A Literature Review on the Role of Intellectual Capital to Increase Competitive Advantage

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Abstract. In order to get a competitive edge, this study will examine the function of intellectual capital. This study takes a theoretical tack by reviewing the existing literature and drawing conclusions based on those analyses. In order to offer theoretical and methodological advances, the literature review covers recent and pertinent journal articles. By bringing together the function of intellectual capital inside a single analytical framework to comprehend competitive advantage in different types of corporate organizations, this research significantly adds to the body of theory. This study's findings support the idea that better resource management may boost productivity in the workplace and lead to long-term success in the marketplace. The results contribute to the current body of knowledge, provide useful information for business executives to boost their company's efficiency, and lay the groundwork for future studies that investigate the link between intellectual capital and competitive advantage in different types of organizations.

Keywords: Intellectual Capital, Competitive Advantage, organizational.

1 Introduction

The prosperity of the corporation has a significant impact on the economy of Indonesia, the creation of jobs, the alleviation of poverty, and the promotion of regional development [1]. The company drives industry transformation by fueling innovation, improving service quality, optimizing costs, and enabling rapid and sustainable expansion [2]–[5]. The determinant of success in the company is resource management because it is considered the cornerstone in providing the best service [6]. Furthermore, it is necessary to implement management strategies [7], organizational performance monitoring and control [8], and improve the quality of employees by paying attention to the standards set for the benefit of consumers [9].

With the rapid development of digital technology, the role of Artificial Intelligence (AI) is increasingly dominant, innovative and creative in producing digital works. Therefore, investment in skills development is key to maximizing the value of intellectual capital. Artificial intelligence also manages intellectual capital as well as other resources, such as information technology, finance, and staff, to overcome challenges and mitigate risks and negative impacts, such as reduced human oversight in decision-making [10]. Many companies are now integrating

artificial intelligence to increase competitive advantage and strategically utilize artificial intelligence capabilities in the long term [11].

In the context of intense competition, the company must continue to innovate and improve the quality of their services to attract and retain customers [5]. As an intangible asset, intellectual capital consists of a company's employees' expertise, knowledge, and experience [12], [13]. Intellectual capital helps companies develop and maintain their competitive advantage [14]. By utilizing intellectual capital, such as employee knowledge and skills, and implementing effective knowledge management can improve operational efficiency and service quality.

By utilizing intellectual capital, such as employee knowledge and skills, and implementing effective knowledge management, hotels can improve operational efficiency and service quality [15], intellectual capital the network of relationships built by the company [16], Companies started to see intellectual capital as their primary asset for achieving success [17], By managing their intellectual capital, firms may guarantee effective outcomes and creative answers to contemporary difficulties [18]. Regardless of the market share, profitability, or other important metrics, company executives should always strive to boost staff performance in order to gain a competitive edge [19]. Intellectual capital, also known as intangible assets, is crucial in a knowledge-based economy since it increases a company's worth and competitive advantage [20].

According [15] that acknowledges the critical role that information exchange and intellectual capital play in an organization's success. In research [17], Moreover, as time went on, companies started to see intellectual capital as their most important asset [14] intellectual capital is critical to retaining a competitive edge, according to their research. Study by Astuty and Udin [21] found that intellectual capital management can increase competitive advantage, but many companies are still not fully utilizing this potential. This study compiles and analyzes a number of papers in order to make reasonable inferences about the function of intellectual capital in enhancing competitive advantage.

The results of this study will not only enrich strategic management theory but also provide practical insights that can be used to optimize their resources and achieve greater competitive advantage in a highly competitive environment. This research offers valuable guidance for corporate management to integrate knowledge management strategies with human and intellectual resource management practices, propelling them to higher levels of success [22], [23].

2 Literature Review

2.1. Resource Based View Theory (RBV)

For Barney's Resource Based View (RBV), the key to a company's long-term success is focusing on its own strengths and competencies [24] and is a major focus in strategic management research [25]. Resource Based View Theory (RBV) or Resource Theory is a supporting theory in this study developed by Wernerfelt in 1984 which states that businesses with "strategic resources" have a greater competitive advantage than businesses without these resources. Furthermore, ascribing better financial performance to the resources and capabilities of the company [26].

The resource-based view (RBV) emphasizes the ability of firms to achieve sustainable competitive advantages compared to other firms [27]–[29], such as cost, quality, or differentiation if they possess and utilize valuable, rare, unique, and irreplaceable resources and capabilities [30]. In line with research from [31], suggest that the combination and dynamic development of resources helps companies achieve competitive advantage and affects performance [32], hus supporting the Company's competitive advantage.

2.2. Intellectual capital

Intellectual capital refers to the intangible assets of a company that are crucial to enhancing performance. These assets include things like staff knowledge and processes [33]. To put it simply, an organization's intellectual capital consists of its workers' skills and knowledge, which contribute to the development and preservation of its competitive advantage [34].

