

Intellectual Capital's Impact on Organizational Performance Mediated by Creativity (A Study on the Small and Medium Enterprises of Manik-Manik Plumbon Gambang in Jombang, East Java)

Abdul Rohim, Deni Widyo Prasetyo, Widy Taurus Sandy, Bela Tofani
Damayanti

Management Study Program, STIE PGRI Dewantara, Jombang, Indonesia
Email: abdul@unime.ac.id

Abstract

This study aims to determine, analyze, and explain the influence of Intellectual and Creativity on Organizational Performance, the influence of Intellectual on Creativity, as well as the mediating role of Creativity in the influence of Intellectual on Organizational Performance. The research adopts a quantitative approach. The population of this study consists of 60 owners with a sample size of 60 owners of MSMEs Manik-Manik Plumbon Gambang. Data collection is done through questionnaire distribution using Likert scale. Data analysis technique involves SEM-PLS (Structural Equation Modeling Partial Least Square) with the assistance of SmartPLS application. The results of this study indicate that Intellectual Capital can enhance Organizational Performance, Intellectual Capital can enhance Creativity, Creativity can enhance Organizational Performance, and Creativity can partially mediate the relationship between Intellectual Capital and Organizational Performance.

Keywords: Creativity, Intellectual Capital, Organizational Performance, Enterprises, Business, Knowledge, Resources.

Research in the field of intellectual capital reveals that achieving organizational performance and business sustainability can only be accomplished if a company is able to manage its intellectual capital [1], [2]. In today's contemporary business environment, every organization worldwide is striving to achieve exceptional performance. Each organization needs to identify and manage the key drivers of performance more effectively and efficiently.

This research assumes that in order to sustain performance, SMEs must start by conducting internal analysis and recognizing their available resources. SMEs with strong intangible resources can gain a competitive advantage and differentiate themselves from competitors in a competitive business environment.

Small and Medium Enterprises (SMEs) play a crucial role in the Indonesian economy, as their products exhibit competitiveness in the global

market. Consequently, SMEs contribute significantly to the country's foreign exchange earnings and employment opportunities. According to Rohim [3], the SME sector in Indonesia has grown by approximately 25%, with 37% of the 51 million registered SME entrepreneurs planning business expansion and 16% intending to increase their workforce. The success of SMEs is influenced by key factors, including the knowledge, experience, and skills of both owners and employees [4].

Entrepreneurs who effectively capitalize on business opportunities, as highlighted by Rohim, can strategically position themselves to develop innovations and new products.

Barney and Clark propose the Resource-Based Theory (RBT) as an approach that can provide a competitive advantage by emphasizing the significance of a company's unique and valuable resources [5]. Empirical studies using the ResourceBased Theory (RBT) have confirmed that strategic resources significantly influence the strategies and performance of SMEs.

SMEs in Jombang District, like Manik-Manik Plumbon Gambang, are realizing that their success goes beyond physical assets. They are placing more emphasis on creativity, information systems, organizational management, and resources as key components of their knowledge assets to drive growth and innovation.

SMEs are seen in this theory as a combination of valuable resources and capabilities, with a focus on the idea that disparities in these resources and capabilities can give them an edge over their competitors. Barney and Clark [5] suggest that SMEs need to fulfill certain criteria in order to gain a competitive advantage: their resources should bring positive value, be distinct and scarce compared to their rivals, hard to replicate, and impossible to substitute with other resources.

One theory strongly supporting the recognition of intellectual models as SME assets is the Knowledge-Based Theory (KBT), which

emphasizes the importance of SME knowledge. The Resource-Based Theory (RBT) also recognizes the pervasive role of knowledge.

Given its knowledge foundation, SMEs must develop new knowledge as a competitive advantage. According to Bontis, the capacity and effectiveness of SMEs to generate, convey information, and knowledge will determine their long-term value and competitive advantage [6]. Intellectual capital, perceived as knowledge and experience in creating wealth, is identified as an intangible resource driving organizations to create performance and value for SMEs [6].

Intellectual capital plays a crucial role in enhancing organizational performance by boosting innovation capabilities [7], [8]. Additionally, intellectual capital positively influences creativity within the organization [9]. The mediating role of creativity in the relationship between intellectual capital and organizational performance is significant, as it enhances the performance benefits achieved through the deployment of intellectual capital resources [10]. This mediating effect is further supported by findings that creativity strengthens the relationship between artificial intelligence capabilities and organizational performance in the banking sector [11]. Therefore, fostering intellectual capital and creativity within the organization can lead to improved performance outcomes, highlighting the interconnectedness of these factors in driving organizational success [12].

Studies on intellectual capital have been conducted by researchers such as Rohim in Jombang District, reaching conclusions regarding the cause-and-effect relationship between business strategies, intellectual capital, and business performance for small enterprises in various industries. Another study by Wahyuni and Fivi [13] focused on manufacturing companies in Indonesia, finding that Human Capital (HC) significantly influences company performance, while Structural Capital (SC) significantly affects company performance.

