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HOW DIGITAL TRANSFORMATION CAN AFFECT PRODUCT INNOVATION PERFORMANCE MSMEs: EVIDENCE FROM WEST JAVA

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Abstract: This study aims to examine the relationship of foresight capability to the innovation performance of SMEs by using digital transformation as a mediating variable. This study uses a quantitative research method. Data collection was carried out through a structured offline questionnaire. The technique of determining the sampling is done by using purposive sampling. The population in this study were SMEs originating from the West Java region, with a total of 187 questionnaires collected. This research uses structural equation modeling (SEM) to test the hypothesis. This study proposes ten hypotheses, of which seven direct effect hypotheses and three hypotheses test the mediating effect. The study's results found that foresight capability can affect product innovation performance. The effect of foresight capability (network and analysis) can affect digital transformation, but the time horizon cannot affect digital transformation. Digital transformation can affect the performance of MSMEs product innovation. This study found that digital transformation can partially mediate network relationships and analysis on product innovation performance and cannot mediate time horizon relationships on product innovation performance. The findings of this study enrich the foresight literature, digital transformation, and innovation performance of MSMEs products.

Keywords: Foresight, Digital Transformation, Product Innovation Performance, MSMEs, West Java

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INTRODUCTION

MSMEs are a research topic that is often investigated in various countries today. MSMEs cannot be separated from the vital role of MSMEs in providing economic growth in a country. MSMEs face competition in a dynamic business environment (Cenamor et al., 2019). Besides that, companies also face a business environment that contains volatility, uncertainty, complexity, ambiguity, and hyper-competition (Kaivo-Oja and Lauraeus, 2018; Semke and Tiberius, 2020). This high level of competition requires organizations owned by MSMEs to continue to be able to compete in the dynamics of an uncertain business environment.

Based on the Resource Based View (RBV) theory, to achieve sustainable competitive advantage, MSMEs must focus on intangible and tangible resources (Xin et al., 2023). Innovation will be the key for MSMEs facing competition in the technological era (Kontić and Vidicki, 2018). Innovation carried out by MSMEs cannot be separated from the strategies that have been and will be implemented. Innovation is essential for organizational stakeholders to understand to create strategies to help achieve positive business growth (Wu et al., 2015). Foresight capability provides a view of business situations that continue to fluctuate and may impact their superior position and cause a decrease in their competitive advantage (Kononiuk and Sacio-Szymańska, 2015). Good foresight capability will improve SMEs' innovation performance (Manalu et al., 2023). In line with AlMujaini et al. (2021), the company's corporate foresight can influence innovation performance. So, the foresight capability possessed by MSMEs will be the correct antecedent factor to improve the innovation performance of MSMEs.

Currently, MSMEs in Indonesia have several dominant factors that are sources of vulnerability, including the use of technology, which has a 37% influence on business continuity (BI, 2022). Digitalization can be an effective strategy for the MSMEs to reduce costs (Phiri, 2020). MSMEs can achive business sustainability by adopting digital technology through creative transformation and innovation (Matt and Rauch, 2020). MSMEs originating from West Java are classified as potential; when the acceleration of digitalization in business processes was implemented, the economic contribution reached 28.27% (Susanto, 2020). Husniyah et al. (2023) found that the digital literacy level of MSMEs in West Java is at a high level.

Cultural and organizational aspects of the MSMEs often find it challenging to consider the knowledge related to digital transformation when implementing digital technology (Riesener et al., 2019; Stich et al., 2020). The limited resources owned by MSMEs can be a stumbling block in facing uncertain competition. Besides that, financial strength and resources are essential factors for MSMEs to face competition in the digital era of technology (Peillon and Dubruc, 2019). The discontinuity between organizational innovation and digitalization makes it difficult for MSMEs to compete in a dynamic business environment. Every MSMEs needs digital transformation to compete (Costa-Melo et al., 2023).

On the other hand, digital transformation requires considerable resources, which may be difficult for every MSMEs. However, digital transformation is a change from traditional to digital, so that the right strategy will be the primary key (Stalmachova et al., 2022). However, according to Appio et al. (2021), digital transformation can impact the stages of the innovation process in complex and ambiguous ways through supporting technology to improve product performance innovation (Iansiti and Lakhani, 2019). Thus, digital transformation is a potential variable in bridging the foresight relationship on product innovation performance.

