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NETWORK CAPABILITY, KNOWLEDGE CREATION, PRODUCT INNOVATION, AND MARKETING PERFORMANCE OF MICRO, SMALL, AND MEDIUM ENTERPRISES (MSMES)

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Abstract

This study aims to empirically prove the effect of network creation on marketing performance and knowledge creation, the effect of knowledge creation on product innovation, and the effect of product innovation on marketing performance. Micro, Small, and Medium Enterprises (MSMEs) are one of the most developed creative industries in Indonesia and are able to make significant contribution to Indonesia's GDP (Gross Domestic Product), but the high growth of MSMEs has not been able to create sustainable MSMEs performance. Factors that influence each other include network capability, marketing performance, knowledge creation, and product innovation. The sample in this study were 250 respondents of MSME owners in Semarang City. The data collection method used questionnaire distributed to MSMEs owners through Google Forms. Data analysis used descriptive statistics and structural equation modelling with the Smart PLS program. The results showed that network capability has positive and significant effect on marketing performance and knowledge creation, knowledge creation has positive and significant effect on product innovation, and product innovation has positive and significant effect on marketing performance.

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INTRODUCTION

According to the World Bank, Micro, Small and Medium Enterprises (MSMEs) play an important role in the economies of most countries, particularly in developing countries (Asian Development Bank, 2020). The majority of enterprises worldwide are classified as MSMEs, which play significant role in employment (International Labour Organization (2019). Globally, MSMEs account for about 90 per cent of all businesses and more than 50 per cent of all jobs. Formal MSMEs can contribute up to forty per cent of Gross Domestic Product (GDP) in developing countries. This number may be much higher if informal MSMEs are included. As result of the significant economic contributions they make and the large number of people they employ, many governments have made the study of MSMEs high priority (Kumar & Gajakosh, 2021; Dash, 2018; Nadaf & Kadakol, 2017). According to the findings of Quaye & Mensah (2018), MSMEs are able to maintain the market advantage of current products by utilising resources and specialised marketing petencies simultaneously.

MSMEs make significant contribution to the national economy in Indonesia and are able to make significant contribution to Indonesia's GDP (Gross Domestic Product) (Prasetyo & Kistanti, 2020; Prasetyo, 2020; Muliadi et al., 2020), but in its development it is still faced with various obstacles in terms of business management, financial management, human resource management and entrepreneurship (Hernita et al., 2021; Salamzadeh & Dana, 2021; Mayr et al., 2021; Sarvari et al., 2021). Human resource competencies and skills and knowledge are still weak compared to large enterprises (Hernita et al., 2021; Surya et al., 2021; Purnamawati et al., 2022). The human resource practices of many MSMEs are often

not conducive to knowledge creation and exchange. Generally, MSMEs also engage in fewer management development activities than large firms (Madrid-Guijarro et al., 2021; Alhusen & Bennat, 2020; Demirkan et al., 2022; Heenkenda et al., 2022). Number of studies have examined the relationship between knowledge management and performance, however, they focus more on established manufacturing firms (Robert et al., 2022; Singh et al., 2021; Viet & Kravets, 2022; Patalas-Maliszewska & Kłos, 2017). MSMEs play an important role in the national economy although there are still several problems and obstacles in the development of MSMEs such as management, entrepreneurship, finance, human resources, and performance (Hernita et al., 2021; Salamzadeh & Dana, 2021; Menne et al., 2022; Zutshi et al., 2021).

Network Capability (NC) according to Walter et al. (2006) is the ability of companies to develop and utilise inter-organisational relationships to gain access to various resources owned by other actors. Network Capability is integrated by various dimensions that represent different capabilities to manage relationships with other organisations and partners. Similarly, network capability contributes to the success of small and medium-sized export firms by helping to identify new market opportunities and contributing to knowledge building (Coviello & Joseph, 2012). From the perspective of Dynamic Ability Theory, Network Capability is determining factor in accelerating the internationalisation of MSMEs (Sulistyo, 2020).

The importance of Knowledge Creation (KC) capability is emphasised in the knowledge-based organisational view, advocated by researchers such as Spender (1996), who argues that the 2 main objectives of organisations are to generate and apply knowledge. An organisation that has continuous Knowledge Creation capability has developed dynamic and unique capabilities and has the potential to support continuous organisational learning. This is supported by empirical findings that knowledge creation is critical to variety of organisational processes that support competitive advantage, including new product development and dynamic capability evolution (Brockman & Morgan, 2003).

