

The Effect of Digital Capability, Digital Orientation on Business Resilience with Digital Transformation as a Mediating Variable

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ABSTRACT

In the advent of information technology advancement, digitalization in business becomes pivotal in sustaining competitive advantage, especially for small scale enterprises. Notwithstanding the influx of digitalized business processes, their impact on business resilience is arguably impacted by other variables. This study is aimed at analyzing the influence of digital capabilities, and digital orientation on business resilience with digital transformation as a mediating variable. As a case in point, 380 small business owners in Greater Jakarta area are selected as respondents. The data was collected using a Likert-scale questionnaire that was distributed online. Data was analyzed using Smart PLS. The study finds that digital capabilities, digital orientation, and digital transformation as separate variables are significantly influenced by business resilience with digital capability showing the highest significance value. The digital transformation partially mediates the impact of digital capabilities and digital orientation on business resilience. The findings indicate the limited success of the Indonesian government initiatives in accelerating small businesses' exposure to digitalization during the pandemic period. The next proposed recommendation would be to initiate efforts to increase digital transformation of small businesses since this variable comes across as the bridge between digitalization and business resilience.

Keywords: *Digital Capability, Digital Orientation, Business Resilience, Digital Transformation*

INTRODUCTION

Business resilience is commonly found in large businesses compared to small scale enterprises, presumably due to their accumulations of assets, knowledge, and social capital. The term resilience in economic/business perspective has evolved from the capacity to operate through crises without sustaining any loss (Holling, 1973) to the ability to response to any adversity (Hamel and Valikangas, 2004). The body of knowledge related to business resilience for corporations can be found in Bhamra et al (2011), Annarelli and Nonino (2016), and Linnenluecke and Griffiths (2017), suggesting that studies on resilience remain relevant in this digital era, whereby digitalization is considered a disruption to business. The three-year Pandemic has shown how corporations shift their assets, redirect their knowledge, and form new types of social capital that is based on technological advancement.

In the realm of small businesses, on the contrary, the body of knowledge on business resilience is scarce. According to Saad et al (2021), the body of literature on business resilience for Small and Medium Enterprises (SMEs) refers to eight features, namely survival/recovery, positive performance, adaptability, vulnerability, strategies, time, competitiveness, and responsiveness. Amongst the most-researched features of entrepreneurial aspects, financial resources, business

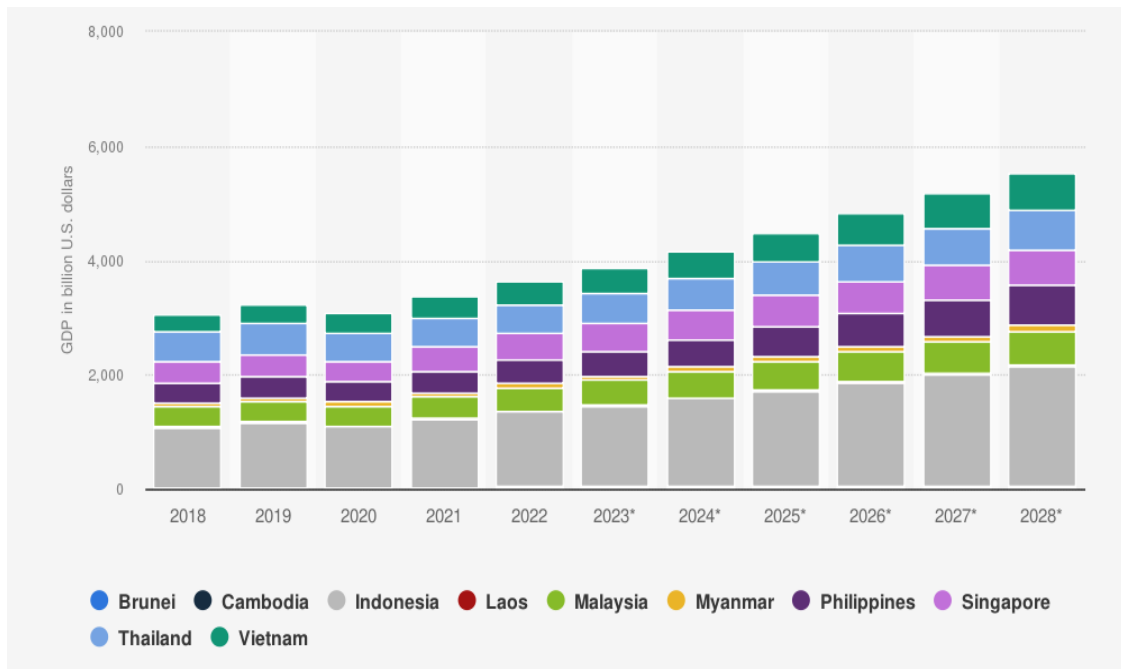
environment and interactions, these studies have not featured the contemporary issue of technology and digitalization of businesses. While corporations had time to accumulate their tangible and intangible assets to accommodate the new ways of operations, their counterparts have limited resources to respond to the challenge, thus compromising their business resilience.