There needs to be more investigations into the influence of foresight capability on the product innovation performance of MSMEs in West Java. Furthermore, the measurements used for foresight capability have not come to light and have caused confusion among researchers. On the other hand, digital developments have required business actors to be able to implement digitalization, including at the MSMEs level. This research is presented to provide novelty regarding foresight capability testing on MSMEs product innovation performance and the impact of the mediating effects of digital transformation.

LITERATURE REVIEW

Theoretical Background

By embracing the theory of Resource-Based View (RBV) and Dynamic Capability View (DCV), we review relevant literature to understand

better our assumptions about the foresight capability, digital transformation, and innovation performance of MSMEs.

RBV shows two types of resources owned by a company, namely intangible and tangible (Barney, 1991). For companies with a lot of capital, tangible resources will be fine. On the other hand, small companies such as MSMEs often face this problem due to limited financial and human resources. Thus, strengthening tangible resources will be the key for them to achieve Sustainable Competitive Advantage (SCA).

High competition and the dynamic business environment require MSME owners to have dynamic capabilities (França and Rua, 2018). Good dynamic capabilities will enable MSMEs to compete in a cruel business environment. The better MSMEs are at implementing dynamic capabilities, the better they will be able to improve their achievements to achieve a good competitive advantage (Teng et al., 2022). MSMEs' unique and rare capabilities compared to their competitors can be the primary key for them to survive in uncertain business competition.

Foresight Capability

Foresight analyzes current conditions based on the past and present and predicts possible future events (Slaughter, 1996). Foresight can be done by assuming the absence of luck and randomness (Ahuja et al., 2005). Kayser and Blind (2017) define foresight as current decisions and actions to study the possible future of an organization. So, foresight cannot be predicted by itself but is formed based on current events. According to Heiko et al. (2010), the concept of foresight significantly contributes to the development of new products and the innovation path of a company. Foresight can be seen as two sides of a process, on the other hand, as an organizational capability (Rohrbeck and Gemünden, 2011).

Practices and techniques have been suggested as essential from foresight, including scenario planning, environmental scanning, and trend analysis (Vecchiato, 2012). Thus, foresight allows companies to reduce uncertainty and increase the ability to understand changes and challenges for a reasonable future throughout the industry (Paliokaitė et al., 2014; Amer et al., 2013; Chermack, 2005). Previous researchers have acknowledged the many conceptualizations of foresight with differences or contradictions that add to the difficulty of measuring the impact of this concept on firm performance (Paliokaitė et al., 2014). Thus, there is hope that foresight proposals can help reduce uncertainty, analyze future scenarios, and facilitate the strategy formulation process to support decision-making and strategic planning.

Digital Transformation

Digital transformation is a phenomenon reshaping industry, business, and society as a whole, where a holistic and strategic approach is needed beyond just technology adoption to evaluate business models (Bharadwaj et al., 2013). According to Fitzgerald et al. (2014), digital transformation uses new digital technologies such as social media, mobile technology, analytics, or embedded devices to enable major business improvements, including improved customer experience, simplified operations, or streamlined business models. Gong and Ribiere (2021) define digital transformation as a process of fundamental change enabled by the innovative use of digital technology accompanied by strategic leverage of key resources and capabilities to improve the entity and redefine the value proposition for stakeholders. An entity can be expressed as an organization, business network, industry, or society.

Digital transformation is considered a driver of change in all contexts, especially in the business context, and influences all aspects of human life based on the use of technology (Kraus et al., 2021). Digital transformation and digitalization are considered to have differences. However, some studies often describe it as "digitalization" (Hess et al., 2016). Digital transformation is a change that arises from digital technology, while digitalization refers to converting information from analog to digital form and automating processes through technology (Hess et al., 2016). Thus, this research will consider digital transformation as a synonym for "digitalization," "digital innovation," and "digital transition" in line with (Costa-Melo et al., 2023).

