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DOES INNOVATION CAPABILITY AND TECHNOLOGY CAPABILITIES AFFECT THE MARKETING PERFORMANCE OF SMES IN INDONESIA?

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ABSTRACT

Small and Medium Enterprises (SMEs) in Indonesia are the backbone of the national economy. The number is expected to continue to increase to have an existence with sustainable competitiveness. The competitiveness of SMEs will become a necessity if SMEs are an essential element in maintaining a competitive position. Innovation capability and Technology capabilities are crucial elements in creating sustainable competitiveness. Profit-maximizing activities also determine the survival of SME businesses through a market-oriented approach to dealing with marketing challenges. Marketing performance is the key to business success due to market strategies for customers, markets, and financial organizations. Marketing performance focuses on sales growth, market share, and market development in marketing performance studies. This research will examine how much innovation and technology capabilities influence marketing performance for SME activists in Indonesia. Using Structural Equation Modeling (SEM) and AMOS statistical tools, this study examined the relationship between the independent variables and the dependent variable to support the developed hypothesis. Methods of data collection using a questionnaire with a number of respondents 206 people. The study's findings demonstrate that capabilities in innovation and technology positively and significantly impact marketing performance. Technology capabilities also show a strong influence on innovation capability. Meanwhile, innovation capability mediates between technology capabilities and marketing performance.

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1. INTRODUCTION

The development of Small and Medium Enterprises (SMEs) is always a top priority for policymakers worldwide because of their enormous contribution to a country [1], [2]. MSMEs are essential in opening jobs, increasing welfare, and developing innovation [3]. MSMEs also contribute to economic growth, especially in developing countries [2]. MSMEs can absorb most of the unemployment if they continue to produce market needs for domestic and export markets, contributing to sustainable development [4], [5]. MSMEs are believed to be a sector capable of providing the highest employment opportunities for the labor market in a country [6], [7]. According to Burns [8], on average, in many countries, MSMEs employ at least 22% of the adult population in developing countries.

In a country like Indonesia, MSMEs are the backbone of the national economy. The number is expected to continue to increase. In 2016, the number of MSMEs in Indonesia was 61.7 million business units. In 2017, the number then increased by 2.06% to 62.9 million business units. In 2018, the number of MSMEs reached 63.5 million units, with an overview of the composition of small businesses running at 783,132 units and medium businesses reaching 60,702 units [9]. The MSME sector in Indonesia also contributed to GDP by 59.84% in 2016 and increased to 60.34% in 2017. The MSME sector's labor absorption capacity also significantly contributed to up to 116.6 million people or 97 .22% in 2017 [10]. This proves that the MSME sector is one of the most effective solutions for ensuring income stability, growth, and employment [11], [12]. An increase in the number of MSMEs in Indonesia is good news that must be balanced with an increase in the performance of MSMEs so that they can continue to exist and have sustainable competitiveness. Results from previous research highlight that the ability to innovate is essential to maintaining a unique competitive position and improving organizational performance [13], [14], especially for SMEs [15].

It has been argued that the success of contemporary firms increasingly depends on their intellectual capabilities rather than their material resources [16], [17]. Da Costa et al., [18] emphasized that every

organization needs a central innovation capability to record and evaluate its innovation performance. When a country has a culture of innovation, its economy gains superiority and status [19], [20]. Small and medium-sized enterprises need to improve product marketing performance through innovation to win the market competition ([21]–[23]. Innovation success is one of the most crucial factors for companies to achieve their goals and objectives [24]–[26].

Apart from innovation, Technology capabilities also play a vital role for SMEs in supporting the sustainability of a business through competitive advantage [27], [28]. Technology is believed to have an essential meaning as the primary source of competitive advantage for a business, leading to better profitability performance and faster development of new product lines or other technological innovations [29]. Technology capabilities positively correlate with company performance through new product development [30], [31]. The development of firms depends on how much their technological capabilities allow them to create new products [32], [33]

Today, SMEs increasingly use information and communication technology (ICT)-based e-commerce to gain competitive advantage and access to global markets [34], [35]. It becomes crucial to understand the main issues determining adopting technologies such as the Internet for SMEs [36]. Technology capabilities are related to the complexity of IT use and management in an organization [15], [31]. IT maturity captures the level of technical expertise in an organization and assesses the level of management understanding and support for using IT to achieve business goals [37], [38]. This factor is considered because small companies lack the necessary IT investment resources [39], [40].

