td>1.4</td>
</tr>
<tr>
<td></td>
<td>Others</td>
<td>62</td>
<td>29.2</td>
</tr>
</tbody>
</table>

### 7.2 Descriptive Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>3.9811</td>
<td>0.59090</td>
</tr>
<tr>
<td>Brand Name</td>
<td>4.1309</td>
<td>0.61836</td>
</tr>
<tr>
<td>Price</td>
<td>3.9104</td>
<td>0.70643</td>
</tr>
<tr>
<td>Product Quality</td>
<td>4.0271</td>
<td>0.60764</td>
</tr>
</tbody>
</table>
Table 2 shows the average means and standard deviations for each variable in this research. The highest mean score is obtained by brand name with 4.1309. The second highest is product quality with total average of mean 4.0271 and followed by promotion with 3.9811. The lowest average mean is price with 3.9104. The consumers will have a high degree of loyalty towards a specific brand if they pay more for the brand name.

7.3 Reliability Analysis

The Cronbach’s Alpha for brand loyalty is 0.878, promotion is 0.826, brand name is 0.845, price is 0.830 and product quality is 0.823 where all are considered as high reliability. The reliability of the measure indicates the stability of the instrument used. It can be concluded that Cronbach’s Alpha values for all variables have a good strength of association as the values are more than 0.8, therefore, all the variables used in this study were reliable.

<table>
<thead>
<tr>
<th>Factors</th>
<th>No. of Items</th>
<th>Cronbach’s Alpha</th>
<th>Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Loyalty</td>
<td>4</td>
<td>0.878</td>
<td>GOOD</td>
</tr>
<tr>
<td>Promotion</td>
<td>4</td>
<td>0.826</td>
<td>GOOD</td>
</tr>
<tr>
<td>Brand Name</td>
<td>4</td>
<td>0.845</td>
<td>GOOD</td>
</tr>
<tr>
<td>Price</td>
<td>4</td>
<td>0.830</td>
<td>GOOD</td>
</tr>
<tr>
<td>Product Quality</td>
<td>4</td>
<td>0.823</td>
<td>GOOD</td>
</tr>
</tbody>
</table>

7.4 Pearson’s Correlation Analysis

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>Strength of Association</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brand Loyalty and Promotion</td>
<td>0.417</td>
<td>Moderate</td>
</tr>
<tr>
<td>Brand Loyalty and Brand Name</td>
<td>0.560</td>
<td>Strong</td>
</tr>
<tr>
<td>Brand Loyalty and Price</td>
<td>0.580</td>
<td>Strong</td>
</tr>
<tr>
<td>Brand Loyalty and Product Quality</td>
<td>0.634</td>
<td>Strong</td>
</tr>
</tbody>
</table>

The first correlation is to identify the association between brand loyalty and promotion and the result shows that the correlation is $r=0.417$, $p=0.000$. Therefore, there is a moderate relationship between brand loyalty and promotion. Next, correlation is used to examine the association between brand loyalty and brand name. The result indicated that the correlation is $r=0.560$, $p=0.000$. Therefore, there is a strong relationship between brand loyalty and brand name. The third correlation is to determine the association between brand loyalty and price. The result shows that the correlation is $r=0.580$, $p=0.000$. Therefore, there is a strong relationship between brand loyalty and price. The last correlation is to examine the association between brand loyalty and product quality and the result demonstrates that the correlation is $r=0.634$, $p=0.000$. Hence, there is a strong relationship between brand loyalty and product quality.
7.5 Multiple Regression Analysis

Table 5. Multiple Regression Result

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Standardized Coefficient (Beta)</th>
<th>t-Values</th>
<th>Significant Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotion</td>
<td>.061</td>
<td>1.009</td>
<td>.314</td>
</tr>
<tr>
<td>Brand Name</td>
<td>.274</td>
<td>4.365</td>
<td>.000</td>
</tr>
<tr>
<td>Price</td>
<td>.292</td>
<td>4.551</td>
<td>.000</td>
</tr>
<tr>
<td>Product Quality</td>
<td>.238</td>
<td>3.048</td>
<td>.003</td>
</tr>
</tbody>
</table>

Table 5 demonstrates the regression results. Based on the results, promotion variable shows no significance relationship with brand loyalty \( (t=1.009, p=0.314) \). Hence, \( H_1 \) is rejected. Brand name variable is significantly associated with brand loyalty \( (t=4.365, p=0.000) \). Hence, \( H_2 \) is supported. Price variable is shown to have a significant relationship with brand loyalty \( (t=4.551, p=0.000) \). Hence, \( H_3 \) is also supported. Lastly, for Product Quality variable, it is significantly associated with brand loyalty \( (t=3.048, p=0.003) \). Hence \( H_4 \) is also supported.

8 Conclusion and Discussion

The results showed that all the four variables which are promotion, brand name price and product quality were positively correlated with the dependent variable (brand loyalty). Meanwhile, using the Regression analysis, only one independent variable was not accepted which is promotion. The result demonstrates that all independent variables achieved and had a significant relationship. The analysis for brand name showed a strong association between brand name and brand loyalty where the result shows \( r=0.560 \). That implies buyers lean toward brand image when they see positive advantages or capacity from that item.

Furthermore, for product quality and brand loyalty variables, it also demonstrated a strong association by \( r=0.634 \). Compared to other variables, product quality variable has the strongest association with brand loyalty. The reason is because consumers are very concern about what they consume to prevent any infections on their skin or body. On the other hand, consumers prefer to buy international products rather than local products. Therefore, product quality is very important to maintain consumer loyalty. Price also has a strong association with brand loyalty by \( r=0.580 \). Findings from this study are also coherent with other several studies where price is considered as a sensitive matter in life where everyone tries to purchase the best products with high quality and affordable price. They will buy products that satisfy their needs with appropriate prices. Lastly, for promotion and brand loyalty variables, the result showed that there is a moderate association of \( r=0.417 \). It also means that promotion variable was not considered an important aspect of brand loyalty.

The study has its own limitations. Firstly, the sample size might be too small whereby only 250 respondents participated. Moreover, the used of online survey might have its own shortcomings such as respondents tend to answer the questions more than once. Furthermore, lack of cooperation and limitations of the source are also identified as other limitations for the study.

References


Investigation of Excellent Performance for Basic Accounting Course: The Evidence of Non-Accounting Students

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Universiti Teknologi MARA, Malaysia¹, ², ³, ⁴, ⁵

Abstract. Nowadays, graduates should focus more on entrepreneurship rather than being employed due to the rise of unemployment rate in Malaysia. Accounting literacy is a key role in the success of being an entrepreneur. However, non-accounting students believed that accounting subject as irrelevant to their discipline and difficult to grasp due to its technical and complex process. This perception has consequently led to a high failure rate of accounting subject among non-accounting students. On the other hand, most of the non-accounting students in Universiti Teknologi MARA Jasin Campus had performed very well in the accounting subject. The characteristics of students such as their past experiences and their approaches to learning may influence the academic performance in the basic accounting course. Hence, this study examines the factors that contribute to the student’s excellence performance for the basic accounting course. 524 students from two faculties responded to the questionnaire distributed. Findings of this study revealed that, those students with prior accounting knowledge performed better and have a high success rate in the basic accounting course. Besides, basic understanding in the financial statements components significantly affect the performance of non-accounting students. These results indicate that prior accounting knowledge really helps students to excel in accounting courses which are necessary to prepare them as an entrepreneur after they have graduated.

Keywords: Accounting Course, Accounting Background, Non-Accounting Students, Performance, Prior Accounting Knowledge

1 Introduction

To date, Malaysia is facing an upward trend of youth unemployment rate from 10.77 per cent in 2017 to 10.92 per cent in 2018 [1]. In line with the current issue, the government has always come out with the current program that focuses on entrepreneurship with the ultimate aim to produce more entrepreneurs or job creators among the graduates [2]. According to Umeji & Obi [3], accounting literacy is a key role in the success and failure of the business. Hence, Universiti Teknologi MARA (UiTM) on the other side has made the parallel effort by requiring the basic accounting course, ACC 106: Introduction to Financial Accounting and Reporting as a compulsory subject for almost all diploma courses in order to equip students with basic knowledge on accounting. The requirement entry for almost all diploma courses is that candidates must pass Malaysian Certificate of Education (SPM) or O-level or equivalent
qualifications recognized by the Government of Malaysia with four credits subjects including English and Mathematics.

The content of the course would comprise of nine (9) basic accounting areas which comprise of accounting concepts, accounting classification, principle of double entry, ledger, trial balance, financial statement, year-end adjustment, bank reconciliation and ratio analysis. Students are tested with 40 per cent continuous assessment and 60 per cent final examination. This course can be considered as an advantage and repetitive to those students who have taken *Prinsip Perakauan* during SPM level at secondary school. The basic accounting knowledge embedded in ACC106 is sufficient for graduates to practically apply the knowledge if they want to start their own business.

Prior studies have revealed that non-accounting students believed the accounting subject as irrelevant to their discipline and difficult to grasp due to its technical and complex process. This consequently led to failure to perform accounting courses by a number of non-accounting students [4]. However, most of the non-accounting students particularly in UiTM Melaka Branch, Jasin Campus performed well in this subject even though they never studied any accounting subject before. Currently, the success rate for non-accounting students taking ACC106 was 93% (passed the papers).

Even though accounting is perceived as difficult, introductory accounting courses are important to be taught to non-accounting students as knowledge and skills are necessary for lifelong learning [5]. Attracting students’ interest into accounting has been recognized as seriously vital in the development of skills necessary to be successful in both accounting and non-accounting professions [6][7]. According to Biggs [8] model of student learning process, performance or output of a subject matter are outlined by characteristics of students and their learning approaches. Appropriate study skills with the appropriate teaching and learning approach will make the students understand better of their subjects of any disciplines.

Inspired by this phenomenon, this paper attempts to investigate the factors contributing to the high success rate for basic accounting subjects, ACC106 including characteristics of students such as their past experiences and their approaches to learning that may influence the academic performance of the non-accounting students in the basic accounting course. The unique contribution of this study is that it discusses the evidence on the factors, specifically the understanding of financial statement components; affecting the success of students taking courses that are distinct from their major discipline.

## 2 Literature Review

### 2.1 The Importance of Accounting Subject

In the early 1960s, researchers struggled to determine the essential accounting course offered to non-accounting students [9]. Some educators believed a separate course should be established for non-accounting students as compared to accounting major students [9]. Accounting is seen as the language of the business [10]. Since the beginning of civilized society, accounting has played a crucial role in society. Accounting is important to analyse how money is used by business. If anything related about money, it starts with accounting [11].

In UiTM, Accounting subjects are not only offered to accounting students. Other programs such as Business, Plantation, Computer Science have included this accounting subject either as a compulsory or elective course. In fact, the mission of UiTM to produce excellence and independent students not only to become job seekers but make them a job creator or
entrepreneur. This is in accordance with Ahmad & Xavier [12] which revealed that entrepreneurship activities produce employment, generate wealth and inspire economic development. Entrepreneurship is considered vital in the revolution of nations, politically and socio-economically [13]. Thus, in order for students to become entrepreneurs in the future, universities must equip their students with basic accounting courses.

Throughout the years, many studies related to the factors influencing the performance of the non-accounting students have been conducted. Despite the importance of accounting subjects, non-accounting students did not perform well in the accounting course [4][14]. Non-accounting students perceived accounting courses irrelevant to their discipline and were not interested in accounting subjects. In addition, the learning style and background of non-accounting students are also different from accounting students [15]. A study revealed that students who are not equipped with strong mathematical skills do not perform in accounting subjects [16]. Eskew and Faley [17] found that students with previous accounting exposure in high school tend to perform well in accounting subjects.

Regardless of the negative performance of the non-accounting students, some of the recent studies suggested various teaching and learning strategies to non-accounting majors to help them to get good results in accounting course [18][19][20]. Evidences shown various styles of learning and teaching techniques should be introduced such as active learning, deep, surface and strategy approach. Ismail & Kasim [21] suggested accounting courses should be offered to higher level non-accounting students. The result indicates that it is possible for students who do not have accounting background to obtain a high score in the accounting subject. In accordance to Baldwin & Howe [22], students’ performance is not significantly associated with prior exposure in high school accounting education. That means even though students do not have a prior accounting background they still can score in accounting. Muda et al. [19] revealed that from the examination results they obtained; it was reported 53.8% students passed ACC106 subject among non-accounting students in UiTM Negeri Sembilan. The result indicated the percentage of passed was more than failure even though the percentage of failure was quite high. Hence, this study will investigate factors contributing to the high success rate for basic accounting subjects among non-accounting students in UiTM Jasin.