Product Innovation Performance

Innovation can be interpreted as a company's good implementation of a creative idea (Gumusluoğlu and Ilsev, 2009). Innovation can result from raw ideas created by the company or from

adapting new knowledge discovered within the company (Chen et al., 2015). Innovation is generally referred to as one of the key ingredients for competitive companies and the ability to survive in a dynamic business environment (Gumusluoğlu and Ilsev, 2009).

Product innovation plays a crucial role as one of the key aspects of overall innovation through the company's ability to learn abnormal profits and provide channels for companies to enter new markets and industries (Nambisan, 2003). Furthermore, product innovation is the introduction of a novelty or product significantly developed in the study of its characteristics or intended use (Alegre et al., 2006; Muñoz-Pascual et al., 2019).

HYPOTHESIS DEVELOPMENT

Foresight Capability, Digital Transformation and MSMEs Product Innovation Performance

SMEs can overcome the demands and challenges of a hypercompetitive business environment by improving innovation performance (Parida et al., 2012). In line with Milshina and Vishnevskiy (2018), innovation issues are a topic that is often associated with MSMEs. Innovation is the key for MSMEs to survive and compete because MSMEs often have difficulty creating a strategic vision (Van de Vrande et al., 2009).

Previous research supports leveraging foresight capabilities to strategically benefit MSMEs innovation performance (AlMujaini et al., 2021; Manalu et al., 2023). Slaughter (1996) explains that foresight is a strategy for predicting future events based on data sources they have currently and in the past. Several studies have linked foresight with organizational learning, innovation, ambidexterity, and business performance (Paliokaité, 2010). Without a clear theoretical basis, foresight is sometimes viewed as a collection of various methods (Baškarada et al., 2016; Piirainen and Gonzalez, 2015). However, business organizations that cannot implement foresight well are usually low in innovation and tend to have stagnant growth (AlMujaini et al., 2021). So, by having good foresight skills, they will be able to increase their innovation in developing new products.

Companies can gain operational efficiency through digital technology. Digital technology that is appropriately utilized can reduce workload or automate business activities. Companies can break away from traditional sales methods by having better foresight skills, such as digitizing sales.

H1: Network has a positive effect on MSMEs product innovation performance.
H2: Time Horizon has a positive effect on MSME product innovation performance.
H3: Analysis has a positive effect on the product innovation performance of MSMEs.
H4: Network has a positive effect on digital transformation.
H5: Time Horizon has a positive effect on digital transformation.
H6: Analysis has a positive effect on digital transformation.

The Influence of Digital Transformation on MSMEs Product Innovation Performance

Digital transformation refers to a business transformation strategy that focuses on consumers and equally requires organizational and cultural changes in line with the implementation of digital technology (Stalmachova et al., 2022). The rapidly growing use of the internet encourages ease in disseminating knowledge and information, thereby reducing company costs in the information search, tracking, and verification process, ultimately conducive to encouraging company innovation (Fang et al., 2022; Li et al., 2023). Furthermore, digital communication technology, including social media, positively influences innovation (Gaglio et al., 2022). Several studies indicate that digital technology companies will potentially be more innovative (Li et al., 2023).

Research on digital transformation on the product innovation performance of MSMEs is still lacking. MSMEs are often faced with technology investments that are quite high in terms of costs. However, on the other hand, digital usage can be used via other digital platforms that are considered more cost-effective, such as social media. Based on the description above, we propose the following hypothesis:

H7: Digital transformation positively influences MSME product innovation performance.

Mediation Role of Digital Transformation

Digital transformation refers to triggering an organization to respond to strategies through digital technology, including information, computerization, communication, changing structures, boun-

daries, and even value-generating paths, and then realizing the corporate entity's evolution process (Vial, 2019). Other studies believe that corporate digital transformation triggers major changes in the reconstruction and characteristics of corporate organization, behavior, and system operation through applications of information technology (IT), computerization, communications, and connection technology (Zhang et al., 2021). Therefore, in the digital transformation process, companies need a clear strategy, appropriate methods, and appropriate behavior to accelerate the progress of continuous innovation and development stages (Teng et al., 2022). Thus, good innovation to compete in a business environment that requires accelerated use of technology will be influenced by good transformation, and digital transformation will be influenced by the ability of foresight to obtain valuable information in determining future strategies for MSMEs.

