



The Impact of Intellectual Capital and Cultural Intelligence on Innovation and Performance, with Knowledge Sharing as a Mediator in Manufacturing Companies

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ABSTRACT

Batam City has become a popular destination for individuals from outside the city seeking employment due to the numerous manufacturing companies established there, both from local and foreign sources. The success of these companies is influenced not only by the abilities of their workforce but also by how well employees adapt to their working environment. This study aims to explore whether intellectual capital and cultural intelligence impact innovation and performance within the manufacturing sector in Batam City, with knowledge sharing serving as a mediating variable for cultural intelligence. Utilizing a quantitative research approach, the study is supported by primary data collected through surveys in the form of questionnaires. The researchers employed SPSS and Smart PLS software to analyze variable data and test the hypotheses. The findings reveal the following: 1) intellectual capital has no effect on innovation., 2) intellectual capital positively affects performance. 3) cultural intelligence positively affects innovation., 4) cultural intelligence positively affects knowledge sharing. 5) knowledge sharing positively affects innovation., 6) innovation positively affects on performance, and 7) cultural intelligence affects innovation through knowledge sharing as a mediating variable. In relation to these results, this research is recommended as a reference for managers in improving innovation and performance

Keywords: Intellectual Capital, Cultural Intelligence, Knowledge Sharing, Innovation, performance

INTRODUCTION

The world is on the brink of the Fourth Industrial Revolution (Industry 4.0), where businesses are required to enhance their technological capabilities and innovation to compete in a dynamic environment (Mahmood & Shujaat, 2020). Industry 4.0 is viewed as a significant innovation in the manufacturing sector. Consequently, similar factors can influence the implementation of innovation and the adoption of Industry 4.0 within a company (Michna & Kmiecik, 2020). Manufacturing companies serve as the backbone of a country's economy, necessitating capital and knowledge to operate effectively (Xu & Liu, 2020). According to Alvino et al. (2021), intellectual capital signifies a transition toward innovative, competitive, and sustainable development; however, many ASEAN countries still face challenges in human resource development (Ekaningrum, 2021). Indeed, intellectual capital comprises a collection of intangible resources, knowledge, experience, and intellectual wealth owned and utilized by an organization, community, country, or society to create economic, utility, social, and environmental value (Dumay, 2020).

In addition to the importance of knowledge capital, understanding cultural dynamics is crucial in the realms of business and management. Stoermer et al. (2021) define Cultural Intelligence as an individual's ability to interact effectively across different cultural contexts with people from diverse backgrounds. This concept originated in cross-cultural psychology and has gained significant attention in the fields of business and international management (Nooria et al., 2020). Cultural Intelligence benefits

cross-cultural teams by fostering increased innovation and knowledge sharing among team members within a company (Mangla, 2021). It arises from the social contexts in which individuals operate, influencing their intergroup attitudes, their ability to empathize with others, and their understanding of how culture affects human behavior. This understanding ensures that knowledge sharing is utilized effectively. Id et al. (2021) define Knowledge Sharing as the behavior exhibited by individuals to assist or cooperate with others, aimed at problem-solving and generating new ideas through the exchange of information and knowledge.

According to World Bank data from 2020, Indonesia is ranked 94th on the Human Capital Index, with a score of 0.54, which is equal to that of Dominica. In contrast, other Asian countries like Singapore and Malaysia rank significantly higher: Singapore holds the top position with a score of 0.88, while Malaysia is ranked 62nd with a score of 0.61. This indicates that Indonesia is positioned quite low on the Human Capital Index. There is a critical need for improvement in the development of human capital to enhance quality, facilitate technology diffusion, and foster innovation, which have all been ongoing challenges (Ekaningrum, 2021). This research will explore how Intellectual Capital and Cultural Intelligence, mediated by Knowledge Sharing, influence innovation in manufacturing companies located in Batam City.

LITERATURE REVIEW

The Effect of Intellectual Capital on Innovation

Intellectual capital refers to the intangible resources and knowledge embedded

within a company, both internal and external, that can create value for the organization (Cindiyasari et al., 2022). According to Jayabalan et al. (2022), intellectual capital consists of three main components: human capital, structural capital, and relational capital. Human capital includes employees' experience, skills, development, and teamwork. Structural capital encompasses databases, processes, patents, licenses, trademarks, and similar resources. Finally, relational capital focuses on the network of relationships between individuals. From a managerial perspective, Najjar et al. (2020) research highlights the most important success factors that should be considered in future innovation investments, suggesting that their findings enrich the discourse on research and development (R&D) and innovation by presenting varying results from different developed countries. Empirical results from Rideg et al. (2023) show a positive relationship between intellectual capital and innovation. This finding is further supported by research from Phonthanukitithaworn et al. (2023), which also indicates that intellectual capital positively correlates with innovation.

H1: Intellectual Capital is positively related to Innovation

Effect of Intellectual Capital on Performance

Intellectual Capital is positively related to performance (Hesniati & Erlen, 2021). A company must focus on developing resources that are valuable, rare, and difficult to imitate in order to establish a lasting competitive advantage (Alharbi, 2023). According to M. Yousaf (2022), intellectual capital, as an intangible asset, significantly contributes to a company's superior performance in a competitive environment. This view is also supported by Aljuboori et al. (2022), who found that

intellectual capital plays a crucial role in enhancing innovation and performance within a company. Furthermore, research by Aybars & Öner (2022) indicated that intellectual capital is one of the key factors contributing to overall company performance. Additionally, Innayah et al. (2020) demonstrated a positive relationship between intellectual capital and company performance, suggesting that it impacts the effectiveness and efficiency of a company's operations.

