Research Article

Organizational Innovation as a Mediation of the Influence of Innovation Capability on Organizational Performance in Manufacturing Companies in East Java

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Abstract.

This research aims to analyze the influence of innovation capabilities on organizational innovation, analyze the influence of innovation capabilities on organizational performance, analyze the influence of organizational innovation on organizational performance, and analyze the influence of innovation capabilities on organizational performance through organizational innovation. The sample in this study involved 140 respondents. Sampling in this study was carried out using a simple random sampling technique. The analyses techniques used were descriptive analysis and structural equation modeling (SEM) analysis. The results of the analyses show that innovation capability influences organizational innovation. Innovation ability influences organizational performance. Organizational innovation influences organizational performance. Organizational innovation as a mediator of the influence of innovation capability on organizational performance. Implementing effective innovation capabilities and promoting a culture of innovation in organizations can be an effective strategy for improving organizational performance. In a competitive business era, the involvement of high-quality human resources and the ability to innovate is the key to achieving competitive advantage and sustainable growth.

Keywords: innovation capability, organizational innovation, organizational performance

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1. Introduction

Organizational performance is important as the final result of all organizational activities because it can be used to evaluate the level of organizational capability, the success of the organization's work processes, and whether they meet expectations or not. Organizational performance is influenced by many factors, including innovation capability. Innovation capabilities must be built to create dynamic, innovative, and high-performance organizations, and can produce competitive products in local and global markets. Riyadi and Yasa [1], Rediyono and Ujito [2] prove that innovation capability influences organizational performance.

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The innovation capability factor is mediated by organizational innovation to be able to produce quality and competitive products in the market. On the other hand, investors who invest in manufacturing companies also want the best returns, so companies are also required to perform to satisfy investors. This fact is important to research regarding the symptoms of the influence of innovation capabilities on organizational performance.

The Central Statistics Agency (BPS) recorded that the export value of East Java Province in April 2023 reached 1.34 billion US dollars. This value decreased by 27.97 percent compared to March 2023 and decreased by 38.82 percent compared to April 2022. Of the total export performance achievements, 97.62 percent were non-oil and gas sector exports. "Specifically for non-oil and gas exports alone, in April 2023 the realization reached US\$1.31 billion or down 37.19 percent compared to April 2022 which realized US\$2.09 billion, or also down 26.07 percent compared to March 2023 which reached US\$1.78 billion," explained Umar in his presentation on BRS export-import [3].

Several companies that carry out innovation at medium and low levels are able to carry out efficiency to continue to survive and compete in the export market because product prices are still superior in the global market. The decline in exports also occurred in vegetable oils, wooden goods (-6.52%), paperboard (-5.56%), organic chemicals (-52.50%), processed fish (-12.59%). The ten main destination countries for East Java's exports are Japan, United States, Taiwan, China, Malaysia, Singapore, Thailand, India, South Korea and the Netherlands. Companies that are able to compete in several cases have attempted to carry out product innovation and process innovation, namely by replacing equipment and machines with new ones partially or totally (incremental, distinctive and breakthrough innovation), for example in baby set and textile companies. Replacing or substituting raw materials, improving the administration system (procedure innovation) for example in packaged food, recruiting new workers who have higher formal education than previously only junior or senior high school graduates. Now D2 or D3 and master English because all the equipment and machines are new using English manuals, the experts who install the machines are also foreigners who speak English and in several companies in East Java there are still those who employ operational managers, expatriate GMs who still use English to communicate. Noruzy et al. [4], Suryo [5], Sartika [6] and Soomro et al. [7] found that organizational innovation influences organizational performance. Here it is clear how important it is for companies to innovate products, processes and procedures and improve the qualifications of their employees who have adequate knowledge of the technology used, good skills and foreign language communication (English) so that they are responsive to macroeconomic changes, changes in process technology and changes. Market appetite that continues to occur can even always be anticipatory if led by a leader who is visionary and is able to encourage employees to always develop themselves to be in line with work demands. Organizational innovation is also influenced by innovation capability, as the research results of Abdelkader and Salem [8], Rediyono and Ujito [2], Kafetzopoulos and Psomas [9], Migdad [10], Saunila et al. [11], Al Taweel and Al-Hawary [12] prove that innovation capability influences organizational innovation. In contrast to the findings of the research by Saraswati and Widiartanto, which concluded that innovation capability does not influence organizational performance [13], this study aims to fill the identified knowledge gap from previous literature reviews. Therefore, this research not only explores aspects that have not been uncovered but also provides a solid foundation for a deeper understanding of the complex dynamics between innovation and organizational performance.