"Intellectual capital, which encompasses not just human capital but also relational and structural capital, as a multi-faceted notion [17], [35], [36]. Human capital includes things like credentials and abilities, relational capital includes things like relationships with outside parties like suppliers and consumers, and structural capital includes things like the layout and culture of a company [14]. Management is critical to attracting, developing, motivating, and retaining effective human capital enhancing organizational and relational capital, as well as organizational performance". [17].

Intellectual capital is information, knowledge, experience, and intellectual property that combine to produce value for the organization [37]. By managing their intellectual capital, organizations may guarantee efficient results (meaning they make the most of their resources) and creative solutions to contemporary issues [18]. A company's intellectual capital is the sum of the knowledge that is ingrained in its employees, its processes, and its network of relationships [16].

2.3. Competitive Advantage

Competitive advantage is key for businesses to compete and support their strategy [38]. Michael Porter emphasized the importance of strategy followed by action, and that future competitive advantage depends on talent within the organization [19], [39]. Competitive advantage is a product or service that is rated better by customers than competitors' products or services [40], and has continuous innovation that is difficult for competitors to replicate [41]. Yang et al., [42] stated that technology adoption is important to achieve business value, specialization, economic growth, and competitive advantage.

Based on Barney's opinion that Resource Based View (RBV), competitive advantage is achieved through the utilization of resources that are rare, valuable, and cannot be replaced or imitated [24][24]. Using RBV, one may investigate how a company's leaders have made strategic decisions to adapt to changing market conditions and meet rising customer expectations [43]. To be competitive in this setting means to have a distinct edge over rivals thanks to strategic assets, competencies, and innovations that set you apart from the competition. This advantage is both temporary and built on a solid foundation of distinctive value proposition and long-term planning [44].

3 Research Method

A literature review—research that critically evaluates information, ideas, or discoveries and contributes theoretically and methodologically to the area of study—is the means by which this research employs a conceptual approach. The literature review focused on scholarly works consisting of publications from journals by incorporating the most relevant and recent evidence from the studies reviewed and presented descriptively.

The publications used to compile the data for this study were located using a combination of online searches and databases specializing in management journals, including "Scopus, Elsevier, Sciendirect, and Ebsco. Publications meeting the specified criteria were located using these databases. The author provides a graph that sorts the article count according to the journal name. According to Graph 1, the journals that receive the most references are: Journal of Management, International Journal of Production Economics, Heliyon, Procedia-Social and Behavioral Sciences, and The Dynamics of Intellectual Capital in Current Era". The following classification of 31 journals is presented in graphical form:



Graph 1. Journal Classification

4 Discussion

This research follows up on previous research, on Intellectual Capital which shows a significant impact of high-performance work systems on the company's competitive advantage. [45]. Here the author conducts bibliometric analysis of various published literature using VOSviewer (VV). VOSviewer (VV) is software for visualizing bibliometric maps, including data such as titles, authors, and journals, as well as mapping research topics, searching for popular references, and more. From the analysis results of the VOSviewer visualization network below, it shows that there are 21 topics of study items in Intellectual Capital.



Fig. 1. Findings of Study Topics Based on VOSViewer Visualization Network Results

This research is to measure the role of intellectual capital to increase competitive advantage by looking at various elements of several previous studies that are relevant or appropriate to be used as a reference that is used as a comparison for the research to be carried out. The following articles cited are articles published in reputable international journals:

Table 1.	Relevant Previous	Research
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Author	Article	Result
"Sayyed Mohsen Allameh (2018)"	"Antecedents and consequences of intellectual capital the role of social capital, knowledge sharing and innovation"	"This study's findings show that information sharing is positively affected by structural social capital, relational social capital, and cognitive social capital. The three parts of intellectual capital—human capital, structural capital, and relational social capital—are all positively impacted by the exchange of information".
"Shafique Ur Rehman, Stefano Bresciani, Khurram Ashfaq & Gazi Mahabubul Alam (2021)"	"Intellectual capital, knowledge management and competitive advantage: a resource orchestration perspective"	"Knowledge management and intellectual capital are powerful determinants of innovation and competitive advantage, as shown by the outcomes. Furthermore, innovation plays a crucial mediating role among IP, KM,