2.2 Component of Subject Introduction to Financial Accounting (ACC106)

UiTM requires students to register subject Introduction to Financial Accounting (ACC106) during second semester as elective subject for Diploma in Computer Science and during third semester for students in Diploma in Plantation Management (AT110) as compulsory subject. This subject provides a fundamental of Accounting Concept, Journals, Ledgers, Trial Balance, Financial Statement, Adjusted Financial Statement, Bank Reconciliation, and Accounting Ratio for sole traders [19].

3 Research Methodology

3.1 Sample and Data Collection

A set of questionnaires was distributed to all non-accounting students sitting for subject ACC106 (Introduction to Financial Accounting and Reporting) from UiTM Melaka Branch, Jasin Campus. The samples were selected based on cluster sampling. A total number of populations is divided into groups called clusters. In Malaysia a total of 9,340 students from
fourteen (14) UiTM branches all over Malaysia have taken ACC106 subject. We focus on one of the branches (cluster) which is in Jasin Campus, Malacca as our aim mainly to investigate on the factors contributing to the high success rate among our students. This cluster contributes a total number of 524 students which constitutes 270 of third semester students from the Faculty of Plantation and Agrotechnology and another 254 of first semester students from the Faculty of Computer Science and Mathematics. The current study is unique as it discusses the evidence on the factors, specifically the understanding of financial statement components; affecting the success of students taking courses that are distinct from their major discipline. The survey method would be the best approach to explore opinions and gain perceptions of respondents as it is less expensive and less time consuming [23].

3.2 Data Measurement & Analysis

The current research employed Statistical Package for Social Sciences (SPSS) version 25.0 to analyse the data. We present the statistical information through a graphical form for descriptive statistics to portray samples and population of research. The current research also tested the difference between the mean of two independent samples using independent t-test towards the performance of the students. The samples were divided into two categories which are (i) students who have an accounting background from secondary school which denoted as ‘YES’ and (ii) students who do not have any accounting knowledge and background from secondary school which denoted as ‘NO’. The performance of students was measured by looking at their final examination results in ACC106 subject. The measurement of students’ performance using final examination results is consistent with research done by Muda et al. [19]. The present study further extends the research through multiple linear regressions to assess whether the components of financial statements contribute to students’ understanding which finally lead to students’ performance. Multiple linear regression helps the researcher to identify which factor will give influence on students’ performance [20]. There are four main components of financial statements which are (i) revenues (ii) expenses (ii) assets and (iv) owner’s equity and liabilities. The responses are based on the 5-point Likert scale indicating “1-Poor, 2-Fair, 3-Average, 4-Good and 5-Excellent”.

3.2 Development of Questionnaire

The present study used questionnaires as an instrument for data collection. This questionnaire was distributed to the students at the end of the semester before they sit for their final examination. The design of the questionnaires covered four sections. A summary of the main sections of the questionnaire is shown in table 1 below.

<table>
<thead>
<tr>
<th>Table 1. Summary of Items in Survey Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Section A: Background of the students</strong></td>
</tr>
<tr>
<td>1. Cumulative Grade Point Average (CGPA)</td>
</tr>
<tr>
<td>2. Accounting background from secondary school</td>
</tr>
<tr>
<td>3. English results from secondary school</td>
</tr>
<tr>
<td>4. Family members with accounting profession</td>
</tr>
<tr>
<td>5. Previous accounting knowledge</td>
</tr>
<tr>
<td><strong>Section B: Components of Financial Statements</strong></td>
</tr>
<tr>
<td><strong>Section 1: Business Revenues</strong></td>
</tr>
<tr>
<td>1. Revenues was shown in Statement of Profit or Loss</td>
</tr>
<tr>
<td>2. Definition of revenues</td>
</tr>
</tbody>
</table>
3. Other revenues
4. Example of revenues
5. Items under revenues

Section 2: Business Expenses
1. Definition of expenses
2. Effect of expenses on net profit
3. Example of expenses
4. Items under expenses

Section 3: Business Assets
1. Definition of Assets
2. Examples of Assets
3. Items of Assets under Statement of Financial Position
4. Description of Assets
5. Types of Assets

Section 4: Owner’s Equity and Liabilities
1. Effect of owner’s equity on accounting equation
2. Component of Owner’s Equity
3. Types of Liabilities
4. Items of Liabilities
5. Examples of Liabilities

4 Findings and Discussion

4.1 Demographic Profile

Questionnaires were distributed to students in UiTM Melaka Branch, Jasin Campus who were compulsory to take the subject of ACC106 at diploma level for the Semester of September 2018 to January 2019. A total number of 524 students responded to the survey. 48 per cent (254) of the students were from Diploma in Science Computer (CS110) whereby 52 per cent (270) of the students were from Diploma in Planting Industry Management (AT110). Both faculties are from science clusters and the requirements to enrol this two (2) courses were quite high. Students should have possessed at least credit in Mathematics during secondary school level in which accounting is a calculative subject and thus requires basic in calculation.

Student who take Accounting in SPM level

![Pie chart showing 14% yes and 86% no](attachment:pie_chart.png)

**Fig. 1.** Students who have Knowledge in Accounting during secondary level.
Based on Figure 1, 14 per cent (71) of the students have taken *Prinsip Perakaunan* during SPM level which could be an advantage to this group of students. However, at diploma level they have to learn an accounting subject in English language as compared to SPM level whereby they have been taught in Bahasa Melayu. Apart from that, 20 per cent (103) of the students have basic accounting knowledge either from formal sources or informal sources (Figure 2).

**Student who has knowledge in Accounting**

![Fig. 2. Students who have Knowledge in Accounting (Formal and Informal Sources).](image)

From 524 students, 48 per cent (252) of the students scored A-, A and A+ for this course, 31 per cent (161) of the students scored B-, B and B+ and 14 per cent (72) of the students scored C and C+. Meanwhile, only 7 per cent (39) of the students failed this course.

Cronbach’s alpha was used to measure the internal consistency between the questions in one similar group. The reliability coefficient normally ranges between 0 to 1. The higher the value of the Cronbach’s Alpha, the more reliable the test is. We have tested the reliability of the components of financial statements factors focusing on four (4) main components in financial statements which are Section 1: Business Revenues, Section 2: Business Expenses, Section 3: Business Assets and Section 4: Business owner’s equity and liability. Students were asked to answer the statements in these four (4) different sections using a 5-point Likert scale indicating “1-Poor, 2-Fair, 3-Average, 4-Good and 5-Excellent”. The result found that there is value of 0.778* highly acceptable and closely related among all the variables.

**Table 2. Reliability test (Cronbach Alpha)**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business Revenue</td>
<td>0.750</td>
</tr>
<tr>
<td>Business Expenses</td>
<td>0.766</td>
</tr>
<tr>
<td>Business Assets</td>
<td>0.655</td>
</tr>
<tr>
<td>Owner's Equity and Liability</td>
<td>0.454</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>0.778*</td>
</tr>
</tbody>
</table>

4.2 The relationship between prior accounting SPM knowledge and ACC106 Final Exam Result

**Table 3. T-Test result analysis**

<table>
<thead>
<tr>
<th>Final Group</th>
<th>Accounting SPM</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>71</td>
<td>1.28</td>
<td>.565</td>
<td></td>
<td>.067</td>
</tr>
<tr>
<td>NO</td>
<td>453</td>
<td>1.64</td>
<td>.621</td>
<td></td>
<td>.029</td>
</tr>
</tbody>
</table>
An independent samples t-test was conducted to compare performance of students with accounting SPM background and no accounting SPM background. There was a significant difference in the performance for students with accounting SPM background (Mean=1.28, Std. Dev=0.565) and no accounting SPM background (Mean=1.64, Std. Dev=0.621) conditions; t (522) = 4.61, p = 0.00. These results indicate that prior experience during SPM really affects the performance of students. Specifically, the result suggests that students with SPM accounting background, performed better and have a high success rate in the basic accounting course, ACC106. This result is in accordance with Illias, Yaso, Rahman and Razak [14] which implies accounting experiences students perceived more confident in taking the course as compared to non-accounting students. Thus, this suggests that non-experience students must be provided with clear explanation and encouragement to increase their understanding in basic accounting subjects.

4.3 The relationship between basic understanding on financial statement components and ACC106 Final Exam Result

This study used linear regression analysis in order to test the relationship between the basic understanding of financial statement components and student performance. The result of multiple regression is presented in the Table 3 below:

<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>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.111*</td>
<td>.012</td>
<td>.010</td>
<td>15.585</td>
<td>6.493</td>
<td>.011</td>
</tr>
</tbody>
</table>

The above table revealed R² value, adjusted R² value, F statistic and sig p value. Adjusted R² value indicated the percentage of independent variables that explained the dependent variable. In overall, the adjusted R² of .010 has indicated that only 1.0% variation in the ACC106 final exam result was explained by basic understanding on financial statement components. In addition, adjusted R² values were supported with F statistic values;(F=6.493). From the regression table, the findings exhibited a significant relationship between basic accounting understanding and students’ performance in ACC106 subject. This was supported by the significant value of .011 presented that the model was significant at 1% level. Thus, the result suggests that basic understanding in the financial statement components significantly affect the performance of non-accounting students. Ismail & Kasim (2014) revealed that prior academic
results have a positive significant impact on non-accounting students’ performance. They found that students who are taking other majoring courses can obtain a good result in accounting subjects provided they are academically good in other subjects. Therefore, understanding the basic financial component is essential in order for students to excel in accounting.

5 Conclusion

Graduates nowadays should focus more on other opportunities besides becoming a job seeker as the employment rate in Malaysia keeps increasing from time to time. Graduates should find ways to become a job creator or an entrepreneur to accelerate Malaysian economies. Accounting is undeniably important for all students to equip themselves with financial literacy when they want to start up their own business. Most other universities discovered that the failure rate of accounting subjects in their universities are quite high as the students feel that the subject is irrelevant to their main discipline. However, this study revealed that 93% of the non-accounting students in Universiti Teknologi MARA, Jasin Campus had performed very well in the accounting subject. 524 students from Diploma in Science Computer (CS110) and Diploma in Planting Industry Management (AT110) had responded to the survey questionnaire. Students who have taken the ‘Prinsip Perakaunan’ subject during their SPM level which could be an advantage to them. The subtopics like Accounting Concept, Journals, Ledgers, Trial Balance, Financial Statement, Adjusted Financial Statement, Bank Reconciliation, and Accounting Ratio for sole traders have been embedded in ACC106 subject. The study found that from the t-test with probability = 0.00, the result suggests that students with SPM accounting background, performed better and have a high success rate in the basic accounting course, ACC106. Therefore, we conclude that the main factor that contributes to the flying colours result of accounting subjects among non-accounting students in Universiti Teknologi MARA, Jasin Campus is because their prior accounting SPM knowledge really contributes to their better achievement in their study.

Furthermore, the other factor that contributed to the success rate for non-accounting students in Universiti Teknologi MARA, Jasin Campus is because of their good understanding in components of financial statements. The four (4) main components in financial statements are (1) Business Revenues, (2) Business Expenses, (3) Business Assets and (4) Business owner’s equity and liability. Based on Multiple Regression Test that has been performed, the results revealed that the adjusted R² value is 0.01 that indicates the basic understanding in the financial statement components significantly affect the performance of non-accounting students. Therefore, the results suggest that in order for the students to succeed and become a good entrepreneur, the students should equip themselves with good accounting knowledge and excel in accounting courses. Students need to really understand the main component of financial statements so that they can manage their business very well in future.

This paper has some limitations. This study has been carried out just on the Faculty of Plantation and Agrotechnology and Faculty of Computer Science and Mathematics. We also consider that the research should include other personal factors such as students’ attitudes, family supports, peer pressure and university facilities. Further research could also address pre and post type of questionnaires to measure the level of students’ understanding on the subject matter. We finally hope that in future research, there will be collaboration with other universities and branches to expand the number of samples and perform a wider range of study.
References


Does the Reinhart-Rogoff Hypothesis is Applicable for the Upper-Middle-Income Economies?