The study conducted by Aldianto et al (2021) on Indonesian start-ups during the Pandemic period suggests that there are four elements to business resilience. These are dynamic capabilities, technology capability, agility in leadership and innovation ambidexterity. Two areas that have not been focused in preliminary studies are the technology capability and innovation ambidexterity. (Yao et al., 2014) explain that technological capability relates to the expertise possessed by a company to design and produce new products and related processes. In many studies, technological capabilities and digital capabilities are frequently used interchangeably. In the scope of digital products, digital capability can be interpreted as the ability, talent, and specialization possessed by companies in controlling digital technology to create new products. Levallet & Chan, (2018) emphasize two important elements in digital capabilities: effective information management and information technology infrastructure that can adapt to change. In addition, Renko et al., (2015) added that skills and competence in technology are also important factors in supporting the innovation process. Recent research has linked technological orientation to firm performance in both corporations (K. Wang et al., 2023; Y. Wang, 2022; Yu & Moon, 2021) and small and medium-sized businesses (Asheq et al., 2021; Baldegger et al., 2021; Mangifera et al., 2022), as well as the innovation capabilities of these

businesses (Amelia et al., 2020; Nassani et al., 2023; Widyanti & Mahfudz, 2020)

In addition to digital capabilities, digital orientation professes as a corporate strategic orientation that focuses on changes brought about by digital technologies such as social networks, mobile applications, and digitalization processes (Kindermann et al., 2021). This is more consistent with resource orchestration theory, which includes the business strategy, rather than the more commonly applied resource based view to SMEs' sustainability. Essentially, digital orientation compels strategies that drive digital transformation and eventually builds up a competitive advantage. Studies on technology orientation and its influence on corporate performance have been well documented, in both corporate-size (李, 2023; Nousopoulou et al., 2022; Ionaşcu et al., 2022) and small and medium-sized businesses (Teng et al., 2022a; Roblek et al., 2021), as well as the innovation ability of these businesses (Sun, 2022; Paskova, 2021; Gao et al., 2022). This study focuses on the influence of digital capabilities and orientation on small business resilience using Indonesian small businesses as a case in point.

Indonesia economy is emerging within the last five years and becomes the leader amongst the 10 ASEAN countries. Figure 1 shows the strong performance of the country's GDP even during the economic downturn due to COVID-19 Pandemic. In 2018, Indonesia's GDP is USD 1,042.71 billion with an increase of USD 276.1 billion to reach USD 1,318.81 billion in 2022. Even at the height of Pandemic in 2020 and 2021, Indonesia' GDP remain strong at USD 1.062,53 billion and USD 1.187,73 billion, respectively. The economic performance of the country is a result of how small businesses manage to survive their operations.



*Projected numbers
 Figure 1. Gross Domestic Product of the ASEAN countries from 2018 to 2028 (in billion USD)
 Source: Statista, 2023

There are approximately 62.4 million micro, small, and medium enterprises, or 98.68% of the total number of businesses across Indonesia (Badan Pusat Statistik, 2019). The contribution of MSMEs in shaping Indonesia's GDP is accounted for more than 60 per cent by 2022. Although the impact of COVID-19 Pandemic on MSMEs has been well-documented by Wahyuni and Ikasari (2022), the fact shows their ability to cushion the shock. the MSEs have successfully employed nearly 60 million individuals, accounting for about three-quarters of the total workforce in Indonesia. Of the seven sectors, the wholesale and retail trade are prominent establishments that form more than 60% of the MSEs. The island of Java has the largest number of MSMEs in wholesale and retail trade with 7,195,726 units, followed by Sumatra with 2,478,180 units, Sulawesi with 1,098,870 units, Bali and Nusa Tenggara with 667,229 units, and Kalimantan with 661,037 units. Given the sector's significant contribution to the economic robustness of Indonesia, this study focuses on the MSMEs' owners digital prowess and orientation, particularly those that are operating within the island of Java that is the Greater are of Jakarta