To increase product innovation so that it can be marketed optimally, good network capabilities are needed. Weak product innovation also affects product marketing coverage (Dhameria et al., 2021). Marketing performance of MSMEs is highly dependent on the level of company innovation (Wiwoho et al., 2020). Higher product innovation will affect marketing performance (Meutia, 2015).

The lack of studies on network capability, marketing performance, knowledge creation, and product innovation in MSMEs is gap in this research that needs to be identified and tested further. Based on the results of the above studies, there is still research gap in research on the importance of network capability, marketing performance, knowledge creation, and product innovation. This study aims to empirically prove the effect of network capability on marketing performance and knowledge creation, the effect of knowledge creation on product innovation, and the effect of product innovation on marketing performance. This study also contributes to closing the research gap and discusses the effect of network capability on marketing performance and knowledge creation, the effect of knowledge creation on product innovation, and the effect of product innovation on marketing performance.

LITERATURE REVIEW AND HYPOTHESES

Network capability and marketing performance

Marketing performance is one of the indications in building overall company performance (Hendar & Sugiyarti, 2018; El-Mallah et al., 2019). Marketing performance is used to measure achievements in the company's marketing activities and is an application of the company's strategy (Gao, 2010). Sugiyarti & Ardyan (2017) explain that what is called Marketing performance is company strategy that is directed to produce company performance. The three indicators of marketing performance are sales value, sales growth, and market share. Sales growth depends on the number of customers or product units sold. high sales value indicates that more and more products are sold. Market share is the amount of product contribution to dominate the market for similar products compared to competitors (Sugiyarti & Mardiyono, 2022).

Wang et al. (2013) found that there is close relationship between network capability and marketing performance. Research conducted by Ferdinand & Killa (2014) found link between network advantages, especially the network of companies that have distribution network with marketing performance. Based on the results of research by Sasono et al. (2018), Heng & Afifah (2020), and Dhameria et al. (2021) that network capability has positive effect on marketing performance. Based on the information presented above, the first hypothesis to be tested in this study is:

Hypotheses 1 (H1): *Network capability has positive effect on marketing performance*

Network capability and knowledge creation

The capacity of company to initiate, create and use relationships between internal and external organisations is referred to as network capability. According to research, "networks formed through strong relationships" can be beneficial to businesses (Walter et al., 2006). Strong relationships allow entrepreneurs and their businesses to gather market information and problem-solving ideas, as well as to learn and gain moral and technical support (Messersmith & Wales, 2013). The capabilities that enable organisations to thrive in networks are important factors in generating knowledge and value (Dayan et al., 2013). Firms and their agents are socially and professionally connected, resulting in an extensive network structure that includes complementary firms and competitors,

consumers, suppliers, and research institutions (Rank et al., 2006; Walter et al., 2006).

Network capability helps in the creation of knowledge base. It is technique for learning consumer desires and anticipating market prospects, as well as obtaining timely and sophisticated best practices and supplier feedback (Walter et al., 2006). The results of research by Zacca et al. (2015) that Network capability has positive effect on knowledge creation of MSMEs. Based on the information above, the second hypothesis to be tested in this study is:

Hypotheses 2 (H2): *Network capability has positive effect on knowledge creation*

Knowledge creation and product innovation

The idea of knowledge-based company describes it as unique sum of diverse knowledge whose main purpose is to build, combine, and apply knowledge, as well as communicate it within and outside the company. Hence, the firm usually becomes "knowledge flow channel" (Abubakar et al., 2017). Knowledge is important in assuming technological innovation (Lichtenthaler, 2016). Knowledge is generally regarded as key strategic means to enhance corporate innovation (Alegre et al., 2013; Elrehail et al., 2018). Mahr et al. (2014) argue that businesses that qualify for knowledge creation can continue to generate the knowledge reserves needed to advance product innovation. Thus, the knowledge base allows companies to increase product innovation (Shu et al., 2012). Similarly, knowledge creation has tendency to achieve product innovation (Quintane et al., 2011; Sankowska, 2013).