H2: Intellectual Capital is positively related to Performance

The Effect of Cultural Intelligence on Innovation

Previous studies indicate that high levels of cultural intelligence can foster innovative behavior among multicultural employees, as cultural intelligence enhances flexibility in thinking (Fan et al., 2020). This assertion is supported by the research conducted by Humaira et al. (2023), Jinlong et al. (2021), and Hernawati & Tajib (2020), which collectively confirm that cultural intelligence has a significant positive effect on innovation. They emphasize that individuals with greater cultural intelligence are more likely to embrace new ideas and enhance their creativity, leading to greater innovation. However, research by F. Yousaf et al. (2022) suggests that cultural intelligence can negatively impact innovation. Individuals who are more immersed in their own culture and show less interest in a multicultural environment may struggle to adapt quickly and accept other cultures. This group tends to feel uncomfortable in diverse settings, indicating that those with higher cultural intelligence are generally more open to new ideas and better

equipped to expand their creativity for innovative purposes.

H3: Cultural Intelligence is positively related to Innovation

The Effect of Cultural Intelligence on Knowledge Sharing

Cultural intelligence consists of four interrelated dimensions: metacognitive, cognitive, motivational, and behavioral cultural intelligence (Van Greunen, 2021). According to Sousa et al. (2023), metacognition refers to an individual's ability to reflect on and understand intercultural experiences. The cognitive dimension relates to a person's understanding of the similarities and differences between cultures. Motivational cultural intelligence involves a person's interest in experiencing and engaging with individuals from different cultural backgrounds. Lastly, the behavioral dimension encompasses a person's ability to adapt both verbal and non-verbal behaviors to fit various cultural contexts. Jayanto & Putra (2022) explains that cultural intelligence facilitates the sharing of knowledge and insights within multicultural teams, thereby fostering a positive social environment in workplaces and companies. Research by Angelis (2023) suggests that an individual's cultural behavior can significantly impact organizational goals, mission, vision, processes, responsibilities, design, communication, learning, and technology. Based on these insights, it can be concluded that cultural intelligence is positively related to knowledge sharing. Additionally, research by Jinlong et al. (2021) supports the assertion that cultural

intelligence correlates positively with knowledge sharing.

H4: Cultural Intelligence is positively related to Knowledge Sharing

The Effect of Knowledge Sharing on Innovation

Stoermer et al. (2021) define knowledge as the information processed by individuals, which includes ideas, facts, and skills that benefit individual, team, and organizational performance. To effectively share knowledge, it is necessary to provide relevant information related to tasks and knowledge, with the goal of assisting others, collaborating to solve problems, and developing new ideas. According to empirical research by Shaikh et al. (2021), knowledge sharing has a positive influence but does not significantly impact innovation. This may be attributed to the fact that it primarily involves sharing ideas rather than concrete knowledge that could enhance innovation. In contrast, studies conducted by Purba et al. (2023), Games et al. (2022) and Lee et al. (2023) indicate that knowledge sharing has a significant positive impact on a company's innovation. These findings highlight the importance of workers' knowledge and skills, as they can contribute valuable new ideas that are beneficial to the company owner.

H5: Knowledge Sharing is positively related to Innovation

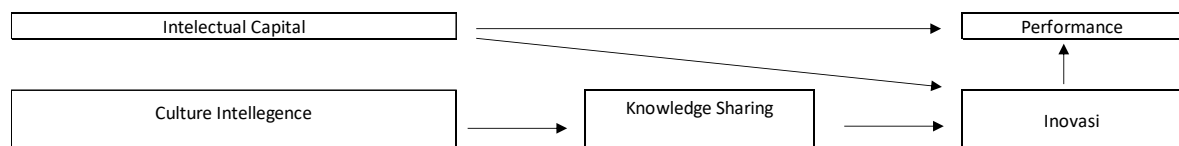
The Effect of Innovation on Performance

Numerous companies are utilizing big data to develop innovative ideas and set themselves apart from competitors (Ghasemaghaei & Calic, 2020). Makgopa (2020) defined Business performance as the assessment of how effectively an organization utilizes its internal resources

and adapts to the external business environment. This effectiveness is reflected in financial indicators such as increased sales, profits, market share, and return on equity. Additionally, non-financial performance metrics, including reputation, competitiveness, brand strength, and quality, also play a significant role in evaluating overall business performance. This understanding is the same as Rifqi et al. (2023) which says that innovation can drive company performance and create competitive advantages and play a role in allocating other resources to improve company performance. Canh et al. (2019) and Wibowo & Christiani (2020) agree that innovation significantly positively impacts a company's performance.

H6: Innovation is positively related to Performance

The effect of Cultural Intelligence on Innovation mediated by Knowledge Sharing



METHODS

In this study, the researchers employed quantitative research methods alongside primary research. According to Torrentira (2020), quantitative research provides estimates for large populations, reveals the attitudes of respondents, and presents results summarized in a statistical format with high precision and clear definitions. The researchers collected data through surveys, using questionnaires as their main tool. A survey involves distributing questions to research

Knowledge is a vital resource for organizations aiming to maintain a competitive advantage in the market F. Yousaf et al. (2022). According to Fan et al. (2020), sharing knowledge and insights can create a new blend of information, which in turn fosters innovative behavior. However, research by Hernawati & Tajib (2020) indicates that knowledge sharing does not positively mediate the relationship between cultural intelligence and innovation. Conversely, studies by Ratasuk & Charoensukmongkol (2020) and Jinlong et al. (2021) demonstrate that knowledge sharing within teams mediates the impact of team cultural intelligence on innovative performance. These findings support earlier research, emphasizing that knowledge sharing is a crucial process for cross-cultural teams to leverage the diverse skills and competencies of members from various cultural backgrounds.

H7: Knowledge Sharing is positively related in mediating Cultural Intelligence on Innovation

participants, who then respond to these questions individually.