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Abstract. This paper aims in investigating the appropriateness of the Reinhart-Rogoff hypothesis in the upper-middle-income economies. The hypothesis argues that public debt is good for the economic growth, but it starts to give detrimental effects as the debt to GDP ratio reaches 90 percent. This issue is essential in the midst of the accomplishment of the Industrial Revolution 4.0, in which all countries need to invest in advanced technology, robotics, artificial intelligence, research, and development as well as human capital development. However, the challenge comes when the government is required to spend a tremendous amount of funds for economic and social recovery due to unexpected events, such as tsunami, earthquakes, and floods. Given a limited amount of funds, the governments have to incur huge amount of public debt to support economic growth and development. By using system GMM for the 32 countries in the upper-middle-income economies from 1990 to 2018, it was found that the Reinhart-Rogoff hypothesis is not applicable in the upper-middle-income economies. The economic growth starts to diminish when the ratio of public debt to GDP is more than 70 percent. This study contributes to the policy implication by re-alerting the government not to borrow funds beyond the 70 percent threshold.

Keywords: Economic Growth, Middle-Income Trap, Public Debt, Reinhart-Rogoff Hypothesis, Upper-Middle-Income Economies

1 Introduction

The World Bank has reported that most of the countries in the upper-middle-income economies (UMIE) are in the middle-income trap position [1]. This is proven based on the evidence by the World Bank’s statistics from 1990 to 2018, in which only four out of sixty countries in the UMIE have successfully upgraded their status from UMIE into the high-income economies (HIE), namely American Samoa (1989 to 1991), Equatorial Guinea (2009 to 2016), the Russian Federation (2014 to 2016) and Venezuela (2016). Nevertheless, the latest statistics in 2019 show that they were not able to retain the HIE status due to their inability to earn the gross national income (GNI) per capita more than $12,376.

One of the possible reasons is due to the scarcity of capital. As illustrated in Figure 1, the average inflows of foreign direct investments (FDI) and domestic investments for the UMIE show a declining pattern from 2010 to 2017. Lower inflows of investments lead to slower economic growth, which is then translated into lower GNI per capita.
It becomes a greater challenge for the UMIE to uplift their economic status into the HIE if the decline in capital investment is prolonged for a long period of time. As the world is moving towards the accomplishment of the Industrial Revolution 4.0, the UMIE requires a massive amount of funds to be injected in critical areas such as advanced technology, robotics, artificial intelligence, research, and development as well as human capital development. Moreover, the pressure increases as the government has to spend a tremendous amount of funds for economic and social recovery due to unexpected events, such as tsunami, earthquakes, and floods. Moving forward, it is vital for the UMIE to obtain additional capital from other sources, such as public borrowings, either domestically or abroad. The funds borrowed from abroad, or so-called as the external debt, is highly vulnerable relative to the domestic borrowing. It is because of its exposure to external risk and exchange risk that are uncontrollable.

Looking at the contribution of external debt to economic growth, there are controversial thoughts on this matter. The Keynesian hypothesis claimed that the external debt helps in stimulating the economic growth if the funds are used for productive expenditure, such as education, health, infrastructure development as well as research and development. This hypothesis is supported by vast empirical researches. However, the contradicting opinion, under the classical school of thought, argued that the increase in public debt gives a detrimental effect on economic growth of the country due to three possible reasons. Firstly, it is expected that the government will increase the tax rate or impose new taxes in order to cover the additional burden of taxes. It will cause a decline in the purchasing power, hence lowering down the economic growth of a country. Secondly, there will be a crowding-out effect of private investment as the demand for loanable funds is greater than its supply. Finally, the savings, which should be saved for the future generation, need to be sacrificed in order to pay the debt burden. In this case, saving funds are not used for productive purposes.

By combining these two schools of thought, Reinhart and Rogoff had developed a Reinhart-Rogoff hypothesis, in which they argued that public debt gives both positive and negative effects on economic growth. The turning point from the positive to the negative effect is subject to further discussion. They argued that the turning point is when the ratio of public debt to GDP exceeds 90 percent for five years or more. Their arguments have been empirically tested by various researchers in a different scope of studies using various types of methodologies.
The answers are not identical. For instance, the turning points for the developing countries were found to be 30 percent [12] and 106 percent [5]. The former authors used mean group as the methodology, while the latter used panel smooth transition regression. Similarly, different thresholds were found in the cases of the advanced countries, from 40 percent [13], 64 percent [14], 80 percent [12] to 90 percent [11][15]. Due to different findings, it is worth investigating how the economic growth of the UMIE is responding when there is an increase in their public debt level. If it is true that public debt gives an adverse effect on economic growth, what is the highest ratio of debt to GDP that the government should hold? This paper aims in answering this question, as it is vital to ensure that the UMIE can stimulate higher economic growth, move out from the middle-income trap position, and upgrade their status into the HIE.

2 Research Methods

In answering the research objective, we used the endogenous growth model [16][17] as a starting point in modeling the economic growth framework. By referring to the endogenous growth model, the economic growth of a country depends on three main elements, namely capital, labor, and human capital. Within the same model, we shall not neglect the role of technological progress in accelerating economic growth. It is captured through savings and investments as the technology is progressing when the country has more savings and investments [18]. By combining all four elements, the baseline growth model for panel data specification is as follows:

\[ y_{it} = \alpha + \rho y_{i,t-1} + \beta x_{it} + \mu_i + \epsilon_{it} \]  

Where \( y \) is the economic growth, measured by the real GDP growth per capita, \( \alpha \) is a constant term, \( y_{i,t-1} \) is the initial real GDP per capita, \( x_{it} \) is a vector of explanatory variables, \( \mu \) is the individual-specific effects, \( \epsilon \) is the error term, while \( i \) and \( t \) represent country and time, respectively. Meanwhile, \( \beta \) is a coefficient that measures the change in the real GDP per capita due to a unit change in the control variables, while \( \rho \) measures how the countries converge to its steady-state level. The inclusion of the initial real GDP per capita (\( y_{i,t-1} \)) is in-line with the convergence hypothesis, in which we expect the \( \rho \) to be negative.

As the main aim of this study is to test the Reinhart-Rogoff hypothesis in the case of the UMIE, public debt (EDEBT) is included in equation 1. Since the hypothesis argued that the debt may give positive and negative effects on economic growth, the model is expected to be non-linear. Therefore, we include the EDEBT as a linear and a quadratic term. The new equation is as follows:

\[ y_{it} = \alpha + \rho y_{i,t-1} + \beta_1 \text{EDEBT}_{it} + \beta_2 \text{EDEBT}^2_{it} + \beta_3 \text{INV}_{it} + \beta_4 \text{SAV}_{it} + \beta_5 \text{POPG}_{it} + \beta_6 \text{HC}_{it} + \beta_7 \text{TO}_{it} + \beta_8 \text{INF}_{it} + \mu_i + \epsilon_{it} \]  

Where EDEBT and \( \text{EDEBT}^2 \) are the focal variables, while the INV, SAV, POPG, HC, TO and INF are the control variables, denoted as \( x \) in equation 1. All data are in their actual forms, except for the initial real GDP per capita. It is converted into the logarithm form. The EDEBT is referring to the external debt since it is more vulnerable to economic growth as compared to the domestic debt [2]. The descriptions of the variables and the sources of the data are explained in Table 1.
The inclusion of both linear and quadratic terms of EDEBT is to test the existence of a non-linear relationship between public debt and economic growth as prescribed by the Reinhart-Rogoff hypothesis. Since the debt-growth relationship is widely debated, the sign of \( \beta_1 \) in equation 2 can either be positive [3] or negative [4]. Besides, the non-linear relationship will also exist if the coefficient of \( \beta_1 \) or \( \beta_2 \) is significant. However, adding a square term (EDEBT2) requires close examination in the interpretation. The coefficient of \( \beta_2 \) should not be interpreted directly. Instead, following Kim et al. [19] and Ibrahim & Law [20], there is a need to calculate the marginal effects of public debt on economic growth using the following formulas.

\[
\frac{\Delta y_t}{\Delta EDEBT_t} = \beta_1 + 2\beta_2 EDEBT
\]  

[3]

Where the calculation of the marginal effects of public debt on economic growth is relying on the coefficients of both \( \beta_1 \) and \( \beta_2 \).

Table 1. Descriptions of the variables and the sources of the data

<table>
<thead>
<tr>
<th>No.</th>
<th>Notation</th>
<th>Description of the Variable</th>
<th>Measurement Unit</th>
<th>Source of the Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>( y_t )</td>
<td>Economic growth, measured by the annual percentage of the growth rate of the real GDP per capita</td>
<td>Percentage</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>2</td>
<td>( y_{it-1} )</td>
<td>Initial real GDP per capita (in logarithm form)</td>
<td>Logarithm</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>3</td>
<td>EDEBT</td>
<td>Public debt, measured by the ratio of external debt to GDP</td>
<td>Percentage</td>
<td>International Debt Statistics (IDS)</td>
</tr>
<tr>
<td>4</td>
<td>INV</td>
<td>Domestic investment as a proxy of capital, measured by the gross capital formation to GDP.</td>
<td>Percentage</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>5</td>
<td>SAV</td>
<td>Savings as a proxy of capital, measured by the ratio of gross savings to GDP.</td>
<td>Percentage</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>6</td>
<td>POPG</td>
<td>Population growth as a proxy of labor.</td>
<td>Percentage</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>7</td>
<td>HC</td>
<td>Human capital index, as a proxy of human capital.</td>
<td>Index</td>
<td>Penn World Table (PWT)</td>
</tr>
<tr>
<td>8</td>
<td>TO</td>
<td>Trade openness, measured by the sum of exports and imports of goods and services to GDP.</td>
<td>Percentage</td>
<td>World Development Indicators (WDI)</td>
</tr>
<tr>
<td>9</td>
<td>INF</td>
<td>Inflation rate, measured by using consumer price index.</td>
<td>Index</td>
<td>International Financial Statistics (IFS)</td>
</tr>
</tbody>
</table>

Out of 60 countries in the UMIE in the fiscal year of 2019, only 32 countries were included as the scope of the study due to data availability. The list of chosen countries is shown in
Appendix 1. These countries were chosen as they were classified as the UMIE status with the GNI per capita ranging from $3,996 to $12,375 in the 2019 fiscal year. All the above-listed data were collected from 1990 to 2018. In order to remove the business cycle elements, all data were divided into six, based on the non-overlapping five-year averages following the procedures by previous researchers [5][21]. The removal of the business cycle elements helps in filtering out the serial correlation that always exists as a result of the short-term fluctuations in the business cycle.

This paper applied the system generalized method of moments (GMM) as a methodology to generate findings for three reasons. Firstly, by observing at the number of cross-sections and time periods, it is the most appropriate method [22] since the number of the cross-sections (32) is large while the number of the time dimension is small (6). Secondly, GMM is specifically designed to run a dynamic model. As shown in equation 2, the model itself is a dynamic model due to the inclusion of the lagged variable \(y_{t-1}\), consistent with the convergence hypothesis in the growth model. Thirdly, the system GMM is able to solve the endogeneity problem that exists in the debt-growth model, by instrumenting the endogenous variables with their lagged values. This matter is crucial as previous literature found the possibility of having an endogeneity problem or a reverse causality between public debt and economic growth [23]. Other methods such as pooled ordinary least square (POLs) fixed effect (FE) and random effects (RE) are incapable of solving the endogeneity problems by using the lagged values of the endogenous variables. These methods are also designed for a static model, that does not take into consideration the convergence hypothesis in the growth model.

Within the system GMM, there are one-step and two-step variants [22]. The one-step estimator uses weighting matrices that are independent of the estimated parameters, while the two-step estimator uses the optimal matrices, in which the moment conditions are weighted by a consistent estimate of the covariance matrix. In between the two, the two-step estimator is more efficient relative to the one-step estimator [20]. However, for robustness check, we run the analyses by using both estimators to check the consistency of the results.

In solving the endogeneity problem, the system GMM instrument the endogenous variables with their lagged values. The results will be valid if the instruments are appeared to be exogenous [24]. Hence, Hansen J test is conducted to test to validity of the instruments. The idea is to ensure that the null hypothesis is not rejected (overidentifying restrictions are valid). If this is the case, then the overidentifying conditions are correctly specified, hence the instruments are valid.