Author	Article	Result
		and competitive advantage. Furthermore, competitive advantage is highly dependent on innovation. Gaining a competitive edge is a direct result of sound business strategy. Business strategy acts as a moderator between innovation and competitive advantage, to a considerable extent".
"Sergio Camison-Haba Jose Antonio Clemente Almendros,Tomas Gon zalez Cruz (2023)"	"Connecting Human and Information Resources in the Generation of Competitive Advantage"	"The findings demonstrate that contemporary firms' competitive positions are enhanced through the synergy of human resources and information assets".
"Max Karel Salangkaa, Daniel Daud Kameob and Harijono (2024)"	"The effect of intellectual capital towards sustainability of business performance mediated by eco-product innovation & external learning: The Indonesian bottled drinking water industries".	"Research hypothesized that intellectual capital affects the sustainability performance of Indonesia's bottled water business; however, actual data disproves this. There is still room for improvement and adjustment in certain areas of structural capital dimensions, such as the technology of the machinery used in bottled beverage factories and the standard operating procedures that are based on ISO certification. These areas must be tailored to meet the requirements of current regulations".
"Monika Barak & Rakesh Kumar Sharma (2024)"	"Does intellectual capital impact the financial performance of Indian public sector banks? An empirical analysis using GMM"	"Financial performance indices like ROA, ROE, ROCE, EPS, and market performance are significantly impacted by intellectual capital and its sub- elements, including human capital, capital employed, structural capital, and relational capital. These impacts can be favorable or negative. Both ROA and ROE benefit from combined

Author	Article	Result
		intellectual capital as measured by MVAIC".
"Samuel Godadaw Ayinaddis, Habtamu Getachew Tegegne, Nitsuh Alemayehu Belay (2024)"	"Does intellectual capital efficiency measured by modified value-added intellectual coefficient affect the financial performance of insurance companies in Ethiopia?"	"Financial success is positively and significantly correlated with value-added intellectual capital, which includes human capital and capital utilized efficiency, according to the results of the random effects regression. However, neither structural nor relational capital efficiency significantly affects the insurance industry's bottom line in Ethiopia".

This research introduces a new approach in understanding how firms integrate intellectual capital in an analytical framework to evaluate its effect on competitive advantage [13]–[15], [17]. By incorporating intellectual capital into an analytical framework to comprehend competitive advantage, this research significantly contributes to the development of theories. Effective resource management is a key component of a successful business. This includes intellectual capital, which includes human capital, structural capital, and relational capital [46], [47]. The intangible asset known as intellectual capital is comprised of the employees' knowledge, abilities, and experience; it is crucial for the development and preservation of the company's competitive advantage [12]–[14], [45].

Getting a competitive edge requires applying what is known about intellectual capital and knowledge management [13]. Do et al., [20] found that intellectual capital positively affects company performance; nevertheless, there is a huge void in how it is put into practice. Babajee et al., [48] noted the positive contribution of human capital and structural capital to financial performance.

Based on the results of previous research above from Salangka [49] found empirically the hypothesis shows that intellectual capital has no effect on the sustainability performance of the bottled water industry in Indonesia. However, aspects of the structural capital dimension, such as bottled beverage factory machinery technology and standard operating procedures based on ISO certification, still need to be improved and adjusted to the provisions of existing regulatory requirements. For further research, it is recommended to involve other variables as mediating variables that can affect intellectual capital and competitive advantage.

This research deduces that intellectual capital is a key component of a sustainable competitive advantage. The findings suggest that a company may gain a competitive edge and boost employee performance via better management of its resources. The results contribute to the current body of knowledge and provide actionable advice that managers and executives may apply to boost their company's efficiency and productivity.

5 Conclusion

The study's findings and discussion point to a strong correlation between intellectual capital and increased competitive advantage. This demonstrates a favourable correlation between strategic leadership and intellectual capital, with the former helping to boost the latter and so giving businesses an edge in the marketplace [33]. This positive impact is particularly evident in terms of revenue quality and profitability [50].

This research makes a significant contribution to theory development by integrating the role of intellectual capital in one analytical framework to understand competitive advantage in the industry company. Previously, studies have tended to analyze these variables separately without considering the interaction between them. As such, this study enriches the literature on strategic and resource management by showing how the combination of these three variables can create sustainable competitive advantage. In addition, this study supports and extends the knowledge-based view of resource theory and intellectual capital theory in a specific context.

In order to address the growing demands of this century, a trustworthy, all-encompassing empirical study is required to investigate the effect of employee intellectual capital relationship variables on competitive advantage. This study should build on prior research to fill in the gaps that remain. A combination of growth motivation, management acumen, and entrepreneurial experience improves company success [51]. When coupled with a desire to expand, an entrepreneur's education, management acumen, and experience all contribute to better company results [52].

A company's competitive advantage is positively correlated with its intellectual capital, meaning that a rise in the former will lead to a rise in the latter, according to studies that examine the function of IP in enhancing competitive advantage. Human, structural, and relational capital are all aspects of intellectual capital that significantly impact how well a company does in gaining a competitive edge. Businesses that adopt a high-performance work system will have a leg up in the race to the bottom when it comes to capitalizing on their intellectual resources. This connection might be influenced by extraneous variables like transformative leadership and organizational backing. The impact of intellectual capital on competitive advantage varies across several industries, suggesting that a sector-specific strategy is necessary. Findings from this study can pave the way for further investigations into the link between ICT and competitive advantage in different types of organizations.

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