Profit-maximizing activities also determine the survival of SME businesses through a marketing-oriented approach to dealing with marketing challenges [39]–[41]. SME activists need to understand the importance of marketing performance to running a business. Many of today's SMB activists need to recognize the importance of marketing performance elements. Even some executives need to see performance marketing as a clear concept or understand something related to marketing as more than just advertising [42], [43].

Marketing performance is the core of modern marketing, which is related to how a person understands, creates, communicates, and deliverBNBBs value to consumers, as well as a series of marketing activities as a process of delivering satisfaction to consumers to offer benefits ([44], [45]. Marketing performance is the key to business success due to market strategies for customers, markets, and financial organizations. Marketing performance focuses on sales growth, market share, and market development in marketing performance studies [46], [47]

This research will examine how much innovation and technology capabilities influence marketing performance for SME activists in Indonesia. SME activists must innovate to compete effectively with large, established companies [48]–[50]. Some research results show that innovation significantly affects marketing performance [6], [51]–[53] . This research also contributes novelty to the constructed model paradigm construct. The involvement of technology capabilities in the model as a variable believed to influence marketing performance and seeing the impact of innovation capability as mediation for marketing performance for SME activists in Indonesia is not been widely discussed by previous researchers, especially in Indonesia. So we need a study that looks at the role of technology readiness in SMEs in Indonesia as well as their innovation capabilities and marketing performance to provide insight for related parties who need them in formulating strategic policies.

2. LITERATURE REVIEW

Technology Capabilities

Technology is the application of knowledge to products and processes [54], [55]. Capability is an organization's ability to use resources to achieve desired results [54], [56]. Technological capability is the effective use of technical knowledge and skills [57]. It is a specific competency that enables companies to stand out [58]. Technological capability means talking about skills, knowledge, experience, and ability to refer to the elements companies implement in their operational activities [30], [59]. “The skills, experience, and internally generated organizational knowledge needed to initiate and manage change in the technology companies use [57].

Elsewhere, technological capability is described as a firm's ability to use scientific research expertise to develop, absorb, and apply the technological capabilities it creates to enhance competitiveness [60]. In addition to developing and improving products and processes, it also includes improving existing technologies and generating new knowledge and skills to respond to the competitive environment [61].

Technological capability combines skills; knowledge, experience, machines; equipment, systems, and processes that benefit an organization in performing technical functions, developing new products and

processes, and operating business facilities efficiently" [62]. Technology is essential to converting inputs into outputs [58], [63]. The two dimensions of technology are (1) hardware, such as organizational equipment, tools, and others what is more (2) software, Which comprises continuous processes [64], [65]. When comparing an organization to its rivals, technological capability refers to its capacity to utilize technology effectively during a transformation process [66], [67]..

Innovation Capability

Innovation is the most enjoyable source for the success and survival of companies [68], [69] in a complex and intellectually competitive environment. Innovation also includes applying new organizational methods to new or significantly altered processes, products, or services. Development is an organization's system for adjusting to a unique climate [70], [71]. Innovation is a new idea or significant change from a collection of related data, starting with input, process, and output [72], [73].

Innovation is viewed as one of the essential parts of business studies. In creation, there are four areas of focus: marketing, product innovation, and process innovation [74], [75]. Product innovation is the process of improving products or services so that customers get more value for their money [76]. process innovation refers to new and creative ways of doing business [77]. New business practices, workplace regulations, decision-making, and approaches to managing external relations are the primary focuses of organizational innovation [58]. Marketing innovation refers to new marketing strategies that significantly alter product promotion, pricing, design, placement, and packaging [23].