Besides, the GMM estimator only allows for the first-order serial correlation if the error terms are serially independent [22]. It is allowed since the model consists of the combination of both level and first difference variables. A higher order of serial correlation illustrates specification error in the model. Therefore, to test for the second-order serial correlation, Arellano-Bond test can be conducted with a null hypothesis of no second-order serial correlation for the disturbances in the first-difference equation. In order to ensure no specification error, the null hypothesis should not be rejected.

Finally, the use of the system GMM requires careful selection of the instruments. By default, the instruments are selected by using all available lags. Too many lags will lead to a high number of instruments. It will cause the estimation bias [25]. In avoiding the estimation bias, the number of instruments should be lower than the number of cross-sections [25]. If not, the number of lags can be reduced by restricting the lags or by collapsing the instruments. By referring to this rule, the number of lags chosen for all analyses in this thesis was based on the multiple series of estimations that involved multiple combinations of lags. The lags that yield the best estimation results were chosen based on the significance of the steady-state
determinants as well as the rules set by Hansen [24], Arellano and Bond [22] and Roodman [25].

3 Results and Discussion

The following table shows the descriptive statistics for all variables used in this paper.

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>y</td>
<td>2.3247</td>
<td>3.1574</td>
<td>-12.5759</td>
<td>11.2728</td>
</tr>
<tr>
<td>2</td>
<td>y_t-1</td>
<td>8.5216</td>
<td>0.5431</td>
<td>6.5918</td>
<td>9.5362</td>
</tr>
<tr>
<td>3</td>
<td>INV2</td>
<td>24.6799</td>
<td>6.6374</td>
<td>12.6640</td>
<td>49.9950</td>
</tr>
<tr>
<td>4</td>
<td>SAV</td>
<td>22.4664</td>
<td>13.3370</td>
<td>-28.0355</td>
<td>56.0171</td>
</tr>
<tr>
<td>5</td>
<td>FDI</td>
<td>3.0433</td>
<td>2.6723</td>
<td>-4.1728</td>
<td>18.9154</td>
</tr>
<tr>
<td>6</td>
<td>POPG</td>
<td>1.1773</td>
<td>1.1354</td>
<td>-1.5050</td>
<td>5.2075</td>
</tr>
<tr>
<td>7</td>
<td>HC</td>
<td>2.5260</td>
<td>0.4273</td>
<td>1.4676</td>
<td>3.4891</td>
</tr>
<tr>
<td>8</td>
<td>TO</td>
<td>72.0504</td>
<td>33.6360</td>
<td>15.5664</td>
<td>205.5394</td>
</tr>
<tr>
<td>9</td>
<td>INF</td>
<td>1290.6270</td>
<td>16878.6200</td>
<td>-0.1210</td>
<td>232662.3000</td>
</tr>
<tr>
<td>10</td>
<td>EDEBT</td>
<td>45.1043</td>
<td>26.8919</td>
<td>1.4447</td>
<td>166.1601</td>
</tr>
</tbody>
</table>

As illustrated in Table 2, huge differences were found between the minimum and the maximum values of TO, INF and EDEBT. This symptom indicates the possible existence of outliers as the data might have extreme values. To ensure robust estimation results, we removed all outliers, as suggested by Abdul Bahri [26]. Altogether, 16 observations were removed based on the Cook’s D test, since the Cook’s D distance values were larger than the cut-off distance of 0.0211 (based on a formula of 4 divided with 189 total number of observations).

Table 3 illustrates the main findings for this paper, with two models. Model 1 and model 2 show the findings based on the one-step and two-step system GMM estimators, respectively. The non-linear relationship between public debt and economic growth can be seen at the coefficients of the EDEBT². In both models, the coefficients were negative and significant. It proves the existence of a non-linear relationship between EDEBT and y. In other words, external debt can promote economic growth, but at one point, if the debt is too high, it will give an adverse effect on economic growth.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Notation</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial GDP per capita</td>
<td>y_t-1</td>
<td>-3.4694***</td>
<td>-3.5374***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.9881) (0.5998)</td>
<td></td>
</tr>
<tr>
<td>External debt</td>
<td>EDEBT</td>
<td>0.1058***</td>
<td>0.1233***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0378) (0.0262)</td>
<td></td>
</tr>
<tr>
<td>Square of external debt</td>
<td>EDEBT²</td>
<td>-0.0006**</td>
<td>-0.0008**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0002) (0.0002)</td>
<td></td>
</tr>
<tr>
<td>Gross capital formation</td>
<td>INV2</td>
<td>0.1984***</td>
<td>0.2309***</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0662) (0.0445)</td>
<td></td>
</tr>
<tr>
<td>Gross savings</td>
<td>SAV</td>
<td>0.1139**</td>
<td>0.0987**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(0.0538) (0.0402)</td>
<td></td>
</tr>
<tr>
<td>Population growth</td>
<td>POPG</td>
<td>-0.6584**</td>
<td>-0.5624**</td>
</tr>
</tbody>
</table>

Table 3. Findings on the relationship between public debt and economic growth.
Due to the significance of the EDEBT$^2$ in both models, the interpretation of how EDEBT affects y should take into consideration the magnitudes of both EDEBT and EDEBT$^2$. Since there were two models, model 2 is used as the primary model for interpretation since the model was derived from the two-step system GMM, which is more efficient relative to the one-step system GMM [22]. Therefore, the new marginal effects and t-statistics of EDEBT in model 2 were computed based on the covariance matrix [27]. The computations were conducted at the mean, minimum and maximum levels of EDEBT. The results are demonstrated in Table 4.

**Table 4. Marginal effects of EDEBT on y**

<table>
<thead>
<tr>
<th>Marginal Effect</th>
<th>New Standard Error</th>
<th>T-Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>0.05113</td>
<td>0.015147</td>
</tr>
<tr>
<td>Minimum</td>
<td>0.12099</td>
<td>0.025685</td>
</tr>
<tr>
<td>Maximum</td>
<td>-0.14256</td>
<td>0.06283</td>
</tr>
</tbody>
</table>

Note: *** and ** indicate significance at 1% and 5%, respectively.

The marginal effects, as shown in Table 4, confirmed the GMM results in Table 3. At the minimum level of public debt (1.4447 percent), the impact of debt on economic growth is positive (0.12099). Similar results can be found at the mean level of public debt (45.1043 percent) since the marginal effect at the mean is still positive (0.05113). It means that as the countries in the UMIE accumulate a higher level of external debt from 1 percent to 45 percent, the countries can expect a positive economic growth but at a diminishing rate (from 0.12099 to 0.05113 percent). Nevertheless, if they keep accumulating more debt, it might have an adverse effect on economic growth. It is be proven by looking at the marginal effect of debt at the maximum level, in which the effect is negative (-0.14256). It happened when the debt reached a maximum level of 166 percent (Jordan).

The next question that arises here is how much debt the UMIE should consider, so that the economic growth is not compromised. Figure 2 gives the answer to this question. Figure 2 illustrates the marginal effects of EDEBT on y based on the results generated by using the two-step system GMM (model 2). The y-axis is the marginal effect, while the x-axis is the values of EDEBT. The spikes in black show the number of countries based on certain EDEBT level. For
instance, at the EDEBT level of 30 to 35, a lot of spikes were accumulated there, indicating that there were many countries in the UMIE that have EDEBT levels between 30 to 35 percent. On the below part of the figure, the histogram shows a similar pattern. The solid sloping line in the figure shows the marginal effects of public debt on the economic growth of the UMIE at each point of EDEBT. In contrast, the dotted lines illustrate the 95 percent confidence intervals. The marginal effects are statistically significant when the upper and lower bounds of the confidence intervals are not equal to zero. The sloping line and the confidence intervals stopped at EDEBT equal to 100. The reason being is because the other data of EDEBT beyond 100 percent were removed due to the outliers (the cases of Bulgaria and Jordan).

Looking at the above figure, it is easy to conclude that public debt has a positive effect on economic growth when the EDEBT level is lower than 70 percent. The lower the EDEBT, the higher the economic growth of the countries. Based on 32 countries under investigation, 27 of them were having average EDEBT of lower than 70 percent since 1990 to 2018. These countries, including Malaysia (48.32 percent) are expected to have a positive effect on economic growth since the EDEBT level does not exceed 70 percent. However, if the EDEBT level is beyond 70 percent, an increase in the EDEBT will hurt economic growth. Five countries have the average EDEBT higher than 70 percent from 1990 to 2018, namely Belize (70.26 percent), Serbia (72.12 percent), Jamaica (80.37 percent), Bulgaria (85.54 percent) and Jordan (104.38 percent). Apart from these countries, four more countries are expected to join the list, namely Albania, Armenia, Kazakhstan, and Mauritius. It is because the average EDEBT from 2015 to 2018 for these
countries were exceeding 70 percent. These findings confirmed the validity of the Reinhart-Rogoff hypothesis, but with a different turning point. The turning point for the UMIE is at 70 percent, while the Reinhart-Rogoff hypothesis found that the threshold is at 90 percent.

Among the possible reasons for the turning point are due to the crowding-out effect on the private investment \([7][8]\) as well as the expectation that the government will increase tax rate as the debt increases \([5][28]\). Firstly, the governments in highly indebted countries are expected to soak up the available investment funds to finance the existing debt. Given that the supply of loanable funds is very limited, the available funds are not enough to cater to the needs of private investors. As a result, the private sector might not be able to truly participate in the economy, hence lowering down their contribution to the economic growth of the countries. Secondly, as the debt level increases, the commitment of the government to pay back the debt is also increasing. Since the private sector is less productive due to the crowding-out effect problem, the government is expected to impose new taxes or increase the tax rate to accumulate more funds for debt financing. This, in return, leads to a slowdown of the economic growth as taxation creates a distortionary effect on the economy through a reduction in private consumptions and private investments.

4 Conclusion

In conclusion, the Reinhart-Rogoff hypothesis is still applicable to the UMIE but with a lower turning point. Instead of aiming at the ratio of public debt to GDP at 90 percent, the turning point for the UMIE is at 70 percent. In this case, the countries will experience a negative growth rate if they keep borrowing funds from the external sources. Out of 32 countries in the UMIE, only nine countries were expected to experience a negative relationship due to the debt level exceeding 70 percent of the turning point. These countries should take immediate measures to reduce the amount of funds borrowed from the external sources since the costs to pay back the debts might increase if the economies are facing currency depreciation and macroeconomic instability. It is to ensure that the countries in the UMIE are able to sustain higher economic growth and move out from the middle-income trap position. Or else, higher debt beyond 70 percent might result in an increase in the debt burden of the future generation, hence limiting the ability of the countries to achieve high-income nations even in the near future. In case if the governments still need additional funds for the economic growth and development, the priority of borrowing should be from the domestic side rather than the external ones. The debt derives from the domestic side does not incur any risk related to the fluctuation of the exchange rate. This work is different from others in two ways. Firstly, the findings are more robust since we removed the outliers. This step is often being neglected by previous researches, with a reason to capture all essential characteristics and components in the dataset. Nevertheless, ignoring the outliers may result in biased estimations. Secondly, this study contributes to the existing body of knowledge as we look at marginal effects at every point of the public debt by using the graphical form. This method is seldom being applied in the existing empirical researches. Future research might want to investigate how the institutional variables moderate the debt-growth relationship in the UMIE. Among the institutional variables include corruption, rule of law, and political stability. From the findings, the storylines behind the reasons why they are trapping in the middle-income trap position can be further exposed and explored.
References


Analysis of Technology Acceptance in Student Entrepreneurs

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Abstract. This study aims to analyze the acceptance of technology in entrepreneurship. This research adopts the TAM theory and the TRA theory. In TAM theory adopts two variables are perceived usefulness and perceived ease of use. Meanwhile, the TRA theory adopt an attitude. This research is a quantitative study. The sample in this study was Semarang State University students who joined in the Indonesian Young Entrepreneurs Association. Sampling techniques in this study using the formula from Slovin. Analysis techniques were use SEM with the WarpPLS 7.0 application. The results of this study are the perceived usefulness and perceived ease of use have a positive and significant effect directly on attitudes to using technology in entrepreneurship. Perceived ease of use has a positive and significant effect directly on perceived usefulness. On the other hand, perceived ease of use has an indirect positive and significant effect on attitudes to using technology in entrepreneurship through perceived usefulness. The conclusion of this research is that perceived usefulness and perceived convenience have a positive effect on students' attitudes in applying technology when entrepreneurship. It’s means that the application of technology in student entrepreneurship is responded positively.