Studies conducted by Firer and Wiliams in South Africa and Chen in Taiwan, utilizing the VAICTM measurement method, concluded that intellectual capital affects market value and company performance [14], [15]. However, these studies primarily used financial measures such as ROA and ROE, neglecting non-financial aspects as performance indicators.

Considering the existing research on the relationship between intellectual capital and company performance, variations in results persist, indicating a research gap. Moreover, research on creativity as a mediator in the relationship between intellectual capital and organizational performance is limited, representing an additional gap in the literature.

Despite numerous studies on continuous improvement in SMEs, as noted by Gunasekaran [16], there is a lack of indepth studies on the relative application of creative innovation in SMEs. Intellectual capital, providing structure, systems, strategies, and culture, constitutes an innovative element. Some studies, such as those by Akgun and Wu, have explored variables such as mediation and innovation [9],[10].

This research has identified a gap in understanding how intellectual capital affects organizational performance and how creativity can play a role as a mediator in that relationship. While many previous studies have explored the relationship between intellectual capital and organizational performance, the role of creativity as a mediator has not been deeply explored. The research questions posed include: how does intellectual capital influence organizational performance at

Manik-Manik Plumbon Gambang MSMEs, how does intellectual capital influence creativity, how does creativity influence organizational performance, and whether creativity mediates the influence of intellectual capital on organizational performance.

This research aims to investigate the influence of intellectual capital on organizational performance. The primary focus is to explore the extent to which intellectual capital contributes to

enhancing organizational performance in Manik-Manik Plumbon Gambang SMEs. The results of this research are expected to provide further insights into how intellectual capital and creativity interact in the context of Manik-Manik Plumbon Gambang SMEs and the extent to which creativity mediates the relationship between intellectual capital and organizational performance.

LITERATURE REVIEW

2.1 Theoretical Framework

2.1.1 Intellectual Capital

Bontis [19] identified intellectual capital as a set of intangible resources that drive organizations to create performance and corporate value. Intellectual capital refers to non-physical or intangible forms of capital associated with human knowledge and experience, as well as the technology utilized. Further, Bontis highlight that there are generally three main components of Intellectual Capital (IC): Human Capital (HC), Structural Capital (SC), and Customer Capital (CC). Human capital is defined by Bontis as a combination of genetic endowment, education, and attitudes in life and business. Structural capital comprises non-human knowledge assets, including databases, organizational structures, manual processes, strategies, habits, and everything considered by the company to have higher value than its material worth. Customer capital is the knowledge embedded in marketing channels and customer relationships that the company has built and developed throughout its business journey.

From various theories proposed by scholars, it can be concluded that intellectual capital is a crucial concept providing knowledge-based resources and describing intangible assets that, when optimally utilized, enable companies to execute their strategies effectively and efficiently.

2.1.2 Organizational Performance

Performance is the outcome achieved from the behavior of organizational members [20]. The desired outcomes of the behavior of individuals within an organization are referred to as organizational performance. The concept of organizational performance, in terms of measurement and definition, has undergone various developments. The understanding and definition of organizational performance in academic literature and several management studies are diverse, making it a persistent issue that continues to evolve [21]. According to Luthans [22], performance is the quantity and quality of work results produced or services provided by an individual performing tasks within the organization.

In this study, organizational performance focuses on the management of intangible assets (such as customer relationships, innovative products and services, and responsive operational processes) that are non-financial, rather than managing tangible assets (such as fixed assets and inventory) [23]. Based on these perspectives, it is indicated that achieving optimal organizational performance involves managing and utilizing organizational resources effectively.

2.1.3 Creativity

According to Robert W. Olson, creativity is the ability to create or innovate. The definition of creativity is differentiated into four dimensions: person, process, product, and press. Rhodes refers to them as "the four p's of creativity." Based on Guilford's factor analysis, five characteristics are identified as indicative of creative thinking ability: fluency, flexibility, originality, elaboration, and redefinition.

Amabile asserts that a product is considered creative if, according to the judgment of an expert or observer with authority in that field, it is deemed creative. Thus, creativity is the quality of a product or response evaluated as creative by an expert observer. From the various theories presented by experts, it can be concluded that creativity is an ability to create or produce

genuinely different or relatively new results compared to what has existed before.

2.2 Relationship Between Variables

2.2.1 Relationship of Intellectual Capital to Organizational Performance

Intellectual capital is not a management technique but rather a fundamental approach to organizing asset resources within an organization [24]. Intellectual capital is believed to play a crucial role in enhancing the value of a company and the performance of the organization. Companies that can efficiently leverage their intellectual capital will experience an increase in market value, consequently elevating their overall performance.

2.2.2 Relationship of Intellectual Capital to Creativity

In the presence of heightened competition and increased consumer demand, corporate entities may be compelled to meet customer needs in more inventive ways. A company's approach to challenges posed by competitors involves placing greater emphasis on knowledge, application, technology, and creativity, while incorporating intellectual capital into its strategic plans to expand the organizational capacity for creative endeavors. One of the most significant factors in the success of creativity is an individual's intellectual capital, encompassing skills, uniqueness, and years of experience [25]. Therefore, intellectual capital is a fundamental driver of new product development.