According to Iddris [78], a company can only innovate if it can innovate. Innovation capability can be understood as the ability to manage and improve existing technology, skills, and knowledge necessary for new creation [79]. According to Vicente et al., [80] an organization's innovation capability is its capacity to develop new products through innovative behavior, strategic capabilities, and internal technological processes.

According to Khin et al., [58], an organization's innovation capability is its readiness to implement novel concepts, devise novel approaches to problems, and maintain operational creativity. According to Zhang & Hartley [81], innovation capability also discusses the company's emphasis on utilizing experiences and ideas from various sources. Similarly, innovation capability is said to have a variety of dimensions related to creative output, such as leadership, competency management, organizational culture, the use of external knowledge, and employee creativity [82], [83]. Likewise, marketing, learning, entrepreneurship, network, and resource exploitation are just a few of the specific capabilities that make up innovation capability according to some researchers [82], [84]

The try-out innovation capability categorization is associated with updating products, processes, services, and organizational structures [24], [31], [54], [55], [82]. Several studies have focused on a particular set of innovation capabilities, such as management and marketing innovation [24], [53] and production process and process innovation [30], [72]. Product, process, management, and marketing innovation capabilities are collective innovation capabilities used in other studies [85], [86].

Marketing Performance

Marketing performance is the essence of modern marketing, which is related to understanding, creating, communicating, and providing value to consumers, as well as a series of marketing activities as a process of providing satisfaction to consumers to provide benefits [87]. Some experts explain that marketing performance is essential in measuring company success [88], [89]. Marketing performance is considered a benchmark for the level of success of a company's business, including sales turnover, number of customers, sales, and growth in profitability [90]. Marketing performance is the key to business success due to market strategies for customers, markets, and financial organizations, such as sales growth, market share, and market development in marketing performance studies [6], [52], [91].

Technology Capabilities and Marketing Performance

Technological capability is essential for SMEs in producing new products to meet dynamic market needs [92], [93]. Implementing sophisticated product features, useful functions, and high-quality new products with technological capabilities increases customer satisfaction [33], [94]. The technological capability has a positive effect on company growth and development [72], [95], performance [96], [97], and long-term competitive advantage [34], [60], [68]. Liao et al. [98] and Stone et al. [99] show that technological capabilities affect firm performance.

SMEs that influence innovation and computerized instruments like social media (Facebook, WhatsApp), online marketing (websites, e-commerce), and artificial intelligence (chatbots) will have a

superior way to deal with their market and have suggestions for expanded consumer loyalty, share market, and monetary execution [13], [100]. Conversely, low technological capacity impacts weak innovation processes, economic growth, and company performance [95]. Even disrupting access to digitalization and technology adoption disrupts SME competitiveness and financial performance [101], [102].

Technology Capabilities and Innovation

Contrasts in organization capacities should be viewed as carrying out innovation to develop further organization execution [103]. High-tech and low-tech businesses employ innovation patterns adapted to technological capabilities [104]. The role of technology owned by firms and firm size in driving innovation [105], [106]. High-tech and low-tech firms are a form of a corporate effort to innovate by aligning their technological capabilities [107]–[109]. Typically, a firm's innovation should achieve economic goals. Companies with low technological capabilities tend to focus on non-R&D activities and have low value-added systems with little internal innovation [30], [51].

Knowledge is the fundamental characteristic of technological capability [110], [111]. Product innovation is aided by technological capabilities, which enhance existing skills and knowledge [112] and positively impact customer perceptions of product innovation [113]. Innovative capacity emphatically affects new item execution [114], innovation in products [115], and exploitation [116]. Companies with solid technological capabilities can quickly recognize technological opportunities and the value of technological resources, acquire and capitalize on them, resulting in product innovation success [5], [55], [76], [117].

Innovation Capability dan Marketing Performance

Previous research has revealed the role of innovation in improving marketing performance [52], [99], [101]. Creation is believed to affect positively and significantly affect marketing performance for small and medium enterprises [15], [118]. Researchers have viewed innovative capabilities as a one-dimensional construct as a tool for creating innovative outcomes [78] and improving SME performance ([25], [72], [103] process.