Keywords: Entrepreneurship, Student, TAM, TRA

1 Introduction

In this era, technology encourages various innovations for every aspect of community life in terms of economic, social, cultural and technological issues. Technology will change people's lifestyles and put pressure on society if they are unable to improve with the environment. Individuals who are unable to cope with these eras will have the negative impacts of their social life.

Technology has become a necessity for the community and inseparable in meeting the needs of information and communication media. The use of technology in entrepreneurship will also have a positive effect when squeezed by distance and time. Technology will provide convenience and benefits for users in entrepreneurship. Wang et al. [1] the consequence of this is the high acceptance of the technology. The existence of usefulness and ease of use felt by someone in using technology will have an impact on the high public interest in using technology. Rosen et al. [2] also stated that new technology is needed in the commercial. The purpose of using new technology in the commercial is to dominate market share, facilitate transactions and business more effectively and efficiently.

The use of technology for students in conducting entrepreneurial transactions will provide major changes in aspects of the ability to adopt technology, the ability to compete, and the ability to develop technology in entrepreneurship. The use of technology, such as e-commerce and e-
marketing is international markets access. It’s means that using technology here will have a positive impact on business progress in the international market. By utilizing technology, it will be able to compete with other entrepreneurs [3][4].

Theory of Technology Acceptance Model (TAM) is a model used to determine the acceptance of technology and information systems. Davis [5] in his research combines TAM with Theory of Reasoned Action (TRA) and many researchers have indicated that this model is suitable for technology adoption [6][7][8]. Davis et al. [9], the main purpose of TAM is to provide a basis for tracing the influence of external factors on user beliefs, attitudes, and goals. TAM considers that two individual views, perceived usefulness (PU) and perceived ease of use (PEOU) are the main influences on computer acceptance behaviour.

Perceived usefulness is a key variable for predicting consumer acceptance of continued intentions using technology [10]. Besides that, attitudes are predicted by perceived benefit [11]. From some of the results of these studies, it can be concluded that the perception of usefulness plays a more influential role in shaping the attitude of technology use [12].

Liou et al. [13] found that perceived ease of use will have an impact on a person's attitude. Perceived ease of use technology will attract users in using these services. Idea of someone who wants easy access to information, especially in business, will encourage to use technology.

Online business is one business that adopts technology because of the convenience provided. Time and mobility are the reasons some people prefer to make purchases through the online system. The present of new technology can cause a reaction in users, both accepting and rejecting reactions.

Theory of reasoned action was developed by Fishbein and Ajzen [14]. This theory is derived from previous studies that began from the theory of attitude (theory of attitude) which studies about attitudes and behaviour (behaviour). Attitude arise because of positive beliefs or perceptions so that someone will take action according to the results that will be obtained. Hajer and Habib [15] to defined attitude is things that someone does because they have been done before. People will act because they have done the same thing. Attitudes that do it continuously will give birth to behavior. In using technology, the attitude in using technology is influenced by perceived usefulness and perceived ease of use.

Several studies show differences in research results related to technology acceptance. In other words, there is a research gap between one researcher and another. According to Juhri & Dewi [16]; Mubiyantoro [17]; Kanchanatanee et al. [18]; Soroa-Koury & Yang [19]; Yang et al. [20] stated that perceived usefulness does not significantly influence the attitude of using technology. Furthermore, Moses et al. [21] perceptions of ease have no significant effect perceived from the use of the attitude of teachers to use technology. But, study by Rizwan et al. [22] states that perceived usefulness and perceived ease of use have a positive effect on consumer attitudes online shopping. This means that consumers will be interested in using technology on online shopping. Furthermore, Anton et al. [23] succeeded in proving that perceived usefulness, and perceived ease of use influence to attitudes using e-readers.

The importance of this research is providing information that through this research, entrepreneurs who collaborate with technology can exist in business. Besides, it also aims to analyze the condition of individual psychology (perceived usefulness and perceived convenience) will influence the attitude of the use of technology in entrepreneurship. Therefore, we need awareness and education about the use of technology for students in entrepreneurship.

Therefore, this research needs to be done to find out the technology acceptance model of students in entrepreneurship. New technology usually faces challenges to be accepted by consumers. Because of the unique features of modern technology, it requires certain approaches to develop its acceptance.
2 Literature Review

2.1 Technology Acceptance Model Theory

TAM was first introduced by Davis [5] which was developed based on the theory of reasoned Action model which is devoted to modeling user acceptance of information technology. TAM explains that the level of acceptance of information technology is determined by six factors, namely external variables, user perceptions of ease of use of technology (perceived ease of use), user perceptions of technology usability (perceived usefulness), user attitudes toward technology (attitude toward using), the tendency of user behavior to use technology (behavioral intention) and actual usage. External variables will directly affect the perceived usefulness and perceived convenience of the users. External variables related to system characteristics, development process and training [5].

Davis et al. [9] main objective of TAM is to provide a basis for tracing the influence of external factors on user beliefs, attitudes, and goals. TAM considers that 2 individual beliefs, namely perceived usefulness (PU) and perceived ease of use (PEOU) are the main influences for computer acceptance behavior.

Furthermore, in the TAM theory, perceived ease of use has a contribution to perceived usefulness. The less effort consumers feel in using the system allows consumers to get more work done [9]. Perceived ease of use has a positive and significant effect on perceived usefulness [22]. In the TAM theory it is said that perceived usefulness and perceived ease of use are important factors that influence consumer attitudes towards their interests and use of information systems [9].

2.2 Theory of Reasoned Action

The theory of reasoned action (Theory of Reasoned Action) was developed by Ajzen and Fishbein. This theory is derived from previous studies starting from the theory of attitude which studies attitudes and behavior. Theory of Reasoned Action (TRA) by Fishbein and Ajzen [24] was born of this theory due to the lack of success of studies examining attitude theory, namely the relationship between attitudes and behavior. The reasoned action (TRA) model by Fishbein and Ajzen [24] is a popular intention model that can be used to study behavioral intention with respect to the acceptance or use of technology.

Several research results regarding attitudes in the TAM construct state that attitude is an important factor influencing the behavior of users' adoption intentions of new technology. Furthermore, the perception of user usefulness has a positive and significant effect on personalization on the attitudes of business people [25].

2.3 Perceived Usefulness

Perceived usefulness is defined as the degree to which a person believes that using a particular system would enhance his or her job performance. Perceived ease of use, in contrast, refers to the degree to which a person believes that using a particular system would be free of effort [5] which means that perceived benefits are defined as the extent to which a person believes that using a particular system will improve performance. his job. Besides that, attitudes are predicted by perceived benefits [11]. From some of the results of these studies, it can be concluded that it is perceived usefulness that plays a stronger role in shaping attitudes to technology use [12].
2.4 Perceived Ease of Use

Perceived ease of use is the degree to which a person believes that using a particular system would be free of effort [5]. In the technological context, perceived ease of use is essential to influence perceived benefits and attitudes towards the use of e-learning 2.0 [26]. A research done by Moslehpoor et al. [27] perceived ease of use as the variable with the strongest influence on behavioral intention. Another influence that perceived convenience exerts is on attitude. Teo & Noyes [28] state that perceived ease of play has a positive and significant influence to shape user attitudes. Same results were also presented by Elkaseh et al. [29] stated that the variable perceived ease of use has a contribution to affect user attitudes.

2.5 Attitude

Attitude is a form of someone's action that arises because of the trust factor. Jogiyanto [30] explains that attitudes arise because of someone's consideration in doing something. There are two considerations, namely the positive impact and the negative impact if you carry out activities. If someone has a positive perception, that person will act. However, if the impact is negative someone will think back and tend not to do. In using technology, consideration of positive and negative impacts is very sensitive for someone when using technology. Fishbein & Ajzen [14] explained that attitudes are determined by individual beliefs about the consequences of presenting a behavior (behavioral beliefs) and weighed based on the results of the evaluation of the consequences (outcome evaluation).

In attitude, there are three important components are affective, cognitive and conative. Affective means a certain feeling or judgment about an object, person, issue or event. Cognitive consists of knowledge, opinion and belief in an object. While the conative component is a form of feeling and evaluative [14].

The attitude of using technology depends on perceived ease of use, perceived usefulness. Someone will to consider it. If the use of technology has a value of benefits and ease of use for users, then a strong attitude will arise to use technology.

The research hypotheses:
Hypothesis 1: The attitude of using technology in entrepreneurial students has positively and significantly influenced by perceived usefulness
Hypothesis 2: Perceived ease of use has a positive and significant effect on the attitude of technology use in student entrepreneurship.
Hypothesis 3: Perceived ease of use has a positive and significant effect directly on perceived usefulness.
Hypothesis 4: Perceived ease of use has a positive and significant indirect effect on the attitude of using technology in entrepreneurship through perceived usefulness.

3 Research Methods

This research is a quantitative study that uses ex post facto. The population of the research was all students in Semarang State University who joined in the Indonesian Young Entrepreneurs Association. They are 243 students, and then 152 students were the samples taken by Slovin formula. This study uses a causality or influence model and to test the proposed hypothesis, the analysis technique used is SEM (Structural Equation Models) with an analysis tool using WarpPLS 7.0.
4 Result and Discussion

Acceptance of technology in this study consisted of variables perceived ease of use, perceived usefulness and attitude to use technology. Respondents in this study amounted to 152. However, 149 respondents filled out completely and 3 respondents who filled out incomplete.

Indicators to measure the construct of usability are faster completion of work, increasing performance, increasing productivity, increasing work effectiveness, facilitating work and being useful [5]. Perceived ease of use can be measured by indicators easy of learn, controllable, the interaction with a clear and understandable system, flexibility, easy to become skillful and easy to use [5]. Indicators in the attitude of the use of technology are good things, wise things, positive things and things that are liked [9][14]. The magnitude of the load loading factor for each indicator >0.7, this means that the indicators of each variable are feasible to be used in this study.

<table>
<thead>
<tr>
<th>Table 1. Indicators Factor Loading</th>
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<tbody>
<tr>
<td>Variable</td>
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<tr>
<td>Perceived usefulness [5]</td>
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<tr>
<td>Perceived ease of use [5]</td>
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<tr>
<td>Attitudes using [9][14]</td>
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</table>

Output latent variable coefficient both variable perceived ease of use, perceived usefulness and attitudes using technology show valid, reliable and non-collinearity results. This means that the indicators forming each predictor variable can explain the response variable.

<table>
<thead>
<tr>
<th>Table 2. Output Laten Variable Coefficient</th>
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<tbody>
<tr>
<td>PU</td>
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<tr>
<td>R-squared</td>
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<tr>
<td>Composite reliable</td>
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<tr>
<td>Cronbach’s alpha</td>
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<td>Avg. var. extract</td>
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<td>Full Collin, VIF</td>
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<tr>
<td>Q-squared</td>
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</tbody>
</table>
Model fit and quality indices display the results of several fit indicators. The results of each component fit and quality indices showed good and ideal results. This means that the model formed in this study is appropriate.

<table>
<thead>
<tr>
<th>Model Fit and Quality Indices</th>
<th>Result</th>
<th>Fit criteria</th>
<th>Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average path coefficient (APC)</td>
<td>0.436</td>
<td>P&lt;0.05</td>
<td>Good</td>
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<tr>
<td>Average R-squared (ARS)</td>
<td>0.362</td>
<td>P&lt;0.05</td>
<td>Good</td>
</tr>
<tr>
<td>Average adjusted R-squared (AARS)</td>
<td>0.356</td>
<td>P&lt;0.05</td>
<td>Good</td>
</tr>
<tr>
<td>Average block VIF (AVIF)</td>
<td>1.158</td>
<td>acceptable if &lt;= 5, ideally &lt;= 3.3</td>
<td>Ideal</td>
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<tr>
<td>Average full collinearity VIF (AFVIF)</td>
<td>1.741</td>
<td>acceptable if &lt;= 5, ideally &lt;= 3.3</td>
<td>Ideal</td>
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<tr>
<td>Tenenhaus GoF (GoF)</td>
<td>0.360</td>
<td>medium &gt;= 0.25, large &gt;= 0.36</td>
<td>Ideal</td>
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<tr>
<td>Sympson's paradox ratio (SPR)</td>
<td>1.000</td>
<td>acceptable if &gt;= 0.7, ideally = 1</td>
<td>Ideal</td>
</tr>
<tr>
<td>R-squared contribution ratio (RSCR)</td>
<td>1.000</td>
<td>acceptable if &gt;= 0.9, ideally = 1</td>
<td>Ideal</td>
</tr>
<tr>
<td>Statistical suppression ratio (SSR)</td>
<td>1.000</td>
<td>acceptable if &gt;= 0.7</td>
<td>Ideal</td>
</tr>
<tr>
<td>Nonlinear bivariate causality direction ratio (NLBCDR)</td>
<td>1.000</td>
<td>acceptable if &gt;= 0.7</td>
<td>Ideal</td>
</tr>
</tbody>
</table>

The results of hypothesis testing in the form of a path for each predictor variable and the response variable in model causality relationship bellow:

Fig. 1. Flowchart Causality Relationship.
4.1 Perceived usefulness has a positive and significant effect on the attitude of the use of technology student entrepreneurship

Perceived usefulness is one of two basic determinants of predicting people's attitudes toward new systems or technologies, and people's attitudes towards brands [31][32].