2.2.3 Relationship of Creativity to Organizational Performance

Creativity is the key to a company's success, as it enables the creation of a competitive advantage in the market. The expectations for every company include cost reduction, increased productivity in both supply-chain and demand-chain activities. Thus, with creativity, a well-structured process will undoubtedly yield a product with superior value, uniqueness, and the ability to streamline work processes through the use of more advanced technology. This aids in meeting consumer demands and helps the

company achieve economies of scale or scope for lower prices and costs.

2.3 Conceptual Framework

From the relationships among the variables mentioned above, it can be elucidated using a conceptual framework, wherein the variables are the influence of work motivation and work discipline on employee performance.

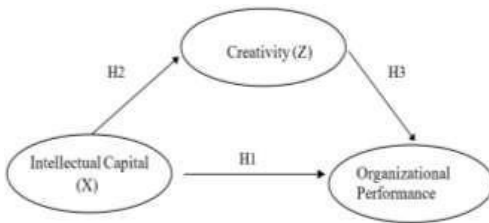


Figure 1. Conceptual Framework

2.4 Hypothesis

Based on the framework outlined above, several hypotheses can be formulated as follows:

H1: It is hypothesized that intellectual capital has a positive effect on company organization.

H2: It is hypothesized that intellectual capital has a positive effect on creativity.

H3: It is hypothesized that creativity has a positive effect on organizational performance.

Methodology

The study utilizes a verifacative research method with a quantitative approach, along with an explanatory research method that explores the relationship between variables X and Y through variable Z. The main focus is on understanding how intellectual capital impacts organizational performance through creativity. Data is gathered using the Likert scale, observation, interviews, questionnaires, and documentation. The analysis is done using the Partial Least Squares (PLS) method in two stages: the measurement model (outer) and the structural model (inner).

This research design provides a systematic and rigorous framework for investigating the interconnections between intellectual capital, creativity, and organizational performance. The

utilization of diverse data collection methods and the application of the PLS method contribute to the robustness and reliability of the study's findings.

This research was conducted at Manik-Manik Plumbon Gombang SMEs located in Jombang, East Java. We chose this location because it has significant potential in developing intellectual capital and creativity, and is relevant to evaluating organizational performance in the context of SMEs.

In this study, the sampling plan utilizes the purposive sampling technique. The selected sample consists of owners and employees of Manik-Manik Plumbon Gombang SMEs who have more than three years of work experience. A total of 60 respondents were sampled, comprising 37 males and 23 females..

Data collection procedures are carried out through various methods, including observation, interviews, questionnaires, and documentation. Questionnaires utilize the Likert scale to measure the variables under investigation, such as intellectual capital, creativity, and organizational performance. The collected data is then processed using the Partial Least Squares (PLS) method.

The research instrument utilized in this study was a questionnaire that underwent rigorous validity and reliability testing. The validity was assessed through the Corrected ItemTotal Correlation method using SPSS, while the reliability was evaluated using Cronbach's Alpha coefficient.

In this context, the analysis of the Product Life Cycle (PLC) encompasses the evaluation of the intellectual capital life cycle from acquisition, development, to implementation in SMEs. This process involves identifying intellectual resources, analyzing environmental, social, and economic impacts, as well as assessing the sustainability of using intellectual capital to enhance organizational performance.

The data collected was analyzed using the Partial Least Squares (PLS) method, involving two main stages: measurement model (outer

model) and structural model (inner model). The measurement model is used to test the validity and reliability of constructs, while the structural model is used to test the relationships between the variables under study.

Validation testing is conducted to ensure that the research instrument is able to accurately measure the intended variables. This test is carried out using Corrected Item-Total Correlation, where an item is considered valid if it has a correlation value above 0.6. Reliability is tested using Cronbach's Alpha, with a value above 0.7 considered reliable. Hypothesis testing is done using the PLS method. Descriptive analysis is performed to depict the characteristics of respondents and research variables.

Results

4.1 Result

4.1.1 Descriptive Characteristics of Respondents

A. Gender

Based on the gender of the respondents, it is discerned that among the owners of Manik-Manik Plumbon Gambang SMEs, 37 individuals (61.7%) are male, while the number of female owners is 23 individuals, accounting for 38.3%. This data indicates that the majority of Manik-Manik Plumbon Gambang SMEs owners are male.

B. Age

Employees with work experience exceeding 3 years constitute 79.41%, totaling 27 individuals. This illustrates those employees at UD. Dua Putra Sumobito, on average, possess a considerable amount of work experience, indicating a good understanding of their work and performance, expected to positively impact task completion.

C. Educational Level

Employees at UD. Dua Putra Sumobito reveal that 20 respondents, or 58.82%, have completed their last education at the high school level.

D. Business Duration

From the conducted research, it is found that businesses with a duration of 5-10 years have 49 owners, constituting 81.7%, while businesses with a duration of 10-20 years have 11 owners, representing 18.3%.