comprises the five municipalities of Jakarta, Bogor, Depok, Tangerang and Banten. As mentioned above, studies on digital capabilities shows impact on businesses. On extreme cases, the lack of digital capabilities could leave company without competitive edge (H. Wang & Li, 2023). Strongly related to digital capabilities is digital orientation, which includes the willingness to utilize digital technology in various aspects of business, such as marketing, production, distribution, and management. In addition, digital orientation also involves the ability to follow the latest technology trends and be able to adapt quickly to technological changes that occur. This study refers to several research results conducted by (Guo et al., 2020; Khin & Ho, 2018) in providing the constructs of the variables used. Thus, the study aims to analyze the influence of digital capability and digital orientation on the business resilience of MSMEs in the Greater Jakarta area, with digital transformation as a mediating variable. This study contributes to better understanding of how digitalization works and impacted the businesses, which in turn will benefit related government units to develop evidence-based policy and

program to increase MSEs business resilience in relations with technological advancement.

METHODS

This research uses quantitative method whereby its objective is to analyze the causal relationship amongst two exogenous variables of digital capabilities and digital orientation, and one endogenous variable of business resilience, with digital transformation as a mediating variable. The online questionnaires are distributed to

MSMEs' owners who have used digitalization in their business processes. Due to the non-existent population data, the respondents are chosen using purposive sampling technique and is amounted to 380 respondents for three months data collection from October to December 2023.

The survey instrument was developed based on constructs used in Guo et al., (2020) and Khin & Ho, (2018) studies. Table 1 shows the indicators of each variable applied in this study.

Table 1. Concept Operationalization

Variable	Statements
Digital Capabilities	My business adopts important digital technologies
	I am able to analyze opportunities for new digital utilization in my business
	I am able to respond to digital changes
	I am able to master the latest digital technology in developing my business
	I am able to develop innovative products by utilizing digital technology
	I am able to develop innovative services by utilizing digital technology
Digital Orientation	I am able to design innovative business process by utilizing digital technology
	I am committed to using digital technology to grow my business
	My business is ready to adopt new digital technologies
	My business is ready to embrace new digital technologies
Digital Transformation	I look for opportunities to use digital technology in my business
	I look for opportunities to find new innovation in my business
	My business is able to optimize business processes through digital transformation
	My business is able to optimize business procedures through digital transformation
	My business is able to make cost efficiencies through digital transformation
	Digital transformation enables better direct customer transactions
	Digital transformation enables better direct transactions with suppliers
	Digital transformation enables customers to have a better experience
	After doing digital transformation, my business is more sophisticated
	Digital transformation allows me to build a better business model
Business Resilience	I have the basic ability to predict or recognize business problems that will be faced
	I am aware of alternative measures to respond to business problems encountered
	I am able to communicate problems that occur to parties related to my business
	I am able to anticipate the impact of indirect changes that occur in my similar field of business
	I have support from all parties in solving my business problems
	I am able to get information on business development
	My business has available resources to learn
	I always have the desire to learn to improve my business skills
	I follow the latest development in digital technology that support my business
	The resources I have are able to respond to changes in digital technology related to my business
	The competencies I have can support me in anticipating future changes in digital technology
	I have the ability to analyze changes in digital technology related to my business
	My business endeavors to conduct continuous learning related to digital competencies
	My business revenue has increased after digital optimization
I have the courage to increase my business capital	
New jobs created as a result of my growing business	
Team internals are getting stronger thanks to my growing efforts	

The study employed the Likert scale as the measurement scale. Respondents' perceptions are surveyed between agreeing and disagreeing on a scale of 1 to 6. A rating of 6 indicates strong agreement, while a rating of 1 indicates weak agreement. The study develops four hypotheses as follows:

H₁: Digital capabilities and digital orientation have a positive influence on the business resilience of trade or service MSMEs in Jabodetabek

H₂: Digital capabilities and digital orientation have a positive influence on the digital transformation of trade or service MSMEs in Jabodetabek

H₃: Digital transformation has a positive influence on the business resilience of trade or service MSMEs in Jabodetabek

H₄: Digital capabilities and digital orientation have a positive influence on digital transformation, which acts as a mediating variable in its influence on the business resilience of trade or service MSMEs in Jabodetabek

RESULT

The profile of 380 respondents collected through online distribution of the questionnaire is depicted in Table 2 below. It is assumed that the majority of respondents are familiar with technology and digitalization.