H8 : Digital transformation can mediate network relationships and MSME product innovation performance.

H9 : Digital transformation can mediate the relationship between time horizon and MSME product innovation performance.

H10 : Digital transformation can mediate the relationship between analysis and MSME product innovation performance.

METHOD

This research will use a quantitative strategy using a questionnaire's primary data. This research will target MSMEs from the fashion, craft, food, and beverage sectors from West Java who have implemented digitalization in their business activities. These MSMEs were chosen because they are in a competitive and dynamic business environment where innovation capabilities are needed to continue to survive (Cenamor et al., 2019).

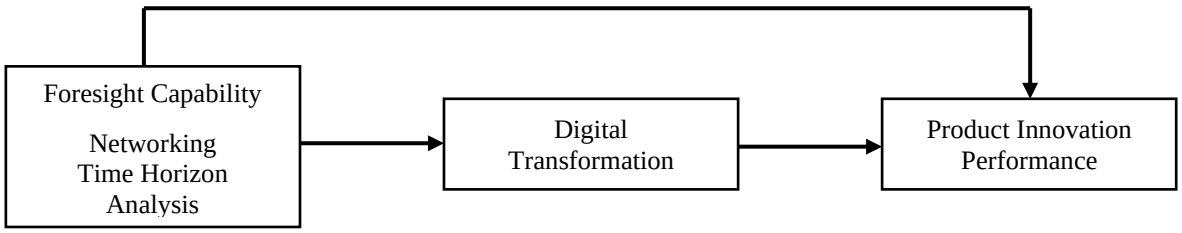

Figure 1. Research Framework

Table 1. Constructs Measurement

Variable	Measures	Source
Networking	I always work closely with suppliers and customers to develop solutions.	Manalu et al. (2023), Paliokaitė et al. (2014).
	I always ask the experts for their opinion.	
	I always participate in trade shows.	
Time Horizon	I clearly define a timescale for investigating a new technology.	
	I conduct continuous scanning of the business environment.	
	I plan activities that optimize progress.	
	I Develop a consensus about the organization's vision.	
Analyzing	I use scenario thinking.	
	I consistently Predict competitors' maneuvers.	
	I Use scenarios to explore potential futures.	
Digital Transformation	I operate systematic technology.	Teng et al. (2022), Bley et al. (2016).
	I've always been data-driven and business-centric	
	I use technology to help with decision-making.	
Product Innovation Performance	I am introducing a new generation of products.	Agostini et al. (2017).

Data was collected through a structured questionnaire using purposive sampling. The criteria used to collect data are MSMEs owners or managers who have carried out business activities for at least one year. We used a 7-point Likert scale (1-strongly disagree to 7- strongly agree).

This research employs three variables: foresight capability, digital transformation, and product innovation performance. The measurements used to explain foresight capability use multidimensionality consisting of networking, time horizon, and analysis. Digital transformation and innovation performance using unidimensionality. Each dimension will be explained into indicators where foresight capability consists of ten indicators: three networking, four-time horizon, and three analyzing indicators. Foresight capability indicator items refer to (Manalu et al., 2023; Nyuur et al., 2015; Paliokaitė et al., 2014); three digital transformation indicators refer to (Bley et al., 2016; Teng et al., 2022) and three innovation performance indicators (Agostini et al., 2017). The structural equation modeling (SEM) approach used in this research is a method for establishing, estimating, and testing causal relationship models. Two stages will be carried out: confirmatory factor analysis (CFA) and path analysis. CFA is tested by looking at the average variance extracted (AVE) value of more than 0.5 and composite reliability (CR) of more than 0.7 (Bagozzi and Yi, 1988).

RESULTS

Respondent Characteristics

Table 1 shows the questionnaire collected 187 respondents who had filled it in and could proceed to the testing stage. Based on the characteristics of respondents, it was found that the average age of MSME owners was 32 years to 39 years, namely 72 (38.5%) respondents. Characteristics based on gender: The average number of MSME owners who filled out the questionnaire was 142 men (75.93%). Furthermore, from the characteristics of educational level, it was found that, on average, 143 (76.47%) respondents had a high school education. Finally, the average operated business for MSMEs to carry out their business activities was 1 to 3 years for 82 (43.85%) respondents.