Responses from research participants, commonly referred to as respondents, are personal and will be analyzed by researchers. The sampling theory used is based on Hair et al., which specifies that each question must have 10 respondents. In total, there are 35 questions related to five variables: intellectual capital (comprising Human Capital, Structural Capital, and Relational Capital), cultural intelligence (including Metacognitive Intelligence, Cognitive

Intelligence, Motivational Intelligence, and Behavioral Intelligence), knowledge sharing, innovation, and performance, with manufacturing companies as the research subjects. To conduct the research optimally, a total of 350 respondents is

required. The questions posed to respondents use a Likert scale. The indicators on the Likert scale are as follows: strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

RESULTS

Demographics

Table 1. Age of Respondents

Age Group	Sum	Percentage
20 – 25 Years	121	34.2%
26 – 30 Years	158	44.6%
Over 30 Years	75	21.2%
Total	354	100.0%

Source: Data Processed (2024)

The data presented in Table 1 shows that the total number of respondents was 354. Among these, 121 respondents

were aged 20 to 25 years, 158 were aged 26 to 30 years, and 75 respondents were over 30 years old.

Position

Table 2. Position of Respondents

Position	Sum	Percentage
Employee	65	18.4%
Superior	289	81.6%
Total	354	100.0%

Source: Data Processed (2024)

According to the results shown in Table 2, the total number of respondents was 354. Among them, 65 respondents

held positions as employees, while 289 respondents were classified as superiors.

Gender

Table 3. Gender of Respondents

Gender	Sum	Percentage
Man	152	42.9%
Woman	202	57.1%
Total	354	100.0%

Source: Data Processed (2024)

Based on the results of the respondents who filled out our research questionnaire in table 3, indicates that out **Work Experience**

of the 354 respondents, 152 identified as male and 202 identified as female.

Table 4. Work Experience of Respondents

Work Experience	Sum	Percentage
Less than 1 Year	72	20.3%
1 – 5 Years	194	54.8%
More than 5 Years	88	24.9%
Total	354	100.0%

Source: Data Processed (2024)

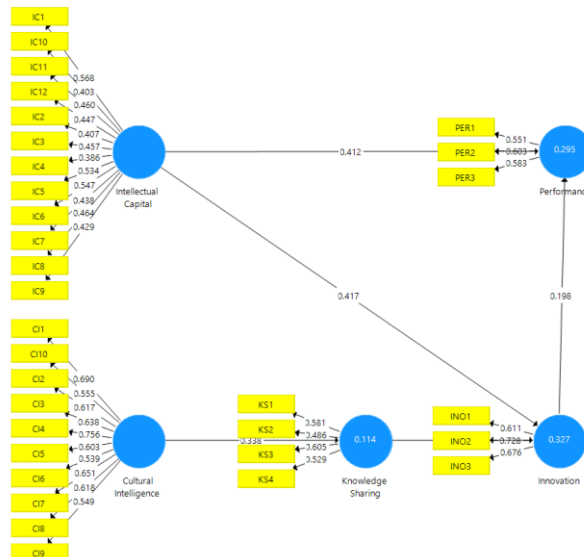
Table 4 reveals the work experience of the respondents. Out of 354 respondents, 72 had less than 1 year of

work experience, 194 had between 1 to 5 years of experience, and 88 had more than 5 years of work experience.

Outer Model

In the Outer Model test, researchers utilize Smart PLS software to analyze the results of the collected data.

The outer model consists of three testing components: the convergent validity test, the discriminant validity test, and the reliability test.



Convergent Validity

test and the Average Variance Extracted (AVE) convergent validity test.

The convergent validity test is divided into two parts: the outer loading

Table 1. Outer Loading & AVE Data Test Results

Variabel		Outer Loading	AVE
Intellectual Capital (IC)	IC1	0.887	0.708
	IC2	0.851	
	IC3	0.860	
	IC4	0.853	
	IC5	0.855	
	IC6	0.827	
	IC7	0.851	
	IC8	0.845	
	IC9	0.828	
	IC10	0.791	
	IC11	0.818	
	IC12	0.827	
Cultural Intelligence (CI)	CI1	0.807	0.575
	CI2	0.746	
	CI3	0.776	
	CI4	0.775	
	CI5	0.741	
	CI6	0.753	
	CI7	0.746	
	CI8	0.794	
	CI9	0.716	
	CI10	0.740	
	CI11	0.789	
	CI12	0.719	
	CI13	0.746	
Knowledge Sharing (KS)	KS1	0.856	0.727
	KS2	0.820	
	KS3	0.842	
	KS4	0.892	
Innovation	INO1	0.880	0.713
	INO2	0.830	
	INO3	0.823	
Performance	PER1	0.897	0.749
	PER2	0.877	
	PER3	0.820	

Source: Data Processed (2024)

According to Purwanto & Sudargini (2022), to pass the recommended loading factor test, a value greater than 0.708 is

required. This indicates that the construct can explain more than 50% of the variance in the indicators, thereby ensuring

acceptable reliability of the items. The results from the outer loading data test, presented in Table 1, show that all variables—intellectual capital, cultural intelligence, knowledge sharing, innovation, and performance—have met the requirements of the loading factor test, each exceeding the threshold of 0.708.

In terms of convergent validity measured by Average Variance Extracted (AVE), a construct must have a value greater than 0.5 to pass the AVE

convergent validity test and avoid any convergent validity issues (Nasution et al., 2020). The results from the AVE convergent value data test presented in Table 1 show the following values for each variable: Intellectual Capital with a value of 0.708, Cultural Intelligence with a value of 0.575, Knowledge Sharing with a value of 0.727, Innovation with a value of 0.713, and Performance with a value of 0.749. Since all these values are above 0.5, they meet the requirements for the AVE convergent validity test.