Table 2. Respondents' Characteristics

Profile	Number	Percentage
Age: (n=377)		
19 - 31 years old	281	74.54
32 - 44 years old	91	24.14
45 - 56 years old	5	1.32
Area: (n=374)		
Jakarta	157	41.98
Bogor	69	18.45
Depok	31	8.29
Tangerang	58	15.51
Bekasi	59	15.77
Year of Establishment: (n=380)		
2000 - 2007	1	0.26
2008 - 2015	65	17.11
2016 - 2023	314	82.63

Inner Model Evaluation Results

The application of SEM-PLS involves an inner and outer model. The validity test using convergent and discriminant validity resulted in all indicators and variables above 0.5 for outer loading and above 0.5 in Average Variance Extracted (AVE) value. The test of reliability using Composite Reliability and Cronbach Alpha also show value above 0.7, which means all indicators and variables are reliable. Thus, the analysis continues to inner model evaluation.

Table 3 below shows that business resilience is explained by variables used in this study as high as 65.4%, whereas the 34.6% that influence business resilience depends on other variables not used in this study. As for digital transformation as mediating variable, it is explained by digital

capability and digital orientation for 70.2% of the model, whilst the other 29.9% is explained by other variables outside this study. This shows the strength of the endogenous variables used in this model.

Table 3. R Square

	R Square	R Square Adjusted
Business Resilience	0,654	0,651
Digital Transformation	0,702	0,701

Source: Processed with SmartPLS Software

Table 4 shows the predictive relevance (Q^2) evaluation for the four observed variables. The business resilience variable has a Q^2 value of 0.354, while digital transformation has a Q^2 value of 0.445. These values indicate how well the model can predict the observed value. Digital transformation has a higher Q^2 value, indicating that the model has a better predictive ability (about 44.5% of the variation of the endogenous variables can be explained by the exogenous variables in the model). On the other hand, business resilience shows moderate predictive ability, with a Q^2 value of around 35.4%. The variation in endogenous variables can be explained by exogenous variables in the model. These results illustrate that the digital transformation model tends to have better predictive ability than the business resilience model based on the evaluation of predictive relevance (Q^2).

Table 4. Predictive Relevance

	SSO	SSE	Q^2 (=1 - SSE/SSO)
Digital Capabilities	2660,000	2660,000	
Business Resilience	6840,000	4419,747	0,354
Digital Orientation	1900,000	1900,000	
Digital Transformation	3040,000	1686,265	0,445

Source: Processed with SmartPLS Software

From Table 5 below, the model fit value is 0.788. The coefficient indicates that the model quality falls within the strong model category, meeting the standard of >0.36 . This evaluation shows that, in general, the structural model in this study has excellent predictive ability (strong model).

Table 5. Model Fit

	Saturated Model	Estimated Model
SRMR	0,055	0,055
d_ ULS	2,241	2,241
d_ G	1,234	1,234
Chi-Square	2417,290	2417,290
NFI	0,788	0,788