The innovative performance of a company has a positive and significant influence on the growth of SMEs [5]. As a result, enhancing managerial, marketing, and organizational entrepreneurship in a competitive market necessitate a culture of innovation [119], [120]. Innovation is a differentiator for companies, thus achieving a competitive advantage [121]. SME performance is correlated with the innovative capabilities of companies and individuals within those companies [122], [123]. Innovative capabilities directly and positively impact a company's business [124]. Innovation related to radical or incremental has made an exciting contribution to company performance [125], [126].

Due to the high rate of new product introductions and the short product life cycles in the market, innovation capability is essential for superior innovation performance [127]. Due to the rigors of imitating the verbal content of R&D activities, it is challenging to imitate organizations with high innovation capabilities in the market because the cost of imitating and transferring the knowledge on which innovation is based is very high [128]. A company gains a competitive advantage due to the nature of this R&D capability feature, which drives innovation's success [129]–[131]

The positive impact of innovation capability on SME performance has been recognized by several studies [22], [49], [60], [90], [120]. Companies' growth, success, and survival depend on product innovation [60], [132]. A dynamic and balanced method for evaluating a company's performance is provided by innovation capability [13], [107]. Numerous studies on innovation capabilities aim to identify the necessary capabilities that enable businesses to innovate and achieve positive results and performance [133]–[137].

In addition, marketing performance can be mediated by innovation [56], [58], [138]. Innovative limit is accepted to drive new cycles and items, further develop human asset information and abilities, and change information into inputs (items and administrations) with high enhanced further develop hierarchical execution [139], [140]. Technological capabilities satisfy customer requirements by increasing customer satisfaction and providing superior value [141]–[144].

Conceptual framework

Based on the description above, it can be built research framework as follows:

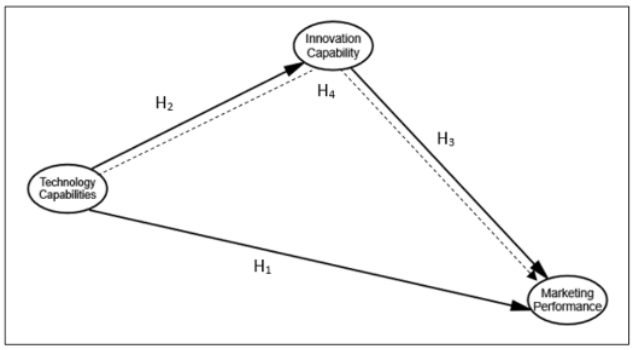

Figure 1. Research Framework

Research Hypothesis

Based on the problem formulation and conceptual framework above, the research hypothesis put forward by the researcher is as follows:

1. Technology Capabilities influence marketing performance.
2. Technology Capabilities influence innovation.
3. Innovation capability influences marketing performance.
4. Technology Capabilities influence marketing performance through innovation capability.

3. METHOD

Causal research is the design chosen in this study. This study uses a questionnaire distributed to respondents who are considered to meet the criteria that have been set. The questionnaire uses a Likert scale of 1 to 5 with categories: Strongly agree has a score of 5; Agree has a score of 4; Indecisive has a score of 3; Disagree has a score of 2; Strongly disagree to have a score of 1. The population in this study is Indonesian business actors who are included in the SME category. The number of samples in this study were 206 respondents. The sampling technique used is purposive sampling with the following criteria: 1) SMEs; 2) Businesses Domiciled in Indonesia; 3) The business has been operating for at least 1 year; 4) Has involved elements of technology in running the business.

Based on the research construct built from the theoretical studies submitted, this research paradigm can be described in Figure 2.1. The six items for Marketing Performance in this study refer to previous research by Nuryakin & Ardyan (2018) [144] and Afriyie et al. (2019) [6]. Innovation Capability, seven items refer to Zehir et al. (2015) [145] , Rajapathirana & Hui (2017) [146], while Technology Capabilities refer to Aydin (2021) [32] and Liao et al. [98] with 5 things.