Discriminant Validity Test

Table 1. Cross Loading Data Test Results

Variabel		INTELLEC TUAL CAPITAL	CULTURAL INTELLIGE NCE	KNOWLE DGE SHARING	INNOV ATION	PERFORMANC E
Intellectual Capital (IC)	IC1	0.887	0.100	0.137	0.104	0.146
	IC2	0.851	0.136	0.159	0.107	0.068
	IC3	0.860	0.057	0.120	0.139	0.157
	IC4	0.853	0.149	0.133	0.130	0.108
	IC5	0.855	0.163	0.158	0.168	0.153
	IC6	0.827	0.091	0.119	0.078	0.083
	IC7	0.851	0.193	0.155	0.148	0.118
	IC8	0.845	0.142	0.163	0.137	0.113
	IC9	0.828	0.123	0.160	0.147	0.125
	IC10	0.791	0.110	0.078	0.078	0.099
	IC11	0.818	0.111	0.175	0.147	0.131
	IC12	0.827	0.151	0.151	0.132	0.144
Cultural Intelligence (CI)	CI1	0.154	0.809	0.260	0.346	0.402
	CI2	0.086	0.746	0.276	0.341	0.332
	CI3	0.191	0.776	0.303	0.372	0.337
	CI4	0.117	0.775	0.290	0.348	0.363
	CI5	0.099	0.741	0.237	0.343	0.304
	CI6	0.110	0.753	0.305	0.321	0.265
	CI7	0.082	0.746	0.247	0.357	0.316
	CI8	0.088	0.794	0.308	0.399	0.388
	CI9	0.151	0.716	0.253	0.316	0.292
	CI10	0.076	0.740	0.223	0.381	0.373
	CI11	0.090	0.789	0.217	0.341	0.306
	CI12	0.140	0.719	0.303	0.362	0.313
	CI13	0.098	0.746	0.225	0.353	0.293
Knowledge Sharing (KS)	KS1	0.111	0.271	0.856	0.271	0.229
	KS2	0.161	0.316	0.820	0.334	0.270
	KS3	0.163	0.334	0.842	0.383	0.242
	KS4	0.144	0.271	0.892	0.356	0.215

Innovation	INO1	0.116	0.392	0.336	0.880	0.321
	INO2	0.109	0.354	0.296	0.830	0.318
	INO3	0.164	0.425	0.369	0.823	0.362
Performance	PER 1	0.130	0.338	0.221	0.338	0.897
	PER 2	0.122	0.406	0.289	0.406	0.877
	PER 3	0.135	0.388	0.217	0.388	0.820

Source: Data Processed (2024)

To determine discriminant validity using the cross-loading method, the outer loading for each construct variable must exceed the correlations with variables from other constructs (Rasoolimanesh, 2022). Table 1 presents the results,

showing that variables within the same construct have greater values than those from different constructs. This confirms that the test results meet the requirements for discriminant validity using the cross-loading method.

Table 2. Fornell-Lacker Criterion Data Test Results

Variable	Cultural Intelligence	Innovation	Intellectual Capital	Knowledge Sharing	Performance
Cultural Intelligence	0.758				
Innovation	0.465	0.844			
Intellectual Capital	0.513	0.156	0.841		
Knowledge Sharing	0.355	0.398	0.172	0.853	
Performance	0.436	0.398	0.148	0.281	0.865

Source: Data Processed (2024)

To establish discriminant validity using the Fornell-Larcker criterion, the square root of the Average Variance Extracted (AVE) for each construct must be greater than the correlations with other constructs within the framework (Rasoolimanesh, 2022). This information is presented in

Table 2. The results from the Fornell-Larcker criterion test indicate that the square root of the AVE for each construct exceeds the correlations with the other constructs, demonstrating that the criteria for the Fornell-Larcker criterion have been met.

Table 3. Results of Heterotrait-Monotrait Ratio (HTMT) Data Test

Variable	Cultural Intelligence	Innovation	Intellectual Capital	Knowledge Sharing	Performance
Cultural Intelligence					
Innovation	0.533				
Intellectual Capital	0.156	0.168			
Knowledge Sharing	0.383	0.467	0.182		
Performance	0.493	0.483	0.160	0.327	

Source: Data Processed (2024)

Cheung et al. (2024) suggest that the acceptable threshold for comparing the correlation between two variables of the same construct should not exceed 0.9. As shown in Table 3, the correlation between the two variables remains below this threshold, indicating that the researcher

has successfully passed the HTMT discriminant test.

Reliability Test

The reliability test is divided into two parts: the Cronbach alpha test and the composite reliability test.

Table 3. Cronbach Alpha and Composite Reliability Data Test Results

Variabel	Cronbach's Alpha	Composite Reliability
Cultural Intelligence	0.938	0.946
Innovation	0.799	0.882
Intellectual Capital	0.963	0.967
Knowledge Sharing	0.875	0.914
Performance	0.832	0.899

Source: Data Processed (2024)

According to Hair et al. (2014), a composite reliability value is considered acceptable when it exceeds 0.7. A value below 0.7 indicates insufficient internal consistency reliability (Haji-othman, 2022). For the Cronbach's alpha, a recommended threshold of 0.5 is advised