Source: Processed with SmartPLS Software

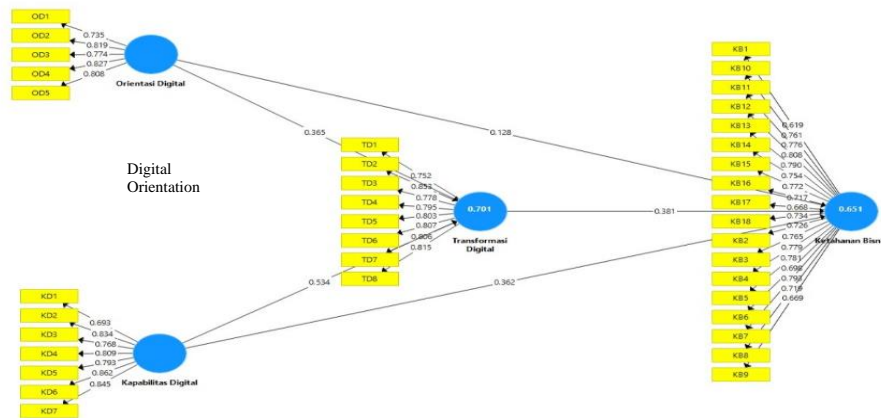


Figure 2. Path Model Pa Digital Transformation

Business Resilience

Figure 2 illustrates the path diagram above explains that digital capability and digital orientation function as exogenous variables in this model. Digital transformation serves as a mediating variable at Digital Transformation as one of the exogenous variables for business resilience. Business resilience, as an endogenous variable, is influenced by three exogenous variables: digital capability, digital orientation, and the mediating variable, digital transformation.

applied to MSMEs, acts as a mediating factor affecting the relationship between digital capability and digital orientation and the digital resilience of MSMEs in the Greater Jakarta area. The mediation test analysis in this study consists of comparing the beta coefficient that shows the direct effect of the independent variable on the dependent variable with the beta coefficient that describes the indirect effect. The results of the data analysis using SmartPLS show the coefficient value of each relationship path in Figure 3.

Mediation Test

The mediation test was utilized to determine whether digital transformation, when

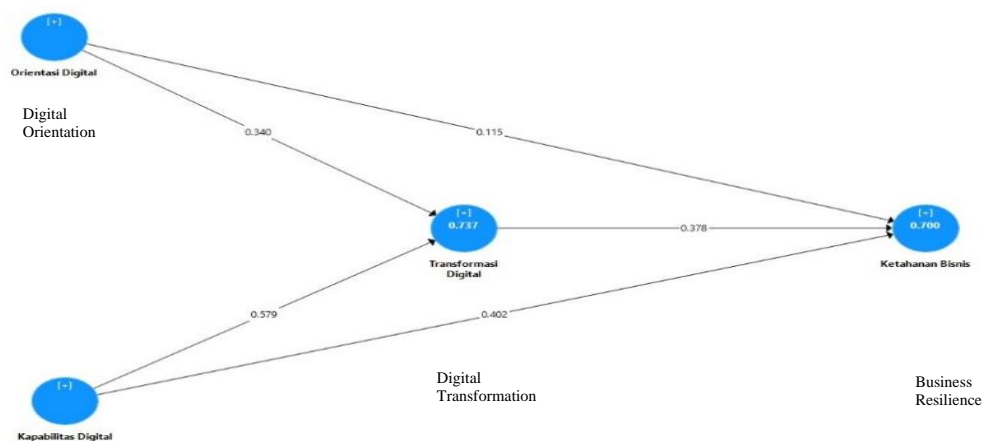


Figure 3. Research Model Path Diagram

Source: Processed by Researcher, 2023

Path diagram analysis revealed several key findings. Firstly, the exogenous variables of digital capability and digital orientation have a direct positive effect on business resilience. Digital capability has a significant positive impact on business resilience, while digital orientation also contributes, albeit to a lesser extent. In addition, both digital capability and digital orientation have a strong direct effect on digital transformation, indicating that improving these factors can drive the digital transformation process among MSMEs in the Greater Jakarta area. The study also highlights the important role of digital transformation in enhancing business

resilience. As digital transformation improves, it will have a more positive impact on the resilience of MSMEs in the trade or service sector in the Greater Jakarta area. The findings provide valuable insights into the interconnections and direct relationships between the key variables in the research framework.

An analysis of the results reveals a direct positive influence between exogenous variables and endogenous variables. An evaluation of the mediating role of the digital transformation variable is available in the subsequent specific indirect effect output table:

Table 6. Mediation Test of Digital Transformation Variables

	Specific Indirect effects
Digital Capabilities -> Digital Transformation -> Business Resilience	0,203
Digital Orientation -> Digital Transformation -> Business Resilience	0,139

Source: Processed with SmartPLS Software

From the table 6 above, it can be seen that there is a specific indirect effect of the digital capability and digital orientation variables on business resilience through the digital transformation variable. For the relationship between digital capability and business resilience, the digital transformation variable acts as a mediator of 0.203. Meanwhile, in the relationship between digital orientation and business resilience, the digital transformation variable acts as a mediator at 0.139. This indicates that digital transformation has a

significant indirect effect on connecting digital capability and digital orientation with business resilience.