2. Methods

This research is explanatory, namely explaining causal relationships and testing hypotheses from the objectives being analyzed, so this research is research to test hypotheses. This research method includes survey research, namely collecting information from a number of populations. This research is quantitative research, with quantitative variables and data collection using a perceptional approach as measurement.

Organizational performance uses indicators that refer to Werner and Souder's opinion, consisting of marketing performance and financial performance [14]. Organizational innovation uses Schumann indicators which consist of product innovation, process innovation and procedural innovation [15]. Innovation capability uses indicators from Lawson and Samson which include having a vision and strategy, having organizational intelligence, creativity and management ideas, technology management and climate and culture [16].

The population in this study were all manufacturing companies in East Java, totaling 228 manufacturing companies in East Java that exported. The number of samples in this research was 140 respondents. Sampling in this study was carried out using a simple random sampling technique. The analysis techniques used are descriptive analysis and Structural Equation Modeling (SEM) analysis.

3. Results and Discussion

3.1. Results of SEM analysis

In accordance with the study of literature and research objectives, then developed the overall structural model as follows Figure 1:

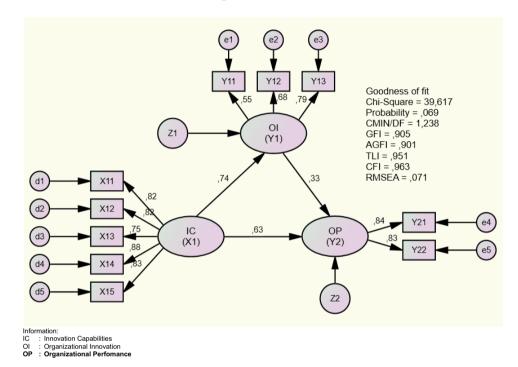


Figure 1: Results of SEM analysis.

Based on AMOS 18 computations for this SEM model, a goodness of fit indexes are presented in Table 1. Furthermore, these index values are compared with the cut-off values of each index. A good model is expected to have the goodness of fit indices that are greater or equal to the critical value.

Goodness Of Fit Index Cut-off Value Model Results Information 39,617 Chi-Square (df = 32) 46,19 Good Probability Chi-Square > 0,05 0,069 Good CMIN/DF ≤ 2,00 1,238 Good RMSEA ≤ 0,08 0,071 Good GFI ≥ 0,90 0,905 Good AGFI ≥ 0,90 0,901 Good TLI ≥ 0,95 0,951 Good CFI

0,963

Good

 ≥ 0.95

TABLE 1: Test result of goodness of fit modified structural model.

Based on the evaluation of the Goodness of Fit Indices criteria in Table 1, it shows that the evaluation of the overall model meets the acceptable model (see Table 2).

Hip	Variable			Regression Coefficients				Information	
	Exogenous	Intervening	Endogenous	Direct Effect		Indirect Effect	Total Effect		
				Coef.	Prob.				
H_1	Innovation Capabilities	-	Organizational Innovation	0,74	0,001*	-	0,74	H1 accepted	is
H_2	Innovation Capabilities	-	Organizational Performance	0,63	0,000*	-	0,63	H2 accepted	is
H ₃	-	Organizational Innovation	Organizational Performance	0,33	0,012*	-	0,33	H3 accepted	is
H_4	Innovation Capabilities	Organizational Innovation	Organizational Performance	0,63	-	0,47	1,10	H4 accepted	is

TABLE 2: Hypothesis testing.

3.2. Discussion

3.2.1. The influence of innovation capability on organizational innovation

Organizational innovation is a new way and perspective to add value to organizational output. The success of organizational innovation is influenced by innovation capabilities. The innovation capability that makes the biggest contribution to increasing organizational innovation is technology management, reflected in the technology used by competitors which the company always anticipates, the company always links the main technological direction with innovation strategy and business strategy, technological alignment will have an impact on competitive advantage, and the company always strive, the effectiveness of the relationship between technology strategy and business strategy is the key to business success in innovation for long-term existence and accuracy of expectations will help identify future developments in terms of technology, products and market customer needs). Good innovation management will illustrate good innovation capabilities and good companies will always invest in and maintain this capability. This innovation capability consists of having a vision and strategy, having organizational intelligence, creativity and management ideas, technology management, as well as organizational climate and culture. This is in accordance with the opinion of Lawson and Samson [16] that innovation capability is the continuous ability to transform knowledge

^{*} Significant at α 5%.

and ideas into new products, processes and systems for the benefit of the company and stakeholders. This innovation capability unites two production/operation paradigms, namely high performance indicators and quality products. The results of this research support the research of Abdelkader and Salem [8], Rediyono and Ujito [2], Kafetzopoulos and Psomas [9], Migdad [10], Saunila et al. [11], Al Taweel and Al-Hawary [12] which states that innovation capability influences organizational innovation. However, the results of this study do not support Saraswati and Widiartanto findings that innovation capability does not affect organizational performance [13].