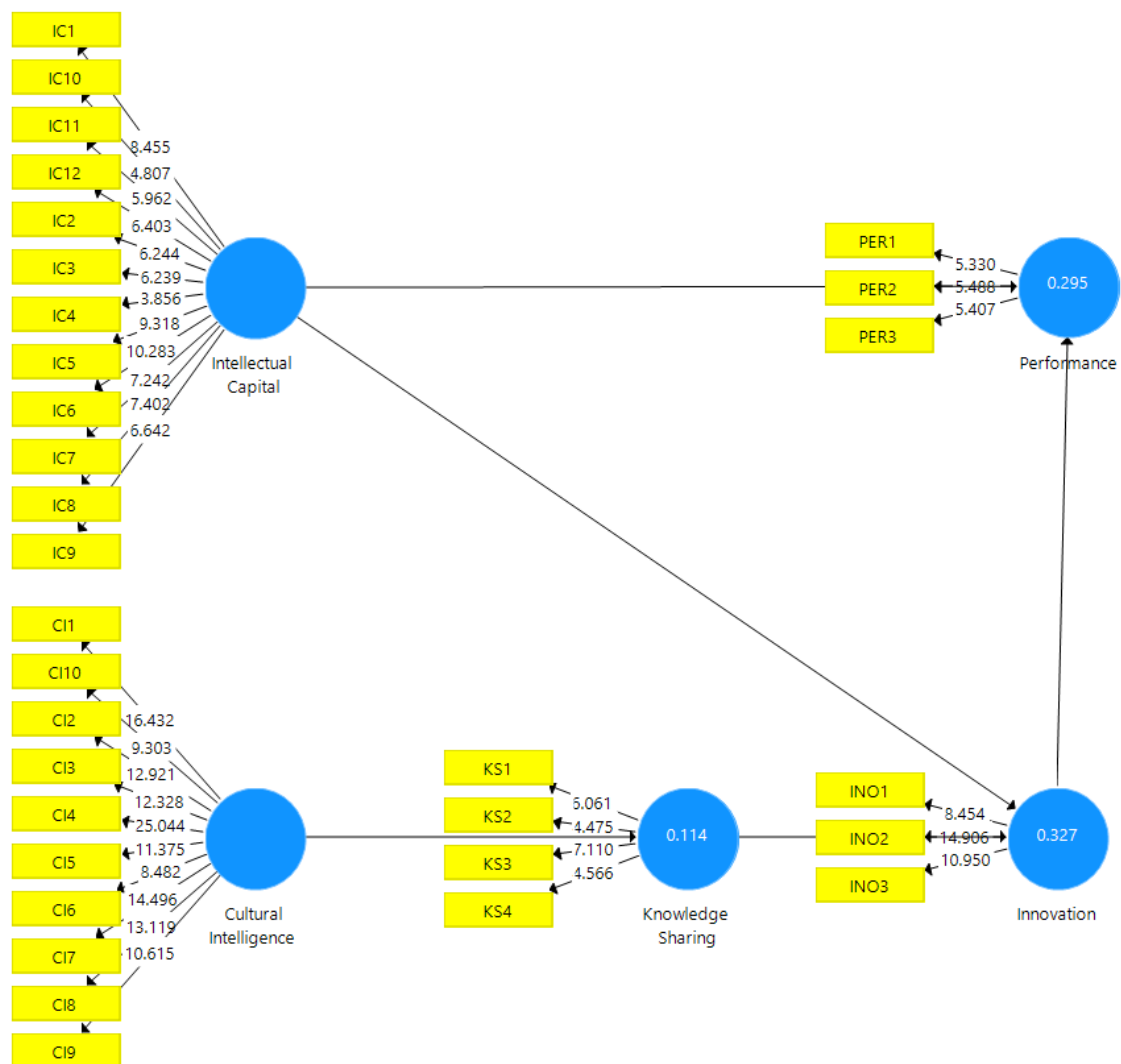
for each variable. As shown in Table 1, the tested composite reliability values exceed 0.7, and the tested Cronbach's alpha values exceed 0.5. Therefore, it can be concluded that the researcher has successfully passed the reliability test based on these results.

Inner Model

Table 1. Hypothesis Test Results

Effect	Hypothesis		T-Value	P-Value	Result
Direct	Intellectual Capital – Inovasi	H1	1.871	0.062	Insignificant
	Intellectual Capital – Performance	H2	2.365	0.018	Significant
	Cultural Intelligence – Inovasi	H3	3.237	0.001	Significant
	Cultural Intelligence – Knowledge Sharing	H4	5.458	0.000	Significant
	Knowledge Sharing – Inovasi	H5	6.238	0.000	Significant
	Innovation – Performance	H6	3.062	0.002	Significant
Indirrect effect	Cultural Intelligence – Knowledge Sharing – Inovasi	H7	3.237	0.001	Significant

Source: Data Processed (2024)



DISCUSSIONS AND CONCLUSIONS

DISCUSSION

Direct Effect

H1: The Effect of Intellectual Capital on Innovation

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. The results from research conducted using the Smart PLS application indicated a T-value of 1.871 and a P-value of 0.062 for the H1 hypothesis test. This suggests that the results of the H1 hypothesis test do not show a significant effect. These findings contrast with the research of Rideg et al. (2023) and Phonthanukitithaworn et al. (2023), which argue that intellectual capital positively influences innovation. Additionally, Najjar et al. (2020) asserts that intellectual capital focuses on the key success factors necessary for future innovation investments.

H2: The Effect of Intellectual Capital on Performance

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. Based on the results from research conducted using the Smart PLS application, the T-value for the H2 hypothesis test is 2.365, and the P-value is 0.018. This indicates that the results of the H2 hypothesis test are statistically significant. Aljuboori et al. (2022) state that to enhance company performance, managers should implement new strategies to improve their daily operations. Suripto & Gunawan (2019) explains that in a dynamic market, new companies often seek strategies and competitive advantages to ensure they can

operate effectively, survive in the long term, and avoid failure.

H3: The Effect of Cultural Intelligence on Innovation

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. The results from the research conducted using the Smart PLS application indicated a T-Value of 3.237 and a P-Value of 0.001 for the H3 hypothesis test, confirming a significant effect. Additionally, research by Humaira et al. (2023) concluded that educators and governments should support students participating in international mobility programs to enhance their cultural intelligence during their study abroad experiences. This support can substantially improve students' performance in innovative work behaviors within the academic environment. Furthermore, the findings from Hernawati & Tajib (2020) demonstrated that when companies implement employee cultural intelligence, it leads to increased innovation behavior among the workforce.

H4: The Effect of Cultural Intelligence on Knowledge Sharing

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. In research conducted using the Smart PLS application, the T-value for the H4 hypothesis test is 5.458, and the P-value is 0.000, indicating that the results of the H4 hypothesis test are statistically significant. Van Greunen (2021) notes that having general knowledge and understanding of specific cultures, including recognition of cultural similarities and differences, positively influences knowledge-sharing behavior among team members.

Additionally, the research by Ratasuk & Charoensukmongkol (2020) emphasizes that cultural intelligence is a crucial trait for individuals who wish to work effectively with people from diverse cultural backgrounds. Therefore, based on these supporting statements and research findings, it is clear that cultural intelligence significantly impacts knowledge sharing.