Convergent Validity

Table 2 shows that validation confirmatory factor analysis (CFA) was carried out to test the measurement model. Overall, CFA obtained satisfactory measurements for measuring the variables of foresight capability, digital transformation, and product innovation performance of MSMEs. Based on model testing, it was found that the measurement parameters were $\chi 2 = 351.724$ df = 97, $\chi 2/df = 3.626$ p = 0.000, Gfi = 0.817, Agfi = 0.744, Tli = 0.776, Nfi = 0.770, Cfi = 0.819, Ifi = 0.822, Rmsea = 0.126. next, AVE and CR testing. Based on table 2 shows that the factor loading value for each indicator is > 0.50, the value for each variable is > 0.5, and the CR value for each variable is > 0.7. These results are overall appropriate and adequate (Bagozzi and Yi, 1988).

Table 1. Respondent Demography

Category		Total	%
Age	18-25 years	24	12.83
	25-32 years	54	28.87
	32-39 years	72	38.50
	> 39 years	37	19.78
Gender	Male	142	75.93
	Female	45	24.06
Education	Senior high school	143	76.47
	Undergraduate	41	21.93
	Postgraduate	3	1.6
Operated MSMEs	1-3 years	82	43.85
	3-5 years	65	34.75
	> 5 years	40	21.39

Source: Processed data, 2023

Direct effect testing

Testing will be carried out using SEM. Two tests will be conducted, namely testing the direct effect and using mediation effects Variance Accounted For (VAF). The first hypothesis testing the influence of networks on MSME product innovation performance was found to have a positive effect ($\beta = 0.215$, $p = 0.008 < 0.05$). The second hypothesis of the influence of the time horizon on the MSMEs product innovation performance was found to have a positive effect ($\beta = 0.752$, $p = 0.001 > 0.05$). The third hypothesis of the influen-

ce of analysis on MSME product innovation performance was found to have a positive effect (β = 0.164, p = 0.027 < 0.05). The fourth hypothesis found that networks can influence digital transformation positively (β = 0.164, p = 0.027 < 0.05). The fifth hypothesis of the influence of time horizon on digital transformation was found to have no effect (β= -0.095, p= 0.265>0.05). The sixth hypothesis of the influence of analysis on digital transformation was found to have a positive effect (β= 0.249, p= 0.006<0.05). The seventh hypothesis of the influence of digital transformation on product innovation performance was found to have a positive effect (β = 0.423, p = 0.001 < 0.05) (Table 3).

Table 3. Confirmatory Factor Analysis

Indicator	Loading Factor	AVE	CR	Mean	SD
Nt1	0,717	0,555	0,789	3,729	1,229
Nt2	0,769				
Nt3	0,749				
Th1	0,768	0,625	0,870	3,955	1,308
Th2	0,810				
Th3	0,786				
Th4	0,798				
An1	0,751	0,585	0,809	3,992	1,312
An2	0,781				
An3	0,762				
Dt1	0,807	0,628	0,835	3,493	1,193
Dt2	0,79				
Dt3	0,781				
Pip1	0,751	0,627	0,834	4,681	1,298
Pip2	0,810				
Pip3	0,813				

Source: Processed data, 2023

Note: Nt: networking, Th: time horizon, An: Analysis, Dt: Digital transformation, Pip: Product innovation performance

Table 2. Hypothesis Testing

Hypothesis	Path			T-value	*β*	*p*	Result
H1	Nt	→	Pip	2.633	0.215	0.008	Supported
H2	Th	→	Pip	7.547	0.752	0.001	Supported
H3	An	→	Pip	2.211	0.164	0.027	Supported
H4	Nt	→	Dt	3.786	0.364	0.001	Supported
H5	Th	→	Dt	-1.115	-0.095	0.265	**Not Supported**
H6	An	→	Dt	2.749	0.249	0.006	Supported
H7	Dt	→	Pip	4.682	0.423	0.001	Supported

Source: Processed data, 2023

Table 5. Mediation Testing

Hypothesis	Path	VAF value	Result
H8	Nt → Dt → Pip	0,417	Supported
H9	Th → Dt → Pip	-	**Not Supported**
H10	An → Dt → Pip	0,391	Supported