4.1.2 Validity Test

Validity refers to the degree to which a test instrument is able to accurately assess the intended construct. A measurement is deemed valid when it effectively captures data pertaining to the variables under investigation. In the present research, the validity of the instrument is assessed through the utilization of the Corrected Item-Total Correlation method, with the support of SPSS. The decision-making criteria employed in this method are as follows:

- Value > indicates the item is valid.
- Value < indicates the item is not valid.

Table 1. Validity Test Result

Variable	No Item	r-statistic	Standard Valid	Description
Intellectual Capital (X)	X1.1	0,655	0,3	Valid
	X1.2	0,763	0,3	Valid
	X1.3	0,910	0,3	Valid
	X1.4	0,753	0,3	Valid
	X1.5	0,794	0,3	Valid
	X1.6	0,636	0,3	Valid
Creativity (Z)	Z1.1	0,682	0,3	Valid
	Z1.2	0,704	0,3	Valid
	Z1.3	0,536	0,3	Valid
	Z1.4	0,570	0,3	Valid
	Z1.5	0,700	0,3	Valid
	Z1.6	0,416	0,3	Valid
Organization Performance (Y)	Y1.1	0,814	0,3	Valid
	Y1.2	0,866	0,3	Valid
	Y1.3	0,577	0,3	Valid
	Y1.4	0,808	0,3	Valid

Source: Prepared by the author, (2023)

Based on the table 1, it is evident that the correlation between each statement item and the total score of the overall variable shows significant results, indicating that the computed correlation coefficient (r) is >0.3. Thus, it can be concluded that all questionnaire items are deemed valid.

4.1.3 Reliability Test

The purpose of conducting a reliability test is to determine if participants have provided consistent answers, thereby ensuring the credibility of their responses. In order to evaluate the reliability of the research instrument, the Cronbach's Alpha formula is utilized. A construct or variable is deemed reliable if it produces a Cronbach's Alpha value greater than 0.60.

Table 2. Reliability Test Result

Variables	Cronbach Alpha Value	Standard	Description
Intellectual Capital (X1)	0,913	0,6	Reliable
Creativity (Z)	0,804	0,6	Reliable
Organization Performance (Y)	0,889	0,6	Reliable

Source: Prepared by the author, (2023)

4.1.4 Variable Answer Frequency Data (Descriptive Analysis)

According to the data collected, it is evident that the evaluation of the intellectual capital factor (X) by the participants resulted in an average score of 3.10, placing it in the "sufficient" range. This suggests that the proprietors of Manik-Manik Plumbon Gambang SMEs exhibit a commendable level of intellectual capital.

Table 3. Frequency of Answers

No	Variable	Mean	Category
1	Intellectual Capital (X1)	3,10	sufficient
2	Creativity (Z)	3,15	sufficient
3	Organization Performance (Y)	3,29	sufficient

Source: Prepared by the author, (2023)

Furthermore, the data reveals that the respondents' assessment of organizational performance variable (Y) yields an average score of 3.15, categorizing it as "sufficient." This suggests that the owners of Manik-Manik Plumbon Gambang SMEs exhibit a sufficiently good organizational performance.

Lastly, based on the acquired data, the respondents' evaluation of the creativity variable (Z) indicates an average total score of 3.29, placing it in the "sufficient" category. This signifies that the owners of Manik-Manik Plumbon Gambang SMEs demonstrate a sufficiently high level of creativity.

4.1.5 SEM-PLS Analysis

A. Outer Model

Full names of authors are required. The middle name can be abbreviated.

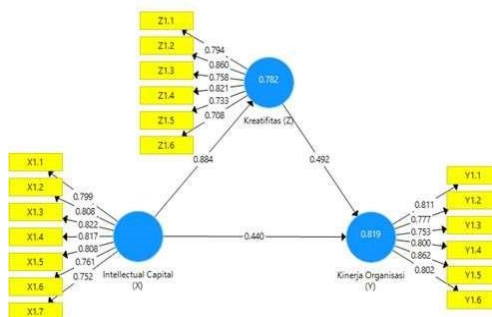


Figure 2. Outer Model Data

Based on the results of the outer model test, as indicated in Figure 2, it is observed that out of the 19 items derived from the overall variables, 10 items exhibit values >0.7 .

B. Convergent Validity

Table 4. Convergent Validity Result

		Loading Faktor		
item	Intellectual Capital	Creativity	Organizational Performance	Description
X1.1	0,799			Valid
X1.2	0,808			Valid
X1.3	0,822			Valid
X1.4	0,817			Valid
X1.5	0,868			Valid
X1.6	0,761			Valid
X1.7	0,752			Valid
Z1.1		0,794		Valid
Z1.2		0,800		Valid
Z1.3		0,758		Valid
Z1.4		0,821		Valid
Z1.5		0,733		Valid

Z1.6		0,706		Valid
Y1.1			0,811	Valid
Y1.2			0,777	Valid
Y1.3			0,753	Valid
Y1.4			0,800	Valid
Y1.5			0,862	Valid
Y1.6			0,802	Valid

Convergent validity can be assessed by examining the magnitude of the outer loading parameter, where values > 0.7 are considered indicative. Based on the results in the above table, it is evident that the loading factors for all questionnaire items are above 0.7. Therefore, all questionnaire items are deemed valid.