This study found that perceived usefulness has a positive and significant effects on students’ attitudes using technology. The path coefficient value is 0.52 with p value <.01. Perceived usefulness contributed positively to the attitudes of using technology in entrepreneurship by 33.6%. The higher the perceived usefulness, the higher the contribution to the attitude of using technology in entrepreneurship.

Perceived usefulness as an important predictor that influences the attitude and acceptance of technology, the higher the perceived value, the more positive the attitude of someone towards the use of technology [33]. Besides, previous studies provide empirical evidence that there is a significant positive effect of perceived usefulness on the attitudes and intentions of using internet banking [34][35][36][37].

4.2 Perceived ease of use has a positive and significant effect on the attitude of the use of technology student entrepreneurship

Perceived ease of use becomes a very important predictor, especially in the formation of positive attitudes towards users [38]. This research proves that perceived ease of use has a positive and significant effect on the attitude of technology use in student entrepreneurship. The path coefficient is 0.37, with a p-value <.01. The amount of contribution of the influence of perceived ease of use on the attitude of the use of technology in entrepreneurship is 20.9%. Perceived convenience has a smaller contribution value than the perceived usefulness to the attitude of using technology. This is due to the extrinsic aspects of technology users who prioritize the benefits to be gained from technology acceptance.

Furthermore, Guritno and Siringoringo [12] stated that perceived ease affects attitude even though the effect is smaller when compared to perceived usefulness towards attitude. From the other side Chen et al. [39] perceived ease of use has a greater impact in shaping the attitude of use where the significance and positive values are increasing in value.

Other studies have also concluded that perceived ease of use has a positive and significant influence on attitudes [40]. Perceived ease of use has a positive and significant effect on attitude [41]. Several other studies found that perceived ease of use does have a direct influence on attitudes in educational contexts [42].

4.3 Perceived ease of use has a positive and significant effect on Perceived usefulness

Perceived ease of use has a positive relationship with perceived usefulness. The existence of perceived ease of use in using technology will give consideration and decision to users to use or not use technology in an activity. In other words, perceived ease of use will encourage individuals to take advantage of the use of technology. Perceived ease of use has a positive and significant effect on perceived usefulness; the magnitude of the path coefficient is 0.42 with p-value <01. That means that, the easier the technology is used, the higher the interest of individuals to use, from this side will give birth to perceived usefulness. The amount of contribution from perceived ease of use to perceived usefulness was 17.8%. Pinho & Soares [43]; Rauniar et al. [44]; Duvince & Cheryl [45] state that perceived ease of use has a positive and significant effect on perceived usefulness.
4.4 Perceived ease of use has a positive and significant indirect effect on the attitude of using technology in entrepreneurship through perceived usefulness

The ease of use of technology is one of the first aspects considered in the use of technology. Individuals before using technologies will pay attention to the difficulty or ease of use of technology. The easier technology is used will encourage individuals to be receptive to technology. Furthermore, Dickinger et al. [46] and Bruner & Kumar [47] found that the easier an e-reader is to use, the better attitude towards its use. But what needs to be considered is the benefits that will be obtained by using technology. The higher the use of the e-reader perceived, the better the attitude towards the use of e-reader. A positive attitude will increase the intention to use the e-reader [46][48]. This study found that perceived ease of use has a positive and significant indirect effect on the attitude of using technology in entrepreneurship through perceived usefulness is 12.2%. The path coefficient is 0.218 with a p-value <.01. Guritno and Siringoringo [12] perceived usefulness becomes a mediating variable; perceived ease of use indirectly affects the attitude of using technology in entrepreneurship through perceived usefulness. On the other hand, the contribution of the effect of perceived usefulness and perceived ease of use on the attitude of using technology in entrepreneurship is 55%. This means that the attitude of using technology in entrepreneurship is influenced by other factors that are not examined by 45%.

5 Conclusion

Technology acceptance of student entrepreneurship responded positively. Indicators of technology acceptance in entrepreneurship in this study are perceived usefulness and perceived ease of use have a positive and significant effect directly on the attitude of using technology. On the other hand, perceived ease of use has a positive and significant indirect impact on the attitude of using technology in entrepreneurship through perceived usefulness. The higher perceived usefulness and perceived ease of use will affect the attitude of using technology in entrepreneurship which is also higher.

6 Implications and Limitation Study

Implications of this study are: a) university leaders to facilitate the use of technology for students who join the entrepreneurship program, so that it has a positive effect on business continuity; b) university leaders provide education and instill awareness to students that technology is needed in entrepreneurship so that it will provide a positive perception in using technology; c) students who utilize technology in entrepreneurship are able to develop businesses for the better.

The limitation of this research is that it only examines two components of the TAM theory are perceived usefulness and perceived ease of use, while TRA theory about attitudes. And the subject in this study only on Semarang State University students who joined in the Indonesian Young Entrepreneurs Association. This is because the time to do research is limited. Recommendate for further research to expand the study of TAM, researchers can adopt the perception of security variables and the perception of security using technology in business.
While, from the TRA theory, researchers can expand research on trust. Future researchers can also combine the theory of TAM, TRA and TPB. Thus, research on TAM and TRA is more comprehensive.

References
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Analysis Gender in Entrepreneurship Education: Role of Entrepreneurial Potential and Mindsets on Intention Students in Universities

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Abstract. This study aims to find out how gender in entrepreneurship education as a place to study entrepreneurship and the role of entrepreneurial potential and mindset can increase student intention. This research method uses a literature review study, which is a literature review from previous research. Gender inequality that still occurs can be seen from the low contribution of women in the economy, especially entrepreneurship, making gender equality as one of the main goals of sustainable development (Sustainable Development Goals/SDGs) in Indonesia. The process of entrepreneurship education, will provide entrepreneurship knowledge and competencies to someone, this will increase one's entrepreneurial potential and mindset so as to encourage the emergence of entrepreneurial behavior and intentions, in connection with this can also be seen the difference between men and women in entrepreneurship education. The results of several studies of previous research literature show that entrepreneurial potential and mindset have a positive effect on one's intention, while gender has different perceptions related to the context of one's intention.

Keywords: Gender, Entrepreneurial Potential, Entrepreneurial Mindset, Intention, Entrepreneurship

1 Introduction

Entrepreneurship education is a process that begins with student attention and then continues to interest in entrepreneurship. Finally, students will be motivated to establish their own business after building the competencies needed to own and start a new business. The general purpose of entrepreneurship education and training is to develop a set of entrepreneurial skills, increase entrepreneurial mindset, stimulate entrepreneurial behavior, prepare and assist students' entrepreneurial efforts [1].

This can be a means of observing gender differences in the implementation of entrepreneurship education. Gender refers to relationships between men and women, so gender needs to be a concern in discussions related to gender equality or inequality [2]. Gender equality in Indonesia, including in the main goals of sustainable development (Sustainable Development Goals/SDGs) is contained at Presidential Regulation Number 59 of 2017 concerning the implementation of achieving sustainable development goals, which is written in goal 5: achieving gender equality and empowering women.

Women have a lower contribution than men in entrepreneurship. This gender inequality in entrepreneurship is a subject of continually and intense discussion in academics and everyday
life [3]. Gender inequality is important for entrepreneurship activities in general, because in understanding social context it is necessary to designate “gender inequality” as an important variable when studying the dynamics of gender inequality in entrepreneurship [4]. Education can reduce the impact of gender inequality so that it will affect the economic growth of a country [5].

Entrepreneurs must have entrepreneurial potential and mindset in themselves, so they will be able to encourage them to conduct entrepreneurial behavior. Entrepreneurial potential is a set of psychological perceptions and self-cognition related to success, confidence and risk, entrepreneurial competence and motivation, which have an impact on intention [6]. Entrepreneurial potential consists of entrepreneurial personality traits and environmental variables that influence one's intention to do business and then use it to analyze gender differences [7].

Personality traits need to be considered and have an influence on the intention to start a new business [8]. Personality traits as one of the key factors that influence one's entrepreneurial intention [9]. Dimensions of personality traits, specifically internal locus of control, need for achievement, risk tolerance, and entrepreneurial alertness can develop entrepreneurial intention [10].

Organization for Economic Cooperation and Development (OECD) identifies three main groups of skills that are widely accepted for entrepreneurs: technical, business management, and personal entrepreneurial skills. Personal entrepreneurial skills consist of: self-control and discipline, risk management, innovation, perseverance, leadership, change management, network development, and strategic thinking skills [11]. Skill is a multidimensional construct that includes cognitive knowledge in the form of what is learned; affectively: emotive feeling also which is practiced; behavior: actions at the strategical, tactics and individual level; and contexture relating to the sector level, occupation, demands, duties and responsibilities [12].

Four categories of entrepreneurial skills proposed by Cell are: idea identification/creation, capitalizing on ideas, traits/behavior, and managerial/leadership skills [13]. The definition of entrepreneurial potential in this study refers to an individual psychological and cognition related entrepreneurial intention to start a new business. Psychological and cognition here refers to one's personality traits and entrepreneurship skills. Entrepreneurial mindset needs attention too. Strategically entrepreneurial mindset has an important role in encouraging and supporting entrepreneurial thinking. Strategic experts, along with entrepreneurs define entrepreneurial mindset as a need for more strategic thinking, beginning with identifying opportunities to be followed up [14]. Entrepreneurial Mindset can be defined by interpreting the first word 'mindset' and then the word 'entrepreneurial'. Mindset is a structured mental attitude or inclination and can change through mindset, talent and ability are permanent but can be developed. The development of a greater awareness of the mindset can make a person start thinking about taking action and reacting in new ways [15]. Entrepreneurial mindset is a mindset that tends to find, evaluate, and take advantage of entrepreneurial opportunities.

Two important components in the entrepreneurial mindset are elaborating mindset and implementing mindset. Elaborating mindset is an important requirement in developing entrepreneurial mindset, decision making that refers to entrepreneurial behavior will decrease along with the increasing elaborating mindset, meaning that there is only the process of fusing mindset entrepreneurship. Implementing mindset is an entrepreneurial mindset that leads to entrepreneurial behavior [16].

Entrepreneurial intention provides direction to understand the antecedents that predict entrepreneurial action [17]. Entrepreneurial intention, is defined as the intention of individuals to take part in activity that refer to the appearance of new businesses [18]. Entrepreneurial
intention as a belief in someone with the aim to plan and establish a new business venture consciously in the future or for long-term goals in the future [19].

Entrepreneurial intention can be interpreted as an urge of desire and confidence that comes from the individual (psychologically) to carry out entrepreneurship activities. Two models can be used to predict intentions, namely the entrepreneurial event model (EEM) proposed from Shapero and Sokol, then Ajzen's Theory of Planned Behavior model. Both of them propose intention formation to initiate behavior, but there are differences in how the model treats intention formation and mechanisms related to which intentions are translated into behavior [20].

2 Research Methods

The methodology used in this study is a literature review, reviewing from previous studies. The type of literature review method used is systematic literature review [21]. A systematic literature review is a research method that is carried out to identify, evaluate and interpret all research that is relevant to a particular research question, topic area, or interesting phenomenon. There are three main processes in the systematic literature review, namely planning the review, conducting the review, and reporting the review [21].