Based on research by Victoria et al. (2020) knowledge creation has significant negative impact on product innovation, but research by Rajapathirana & Hui (2018) shows that knowledge creation facilitates product innovation and research by Alshanty & Emeagwali (2019) that knowledge creation has positive and significant effect on product innovation. Knowledge is seen as the key to innovation and valuable commodity for businesses looking to gain competitive advantage over their competitors. Successful companies can create and disseminate knowledge quickly, then transfer that knowledge into new products (Gao & Bernard, 2018). Knowledge is implicit, dispersed, and embedded in individuals (Park et al., 2015). Based on the information presented above, the third hypothesis to be tested in this study is as follows:

Hypotheses 3 (H3): *Knowledge creation has positive effect on product innovation*

Product innovation and marketing performance

Product line extensions are products that are relatively new to the market, but not new to the organisation. me-too product is product that is relatively new to the company, but already known in the market. New products are products that are relatively new to both the market and the company (Meutia, 2015). New product development and effective strategies are important elements that determine the success and survival of company, but this is not an easy thing to do. New product development requires effort, time, and capability, including the risk and cost of failure. These advantages cannot be separated from the development of product innovation so that it can win market competition (Sugiyarti & Ardyan, 2017).

Product innovation plays major role in improving marketing performance (Hurley & Hult, 1998). According to Atalay et al. (2013) that product innovation is the introduction and development of new types of goods or services that are different from before and complement the shortcomings of previous findings by prioritising quality. Ismail (2015) states that marketing performance is influenced by environmental factors, product innovation, and market orientation that have positive impact on marketing performance. The results of research by Meutia (2015), Sugiyarti & Ardyan (2017), Nuryakin (2018), Wiwoho et al. (2020), and Khamaludin et al. (2022) state that product innovation has positive and significant effect on marketing performance. Based on the information presented above, the fourth hypothesis to be tested in this study is as follows:

Hypotheses 4 (H4): *Product innovation has positive effect on marketing performance*

METHOD

The investigation was based on quantitative descriptive research, which operates on the premise that the main purpose of the most basic type of investigation is to observe (collect data about) specific occurrence, often at single moment in time in cross-sectional survey (Esitti & Kasap, 2019). It is this assumption that allows descriptive research techniques to operate on the premise that the main purpose of the most basic type of investigation is to observe (collect data about) specific event. This research employs descriptive research strategy and uses survey measures to capture the objective and social reality of the hotel business to answer the research hypothesis. This allows the research to answer the questions posed by the research. The first thing that needs to be done as part of this technique is to research the relevant literature review to identify the topics mentioned earlier. framework of enquiry is designed after considering previous work that has been done in the sector. Thereafter, Structural Equation Modelling (SEM) was used in conjunction with the survey to develop the anticipated links and verify them.

Our sample consisted of 250 owners of various types of MSMEs in Semarang City. The time period from January 2022 to October 2022 was the data collection period. The number of questionnaires distributed was one thousand, but for the purposes of subsequent analysis, only responses from respondents indicated that the respondents used at least one variant of the form and provided answers to the questionnaire statements to the respondents. The number of valid questionnaires submitted

was 250. The researcher used Google Forms for the questionnaire creation and data collection process. Then the data from Google Forms was stored in Google Drive. Data collection used Google Forms because face-to-face contact was not possible in the context in which the researcher conducted the study. The identity of the respondents was kept confidential as each questionnaire and invitation to take part in the research, was sent without including any identifying information.

The use of cross-sectional data served the purpose of verifying the validity of the theoretical model presented. Data was collected through the use of methods based on survey of the target population. The indicators have been evaluated with Likert scale consisting of five points in each category. The anchors on the scale vary from Strongly Disagree (STS) mark of 1 to Strongly Agree (SS) mark of 5, with 1 representing Strongly Disagree and 5 representing Strongly Agree. Since this method requires less time and effort, as well as because by utilising this scale, respondents get the opportunity to remain neutral by voting for the "neither agree nor disagree" option, this study used 5-point Likert scale. Additionally, five-point Likert scale was utilised in this study as previous studies have shown the benefits of utilising this method (Dubey et al., 2019; Gupta et al., 2021; Chatterjee et al., 2022).

The researcher used Smart PLS software to present the research results on network capability, knowledge creation, product innovation, and marketing performance of MSMEs. After determining the measurement parameters and structural model in the first stage, the researcher then developed suitable bootstrap estimation. This study was conducted with the intention of evaluating the influence of the construction of network capability, knowledge creation, product innovation, and marketing performance of MSMEs to better understand the influence between these variables.

RESULT AND DISCUSSION

The demographic details of sample including employee gender, age, education level, MSMEs income per annum, and tax status are shown in Table 2. The majority of respondents in the sample are young workers (25-34 years old (45.60%), female (58.80%), Bachelor degree (53.60%), micro MSMEs (77.60%), and non-NPWP (90.00%).