The next mediation test result criterion is to compare the direct and indirect effects. If the coefficient value of the indirect effect is smaller than the direct effect, this indicates partial mediation, as mentioned by Hair et al. (2010). After conducting the mediation test and knowing the indirect effect, the following table shows the total effect of the direct and indirect effects.

Table 7. Total Effect

	Path Coefficient	Description
Digital Capabilities -> Business Resilience	0,565	Positive
Digital Capabilities -> Digital Transformation	0,534	Positive
Digital Orientation -> Business Resilience	0,267	Positive
Digital Orientation -> Digital Transformation	0,365	Positive
Digital Transformation -> Business Resilience	0,381	Positive

Source: Processed with SmartPLS Software

Hypothesis Test

By examining the path coefficient, t-statistic value, and probability value, hypothesis testing can be conducted based on SmartPLS analysis. If the p-value is less than 0.05 or if the t-statistic value exceeds the t-table (>1.96), researchers can accept

the hypothesis in studies with a significance level of 0.05. In addition, it is important to ensure that the path coefficient shows a positive direction of the relationship. The results of hypothesis testing in this study were carried out through path analysis, and the results can be shown in the table below:

Table 8. Hypothesis Testing Results

	Original Sample (O)	T Statistics ((O/STDEV))	P Values	Result
Digital Orientation -> Business Resilience	0,128	2,572	0,010	H ₁ accepted
Digital Capabilities -> Business Resilience	0,362	6,087	0,000	
Digital Orientation -> Digital Transformation	0,365	6,340	0,000	H ₂ accepted
Digital Capabilities -> Digital Transformation	0,534	9,412	0,000	
Digital Transformation -> Business Resilience	0,381	6,233	0,000	H ₃ accepted
Digital Capabilities -> Digital Transformation -> Business Resilience	0,203	5,325	0,000	H ₄ accepted
Digital Orientation -> Digital Transformation -> Business Resilience	0,139	4,363	0,000	

Source: Processed with SmartPLS Software

H₁: Digital capabilities and digital orientation have a positive influence on the business resilience of MSMEs in Jabodetabek.

Hypothesis testing results confirmed strong support for H₁, indicating that digital capabilities have a positive and significant influence on the business resilience of MSMEs in the Greater Jakarta area. The path coefficient value shows the direct effect of digital capability on business resilience is 0.362, with a t-statistic of 6.087 and a p-value of 0.000, which indicates statistical significance. And the path coefficient shows a direct effect of digital orientation on business resilience of 0.128, with a t-statistic of 2.572 and a p-value of 0.010, indicating statistical significance. This confirms that the higher the digital capability and digital orientation, the stronger the business resilience of MSMEs in the Greater Jakarta area. The result is in line with previous research on the effect of a strong digital orientation (Tjiptono 2019) and a digital capability (H. Wang & Li, 2023) have given positive impact on business by way of competitive edge. MSMEs can better adapt to the digital environment, strengthen online business processes, and expand their customer reach, all of which play a role in increasing their business capabilities in the future. MSMEs with greater digital capabilities can achieve higher levels of digital transformation.

H₂: Digital capabilities and digital orientation have a positive influence on the digital transformation of MSMEs in Jabodetabek

Hypothesis testing results provide strong support for H₂, confirming that digital capabilities and digital orientation have a positive influence on the digital transformation of SMEs in the Greater Jakarta area. The path coefficient value from digital orientation to digital transformation is 0.365, with a t-statistic of 6.340 and a p-value of 0.000, and the path coefficient value shows that there is a significant effect, where the direct effect of digital capability on digital transformation has a value of 0.534, a t-statistic of 9.412, and a very low p-value of 0.000, indicating a significant effect. This indicates that a good understanding of digital aspects influences MSMEs to undertake digital transformation in their business operations and strategies in the digital era. With an emphasis on developing a digital orientation, MSMEs can more effectively adjust to technological and market changes, improve their competitiveness, and expand their market reach. This result consistent with the findings by Guo et al., (2020), where digital orientation as a variable that affects digital transformation includes a willingness to utilize digital technology in various business aspects such as marketing, production, distribution, and management. As well as digital capability as a variable that affects digital transformation by utilizing technology more effectively and efficiently, as well as increasing competitiveness and adaptation to changes that occur due to digital transformation.