C. Discriminant Validity

Discriminant validity can also be determined by comparing the correlation between latent variables (in the diagonal column, denoted in parentheses) to be higher than the correlation between latent variables in the same column (above or below it).

Table 5. Discriminant Validity Result

	Intellectual Capital (X)	Creativity (Z)	Organization Performance (Y)
Intellectual Capital (X1)	(0.884)		
Creativity (Z)	0.796	0.881	
Organization Performance (Y)	0.876	0.781	0.802

Source: Prepared by the author, (2023)

Based on the table above, it is evident that each square root (the numbers within parentheses) is higher than the correlation between variables in columns other than the diagonal.

Therefore, discriminant validity is fulfilled.

D. Internal Latent Structure

The internal latent consistency can be measured in several ways, namely by examining the values of Cronbach's alpha, Average Variance Extracted (AVE), and Composite

Reliability.

Table 6. Values of Average Variance Extracted and Composite Reliability

Variable	Cronbach's alpha	Composite Reliability	AVE
Intellectual Capital (X1)	0,903	0,923	0,633
Creativity (Z)	0,888	0,915	0,643
Organization Performance (Y)	0,871	0,903	0,609

Source: Prepared by the author, (2023)

Based on the table 6, it can be determined that the composite reliability value is greater than 0.7, and the average variance extracted (AVE) is above 0.5. Therefore, it can be concluded that the overall items can be considered reliable.

E. Inner Model

1) Predictive Relevance Test

Table 7. Predictive Relevance Values

	RMSE	MAE	Predictive Q ²
Creativity (Z)	0,516	0,392	0,757
Organizational Performance (Y)	0,871	0,903	0,747

Source: Prepared by the author, (2023)

The value of predictive relevance Q² indicates how well the model can predict the observed values. According to the condition, if the Q² value > 0, it means that the model can be considered to have predictive relevance, while if the Q² value < 0, it means that the model does not show any predictive relevance. Based on the results in the table above, it can be determined that the values for the Creativity variable indicate a strong model, and similarly, for the Organizational Performance variable, it indicates a strong model. Additionally, it can be concluded that these variables have predictive relevance because the Q² values are > 0.

2) Determinant Coefficient Test

Table 8. Results of R Square Values

	R Square	R Square Adjusted
Creativity (Z)	0,782	0,778
Organizational Performance (Y)	0,819	0,812

Based on the table above, the R-square value for the Creativity variable is 0.782, which means that the Creativity variable is influenced by the Intellectual Capital variable by 78.2 percent, while the remaining 21.8 percent is influenced by other variables.

Furthermore, the R-square value for the Organizational Performance variable is 0.819, indicating that Organizational Performance can be explained by the Intellectual Capital and Creativity variables by 81.9 percent, while the remaining 18.1 percent is influenced by other variables not included in this study.

3) Hypothesis Test Results

Table 9. Hypothesis Path Coefficients Values

	Original Sample	T statistics	P values
Intellectual Capital -> Organizational Performance	0.440	3.767	0.000
Intellectual Capital -> Creativity	0.884	38.057	0.000
Creativity -> Organizational Performance	0.492	4.794	0.000

Source: Prepared by the author, (2023)

The research findings indicate that intellectual capital has a significant influence on organizational performance, with a t-statistic value of 3.767 and a p-value of 0.000, demonstrating a strong positive relationship between these two variables. This means that an increase in intellectual capital in ManikManik Plumbon Gombang SMEs can directly enhance organizational performance. Additionally, the study also found that intellectual capital has a significant influence on creativity, with a t-statistic value of 38.057 and a p-value of 0.000. These results confirm that intellectual capital not only improves organizational performance directly but also through the enhancement of creativity. Creativity itself was also found to have a significant influence on organizational performance, with a t-statistic value of 4.794 and

a p-value of 0.000. This indicates that creativity is an important mediator that can strengthen the influence of intellectual capital on organizational performance.

4.2. Discussion

4.2.1. The Influence of Intellectual Capital on Organizational Performance

Based on the aforementioned findings, it is clear that Intellectual Capital has a significant impact on Organizational Performance. This impact suggests that when an organization possesses a strong Intellectual Capital, it leads to improved performance at the organizational level. This correlation is consistent with the theory proposed by Edvidson, which emphasizes the crucial role of intellectual capital in enhancing the value of companies and organizational entities. The effective utilization of intellectual capital is believed to enhance market value and overall corporate performance. The descriptive analysis classifies the Intellectual Capital variable as sufficient. For Micro, Small, and Medium Enterprises (MSMEs) like Manik-Manik Plumbon Gombang, it is crucial to establish primary goals in order to ensure smooth operations and continuity, effectively achieving targets and objectives with satisfactory production outcomes. This study aligns with previous research [26], which further supporting the strong relationship between Intellectual Capital and Organizational Performance .