Table 1. Sample characteristics

	Sample characteristics	N	Sample percentage
	Age		
1	Less than 25	27	10.8
2	25-34	114	45.6
3	35-44	63	25.2
4	45-55	34	13.6
5	More than 55	12	4.8
	Gender		
1	Male	103	41.2
2	Female	147	58.8
	Education		
1	Senior High School	39	15.6
2	Third diploma	42	16.8
3	Fourth diploma	35	14.0
4	Bachelor	134	53.6
	MSME revenue per year		
1	Micro (Rp 76.000.000)	194	77.6
2	Small (Rp 1.630.000.000)	47	18.8
3	Medium (Rp 29.700.000.000)	5	2.0
4	Enterprise (>Rp. 29.700.000.000)	4	1.6
	Tax Status		

	Sample characteristics	N	Sample percentage
1	Non-Taxpayer Identification Number	225	90.0
2	Taxpayer Identification Number	25	10.0

Descriptive data for each indicator is presented in Table 2 which can be seen below. The researcher started by loading the indicator load that reflects and considers internal consistency reliability, convergent validity, and discriminant validity. This is the beginning of the process. It is recommended that the measurement of the reflective structure be carried out using the types of procedures mentioned above in the model (Aleksandar et al., 2020).

In addition to the procedures described, another test called the Common Method Biases (CMB) test. Load factors with values ranging from 0.4 to 0.7 should only be retained if the removal of such values has no impact on AVE and composite reliability (Gašić & Berber, 2021; Hair et al., 2017; Berber et al., 2020). Some components could not be included in future research because the values calculated for their loadings were very low. Figure 1 illustrates the indicator items have loading factor of more than 0.720 (see Figure 1).

Table 2. Descriptive statistics for each variable

	N	Min	Max	Mean	Std.Deviation
NC	250	1	5	4.35	0.66
KC	250	3	5	4.48	0.59
PI	250	1	5	4.29	0.70
MP	250	3	5	4.39	0.58

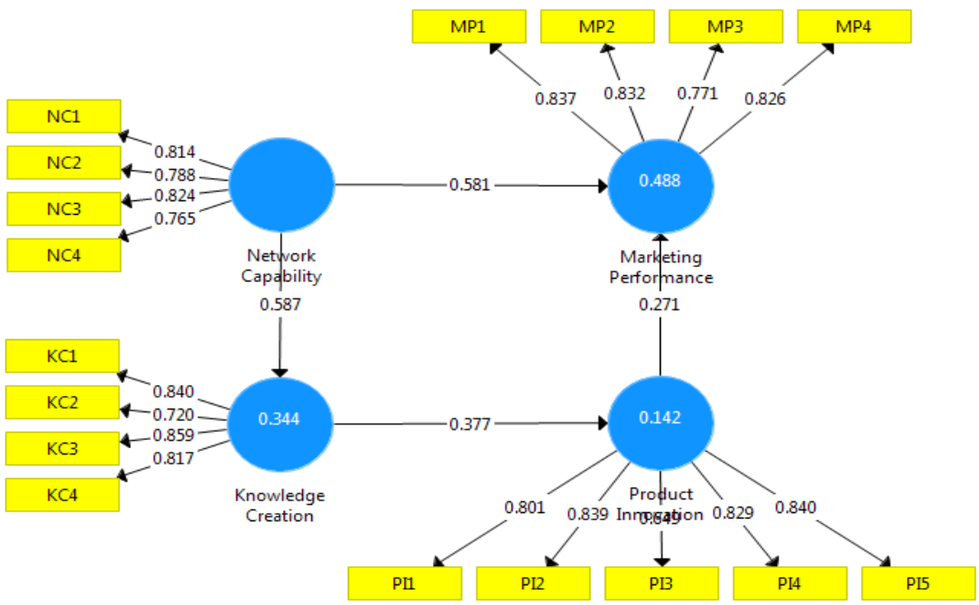

Figure 1. Estimated path coefficients.

Table 3, indicator reliability, and construct reliability and validity. The reliability test results are shown in Table 3 which are achieved by calculating Cronbach's Alpha, Composite Reliability, and Average Variance Extracted. The reliability test results are presented in Table 3. The researcher found that the numbers ranged from 0.825 (Network Capability), 0.833 (Knowledge Creation), 0.810 (Product Innovation), and 0.851 (Marketing Performance) which were the highest reported values. Cronbach's Alpha was used to analyse the data collected, and this is the conclusion it yields according to the suggestions given by some researchers (Taber, 2018; Bjekić et al., 2021).