Source: Processed data, 2023

Testing Mediation Effects

Testing the mediation effect will use the VAF technique by (Preacher and Hayes, 2008) to determine full or partial mediation. Based on the VAF calculation, it was found that digital transformation can partially mediate networking relationships and MSMEs product innovation performance with a VAF value of 0.417, so the hypothesis is accepted. Furthermore, the mediating effect of digital transformation on the relationship between time horizon and product innovation performance was found not to be mediated because the indirect relationship had no effect, so the ninth hypothesis was rejected. Finally, the mediating effect of digital transformation on the relationship between analysis and innovation performance of MSMEs was found to partially mediate with a VAF value of 0.391, so the tenth hypothesis was accepted. (Table 4).

DISCUSSION

This research uses multidimensional measurements on the concept of foresight capability. This research shows that foresight capability (network, time horizon, and analysis) can positively influence product innovation performance. Furthermore, foresight capability found that the three dimensions used to measure foresight capability were only network and analysis that could improve digital transformation, and time horizon could not influence digital transformation. Digital transformation as a mediating variable can partially mediate network relationships and MSME product innovation performance analysis. However, digital transformation cannot mediate the relationship between time horizon and product innovation performance.

This research contributes to a better understanding of the factors influencing product innovation performance in the relationship between foresight capability and digital transformation, especially for MSMEs from West Java. On the other hand, this research strengthens the views of the RBV theory regarding the digital transformation. Many West Java MSMEs use digital technology to carry out business activities (Husniyah et al., 2023). Furthermore, SMEs from West Java have used Foresight capability to improve their product innovation performance to survive in an uncertain business environment (Manalu et al., 2023).

Foresight Capability, Digital Transformation and MSMEs Product Innovation Performance

The influence of foresight capability on the product innovation performance was influential. This research results align with previous research, which states that foresight can influence a company's innovation performance (Manalu et al., 2023; Yoon et al., 2018). Yoon et al. (2018) used the basic theory of RBV and DCV by connecting corporate foresight to innovation performance moderated by organizational learning. This research shows that the more MSMEs apply foresight capability in their business activities, the more they can improve product innovation performance. Manalu et al. (2023) found that good foresight capabilities possessed by MSMEs will help them accelerate product innovation. Changes that occur in the business environment will impact their innovation performance. Having foresight capability will make it easier for MSMEs, especially in West Java, to predict changes in consumer desires, ultimately moving innovation.

The influence of networks and analysis was found to influence digital transformation positively. However, time horizons cannot affect digital transformation. MSMEs that can expand their networks in the business world will help them accelerate digital transformation. Previous research put forward the view that digital transformation can be influenced by their ability to collect and process information using digitalization. The networks

owned by MSMEs in the foresight concept are found to be efforts by MSMEs to obtain information sourced from their competitors or consumers.

Furthermore, analysis in the foresight concept refers to their analytical capabilities using good analytical techniques to improve their digital transformation process. This research found that the time horizon cannot influence the digital transformation of MSMEs in West Java. The time horizon in the concept of foresight capability shows that MSMEs must determine the time scale to use digitalization. Using a time scale in determining digital transformation will cause MSMEs to experience confusion due to the rapid changes occurring in the technological environment. Based on RBV theory, it strengthens the results of this research that using foresight capability will impact digital transformation decisions that MSMEs will carry out. The better SMEs have foresight capabilities, the greater their awareness of the importance of speed and accuracy in predicting digital changes in their business environment.

Digital Transformation and Product Innovation Performance of MSMEs

Digital transformation was found to influence the product innovation performance of MSMEs positively. The results of this research align with previous research, which states that innovation can be done by changing traditional habits to more digital use (Gaglio et al., 2022). The use of digital is carried out to reduce workload by dividing work tasks on digital platforms. Thus, using and implementing an excellent digital transformation process will give MSMEs more ability to innovate products faster and with more products.

These results are consistent with the RBV theory that digital transformation must be profoundly integrated with innovation in the business to form dynamic capabilities (Vial, 2019). These results show that many MSMEs in West Java are investing in digitalization. However, MSMEs must understand that product innovation performance tends to be dynamic and always tied to trends. Digital transformation is related to the ease of MSMEs in carrying out their business activities, which will have impact on product innovation performance.