H5: The Effect of Knowledge Sharing on Innovation

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. Based on the research results obtained using the Smart PLS application, the T-value from the H5 hypothesis test was 6.238, and the P-value was 0.000. This indicates that the results of the H5 hypothesis test had a significant effect. These findings align with research conducted by Purba et al. (2023), Games et al. (2022) and Lee et al. (2023), which also reported a significant positive effect. The studies suggest that knowledge sharing plays a crucial role in enhancing a company's innovation, highlighting the importance of employees' knowledge and skills as they can introduce valuable new ideas appreciated by company owners.

H6: Innovation is positively related to Performance

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. In the research conducted using the Smart PLS application, the T-value from the H6 hypothesis test was 3.062, with a P-value of 0.002. This indicates that the results of the H6 hypothesis test were statistically significant. These findings are supported by Canh et al. (2019) and Wibowo &

Christiani (2020), who agree that the two variables are interconnected. As explained by Rifqi et al. (2023) and Makgopa (2020), innovation is a crucial component in the business world, as it helps enhance a company's performance and competitiveness in the market.

H7: The effect of Cultural Intelligence on Innovation mediated by Knowledge Sharing

The research we conducted adheres to the same standards as the previous study, which employs an alpha value of 5% (Rahmadi & Mutasowifin, 2021). This ensures that the t-statistic value is greater than 1.96 and the p-value is less than 0.05. The results of the research conducted using the SmartPLS application show that the T-value for the H7 hypothesis test is 3.237, and the P-value is 0.001. This indicates that the results of the H7 hypothesis test are statistically significant. Furthermore, Ratasuk & Charoensukmongkol (2020) explain that teams with high levels of cultural intelligence are more proactive in sharing knowledge, which leads to better evaluations of their innovative performance compared to teams with low levels of cultural intelligence. Similarly, research by Jinlong et al. (2021) highlights that employees with high cultural intelligence are more engaged in knowledge sharing with colleagues. This behavior ultimately fosters the creation of innovative ideas and practices that support workplace innovation.

CONCLUSION

The study's results revealed the following key findings: 1) Intellectual Capital has no effect on Innovation., 2) Intellectual Capital positively affects Performance. 3) Cultural Intelligence positively affects Innovation., 4) Cultural Intelligence positively affects Knowledge Sharing. 5) Knowledge Sharing positively affects Innovation., 6) Innovation positively affects on performance, and 7)

Cultural Intelligence affects Innovation through Knowledge Sharing as a mediating variable.

These findings confirm that both Intellectual Capital and Cultural Intelligence influence Innovation, with Knowledge Sharing serving as a significant mediator. However, the first hypothesis (H1), which examined the impact of Intellectual Capital on Innovation, did not yield a significant effect. The findings of this study align with those of Yuwono (2021), which emphasizes the importance of the government's role in supporting corporate innovation. This is particularly significant to examine, given that local governments are responsible for fostering innovation

development. Therefore, further research is necessary in this area.

LIMITATIONS

This research encompasses several key aspects. Firstly, it employs quantitative research methods in conjunction with primary research. Secondly, the researchers collected data through surveys that utilized questionnaires. Lastly, the study is grounded in existing literature, referencing previous research conducted by others.

The findings of this study indicate that Intellectual Capital and Cultural Intelligence have a significant impact on Innovation. Furthermore, Knowledge Sharing has been shown to be a strong mediator in this relationship. Additional research is necessary to achieve a more comprehensive understanding of this topic.

REFERENCE

- Alharbi, A. A. (2023). The impact of intellectual capital on firm performance: A study of firms in Saudia Arabia. *Scientific Journal for Financial and Commercial Studies and Research*, 4(1), 375–405. <https://doi.org/DOI:10.21608/cfdj.2023.258048>
- Aljuboori, Z. M., Singh, H., Haddad, H., Al-ramahi, N. M., & Ali, M. A. (2022). Intelligence capital and firm performance correlation: The mediation role of innovation capability in Malaysian manufacturing smes perspective. *Sustainability*, 14, 154. <https://doi.org/https://doi.org/10.3390/su14010154>
- Alvino, F., Vaio, A. Di, Hassan, R., & Palladino, R. (2021). Intellectual capital and sustainable development : A systematic literature review. *Journal of Intellectual Capital*, 22(1), 1469–1930. <https://doi.org/10.1108/JIC-11-2019-0259>
- Angelis, C. T. De. (2023). A model of cultural intelligence to reduce deficit talent : A comparative study between Taiwan and Vietnam. *International Journal of Sociology and Anthropology*, 15, 24–40. <https://doi.org/10.5897/IJSA2022.0954>
- Aybars, A., & Öner, M. (2022). The impact of intellectual capital on firm performance and value : An application of mvaic on firms listed in Borsa Istanbul. *Gazi Journal Of Economics & Business*, 8(1), 47–60. <https://doi.org/https://doi.org/10.30855/gjeb.2022.8.1.004>
- Canh, N. T., Liem, N. T., & Thu, P. A. (2019). The impact on innovation on the firm performance and corporate