Table 3. Indicators reliability and construct reliability and validity.

	Alfa Cronbach	rho_A	CR	AVE
NC	0.825	0.836	0.884	0.657
KC	0.833	0.834	0.889	0.667

PI	0.810	0.813	0.875	0.637
MP	0.851	0.854	0.895	0.632

The construct composite dependency values vary from 0.899 for BA to 0.897 for desire to move to 0.891 for DC, which is the highest value recorded for composite dependency. number of researchers argue that an adequate Critical Composite (CR) threshold should be set at no less than 0.7, and this should be considered acceptable. As result of the results shown in the Table found above, researchers can conclude that the CR criterion has been met. This allows us to draw the conclusion that the CR criterion is met. Composite reliability can be used as an alternative to Cronbach Alpha because the CR value is somewhat higher than the Cronbach Alpha value, but the difference between the two is not very significant (Peterson & Kim, 2013).

Evaluation of validity convergence is done by testing the average variance obtained (AVE). The AVE values are shown in Table 4 above. The results are 0.657 for NC, 0.667 for KC, 0.637 for PI, and 0.632 for MP which are the highest numbers ever recorded. The absolute minimum value of AVE that may be considered satisfactory is 0.5 (Rouf & Akhtaruddin, 2018). It has been determined that the acceptability threshold has been reached and consequently that convergent validity has been met across all four dimensions. The information presented in the Table that can be seen above serves as the basis of these findings. The cross-loading indicator, the Fornell-Lacker criterion, and the heterotrait-monotonic correlation ratio are three ways that can be used in the process of evaluating discriminant validity hypotheses (Ab Hamid et al., 2017). Table 4 displays the cross-loadings used to determine discriminant validity.

If the indicator loadings for the constructive structure of the measurement model are greater than the indicator cross-loadings for the other constructs, then the measurement model will have suitable discriminant validity. The results show that the cross-loading of each beam is greater than the cross-loading of other beams in the same column and row. This clearly distinguishes each latent variable based on the data obtained and is shown in Table 4. The findings of the cross-loading study provide evidence that the discriminant validity of the measurement model has been established.

In accordance with the Fornell-Lacker criteria, evidence supporting discriminant validity can be seen in Table 5. The latent variable AVE root value must have value greater than the value of any and all correlations with latent variables in order to fulfil the Fornell-Lacker criteria. Discriminant validity has been fulfilled because the root value of AVE on the diagonal is higher than all values for each variable. This conclusion can be reached as result of the data that researchers have collected. Table 6 presents the results of the analysis showing the discriminant validity of the heterotrait-monotrait comparison (HTMT).

Table 4. Discriminant validity-cross loading

	KC	NC	PI	MP
KC1	0.840	0.534	0.261	0.592
KC2	0.720	0.357	0.285	0.551
KC3	0.859	0.473	0.326	0.659
KC4	0.817	0.516	0.349	0.612
MP1	0.636	0.510	0.423	0.837
MP2	0.578	0.521	0.309	0.832
MP3	0.545	0.529	0.315	0.771
MP4	0.671	0.554	0.300	0.826
NC1	0.413	0.814	0.125	0.424
NC2	0.501	0.788	0.233	0.535
NC3	0.500	0.824	0.237	0.548
NC4	0.445	0.765	0.175	0.540
PI1	0.272	0.119	0.801	0.232
PI2	0.314	0.213	0.839	0.317
PI3	0.284	0.198	0.649	0.354
PI4	0.320	0.237	0.829	0.352
PI5	0.295	0.190	0.840	0.359

Table 5. Discriminant Validity: Fornell-Lacker Criterion

	KC	MP	NC	PI
KC	0.811			
MP	0.745	0.817		
NC	0.587	0.647	0.798	
PI	0.377	0.414	0.246	0.795

Table 6. Discriminant validity: heterotrait-monotrait (HTMT)

	KC	MP	NC	PI
KC				
MP	0.898			
NC	0.704	0.781		
PI	0.447	0.483	0.285	

All HTMT values that are less than 0.9 indicate that the components differ from each other to sufficient degree, which indicates that each component represents unique set of phenomena (Hair et al., 2019). Based on the data that has been collected and presented in the Table above, the researcher came to the conclusion that the conditions for discriminant validity according to HTMT have been met. This result was achieved after considering all the information presented. This is due to the fact that each value is less than 0.9 (Kock, 2015;Wong, 2013; Iqbal et al., 2021; Hair et al., 2019).