H₃: Digital transformation has a positive influence on the business resilience of MSMEs in Jabodetabek

The results of hypothesis testing confirm support for H₃, which states that digital transformation has a positive influence on the business resilience of MSMEs in the Jabodetabek area. The significant path coefficient value indicates that digital transformation has a real impact on business resilience. The path coefficient of 0.381 with a t-statistic of 6.233 and a p-value of 0.000 indicates that the higher the level of digital transformation, the stronger the business resilience of MSMEs in the region. The results of the hypothesis test are in accordance with that of Teng et al., (2022b), namely the key elements of digital transformation are technology, people (skills), and strategies that are in accordance with the business stage.

H₄: Digital capabilities and digital orientation have a positive influence on digital transformation, which acts as a mediating variable in its influence on the business resilience of MSMEs in Jabodetabek

Hypothesis testing results support H₄, confirming that digital capabilities have a positive influence on digital transformation, acting as a mediating variable in influencing the business resilience of trade or service MSMEs in Jabodetabek. A t-statistic of 5.325 and a p-value of 0.000 show that the path coefficient from digital capability to business resilience has an indirect effect of

0.203. This effect is statistically significant to a moderate degree. This confirms that digital capabilities play a role in driving digital transformation among MSMEs. However, the coefficient value of the direct effect between digital capabilities and business resilience is directly at 0.362. Then the mediation role is in the category of partial mediation or partial mediation.

While digital orientation has a positive influence on digital transformation, which acts as a mediating variable in influencing business resilience, the path coefficient value shows the indirect effect of digital orientation on business resilience is 0.139 with a t-statistic of 4.363 and a p-value of 0.000. This significant value confirms that digital orientation has a positive contribution to driving digital transformation. However, the coefficient of direct influence between digital orientation and business resilience is 0.128. Then the mediation role is in the full mediation category. This suggests that any improvement in MSMEs' digital orientation tends to drive improvements in their digital transformation. As technology evolves and market needs continue to change, a good digital orientation helps MSMEs be better prepared to accept and adopt these changes. Digital transformation, driven by a strong digital orientation, then plays a role in increasing the resilience of MSME businesses in the digital era.

Table 9. Total Effect

	Original Sample (O)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
Digital Capabilities -> Business Resilience	0.565	0.054	10.462	0,000
Digital Capabilities -> Digital Transformation	0.534	0.057	9.412	0,000
Digital Orientation -> Business Resilience	0.267	0.054	4.982	0,000
Digital Orientation -> Digital Transformation	0.365	0.058	6.340	0,000
Digital Transformation -> Business Resilience	0.381	0.061	6.233	0,000

Source: Processed with SmartPLS Software

Based on the results of hypothesis testing, we can conclude that digital capability has the most significant influence in maintaining business. The relationship

between business resilience and digital capabilities shows a stronger influence than other variables, with a value of 0.565 and a significance of 10.462. This indicates that

the correlation between digital capabilities and business resilience is the most dominant.

DISCUSSION

This research provides a strong picture of the importance of digital factors in the business sustainability of MSMEs in Jabodetabek. Digital capability emerges as a very important point in shaping business resilience. Hypothesis testing results show that the higher the digital capability of an MSME, the higher its ability to deal with rapid changes in this digital era. Especially in the midst of dynamic economic conditions where innovation and adaptation are the keys to survival. The Indonesian government has reacted positively to this challenge by providing free regular trainings on digital marketing for MSMEs during the Pandemic. MSMEs at Depok municipality, for example, enjoy monthly workshops on digitalization and meet-ups with marketplace platform providers. Spearheaded by the local office of Co-Operation and Micro, Small, and Medium Enterprises, a free service related to development of digital content and marketing is also provided. The program is conducted across regions in Indonesia to ensure MSMEs survive the Pandemic period by heavily focused in nurturing MSMEs digital orientation. As valuable as these programs, they will benefit from the results of this study. The findings suggest that the government should encourage digital ecosystems that would trigger digital transformation and prowess in digitalization.