The findings of this study are in line with the research results [8], [11], [27]. Research conducted in Ecuador highlights the significant relationship between intellectual capital and organizational performance, with intrinsic motivation partially mediating this relationship [8]. Similarly, a study in the United Arab Emirates emphasizes that intellectual capital significantly influences organizational performance in social service departments, indicating the importance for growth and development [27]. Furthermore, research in a Jordanian telecommunications company reveals that while human capital may not directly affect

organizational performance, customer capital and business intelligence play a crucial role in enhancing the influence of intellectual capital on organizational performance [11]. These findings collectively underscore the substantial impact of intellectual capital on organizational performance, emphasizing the need for organizations to invest in and effectively leverage their intellectual resources.

Agostini & Filippini [28] highlighted the importance of intangible resources over tangible resources for SMEs to achieve better performance and success. Intellectual capital helps SMEs leverage their intangible and tangible resources in a way that is suitable to gain a competitive advantage in the market [29], [30]. This indicates that intellectual capital is clearly more crucial than tangible assets, and currently, sustainability and the ability to survive in the modern knowledge economy increasingly stem from the exploitation of intellectual capital. Furthermore, other literature has supported that intellectual capital has a positive relationship with the performance and success of SMEs [31]–[33].

4.2.2. The Influence of Intellectual Capital on Creativity

The results of the examination indicate a significant influence of Intellectual Capital on Creativity. This suggests that a favourable Intellectual Capital within an organization corresponds to enhanced creativity, consistent with previous research result [34]. One of the pivotal factors contributing to creative success is an individual's intellectual capital, encompassing skills, uniqueness, and accumulated experience over the years. Descriptive analysis categorizes the Creativity variable as adequate. Therefore, intellectual capital serves as a fundamental driver in the development of innovative products. This study is in line with prior research by Almutirat, illustrating the impact of intellectual capital on creativity, contributing to the quality of work and fostering an environment conducive to innovation.

Research has shown that intellectual capital, including human, structural, and relational capital, positively influences creativity and innovation performance [35]–[38]. Specifically, the presence of intellectual capital components such as knowledge management processes and individual absorptive capacity enhances creative work behavior and innovation outcomes [39]. Furthermore, the relationship between intellectual capital and innovation is further strengthened by factors such as culture, trust, and entrepreneurial orientation, which act as mediators or moderators in this dynamic process. Therefore, organizations that effectively manage and leverage their intellectual capital are more likely to foster a culture of creativity and successfully drive innovation initiatives.

4.2.3. The Influence of Creativity on Organizational Performance

The results also demonstrate a significant influence of Intellectual Capital on Organizational Performance, indicating that organizational creativity positively correlates with organizational performance. Creativity is a key success factor for companies, enabling the creation of competitive advantages in competition with rivals. The expectation for every company is to reduce costs, enhance productivity in supply-chain and demand-chain activities. Hence, creativity, when applied, streamlines processes, leading to the creation of unique, high-value products and a reduction in work time through the incorporation of more advanced technologies to meet consumer demands. Creativity influences organizations by empowering entrepreneurs to enhance their organizational performance by developing products aligned with market demands or incorporating new technologies to introduce and market products on a broader scale.

Research from various contexts supports the idea that Intellectual Capital significantly influences Organizational Performance. Studies in higher education institutions in Ecuador [8], social service departments in Sharjah, UAE [27], and high-tech companies in Malaysia [7] all

demonstrate a positive relationship between Intellectual Capital and Organizational Performance. Furthermore, research in the hospitality industry in Nepal [9] highlights how organizational creativity, which can be nurtured by Intellectual Capital, correlates positively with Organizational Performance. These findings collectively emphasize the importance of investing in Intellectual Capital to enhance creativity within organizations, ultimately leading to improved performance outcomes. By effectively leveraging Intellectual Capital, organizations can cultivate a culture of innovation and creativity that drives success and competitiveness in today's dynamic business environment.

CONCLUSIONS

Based on the research findings, it is concluded that there is empirical evidence indicating that Intellectual Capital significantly influences the Organizational Performance of Micro, Small, and Medium Enterprises (MSMEs) like ManikManik Plumbon Gambang. Higher Intellectual Capital enhances organizational performance, while lower Intellectual Capital leads to decreased performance. Additionally, the study reveals that Intellectual Capital also affects Creativity within the context of these MSMEs. A higher level of Intellectual Capital corresponds to increased creativity, while lower Intellectual Capital results in decreased creativity.

The limitations in sampling, the Holistic Life Cycle (HLC) method, and the case study approach in this research can impact the results and generalization of findings. In terms of sampling, the study utilizes purposive sampling technique which may not fully represent the larger population as the sample is based on specific criteria that may not reflect the variations within the overall population. Additionally, the relatively small sample size of only 60 respondents can restrict the ability to

make strong generalizations about the research findings.

Although the HLC method offers a comprehensive analysis, its implementation can be quite complex. This method requires highly detailed and complete data to evaluate the environmental, social, and economic impacts, which can be challenging to gather, especially for small and medium-sized enterprises (SMEs) that may have limited resources and time. Additionally, implementing the HLC method requires significant resources, which may not always be available on a SMEs scale.