Effect of independent variables NC, KC, and PI and dependent variables KC, PI, and MP. R^2 (R-squared), statistical measure of the proportion of variance for the dependent variable explained by the independent variables reveals that the KC value is 34.2%, the MP value is 48.4%, and the PI value is 13.9%. These three values are explained by the independent variables KC, NC, and PI in the model R^2 is measure of the proportion of variance for the dependent variable explained by the independent variables. R^2 is statistical metric that indicates the fraction of variation in the dependent variable that can be attributed to particular independent variable.

According to the data processing results presented in Table 7, the multicollinearity analysis shows that the VIF values are, in most cases, less than 3, but there are values such as PI5 higher than 3. Nonetheless, these values are acceptable based on the researcher's indicator of accepting VIF values up to 5.

Table 7. Collinearity statistics.

	VIF
KC1	2.041
KC2	1.484
KC3	2.248
KC4	1.749
MP1	2.019
MP2	2.073
MP3	1.575
MP4	1.857
NC1	1.924
NC2	1.553
NC3	1.832
NC4	1.493
PI1	2.395
PI2	2.259

PI3	1.410
PI4	2.884
PI5	3.376

Table 8. Mean, deviation standar, T- statistic, dan p value.

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	*p* Values	Results
KC -> PI	0.377	0.385	0.066	5.686	0.000	Accepted
NC -> KC	0.587	0.593	0.043	13.749	0.000	Accepted
NC -> MP	0.581	0.581	0.042	13.914	0.000	Accepted
PI -> MP	0.271	0.276	0.056	4.810	0.000	Accepted

Based on the information presented in Table 9, the researcher can draw the following conclusions: There is positive and significant influence between NC and KC (β = 0.377; T = 5.686; p = 0,000); there is positive and significant influence between NC and KC (β = 0.587; T = 13.749; p = 0,000); there is positive and significant influence between NC and MP (β = 0,581; T = 13.914; p = 0,000); and there is positive and significant influence between PI and MP (β = 0,271; T = 4.810; p = 0,000). The correlation between these variables is shown graphically in Figure 2.

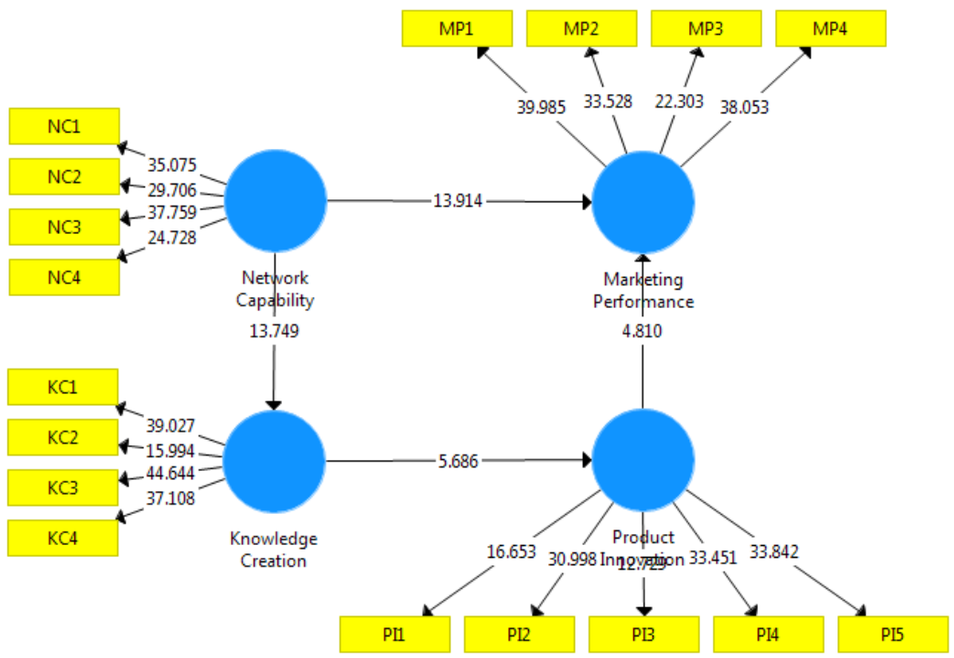

Figure 2. Path model with bootstrap results.