- social responsibility of Vietnamese manufacturing firms. *Sustainability*, *11*, 3666. <https://doi.org/http://dx.doi.org/10.3390/su11133666>
- Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2024). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal of Management*, *41*, 745–783. <https://doi.org/10.1007/s10490-023-09871-y>
- Cindiyasari, S. A., Junarsin, E., Mada, U. G., & Septiani, E. (2022). Does intellectual capital affect financial performance? An empirical evidence from financial companies in Indonesia. *3rd Asia Pacific International Conference on Industrial Engineering and Operations Management*, 1888–1898. <https://doi.org/https://doi.org/10.46254/ap03.20220322>
- Dumay, J. (2020). Being critical about intellectual capital accounting in 2020: An overview. *Critical Perspectives on Accounting*, *70*, 102185. <https://doi.org/10.1016/j.cpa.2020.102185>
- Ekaningrum, Y. (2021). The Influence of intellectual capital elements on company performance. *Journal of Asian Finance, Economics and Business*, *8*(1), 257–269. <https://doi.org/10.13106/jafeb.2021.vol8.no1.257>
- Fan, P., Song, Y., Nepal, S., & Lee, H. (2020). Can cultural intelligence affect employee's innovative behavior? Evidence from Chinese migrant workers in South Korea. *Front. Psychol.*, *11*, 559246. <https://doi.org/10.3389/fpsyg.2020.559246>
- Games, D., Hidayat, T., Fhardilha, J., Fernando, Y., & Sari, D. K. (2022). The impact of trust, knowledge sharing, and affective commitment on sme innovation performance. *JOURNAL OF GOVERNANCE AND INTEGRITY (JGI)*, *5*(2), 267–274. <https://doi.org/https://doi.org/10.15282/jgi.5.2.2022.7184>
- Ghasemaghaei, M., & Calic, G. (2020). Assessing the impact of big data on firm innovation performance: Big data is not always better data. *Journal of Business Research*, *108*, 147–162. <https://doi.org/10.1016/j.jbusres.2019.09.062>
- Haji-othman, Y. (2022). Assesing reliability and validity of attitude construct using partial least squares structural equation modeling (pls-sem). *International Journal of Academic Research in Business and Social Sciences*, *12*(5)(May), 378–385. <https://doi.org/10.6007/IJARBSS/v12-i5/13289>
- Hesniati, & Erlen. (2021). The influence of intellectual capital on organizational performance. *International Journal of Economics, Business and Accounting Research (IJEBAR)*, *5*(2), 98–109. <https://jurnal.stie-aas.ac.id/index.php/IJEBAR/article/view/2402/1148>
- Hernawati, M., & Tajib, E. (2020). The influence of cultural intelligence on sustainable innovation behavior mediated by knowledge sharing and moderate by organization culture. *Journal of Social Research*, *3*, 438–455. <https://doi.org/https://doi.org/10.55324/josr.v3i2.1925>

- Humaira, F. P., Arief, N., & Putranto, R. (2023). The relationship of cultural intelligence, student's innovative work behavior and the influence of interpersonal trust: Case study of Indonesian international student mobility awards. *Journal Integration of Management Studies*, 1(2), 203–215.
<https://doi.org/10.58229/jims.v1i2.102>
- Innayah, M. N., Pratama, B. C., & Hanafi, M. M. (2020). The effect of intellectual capital towards firm performance and risk with board diversity as a moderating variable: Study in ASEAN banking firms. *Jurnal Dinamika Manajemen*, 11(1), 27–38.
<https://doi.org/10.15294/jdm.v11i1.21487>
- Jayanto, J., & Putra, M. S. (2022). The role of cross-cultural adaptability to mediate the effect of cultural intelligence on knowledge sharing of workers of expatriates in Bali. *International Journal of Business, Economics & Management*, 5(4)(October), 328–339.
<https://doi.org/https://doi.org/10.21744/ijbem.v5n4.1988>
- Jinlong, L., Wu, N., & Xiong, S. (2021). Sustainable innovation in the context of organizational cultural diversity: The role of cultural intelligence and knowledge sharing. *PLoS ONE*, 16(5), 1–22.
<https://doi.org/10.1371/journal.pone.0250878>
- Lee, C., Yeh, W.-C., & Luo, Y.-C. (2023). Knowledge sharing and innovation performance: A case study on the impact of organizational culture, structural capital, human resource management practices, and relational capital of real estate agents. *Humanit Soc Sci Commun*, 10(51), 707.
<https://doi.org/https://doi.org/10.1057/s41599-023-02185-w>
- Mahmood, T., & Shujaat, M. (2020). Technological forecasting & social change balancing innovation and exploitation in the fourth industrial revolution: Role of intellectual capital and technology absorptive capacity. *Technological Forecasting & Social Change*, 160, 120248.
<https://doi.org/https://doi.org/10.1016/j.techfore.2020.120248>
- Makgopa, S. S. (2020). Towards a conceptual model of measuring the influence of service innovation on business performance. *INTERNATIONAL JOURNAL OF MULTIDISCIPLINARITY IN BUSINESS AND SCIENCE*, 9(14), 24–32.
<https://doi.org/10.56321/ijmbs>
- Mangla, N. (2021). Working in a pandemic and post-pandemic period – cultural intelligence is the key. *International Journal of Cross Cultural Management International*, 21(1), 53–69.
<https://doi.org/10.1177/14705958211002877>
- Michna, A., & Kmiecik, R. (2020). Open-mindedness culture, knowledge-sharing, financial performance, and industry 4.0 in smes. *Sustainability*, 12, 9041.
<https://doi.org/doi:10.3390/su12219041>
- Mukaro, C., Deka, A., & Rukani, S. (2021). The influence of intellectual capital on organizational performance. *Future Business Journal*, 7(31), 1–14.
<https://doi.org/10.1186/s43093-023-00208-1>
- Najar, T., Dhaouadi, K., & Zammel, I. Ben. (2020). Intellectual capital impact on open innovation: The case