3.2.2. The Influence of innovation capability on organizational performance

Innovation capability has a significant effect on organizational performance, which means that the higher the innovation capability that a company can carry out, the higher the organizational performance will be. Innovation is a very vital tool in improving organizational performance. These findings contribute to manufacturing companies in East Java to continually improve their ability to innovate so that they can achieve higher organizational performance. These results support the research of Rediyono and Ujito [2] and Riyadi and Yasa [1] which stated that innovation capability influences organizational performance. The innovation capability that makes the greatest contribution to improving organizational performance is technology management. The higher the quality of the technology used, the higher the level of organizational performance. Technology management is reflected in the technology used by competitors which the company always anticipates, the company always links the main technological direction with innovation strategy and business strategy, technological alignment will have an impact on competitive advantage, and the company always strives, and the effectiveness of the relationship between technology strategy and business strategy is The key to business success is innovation for long-term existence and accurate expectations that will help identify future developments in terms of technology, products and markets (customer needs).

3.2.3. The influence of organizational innovation on organizational performance

Organizational innovation is an effort to maintain the existence of an organization and increase organizational progress. With organizational innovation it is hoped that it can respond to environmental complexity and the dynamics of environmental change, especially in intense competition and create sources for competitive advantage. This can be achieved through product innovation, process innovation and procedural innovation. Organizational innovation is the ability to create new ideas and new behavior for the organization, this consists of innovation in products, innovation in processes and innovation in administration (procedures) [17]. Product innovation is reflected in new product innovations carried out technically, overall specifications and functions are different from current ones; the newness of the product now leads to improved use and customer satisfaction; product development now uses different components and materials than before; there is a decrease in production costs, components and materials for current products and there is an increase in production quality in terms of components and materials for current products. Process innovation is reflected in reducing distribution company activities that do not have added value for the company, reducing variable costs and increasing delivery speed in terms of logistics processes, reducing process steps so that production costs become cheaper. It is important for companies to choose the right location in order to get the right production factors. cheaper locally and globally, and carry out energy optimization so that the production process is truly the most efficient. Procedural innovation is reflected in improvements to the administration system so that procedures are faster and more efficient, a decrease in the intensity of interaction between people and people in company activities making administration faster, the determination of new distribution channels so that product delivery to the market is faster without reducing quality, new marketing method policies making administrative requirements easier and faster and openness/transparency will encourage employees to work better in the company's administration/work procedures.

The indicator of organizational innovation that most influences organizational performance is procedural innovation. Procedural innovation involves the way in which products and processes are integrated into the operations of an organization. The better implementation of organizational innovation can improve organizational performance in terms of marketing performance and financial performance. The results of this research

support the research of Noruzy et al. [4], Suryo [5], Sartika [6] and Soomro et al. [7] which states that organizational innovation influences organizational performance.

3.2.4. The influence of innovation capability on organizational performance through organizational innovation

Innovation ability is reflected in having a vision and strategy, having organizational intelligence, creativity and management ideas, technology management and organizational climate and culture. The ability of innovation to influence organizational innovation is illustrated by the company carrying out product innovation, process innovation and procedural innovation tailored to customer needs. This improves organizational performance as reflected by the company being able to improve marketing performance and financial performance.

This research has provided theoretical meaning that organizational innovation is a mediating influence of innovation capability on organizational performance. Indicators of organizational innovation that provide the greatest contribution are reflected in procedural innovations such as improving the administration system so that procedures are faster and more efficient, reducing the intensity of interaction between people and people in company activities making administration faster, determining new distribution channels so that product delivery to the market is faster. without reducing quality, the new marketing method policy makes administrative requirements easier and faster and openness/transparency will encourage employees to work better in the company's administration/work procedures. In this way, innovation capability is reflected in technology management in the form of the effectiveness of the relationship between technology strategy and business strategy, which will create organizational innovation, thereby improving organizational performance. The results of this study support Abdelkader and Salem [8], Rediyono and Ujito [2], Kafetzopoulos and Psomas [9], Migdad [10], Saunila et al. [11], Al Taweel and Al-Hawary [12] prove that innovation capability influences organizational innovation. High innovation capability enhances the organization's ability to create and adopt innovations, which, in turn, can improve efficiency, competitiveness, and responsiveness to market changes. Organizational innovation, acting as a transmitter, serves as a mediator connecting innovation capability with organizational performance, bringing significant strategic benefits.