The effect of network capability on marketing performance

The results of the first study show that network capability has positive and significant effect on knowledge creation so that the first hypothesis is accepted. Marketing performance is one of the indications in building overall company performance (Hendar & Sugiyarti, 2018; El-Mallah et al., 2019). Marketing performance is used to measure achievements in the company's marketing activities and is an application of the company's strategy (Gao, 2010). Sugiyarti & Ardyan (2017) explain that what is called Marketing performance is company strategy that is directed to produce company performance. The three indicators of marketing performance are sales value, sales growth, and market share. Sales growth depends on the number of customers or product units sold. high sales value indicates that more and more products are sold. Market share is the amount of product contribution to dominate the market for similar products compared to competitors (Sugiyarti & Mardiyono, 2022).

Marketing performance is related to the results achieved by the company as result of the company's strategy. Marketing performance can be achieved through network business capabilities. Network business capabilities themselves are form of cooperation between individuals, groups or organisations in achieving certain goals (Sasono et al., 2018). Network capabilities provide resource

advantages that are not owned by other companies, which result in increased company capabilities such as technology utilisation, business processes, marketing capabilities, and others that provide company marketing performance. In addition to access to resources, network capabilities also provide new insights and knowledge for companies (Naudé et al., 2014). This of course provides benefits for the company and is able to improve its business.

Building new networks is important to develop orientation to be innovative to build higher performance (Asemokha et al., 2019). Network capability not only seeks and manages the company's external network but also talks about network relationships within the company itself. The network capability component consists of finding partners and managing relationships to develop SMEs. The network capability component consists of the company's ability to organise partners who collaborate with them, the company's interpersonal relationship ability to influence partners, having information or knowledge about the company's partners and competitors and having communication skills to build new relationships. This component can be referred to as coordination, ability to establish relationships, knowledge of partners, and communication. This component is needed to improve the MSMEs marketing performance. MSMEs will more easily identify their markets and distribution channels through the marketing networks that MSMEs have built (Sadiku-Dushi et al., 2019). That way, MSMEs can easily utilise the network they have in product innovation to develop product marketing performance. Network capability must be developed for sustainable MSMEs marketing performance (Dhameria et al., 2021).

Wang et al. (2013) found that there is close relationship between network capability and marketing performance. Research conducted by Ferdinand & Killa (2014) found correlation between network advantages, especially the network of companies that have distribution network with marketing performance. Based on the results of research by Sasono et al. (2018), Heng & Afifah (2020), and Dhameria et al. (2021) that network capability has positive effect on marketing performance.

The effect of network capability on knowledge creation

The results of the second study show that network capability has positive and significant effect on knowledge creation so that the second hypothesis is accepted. The capacity of company to initiate, create, and use relationships between internal and external organisations is referred to as network capability. According to research, "networks formed through strong relationships" can be beneficial to business (Walter et al., 2006). Strong relationships allow entrepreneurs and their businesses to gather market information and problem-solving ideas, as well as to learn and gain moral and technical support (Messersmith & Wales, 2013). The capabilities that enable organisations to thrive in networks are important factors in generating knowledge and value (Dayan et al., 2013). Firms and their agents are socially and professionally connected, resulting in an extensive network structure that includes complementary firms and competitors, consumers, suppliers, and research institutions (Rank et al., 2006; Walter et al., 2006).

The value of the network can be represented as relational capital (Kale et al., 2000). The formation of relational capital does not arise by chance. Companies must gain the ability to thrive in relational environment. The development of network capability is dynamic process that occurs throughout the organisation and is considered high-level resource (Tolstoy, 2009; Walter et al., 2006) consisting of 4 components: coordination, relationship skills, partner knowledge, and internal communication (Kale et al., 2000). Coordination of co-operating firms promotes mutually beneficial exchanges. Network capability also includes social competence or relationship skills, as business partnerships often involve interpersonal communication that requires adaptation to various social contexts and effective responses to various social cues and information (Dayan et al., 2013). Knowledge of partners enables specialised methods for creating relationships and successful network coordination. Internal communication, or competence in collaborative communication within the firm, promotes the assimilation and transmission of up-to-date information about partners, thus integrating external relationships internally to complement internal knowledge. These components of network capability are consistent and mutually reinforcing (Walter et al., 2006).