- of technology-based sectors in Tunisia. *Journal of Innovation Economics & Management*, 2, 75–106.
<https://doi.org/10.3917/jie.032.0075>
- Nasution, M. I., Fahmi, M., & Prayogi, M. A. (2020). The quality of small and medium enterprises performance using the structural equation model-part least square (sem-pls). *Journal of Physics: Conference Series*, 1477, 052052.
<https://doi.org/10.1088/1742-6596/1477/5/052052>
- Nooria, Y., Lankut, E., Alon, I., & Richter, N. F. (2020). Cultural intelligence , global mindset , and cross- cultural competencies : A systematic review using bibliometric methods. *European J. International Management*, 14(2), 210–250.
<https://doi.org/10.1504/EJIM.2020.105567>
- Phonthanukitithaworn, C., Srisathan, W. A., & Ketkaew, C. (2023). Sustainable development towards openness sme innovation: Taking advantage of. *Sustainability*, 15, 2126.
<https://doi.org/https://doi.org/10.3390/su15032126>
- Purba, J. T., Asbari, M., Hariandja, E. S., & Sudibjo, N. (2023). The mediating role of dynamic leadership towards the relationship between knowledge-sharing behaviour and innovation performance in higher education. *International Journal of Learning, Teaching and Educational Research*, 22(11), 466–485.
<https://doi.org/https://doi.org/10.26803/ijlter.22.11.24>
- Purwanto, A., & Sudargini, Y. (2022). Partial least squares structural equation modeling (pls-sem) Analysis for social and management research: A literature review. *Journal of Industrial Engineering & Management Research*, 2(4), 114–123.
<https://doi.org/https://doi.org/10.7777/jiemar.v2i4>
- Rahmadi, I. H., & Mutasowifin, A. (2021). Pengaruh intellectual capital terhadap kinerja keuangan dan nilai perusahaan (Studi kasus perusahaan sektor keuangan yang terdaftar di bursa efek Indonesia tahun 2017-2019). *Jurnal Inovasi Bisnis Dan Manajemen Indonesia*, 04(02), 279–294.
<https://doi.org/https://doi.org/10.31842/journalinobis.v4i2.183>
- Rasoolimanesh, S. M. (2022). Discriminant validity assessment in pls-sem: A comprehensive composite-based approach. *Data Analysis Perspective Journal*, 3(2)(December 2021), 1–8.
https://www.researchgate.net/publication/356961783_Discriminant_validity_assessment_in_PLS-SEM_A_comprehensive_composite-based_approach
- Ratasuk, A., & Charoensukmongkol, P. (2020). Does cultural intelligence promote cross-cultural teams ' knowledge sharing and innovation in the restaurant business? *Asia-Pacific Journal of Business*, 12(2), 183–203.
<https://doi.org/10.1108/APJBA-05-2019-0109>
- Rideg, A., Szerb, L., & Varga, A. R. (2023). *The role of intellectual capital on innovation: Evidence from Hungarian smes*. 17(2), 1–19.
<https://doi.org/https://doi.org/10.18845/te.v17i2.6695>
- Rifqi, A., Rahmat, A., Nisa, K., & Nurcholifah, S. (2023). Exploring entrepreneurial orientation's impact on innovation and academic performance in Malang city's consumer cooperatives. *Jurnal*

- Ilmiah Manajemen Dan Bisnis*, 8(2), 249–266.
<https://doi.org/https://doi.org/10.38043/jim.b.v8i2.4637>
- Shaikh, M., Diwan, M., & Kumar, R. (2021). Role of hrisk and knowledge sharing behaviour towards innovation capability: Moderating effect of organizational citizenship behaviour. *Journal of Entrepreneurship, Management, and Innovation*, 3(2), 237–257.
<https://doi.org/10.52633/jemi.v3i2.75>
- Sousa, M., Font, E., Machado, I., Mendonça, J., Rodrigues, J., & Freitas, C. (2023). Assessing cultural intelligence and its antecedents in the Portuguese higher education context. *Educ. Sci*, 13, 546.
<https://doi.org/https://doi.org/10.3390/educsci13060546> Academic
- Stoermer, S., Davies, S., & Froese, F. J. (2021). The influence of expatriate cultural intelligence on organizational embeddedness and knowledge sharing : The moderating effects of host country context. *Journal of International Business Studies*, 52(3), 432–453.
<https://doi.org/10.1057/s41267-020-00349-3>
- Suripto, S., & Gunawan, J. (2019). Intellectual capital determinant towards company's competitive advantage and performance and its impact on company's values. In *International Journal of Business, Economics and Law* (Vol. 19, Issue 5).
https://www.researchgate.net/publication/341611669_INTELLECTUAL_CAPITAL_DETERMINANT_TOWARDS_COMPANY'S_COMPETITIVE_ADVANTAGE_AND_PERFORMANCE_AND_ITS_IMPACT_ON_COMPANY'S_VALUES
- Torrentira, M. C. (2020). Online data collection as adaptation in conducting quantitative and qualitative research during the covid-19 pandemic. *European Journal of Education Studies*, 7(11), 78–87.
<https://doi.org/10.46827/ejes.v7i11.3336>
- Van Greunen, C. (2021). The influence of cultural intelligence on the intra-team knowledge-sharing behaviour of knowledge-intensive teams. *South African Journal of Information Management*, 24(1), a1567.
<https://doi.org/https://doi.org/10.4102/sajim.v24i1.1567>
- Wibowo, Y. C., & Christiani, N. (2020). The Effect of affective organizational commitment towards innovation capability and its impact to job performance in family business. *Jurnal Entrepreneur Dan Entrepreneurship*, 9(2), 143–154.
<https://api.semanticscholar.org/CorpusID:234532541>
- Xu, J., & Liu, F. (2020). The impact of intellectual capital on firm performance: A modified and extended vaic model. *Journal of Competitiveness*, 12(1), 161–176.
<https://doi.org/https://doi.org/10.7441/joc.2020.01.10> THE
- Yousaf, F., Masrek, M. N., & Bahry, F. D. S. (2022). Inter-relationship of cultural intelligence, emotional intelligence, knowledge conversion abilities, and innovation work behavior: A conceptual framework. *Environment-Behaviour Proceeding Journal*, 8(12), 147–153.
<https://doi.org/https://doi.org/10.21834/e-bpj.v8iSI12.5034> 147
- Yousaf, M. (2022). Intellectual capital and firm performance: Evidence from certified firms from the efqm excellence model. *Total Quality Management & Business Excellence*

ISSN:, 33(13–14), 1472–1488.
<https://doi.org/10.1080/14783363.2021.1972800>

Yuwono, W. (2021). Empirical analysis of intellectual capital , potential absorptive capacity , realized

absorptive capacity and cultural intelligence on innovation. *Management Science Letters*, 11, 1399–1406.

<https://doi.org/10.5267/j.msl.2020.10.034>