4. RESULT AND DISCUSSION

Respondent Characteristics

Analysis of the profile of respondents in this survey is based on the following demographics:

Table 1. Characteristics of Respondents

Category	Item	f	%
Business Sector Run	Culinary	14	6,8
	Fashion	97	47,1
	Craft	38	18,4
	Publishing And Printing	57	27,7
	Total	206	100
Long Running Business	1 Year to <3 Years	67	32,5
	3 Years to <5 Years	97	47,1
	> 5 Years	42	20,4
	Total	206	100
Use of Technology in Business	Involving technology in all business processes	78	37,9
	Involving technology in several business processes	128	62,1

	Does not involve technology in all business processes	0	0
	Total	206	100
Monthly Business Income	1 million to <10 million	11	5,3
	10 million to <25 million	56	27,2
	25 million to <50 million	51	24,8
	50 million to 100 million	67	32,5
	> 100 million	21	10,2
	Total	**206**	**100**

Measurement Models

The conformance, validity, and reliability test results are as follows.

Tabel 2. Value of Standardized Loading Factor, Construct Reliability (CR), and Average Variance Extracted (AVE) in Overall Model Fit

	Items	SLF	CR	AVE
Innovation Capability	Our company often tries new ideas	0,958	0,969	0,905
	Our company is looking for new ways to do things	0,952		
	Our company uses knowledge from various sources	0,956		
	Our company is creative in its operation method	0,952		
	Our company is often the first to market new products and services	0,943		
	Innovation in our company was deemed too risky and rejected.	0,945		
	The introduction of our new products has increased over the past five years.	0,953		
Technology Capabilities	Identify new technology opportunities	0,950	0,957	0,886
	Responding to changes in technology	0,942		
	Mastering the latest technology	0,942		
	Obtaining new and essential technology information (from competitors)	0,945		
	Develop a series of innovations	0,926		
Marketing Performance	Sales growth	0,951	0,965	0,902
	Increasing of products offering	0,945		
	Increasing of products values	0,950		
	Market coverage	0,940		
	Profitability	0,951		
	Customer satisfaction	0,961		

Based on Table 2, the results of validity and reliability tests show that the indicators of the constructed model meet valid and reliable criteria. Existing indicators have standardized stress factor (SLF) values above 0.50. This indicates that all metrics are valid and adequate to measure the composition of the entire model produced. The Construct Reliability (CR) test score is over 0.70. This indicates that all instruments are reliable and can consistently measure the structure across the constructed model.

Tabel 3. Goodness of Fit Index

Goodness of Fit Index	Cut off Value	Results
χ^2	Expected to be low	611.136
Df		132
χ^2- Significance Probability	≥ 0.05	0.000
CMIN/DF	≤ 3.00	4.630
RMSEA	≤ 0.08	0.133
RMR	< 0,05	0.027
NFI	≥ 0.90	0.918
IFI	≥0.90	0.935

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TLI	≥0.90	0.924
CFI	≥0.90	0.935

The model conformance test (model conformance test) shown in Table 3 shows that the model conformance requirements are accepted, and conformance can be declared. Five measurements indicate good goodness of fit. If there are 3-4 measurements with a good level of agreement or above the cut-off value, the study model configuration can be declared adequate and accepted.

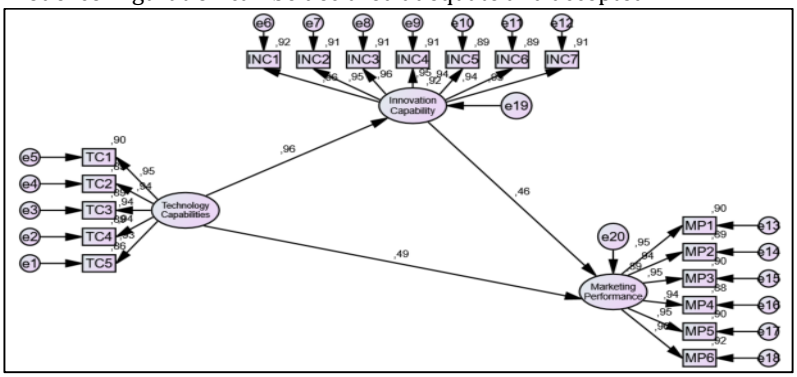

Figure 2. Full Model Testing

Hypotheses Testing

The results of testing the effects of relationships between variables in the study configuration constructed in this study can be conveyed as follows.