Network capability helps in the creation of knowledge base. It is technique for learning consumer desires and anticipating market prospects, as well as obtaining timely and sophisticated best practices and supplier feedback (Walter et al., 2006). The results of research by Zacca et al. (2015) that Network capability has positive effect on knowledge creation of MSMEs.

The effect of knowledge creation on product innovation

The third research result shows that knowledge creation has positive and significant effect on product innovation so that the third hypothesis is accepted. The idea of knowledge-based company is explained as unique amount of diverse knowledge whose main purpose is to build, combine, and apply knowledge, as well as communicate it within and outside the company. Therefore, the company usually becomes "knowledge flow channel" (Abubakar et al., 2017). Knowledge is important in assuming technological innovation (Lichtenthaler, 2016). Knowledge is generally regarded as key strategic means to enhance corporate innovation (Alegre et al., 2013; Elrehail et al., 2018). Mahr et al. (2014) argue that businesses that qualify for knowledge creation can continue to generate the

knowledge reserves needed to advance product innovation. Thus, the knowledge base allows companies to increase product innovation (Shu et al., 2012). Similarly, knowledge creation has tendency to achieve product innovation (Quintane et al., 2011; Sankowska, 2013).

Based on research by Victoria et al. (2020) knowledge creation has significant negative impact on product innovation, but research by Rajapathirana & Hui (2018) shows that knowledge creation facilitates product innovation and research by Alshanty & Emeagwali (2019) that knowledge creation has positive and significant effect on product innovation. Knowledge is seen as the key to innovation and valuable commodity for businesses looking to gain competitive advantage over their competitors. Successful companies can create and disseminate knowledge quickly, then transfer that knowledge into new products (Gao & Bernard, 2018). Knowledge is implicit, dispersed, and embedded in individuals (Park et al., 2015).

The effect of product innovation on marketing performance

The results of the fourth study show that product innovation has positive and significant effect on marketing performance so that the fourth hypothesis is accepted. Product line expansion is relatively new product in the market, but not new product for the organisation. Me-too products are products that are relatively new to the company, but already known in the market. New products are relatively new products both in the market and for the company (Meutia, 2015). New product development and effective strategies are important elements that determine the success and survival of company, but this is not an easy thing to do. New product development requires effort, time, and capability, including the risk and cost of failure. These advantages cannot be separated from the development of product innovation so that it can win market competition (Sugiyarti & Ardyan, 2017).

Product innovation plays major role in improving marketing performance (Hurley & Hult, 1998). Menurut Atalay et al. (2013) that product innovation is the introduction and development of new types of goods or services that are different from before and complement the shortcomings of previous findings by prioritising quality. Ismail (2015) states that marketing performance is influenced by environmental factors, product innovation, and market orientation that have positive impact on marketing performance. The results of research by Meutia (2015), Sugiyarti & Ardyan (2017), Nuryakin (2018), Wiwoho et al. (2020), and Khamaludin et al. (2022) state that product innovation has positive and significant effect on marketing performance.

CONCLUSION AND RECOMMENDATION

Based on the research results, the Network Capability variable has positive and significant effect on Marketing Performance, Network Capability has positive and significant effect on Knowledge Creation, Knowledge Creation has positive and significant effect on Product Innovation, and Product Innovation has positive and significant effect on Marketing Performance. This study demonstrates and contributes to the closure of the risearch gap. Based on this research, empirical research also explains that network capability, knowledge creation, and product innovation significantly directly and indirectly improve marketing performance.

Based on the research results and discussion, the implication of this study is that network capability, knowledge creation, product innovation, and marketing performance have positive and significant impact on the sustainability of MSMEs businesses. Theoretically, MSMEs actors can develop the use of marketing performance, so that practically this has implications for MSMEs actors being able to increase sales by utilising social media properly, as means of promotional activities to maintain business continuity in the future. The managerial implication in this research is that companies must improve network capability and secure relationships with stakeholders. Building strong network capability and having good relationships with business partners will enable the company to improve knowledge creation and technology. As result, companies will more easily develop product innovation and have positive impact on the performance of MSMEs.

There are several limitations in this study: (1) the number of samples used is small, (2) does not consider cultural aspects in the MSMEs industry, and (3) does not consider data normality. Therefore, future research should (1) increase the sample size, (2) consider cultural aspects in its influence on MSMEs, and (3) use covariance-based SEM to find data normality assumptions.

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