Case study approach also has limitations, especially in terms of generalizing findings. Focusing on a specific case or context, such as the Manik-Manik Plumbon Gambang MSMEs, may not be fully applicable to other MSMEs with different contexts. Case studies are also susceptible to subjective biases, both from researchers and respondents, which can affect the validity of the findings. Therefore, while this research provides valuable insights, these limitations need to be considered in interpreting the results and applying them to a broader context.

In terms of recommendations, addressing the specific areas of Intellectual Capital related to digital marketing and emphasizing meaningful product production is crucial. MSMEs like Manik-Manik Plumbon Gambang are advised to conduct specialized training in digital marketing and focus on producing culturally significant products. Evaluating customer satisfaction and consistently striving for excellence in service provision is essential for optimizing Organizational Performance. Lastly, for future research, this study can serve as a reference point, and researchers are encouraged to explore additional variables to deepen the understanding of the relationships between Intellectual Capital, Creativity, and

Organizational Performance in the context of MSMEs

CONFLICT OF INTERSET

The authors declares that there is no conflict
of interest.

FUNDINGS

None

WORKS CITED

- J. I. Criado and J. R. Gil-Garcia, "Creating public value through smart technologies and strategies: From digital services to artificial intelligence and beyond," *Int. J. Public Sect. Manag.*, vol. 32, no. 5, pp. 438- 450, 2019.
- M. Zhang, Y. Qi, and H. Guo, "Impacts of intellectual capital on process innovation and mass customisation capability: direct and mediating effects," *Int. J. Prod. Res.*, vol. 55, no. 23, pp. 6971-6983, 2017.
- A. Rohim, U. Salim, M. Sudarma, and Sumiati, "The Influence of Intellectual Capital and Business Strategy Toward Innovation Capability and Firms Performance the Case of Small Management Enterprise Jombang Regency East Java Indonesia," *Int. Businnes Manag.*, vol. 11, no. 6, pp. 1199-1212, 2017, doi: 10.36478/ibm.2017.1199.1212.
- T. W. Y. Man, T. Lau, and K. F. Chan, "The competitiveness of small and medium enterprises: A conceptualization with focus on entrepreneurial competencies," *J. Bus. Ventur.*, vol. 17, no. 2, pp. 123- 142, 2002.
- J. B. Barney and D. N. Clark, *Resource-based theory: Creating and sustaining competitive advantage*. Oup Oxford, 2007.
- N. Bontis, W. C. C. Keow, and S. Richardson, "Intellectual capital and business performance in Malaysian industries," *J. Intellect. Cap.*, vol. 1, no. 1, pp. 85-100, 2000.
- O. Fajimolu, P. Okonji, and C. Onyemaobi, "The role of organizational creativity between artificial intelligence capability and organizational performance," *Bus. Entrep. Rev.*, vol. 23, no. 1, pp. 157-174, 2023.
- P. A. Uriguen Aguirre and B. E. Avolio Alecchi, "Impact of intellectual capital on organizational performance through intrinsic motivation in higher education institutions," *Cogent Bus. Manag.*, vol. 10, no. 1, p. 2189772, 2023.
- M. Shabbir, M. S. Mubarik, and Q. Jalil, "Interplay of intellectual capital and digital tranformation to enhance innovation performance," *Br. J. Manag. Mark. Stud*, vol. 6, no. 1, pp. 113-126, 2023.
- H. A. Javed, N. A. Khan, S. Michalk, N. U. Khan, and M. Kamran, "High-performance work system and innovation capabilities: The mediating role of intellectual capital," *Adm. Sci.*, vol. 13, no. 1, p. 23, 2023.
- A. H. Arifin, "Intellectual capital terhadap capital gain melalui corporate performance," *J. LENTERA BISNIS*, vol. 12, no. 1, pp. 148-164, 2023.
- O. A. Arningsih and K. Azzahra, "The Influence Of Intellectual Capital And Sales Growth On The Company's Financial Performance:(Study on the Basic Chemical Industry Sub-Sector Listed on the IDX in 2016-2020)," *J. Manag. Accounting, Gen. Financ. Int. Econ. Issues*, vol. 1, no. 4, pp. 177-196, 2022.
- L. Wahyuni and F. Anggraini, "Peran Inovasi Teknologi Sebagai Mediasi Hubungan Antara Intellectual Capital Dan Kinerja Perusahaan (Studi Empiris Perusahaan Manufaktur di Indonesia)," *Abstr. Undergrad. Res. Fac. Econ. Bung Hatta Univ.*, vol. 19, no. 1, 2021.
- S. Firer and S. M. Williams, "Intellectual capital and traditional measures of corporate performance," *J. Intellect. Cap.*, vol. 4, no. 3, pp. 348-360, 2003.
- M. Chen, S. Cheng, and Y. Hwang, "An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance," *J. Intellect. Cap.*, vol. 6, no. 2, pp. 159-176, 2005.
- A. Gunasekaran, P. Okko, T. Martikainen, and P. YliOlli, "Improving productivity and quality in small and medium enterprises: cases and analysis," *Int. Small Bus. J.*, vol. 15, no. 1, pp. 59-72, 1996.
- A. E. Akgün, I. Koçoglu, H. Keskin, H. Ince, and S. Z. Imamoglu, "The relationship between intellectual capital, innovation and competitive advantage," in *European Conference on Innovation and*

Entrepreneurship, 2010, p. 42.