4. Conclusions and Recommendations

4.1. Conclusions

The innovation capability represented by technology management is able to increase organizational innovation. Innovation capability influences organizational performance. Organizational innovation is an effort to maintain the existence of an organization in order to improve organizational performance. Innovation capability influences organizational performance through organizational innovation. Individual innovation capabilities make an important contribution in creating organizational innovation, and this organizational innovation then has a significant impact on organizational performance. Thus, developing innovation capabilities within an organization can be one of the key factors influencing an organization's success and competitiveness in the market.

4.2. Recommendations

Exporting companies can make improvements with the main priority that needs to be improved on capabilities, namely adjusting the work given to employees according to their interests, talents and knowledge as well as providing motivation to employees to be more creative in carrying out their work, such as providing computer and internet facilities in the exporting company environment so that Employees can easily see information and trends in the world of industry and commerce.

References

- [1] Riyadi NAK, Yasa NNK. Kemampuan Inovasi Memediasi Pengaruh Orientasi Kewirausahaan terhadap Kinerja Produk IMK Sektor Industri Makanan di Kota Denpasar. E-Jurnal Manajemen Unud. 2016;5(3):1915—41.
- [2] Rediyono, Ujianto. Pengaruh Kemampuan Inovasi, Budaya Organisasi dan Teamwork Terhadap Kinerja Manajerial Serta Implikasinya Pada Kinerja Bank Perkreditan Rakyat di Provinsi Kalimantan Timur. Jurnal Ilmu Ekonomi & Manajemen. 2013;9(2):103 – 119.
- [3] Surabayapagi.com. April 2023, Kinerja Ekspor Impor Jatim Anjlok. 2023.
- [4] Noruzy A, Dalfard VM, Azhdari B, Nazari-Shirkouhi S, Rezazadeh A. Relations between transformational leadership, organizational learning, knowledge management, organizational innovation, and organizational performance: An empirical

- investigation of manufacturing firms. The International Journal of Advanced Manufacturing Technology. 2013;64:1073–1085.
- [5] Suryo BD. Pengaruh Gaya Kepemimpinan Transformasional, Budaya Organisasi dan Inonvasi terhadap Kinerja (Studi pada Panti Asuhan di Kota Tomohon dan Kabupaten Minahasa). Jurnal Aplikasi Manajemen. 2010;8(2):391–404.
- [6] Sartika D. Inovasi Organisasi Dan Kinerja Organisasi: Studi Kasus Pada Pusat Kajian dan Pendidikan dan Pelatihan Aparatur III Lembaga Administrasi Negara. Jurnal Borneo Administrator. 2015;11(2):129–51.
- [7] Soomro BA, Mangi S, Shah N. Strategic factors and significance of organizational innovation and organizational learning in organizational performance. European Journal of Innovation Management. 2020;24(2):481–506.
- [8] Abdelkader I Ben, Salem A Ben. Islamic vs conventional microfinance institutions: Performance analysis in MENA countries. International Journal of Business and Social Research (IJBSR). 2013;3(5):219–33.
- [9] Kafetzopoulos D, Psomas E. The impact of innovation capability on the performance of manufacturing companies the Greek case. Journal of Manufacturing Technology Management. 2015;26(1):104–30.
- [10] Migdadi MM. Knowledge management processes, innovation capability and organizational performance. International Journal of Productivity and Performance Management. 2020;71(1):1–29.
- [11] Saunila M, Pekkola S, Ukko J. The relationship between innovation capability and performance: The moderating effect of measurement. International Journal of Productivity and Performance Management. 2014;63(2):234–49.
- [12] Al Taweel IR, Al-Hawary SI. The mediating role of innovation capability on the relationship between strategic agility and organizational performance. Sustainability (Switzerland). 2021;13(14):1–14.
- [13] Saraswati A, Widiartanto. Pengaruh Implementasi Knowledge Management Terhadap Kinerja Organisasi Melalui Inovasi Sebagai Variabel Intervening (Studi Kasus Pada UMKM Industri Kreatif Digital di Kota Semarang). Jurnal Ilmu Administrasi Bisnis. 2016;5(4):359–73.
- [14] Werner BM, Souder WE. Measuring R&D performance: State of the art. Research-Technology Management. 1997;40(2):34–42.
- [15] Schumann P. Innovate, straight path to quality, customer delight, and competitive andvantage. New York: McGraw-Hill; 1994.

- [16] Lawson B, Samson D. Developing innovation capability in organizations: A dynamic capabilities approach. International Journal of Innovation Management. 2001;5(3):377–400.
- [17] Tan CL, Nasurdin AM. Human resources practices and organizational innovation: Assessing the mediating role of knowledge management effectiveness. The Electronic Journal of Knowledge Management. 2011;9:155–67.