Mediation Role of Digital Transformation

The results of this research align with the RBV theory, which explains that intangible assets will benefit business organizations that do not have enough capital to achieve sustainable competitive advantage. Investment in digitalization to carry out MSME business activities will positively impact their innovation. The mediating effect of digital transformation can mediate the relationship between networks and analysis on the product innovation performance of MSMEs. A network is a network that is needed to be able to collect important current and past information for future decision-making. Previous research suggests that searching for information by having a good network will increase a company's level of innovation with the help of easy digital access (Teng et al., 2022). When MSMEs carry out digital transformation related to collection, it can help link foresight capability to product innovation performance. Good analytical power can be an antecedent of innovation performance. Good analytical skills using information from the past and present are a reference for determining the best techniques that can be used. Digital transformation can be used as mediation by assuming that changing traditional behavior with more use of the digital sector will make it easier to analyze events that occur and impact increasing MSMEs product innovation.

On the other hand, digital transformation cannot mediate the relationship between time horizon and MSMEs product innovation performance. The time horizon is determined when searching for current and future information. Digital transformation must be carried out continuously and tends to be faster. So, selecting the time horizon for improving performance cannot be mediated by digital transformation because the use of timing in gathering information and speed in the digital transformation process is not met.

IMPLICATIONS

This research contributes to the theory by proposing a foresight capability model as an antecedent and impact. This research supports the RBV theoretical framework in perceiving innovation as an intangible asset for MSMEs. Another significant theoretical contribution is the argument linking foresight capability and MSME product innovation performance in a business environment that is difficult to predict. Digital transformation is used to answer several previous research arguments

that link innovation with the use of technology.

The digitalization that has been carried out by MSMEs, which has resulted in improved product innovation that MSMEs have carried out, provides insight into theoretical phenomena and their implications. Despite the uncertainty of the business environment, which is difficult to predict, and the rapid changes in technology, it provides empirical facts that MSMEs originating from West Java can use the concept of foresight capability by connecting digital transformation, which results in better innovation. This research strengthens the idea that small companies such as MSMEs must be able to emphasize their capabilities, especially on intangible assets, in line with the RBV theory. Digital transformation is a mediating effect based on the DCV idea, which views that every company must have dynamic capabilities to face today's uncertain business environment. Foresight capability provides insight to MSMEs owners that the ability to review the future can be done with simple things such as exchanging ideas between employees and desk review, where these activities tend not to require high costs. MSMEs actors, especially the managers or owners, can use the concept of foresight capability well using their networks, determining measurable and structured timing and carrying out. A good understanding of foresight will provide new views on the future, impacting their performance in innovation.

RECOMMENDATIONS

Future research is expected to deepen and examine the concept of foresight capability, which may have yet to be used in this research. Furthermore, future research can explain new terms in digital concepts, including digital transformation. Finally, research development is still needed in testing in other areas.

This research is not free from various limitations. First, research uses the concept of foresight capability, which has yet to find a consensus regarding accurate measurement. Second, the concept of digital transformation has yet to come to light because it still has similarities with the concept of digitalization. Third, this research focuses on MSMEs in the West Java region.

CONCLUSIONS

This research has several conclusions. First, it was found that foresight capability represented by the network, time horizon, and analysis dimensions can improve the innovation performance of MSMEs. Second, network and analysis can improve the digital transformation process, but the time horizon cannot influence the product innovation performance of MSMEs. Third, digital transformation carried out by MSMEs will be able to improve product innovation performance. Fourth, it was found that digital transformation carried out by MSMEs could partially mediate the relationship between network and analysis on product innovation performance but could not mediate the relationship between time horizon and innovation performance.

Based on the findings from this research, it shows that MSMEs originating from West Java already use foresight capability in carrying out their business activities. Foresight capability is used through desk reviews and brainstorming among employees and MSMEs owners. The digital literacy of MSMEs in West Java is at a high level, making it easier for them to carry out transformations, which will impact the ease of obtaining consumer information, ultimately influencing product innovation performance.

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