- H. Zheng, D. Li, J. Wu, and Y. Xu, "The role of multidimensional social capital in crowdfunding: A comparative study in China and US," *Inf. Manag.*, vol. 51, no. 4, pp. 488-496, 2014.
- N. Bontis, "Intellectual capital: an exploratory study that develops measures and models," *Manag. Decis.*, vol. 36, no. 2, pp. 63-76, 1998.
- B. Gibson, "Reappraising the Link Between 'Best Practice' and Performance in Small Firms: A Research Note," *Small Enterpr. Res.*, vol. 5, no. 2, pp. 61-67, 1997.
- J. Barney, "Firm resources and sustained competitive advantage," *J. Manage.*, vol. 17, no. 1, pp. 99-120, 1991.
- F. Luthans, J. B. Avey, B. J. Avolio, S. M. Norman, and G. M. Combs, "Psychological capital development: toward a micro-intervention," *J. Organ. Behav. Int. J. Ind. Occup. Organ. Psychol. Behav.*, vol. 27, no. 3, pp. 387-393, 2006.
- M. Slavković and V. Babić, "Knowledge management, innovativeness, and organizational performance: Evidence from Serbia," *Econ. Ann.*, vol. 58, no. 199, pp. 85-107, 2013.
- W. A. Bhatti and A. Zaheer, "The role of intellectual capital in creating and adding value to organizational performance: A conceptual analysis," *Electron. J. Knowl. Manag.*, vol. 12, no. 3, pp. pp185-192, 2014.
- Ö. Altındağ, Ö. Fidanbaş, and G. İrdan, "The impact of intellectual capital on innovation: A literature study," *Bus. Manag. Dyn.*, vol. 8, no. 12, 2019.
- A. H. Ozgun, M. Tarim, D. Delen, and S. Zaim, "Social capital and organizational performance: The mediating role of innovation activities and intellectual capital," *Healthc. Anal.*, vol. 2, 2022, doi: 10.1016/j.health.2022.100046.
- A. Aldarmaki, "Intellectual Capital and Organizational Performance Within Sharjah Social Services Department," *Asian J. Res. Bus. Manag.*, vol. 5, no. 1, pp. 89-96, 2023.
- L. Agostini and R. Filippini, "Organizational and managerial challenges in the path toward Industry 4.0," *Eur. J. Innov. Manag.*, vol. 22, no. 3, pp. 406- 421, 2019.
- F. Sardo and Z. Serrasqueiro, "On the relationship between intellectual capital and service SME survival and growth: A dynamic panel data analysis," *Int. J. Learn. Intellect. Cap.*, vol. 16, no. 3, pp. 213-238, 2019.
- G. Secundo, M. Massaro, J. Dumay, and C. Bagnoli, "Intellectual capital management in the fourth stage of IC research: A critical case study in university settings," *J. Intellect. Cap.*, vol. 19, no. 1, pp. 157- 177, 2018.
- Y. Khan and M. Terziovski, "The effects of intellectual capital on performance in Australian small and medium enterprises (SMEs)," *Aust. New Zeal. Acad. Manag.*, pp. 1-29, 2014.
- W. C. McDowell, W. O. Peake, L. Coder, and M. L. Harris, "Building small firm performance through intellectual capital development: Exploring innovation as the 'black box,'" *J. Bus. Res.*, vol. 88, pp. 321-327, 2018.
- M. C. Demartini and V. Beretta, "Intellectual capital and SMEs' performance: A structured literature review," *J. Small Bus. Manag.*, vol. 58, no. 2, pp. 288- 332, 2020.
- T. Shabiya, "Pengaruh Intellectual Capital dan Inovasi terhadap Kinerja Keuangan pada UMKM di Kota Semarang," *Universitas Islam Sultan Agung*, 2022.
- R. C. Agostineto, T. C. Soares, G. Mazon, and S. V. Soares, "Influence of intellectual capital and individual absorptive capacity on innovation performance," *Rev. Adm. da UFSM*, vol. 15, pp. 270- 289, 2022.
- M. A. Ali, N. Hussin, H. Haddad, R. Al-Araj, and I. A. Abed, "A multidimensional view of intellectual capital: The impact on innovation performance," *J. Open Innov. Technol. Mark. Complex.*, vol. 7, no. 4, p. 216, 2021.
- A. M. A. Ausat, A. Widayani, I. Rachmawati, N. Latifah, and S. Suherlan, "The effect of intellectual capital and innovative work behavior on business performance," *J. Econ. Business, Account. Ventur.*, vol. 24, no. 3, pp. 363-378, 2022.
- M. Buenechea-Elberdin, J. Sáenz, and A. Kianto, "Intellectual capital-driven innovation: the influence of servitization degree," *R&D Manag.*, 2023.
- Q. Yu, S. Aslam, M. Murad, W. Jiatong, and N. Syed, "The impact of knowledge management process and intellectual capital on entrepreneurial orientation and innovation," *Front. Psychol.*, vol. 13, p. 772668, 2022.