The three stages of a systematic literature review adopted from Kitchenham & Charters [21] are: Research questions, Inclusion criteria, and Identification of papers [22]. This study uses the stages of a systematic literature review from Kitchenham and Charters was developed by Wahono [23] through Figure 1.

![Fig. 1. Stages of systematic literature review (Author processing from Wahono [23]).](image)

2.1 Planning the Review

2.1.1 Formulate the Review’s Research Question

The purpose of this study is to find out how gender relations and the role of entrepreneurial potential and mindset towards intention? The formulation of research question in this study was
designed using the PICOC formula namely: Population, Intervention, Comparison, Results, and the Context of Kitchenham and Charters [21]. This can be seen in the following Table 1.

**Table 1. PICOC Formulas**

<table>
<thead>
<tr>
<th>Population</th>
<th>Gender, Entrepreneurial Potential, Mindset, dan Intention</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>1. Effect of Gender Inequality (male and female) on intention</td>
</tr>
<tr>
<td></td>
<td>2. An important component (Personality Traits and Entrepreneurial Skill) in entrepreneurial potential and its influence on intentions</td>
</tr>
<tr>
<td></td>
<td>3. Two important things (Elaborating and implementing mindset) in Entrepreneurial mindset and its influence on intention</td>
</tr>
<tr>
<td>Comparison</td>
<td>-</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Accurate predictions related to the influence of gender, entrepreneurial potential and mindset (through its important components) on intention</td>
</tr>
<tr>
<td>Context</td>
<td>Entrepreneurship studies specifically entrepreneurial potential, mindset, and intention, gender studies in entrepreneurship education</td>
</tr>
</tbody>
</table>

Source: Author processing from Kitchenham and Charters [21].

The research question in this study consists of three, as in the following table 2.

**Table 2. Research Question**

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Motivation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RQ1 How does gender influence on intention</td>
<td>Gender is always connected with gender inequality between men and women. Previous studies have written gender inequality as being very important in the activities of entrepreneurship in understanding the social context it is necessary to designate “gender inequality” as an important variable when studying the dynamics of gender inequality in entrepreneurship [4]. Are there differences between male and female entrepreneurial intentions?</td>
</tr>
<tr>
<td>RQ2 How is the influence of entrepreneurial potential which includes personality traits and entrepreneurial skills on intention</td>
<td>Entrepreneurial potential variables need to be calculated based on gender [24]. This shows the importance of entrepreneurial potential including personality traits and entrepreneurial skills assessed by gender, so how is the effect on intention?</td>
</tr>
<tr>
<td>RQ3 How is the influence of entrepreneurial mindset that includes elaborating mindset and implementing mindset on intention</td>
<td>The importance of an entrepreneurial mindset based on gender, because both contribute differently in community development [25]. The importance of mindset which includes elaborating mindset and implementing mindset is assessed based on gender, and how is the effect on intention?</td>
</tr>
</tbody>
</table>

Source: Author processing from Wahono [23].
2.1.2 Develop the Review’s Protocol

This stage generally contains 7 elements of procedures and methods in the systematic literature review that will be used, as follows: Background, Research Questions, Search terms, Selection criteria, Quality checklist and procedures, Data extraction strategy, and synthesis strategy [21].

This study uses 5 elements, namely: Research questions, Search terms, Selection criteria, Data extraction strategy, and synthesis strategy.

2.2 Conducting the Review

2.2.1 Identify the Relevant Literature

Journal searches were conducted from December 2019 until early June 2020. Journal keyword searches were carried out using a search engine:

- Scholar Google (https://scholar.google.co.id).

This search engine for keywords is chosen based on the search engine's compatibility with the journals needed to increase the possibility of finding highly relevant articles, because not all keyword search engines publish journals according to the keywords of this study and not all search engines have access to the latest journal publications, for example Cambridge Journals according to research keywords, but only access journal publications from 2012-2013.

The steps of the search string adopted from Wahono [23] are as follows:

- Identification of search terms from PICOC, especially from Population and Intervention.
- Identification of search terms from research questions.
- Identification of terms through search in relevant titles, abstracts and keywords.
- Identify synonyms, alternative spellings and antonyms of the search term.

2.2.2 Perform Selection of Primary Studies

The criteria included in this research are previous literature review studies related to existing variables namely gender, entrepreneurial potential and mindset of intention. The journal publication years used in this study were 2006 to 2020. The oldest journal publications were 2006 and the latest 2020. The first search resulted in 392 journals, titles and abstracts respectively evaluated and 356 rejected because they were not relevant to the research question. So, as many as 36 journals that this study used. These criteria are also formulated based on inclusion and exclusion criteria as in table 3.

<table>
<thead>
<tr>
<th>Table 3. Inclusion and Exclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusion Criteria</strong></td>
</tr>
<tr>
<td>a. Focusing on the influence of gender, two important components of entrepreneurial potential and mindset towards intention.</td>
</tr>
<tr>
<td>b. Focus on topics, determinants, and research results.</td>
</tr>
</tbody>
</table>
Based on the criteria described, the following table shows the distribution of the selection of the main study of this study. Attached is table 4. Distribution of the selection of the main studies by topic, determinants, and results

<table>
<thead>
<tr>
<th>Property</th>
<th>Research Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researchers and Publications</td>
<td>RQ, RQ2, RQ3</td>
</tr>
<tr>
<td>Research Trends and Topics</td>
<td>RQ1</td>
</tr>
<tr>
<td>Gender of intention</td>
<td>RQ1</td>
</tr>
<tr>
<td>Entrepreneurial potential of intention</td>
<td>RQ2</td>
</tr>
<tr>
<td>Entrepreneurial mindset of intention</td>
<td>RQ3</td>
</tr>
</tbody>
</table>

Source: Author processing from Wahono [23].

2.2.4 Assess Studies Quality and Data Synthesis

Assess studies quality, namely studies conducted to be a reference in interpreting findings on synthesis and to strengthen the conclusions described. Data synthesis aims to analyze, evaluate, and choose the most appropriate method for interpreting the findings in the selected literature. Data synthesis has three forms for interpreting data namely, narrative or qualitative, quantitative, and meta-analysis. This research is a narrative form of synthetic data.

2.2.5 Reporting the Review

This stage consists of writing the results of a systematic literature review arranged in the form of scientific journal publications, as well as writing a thesis/thesis/dissertation for chapter 2.

3 Result and Discussion

3.1 RQ1: What is the relationship between gender and intention?

Learning outcomes with the business plan methodology show negative results, namely women are lower than men [26]. There were no statistical differences between male and female students related to their perceptions of business competence and entrepreneurial intention [1].

Female students have a higher intention to practice online business compared to male students [27]. This study shows that gender has a moderate effect on entrepreneurial intentions because of the enactment of Theory of Planned Behavior (subjective norms, perceived behavioral control and attitudes towards behavior) [28].
3.2 RQ2: How is the entrepreneurial potential relationship that includes personality traits and entrepreneurial skills to intention?

Entrepreneurial intention is the result of entrepreneurial potential. High entrepreneurial potential will indicate high entrepreneurial intentions, so that the best measure for entrepreneurial potential is through entrepreneurial intention. Changes in attitude and perceived behavioral control are significant and positive effects on entrepreneurial intentions and entrepreneurial potentials. However, this does not apply to subjective norms, so to optimize entrepreneurial potential, it must prioritize increasing the knowledge of the younger generation (changing attitudes) as well placing them in pedagogical situations that are able to develop their skills and competencies related to entrepreneurship activities (to increase perceived behavioral control) [29].

Entrepreneurship potential has an impact on entrepreneurial intention [6]. Entrepreneurial potential as a combination of human capital in the form of knowledge and skills of entrepreneurship, finance and cooperative relationships to build new businesses in a particular business environment. The results show that human capital in the form of knowledge and skills have a positive effect on the development of new businesses and entrepreneurship activities [30].

The influence between personality traits (optimism, self-efficacy, and risk taking) and entrepreneurial intention. The results show that entrepreneurial intention has a positive effect on optimism and self-efficacy, but has a negative effect on risk taking [31]. Research shows that the ability to take risks and perceptions about education do not have a significant effect on entrepreneurial intention [32]. A person's psychological characteristics or personality traits have a positive and significant effect on entrepreneurial intention through entrepreneurship training [33]. Personality traits can influence the formation of entrepreneurial intention, and tend to act indirectly by influencing attitudes and perceived control [20].

Women who increasingly feel skilled or have skills, they will tend to take risks, then significantly influence entrepreneurial intention [7]. Entrepreneurial skills are the main factors determining attitude and perceived control, this attitude will determine entrepreneurial intention [34]. Entrepreneurial skills have a positive impact on entrepreneurial intention [35].

3.3 RQ3: How is the relationship between the entrepreneurial mindset that includes elaborating mindset and implementing mindset towards intention?

There is a positive relationship between entrepreneurial mindset and entrepreneurial intention [16]. Someone who applies the elaborate mindset and implementing mindset, can cause more cognitive activity so that it will increase the threshold between intention and action. This shows a positive effect between the elaborate mindset and the implementing mindset of intention [36].

4 Conclusion

The phenomenon of gender in entrepreneurship activities, especially entrepreneurship education makes gender an important variable in entrepreneurship. Many researchers analyzed the effect of gender on entrepreneurial intention. The results show that gender has different influences or views related to the context of intention. So, gender has an uncertain relationship
with a person's entrepreneurial intention, statistically gender does not have a significant relationship with entrepreneurial intention, meaning that there is no significant relationship between men and women. Women tend to have negative learning outcomes related to learning with a business plan methodology. Men have less intention to practice online business than women.

Entrepreneurial potential has a positive influence on intention, and to increase entrepreneurial potential, one must improve their entrepreneurial knowledge and skills. The main components of entrepreneurial potential namely personality traits and entrepreneurial skills have a positive influence on intention. Entrepreneurial mindset has a positive influence on intention, the main component of the entrepreneurial mindset that is elaborating and implementing mindset has a positive effect on intention. So, in entrepreneurial education it is necessary to pay attention to one's entrepreneurial potential and mindset, by optimizing the entrepreneurial potential a person is able to have basic entrepreneurial potential, and through an entrepreneurial mindset can become a person's habit in entrepreneurial behavior. It is important for an entrepreneur to have an entrepreneurial potential and a mindset in him to foster entrepreneurial intentions which will then act entrepreneurially.

This study only reviews previous studies in a systematic manner. So, researchers examined how gender in entrepreneurship education as a place to learn entrepreneurship and the role of entrepreneurial potential and mindset can increase the intention of students at the University from various previous studies. This study has not examined more deeply the factors that encourage or hinder the role of entrepreneurial potential and the mindset of a person's intention, factors that influence gender towards a person's intention, things that mediate or intervene between the role of entrepreneurial potential and the mindset of one's intention.

Another limitation, related to the author's extensive efforts in searching the journal literature, may not yet find all the journals relevant to this study in complete. It is hoped that these limitations can be corrected for future research. Future research can further deepen the discussion related to gender in entrepreneurship education, namely the role of entrepreneurial potential and the mindset that can increase or influence student intention. Can also develop a model related to the role of entrepreneurial potential and a mindset towards intention.