Tabel 4. Hypothesis testing

Hypothesis	Path	Estimate	S.E.	C.R.	P
H_1	Marketing_Performance <-- Technology_Capabilities	0,594	0,132	4,505	***
H_2	Innovation_Capability <-- Technology_Capabilities	1,210	0,050	23,978	***
H_3	Marketing_Performance <-- Innovation_Capability	0,441	0,103	4,268	***

Hypotheses are based on existing knowledge. Technology skills have a significant positive impact on marketing performance. The t-value and p-value support hypothesis proof. The t count for variable technology capabilities and marketing performance is 4.505, indicating a more significant gain than the t table value of 1.96. Similarly, the p-value shows a number greater than 0.05 (α = 0.05). The results of the second hypothesis are also accepted. Technical skills have a significant positive impact on your ability to innovate. The t count for the technology capability variable for innovation capability is 25.978, indicating a gain more effective than the t table value of 1.96. Similarly, the p-value indicates a number greater than 0.05. The third hypothesis is also valid. The ability to innovate significantly impacts marketing performance. Variable innovation capacity and marketing performance t-counts reached multiples of 4,268. This indicates that the obtained value exceeds the t-table value of 1.96. Similarly, if the p-value is less than 0.05 (α = 0.05).

To confirm the indirect influence on the influence of the built-in mediation variables, we present Table 5, obtained from the results of the Sobel test.

Tabel 5. Sobel Test - Significance of Mediation

	Sobel test statistic	Two- tailed probability
Technology_Capabilities --> Innovation_Capability --> Marketing_Performance	4,35	0,00001

Based on the Sobel test results in Table 5, the Sobel test statistic is 4.35 with a p-value of 0.00001. The value of the Sobel test statistic is greater than the t-table value of 1.96. Similarly, the p-value is given a value less than 0.05 (α = 0.05). This result demonstrates the critical indirect effect of technology proficiency on marketing performance through innovation capability.

5. CONCLUSION

The development of SMEs has direct implications for developing a country's economy. The real impact of SMEs is the opening of jobs, increasing welfare, living innovation, and contributing to sustainable development [6], [117], [147]. Therefore, the existence of SMEs needs to be maintained. SMEs need to take a modern marketing approach related to understanding, creating, communicating, and providing value to consumers, as well as a series of marketing activities as a process of providing satisfaction to consumers to provide benefits [148]–[150]. This series of activities is essential to maintain business performance in terms of sales growth, the number of customers, product demand, and increased profit, or what is known as marketing performance [151]–[154].

Marketing performance is believed to exist if SMEs have technology capabilities [27], [98], [155] and innovation capability [6], [52], [122], [142], [156]. The results of this study confirm that innovation capability significantly affects marketing performance in SMEs in Indonesia. In line with previous studies which stated the positive impact of innovation capability on SME performance. The role of technology capabilities on marketing performance and innovation capability as mediating variables between technology capabilities on marketing performance is also one of the concerns examined in this study. Technological capacity includes practical and theoretical knowledge enabling companies to improve and develop new products [54], [157], [158]. New technologies have the necessary impact on the open innovation process of SMEs [15], [93], [105]. Because these organizational connections enable small businesses to meet customer expectations and improve the company's financial performance [58], [159], [160]. One of the defining characteristics of innovation is the level of technological mastery [13], [161], This is because the information companies use very differently depending on whether they are low-tech or high-tech companies [33], [78], [162]. Companies with good technological capabilities will rely on customers and competitors as a source of information for innovation [28], [33], [113], [163]. Innovation positively impacts sales, profitability [164]–[166], and performance [167]–[171]. This recognition facilitates innovation development and can lead to higher performance by increasing the effectiveness of product innovation (De Medeiros et al., 2014c; Reguia, 2014).

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