References


# Appendix

Table 4. Distribution of main study selections by topic, determinants, and results

<table>
<thead>
<tr>
<th>Year</th>
<th>Author</th>
<th>Topic</th>
<th>Determinants</th>
<th>Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Gender</td>
<td>Entrepreneurial Potential</td>
<td>Entrepreneurial Mindset</td>
</tr>
<tr>
<td>2006</td>
<td>Liñán &amp; Chen</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2009</td>
<td>Klassen &amp; Lamanna, Thompson</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2011</td>
<td>Kakkonen</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2013</td>
<td>Chell, Gupta, Goctan &amp; Gunay, Mathisen &amp; Arnulf, Santos, Caetano &amp; Curral</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2014</td>
<td>UN, Women.</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2015</td>
<td>Varamäki et al.</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2016</td>
<td>Karabulut, Shabbir, Shariff &amp; Shahzad</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2017</td>
<td>Krueger &amp; Sussan</td>
<td>X</td>
<td></td>
<td>X</td>
</tr>
<tr>
<td>2018</td>
<td>Bosman &amp; Fernhaber, Dilli &amp; Westerhuis, Mamman et al., Pauli &amp; Osowska</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2019</td>
<td>Bastian, Metcalfe &amp; Zali, Cao &amp; Ngob, Gieure, Benavides-Espinosa &amp; Dobón, Hauthakiophong &amp; Ting, Hyams-Ssekasi et al., Irawan, Syakur &amp; Maududi, Madhavika, Onyeakwul &amp; Padmavathi, Sargani et al., Suryawirawan</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Note: X denotes the presence of the respective determinant or outcome in the study.
<table>
<thead>
<tr>
<th>Year</th>
<th>Authors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>2020</td>
<td>Syeda et al. Ward, Sanchez &amp; Garcia</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Abou, Hanafi &amp; Ali Ahmeda et al.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Garcia, Lara &amp; Lopez Gómez et al.</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>Mujahid, Mobarik &amp; Naghavi</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>
Web-based Internship as a New Normal Learning Requirement for Accounting Students

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Universiti Kebangsaan Malaysia, Malaysia⁵

Abstract. The Covid-19 pandemic currently requires students and lecturers in various fields (including accounting) to adapt to the new normal life. This also has an impact on maximizing the use of technology as the main learning media, not least on internship activities by the students. Given the large contribution of the internship activities, the university should develop adequate facilities to maintain the process of supervision of the internship activities of the lecturers to the students they guide. Through the data we collected by surveys and in-depth interviews within accounting students who were taking part in internship activities in the Covid-19 pandemic era, this paper provides suggestions on design for platform websites as a medium for implementing technological-based internship. We believe that the website design that we are proposing will be appropriate for higher education institutions such as universities that are looking for the best solutions for internship activities for accounting students in new normal life.

Keywords: Learning Methods, Technology Usage, Accounting Students, New Normal Living, Covid-19 Pandemic

1 Introduction

As the Covid-19 disease is currently being spread around the world, various ways are being adopted to improve tracking, forecasting, and developing treatment methods to combat the pandemic. So far, the use of advanced technologies such as Machine Learning and Artificial Intelligence is also considered as one of the ways employed by various healthcare providers [1]. Not only in the health sector, the use of technology is also maximized to facilitate teaching and learning activities. This is also one of the impact of new normal life to break the spread of the Covid-19 pandemic.

The era of new normal life that is currently being promoted also requires the use of technology platforms that are more innovative and user-friendly. Nowadays, both students and lecturers in higher education levels are required to get used to use web-based platforms to share their knowledge, both during regular teaching and learning activities, or when they need to mentor the students who participate in internship programs. Previous studies by McManus & Feinstein [2] and Clarke [3] have described that internship activities are media that can bridge students’ abilities to be implemented in professional life, because internships can reflect various real experiences and integrate them for future use. Optimal internship activities, carried out in an active professional environment, and full of exploration in various forms of participating institutions, have proven to be a fundamental way to increase students' knowledge and skills,
while helping them to gain insights on how the profession in their respective fields of science [4]. This demand certainly needs to be considered by higher education activists in the world today, including in Indonesia as a country that also needs to improve and prepare for the new normal era.

In Indonesia, it is revealed that with the existence of the Covid-19 pandemic this actually resulted in a variety of good practices that have been undertaken by teachers in conducting distance learning. Many teachers try to innovate and develop creativity. This is a form of how a teacher does things that are relevant to the situation of students but still enter the corridor of the subjects they teach [5]. For the 2020-2021 academic year which began in August, learning activities will be carried out while prioritizing the health and safety of all members of the higher education unit. For areas that are in the yellow, orange, and red zones the learning system continues with learning from home while for the green zone face to face learning can be done while still following the health protocol and the requirements set [6]. Matters that have been expressed by the ministry certainly also include student learning activities such as internship.

To realize the optimal internship activities amid the Covid-19 pandemic, we strive to provide suggestions on design for platform websites as a medium for implementing technological-based internship. Through the data we collected by surveys and in-depth interviews within accounting students who were taking part in internship activities in the Covid-19 pandemic era, we put together a number of suggestions for designing websites as a facility for managing and overseeing internship activities at a higher education level. We are also developed our researches we have done before, which has built various suggestions for problem mapping of the internship activities of accounting students [7][8]. The website was chosen as the most effective media for students to carry out the reflection process during the internship period with their respective lecturers.

The reflection process that occurs when students examine their responses, beliefs, and premises-based on their experiences can gain new understanding [9]. Previous studies by Wells [10] have revealed that making written records, such as some reflective journals, can facilitate better reflection processes than face-to-face discussions. Students are also developed professionally by using reflective journals as learning media, because they can be able to link theories with practice and evaluate their work performance [11]. Therefore, we believe that the website design that we are proposing will be appropriate for higher education institutions such as universities that are looking for the best solutions for internship activities for accounting students in new normal life.

2 Methods

This research is a qualitative approach study that uses a case study design related to the implementation of internship in the accounting department. The research method is aimed at analyzing the need for technology utilization in internship practices. This analysis is carried out without treatment of the object of research, which is in line with the opinion of Creswell [12] qualitative researchers do not bring these individuals into the laboratory (or in situations that have been previously set); nor do they share instruments with them.

The data used in this study are primary data in the form of interviews and secondary data such as the accounting department’s internship documents (SOPs, regulations and guidelines). The data in this study were collected through surveys in the form of “open-ended questions” in the middle of the year 2020, which were deepened through in-depth interviews thereafter. Research sources are stakeholders in internship activities: about ten students which are currently
having “the new-normal internship system”, four lecturers which are also the internship superintendence, and an operator/administrator of accounting internship program. Activities undertaken in data analysis are data reduction, data presentation, and drawing conclusions and data verification. After the data is analyzed, triangulation of sources is done by synchronizing the answers of informants (stakeholders related to internship).

3 Result and Discussion

As expressed in research of Putri et al. [8] internship is a medium to be able to optimize the work skills and mentality of students. With the internship program students are given the opportunity to learn both theory and practice to develop professional skills in college students [13]. When carrying out internship students will be able to compare and integrate the theoretical knowledge, they obtain in class with the practical conditions that occur in the world of work. Therefore, internship is an aspect that cannot be separated from its role to form students who are ready to work.

To facilitate the implementation of the internship to be able to provide maximum benefits for students, especially during the current pandemic, the role of technology is needed. With the advancement of modern technology, the use of the website provides a means for students to be able to continue to carry out the internship process to the full, provide guidance without having to face-to-face, and obtain the latest information in real time. This study aims to provide advice on website platform design as a medium for implementing internships.

3.1 Problems that arise in the internship process during the pandemic

During this pandemic, universities are required to hold all teaching and learning activities by continuing to implement social distancing, including in conducting internships. Therefore, with this new provision, problems arise in the process of implementing internship due to the limitations of students and other academic communities to be able to meet directly. The most common problem is the communication problem, which is related to unclear information and policies submitted by the university.

Based on the results of interviews with students, problems related to unclear and confusing information are the most felt by students. Following are some student statements that show student dissatisfaction about the publication of internship information.

“There are many mixed announcements circulating among students, many times a change of guidelines occurs, and announcements make students confused which one is correct” (IQ).

“The information conveyed by lecturer A is different from the information conveyed by lecturer B, when asked to the university internship section, the answer is also unclear” (AG).

Based on a few excerpts from interviews with these students, the absence of clear information makes students confused about the implementation of internship. Furthermore because of the unclear information being conveyed, it results in unclear policies that often disadvantage students.
“Initially, the policy said not to be allowed to carry out an internship at the company, this made us cancel the permit that had been submitted to the company. Then a few days later, the policy was changed which allowed for doing internship at companies by following the health protocol”.

“We are disappointed with the policies issued by the university when it was still uncertain, because it caused us to have to repeatedly submit to third parties (companies) which made us, and the university look fickle”.

“In a pandemic like this, the university does not seem to provide students the opportunity to carefully consider the options provided by the university. The administrative period and the implementation period of the internship were not extended even though the announcement of the changes to the internship scheme was only announced one week before”.

It can be seen here that most students are not satisfied with the policies of the university. This could also be due to a delay in the delivery of policies from the center to units at the university so that students are also late in receiving information related to the policy. In the interview process, students also convey some suggestions to be able to make the university's internship system better.

“It is better not to announce the announcement before it is absolutely certain because it tends to be wishy-washy, universities should submit information to wait when it's completely clear” (DK).

“Maybe if there is a website, a live chat feature can be added for students so that information can be conveyed in real-time, especially when the department has not been synchronized with the center so students are free to ask questions on that platform” (RT).

“There should be a synchronization between the university's internship web internship and the web internship majors so there is no need to repeatedly register and the data be synchronized directly. In addition, links to agencies are also provided, but do not close the road if student want to doing internship in other agencies” (MT).

“Maybe the briefing regarding internships should be done two semesters before the implementation, so that there is plenty of time for students to prepare for internships” (HF).

3.2 Platform that can provide solutions to internship problems during the pandemic

From the problems raised in the previous section it can be concluded that there is a need for a platform that can bridge the limitations of direct meetings during the pandemic. One of the most popular technology platforms used in education, especially in distance learning, is the website [14][15]. The website here serves as a good alternative to replace face-to-face interaction, which goes beyond class and time constraints [16][17][18]. In this study we present
a website design that can help maximize the implementation of internships for the better even during the pandemic. As said in the research of Chu, Chan and Tiwari [19] the web page is recommended as a suitable tool for the learning process during internship because of its associated uses in collaborative learning, reflection, communication, and social support.

Website is recommended as a useful tool for professional education or internship because this platform can be accessed anytime that allows user communities to interact and communicate with each other [20] in terms of internship including students and supervisors. During this pandemic, the website is a platform that can be said to be a bridge between users who are obstructed from the situation of not being able to meet in person. As expressed by students in the interview results above the internship website is expected to have a live chat feature that allows interaction between users quickly. Du and Wagner [21] say that websites allow simple and fast web content creation, frequent interactions with posts and comments, and instant hyperlinks to information sources. In addition, the website as an open system, also offers access to other applications in the external environment such as video-based software [for example, YouTube], image-based [Flickr], and bookmark-based, which effectively provides access to information wider. This feature will make it easier for students to get broader information, both initial guidelines, results and reporting guidelines can be presented in various forms of information to help students gain a comprehensive understanding from the beginning to the end of the internship.

Fig. 1. Proposed Internship Website Design
We offer a website platform that has the features needed by students to facilitate the internship process they are doing. The website features include:

1. **Beranda**
   - This feature is the main appearance of an Excellent Internship system website. This feature contains news and announcements related to internship activities.

2. **Tentang**
   - The “About” feature is a feature that contains a description of the website and the organizational structure of the internship manager in the accounting department.

3. **Log in**
   - The “Log in” feature is a place where students register for an internship program online. After registering, students will get a username and password that can be used to access other features in this website.

4. **Pengajuan PKL**
   - In this feature, students can manage administrative matters related to internship activities, choose companies and obtain supervisors.

5. **Pilihan Tempat PKL**
   - This feature contains the list of companies that have collaborated with accounting major where the students may choose and apply their internship place.

6. **Materi Softskill**
   - “Materi Softskil” feature is a section that contains teaching materials related to soft skills. This material must be mastered by students during the internship process and can be consulted with their supervisor.

7. **Panduan System (Mahasiswa)**
   - This section contains guidelines for using the excellent internship system for students along with videos and tutorial modules. This feature is expected to facilitate students in operating the website.

8. **Panduan System (Dosen)**
   - This feature is a part that contains technical instructions for lecturers in utilizing excellent internship websites.

9. **Template Laporan PKL**
   - This feature contains the internship report format which can be downloaded by website users. The internship report will be uploaded at the end of the internship activity to be assessed by the lecturer.

10. **Live Chat**
    - This feature is used as a media to communicate synchronously between website users (lecturers, students, agencies and EIS website managers).

4 **Conclusion**

The Covid-19 pandemic currently requires students and lecturers in various fields (including accounting) to adapt to the new normal life. This also has an impact on maximizing the use of technology as the main learning media, not least on internship activities by the students. Given the large contribution of the internship activities, the university should develop adequate facilities to maintain the process of supervision of the internship activities of the lecturers to the students they guide. To facilitate the implementation of the internship to be able to provide maximum benefits for students, especially during the current pandemic, the role of technology is needed. With the advancement of modern technology, the use of the website
provides a means for students to be able to continue to carry out the internship process to the full, provide guidance without having to face-to-face, and obtain the latest information in real time.

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