Based on this study's findings, MSMEs (including those operating in Depok area) acknowledge the positive and significant effect of digital capabilities on business resilience. Not only that, the Respondents also showcase the need to develop digital orientation as a conduit to achieve digital transformation and, finally, business resilience. This means that businesses need to pay attention to improving digital skills and knowledge to deal with technological

dynamics. The findings also indicate some significant implications for the understanding, adaptation, and utilization of technology in various aspects of business. The implication of these findings is that MSMEs with a strong digital orientation and digital capabilities are more likely to be able to quickly adopt technological changes, improve their business processes, and capitalize on digital opportunities. This may involve the integration of new systems, the adoption of new business models, or increased engagement with digital platforms.

The mediating variable of digital transformation also needs to be taken into account in ensuring the ability to respond to market and technological changes. The implications being that MSMEs that adopt and transform digitally are more likely to better face business challenges in the current digital era. In this context, small and medium enterprises have the opportunity to improve their competitiveness by utilizing digital technologies and tools. Awareness of the importance of digital transformation is changing the way MSMEs view their business strategies. They are more likely to plan for better technology integration in their operations, improve efficiency, deal with market changes, and even develop new business models supported by technology. By understanding and developing digital capabilities, MSMEs tend to be more open to digital transformation. This not only affects internal changes such as the use of new technologies but also affects the way MSMEs interact with customers, competitors, and the market as a whole.

It is important to understand that to face the current economic challenges, MSMEs need to plan a holistic digital development strategy. Strengthening digital capabilities, developing digital orientation, and undergoing digital transformation are all interrelated and mutually supportive. Digital capability, as the dominant variable in this study, can pave the way for improving the business resilience of MSMEs. As previously explained by H. Wang & Li,

(2023), digital capabilities can be broadly classified into three main categories, namely: 1) digital infrastructure; 2) digital skills and competencies; and 3) digital innovation and transformation. The COVID-19 pandemic has become an important momentum for the government to drive the acceleration of digital transformation. During the Large-Scale Social Restrictions (PSBB) period, digital infrastructure and services have become the main foundation for various productive activities, such as working, selling, and learning from home. Digital transformation not only improves efficiency and productivity but also supports inclusivity. The government is committed to creating a conducive business environment for micro, small, and medium enterprises (MSMEs) to do business online. In this effort, consistent and sustainable mentoring and training are crucial for MSMEs to survive and thrive in the digital ecosystem (Wijoyo, 2020). Digital infrastructure is a crucial pillar in ensuring the resilience of MSME businesses, especially in the face of crisis situations such as a pandemic. The ability to operate online, improve efficiency, access wider markets, and strengthen competitiveness are direct results of a solid digital infrastructure. However, inclusivity poses a challenge that requires strengthening inclusive measures to ensure that all levels of society can benefit from digital transformation.

The post-COVID-19 pandemic situation has been a key driver for MSMEs to embrace and accelerate the integration of digital technologies into their operations (Dwivedi, 2019). The pandemic has provided valuable lessons about how MSMEs with strong digital skills have better resilience in the face of uncertain economic turmoil. With solid digital skills, they are able to transition to online business models more smoothly, improve efficiency in operations, and respond to market changes more adaptively and responsively (Arif & Mohiuddin, 2020). More than just a tool, digital skills play a central role in shaping the resilience of

MSME businesses amidst economic turmoil and accelerating changes in consumer behavior. These capabilities provide a vital competitive advantage for MSMEs to survive and thrive in an increasingly connected and technology-driven business ecosystem.

Finally, digital innovation and transformation, as a key component in the digital capabilities of MSMEs, has become a crucial determinant in securing business resilience post-pandemic and in the increasingly urgent era of digital transformation. In this situation, digital innovation proves its crucial role in helping MSMEs accelerate the integration of technology into their operations. MSMEs that manage to effectively adopt digital innovations, such as through the use of e-commerce platforms, the integration of digital systems, or business model adjustments to contribute to the digital environment, tend to be better able to deal with economic uncertainty. Digital innovation drives digital transformation, making it an important milestone in this context. Digital transformation is not only limited to technology adoption but also involves overall business restructuring, including the use of digital innovation as a foundation for such change (Lee, 2019). This makes digital transformation a highly relevant mediating variable in ensuring MSME business resilience. Digital innovation supports effective digital transformation, enabling MSMEs to efficiently manage their operations in a changing environment, meet market demands, and respond more adaptively to changing trends and new technological demands (Lu, 2018).

CONCLUSION

This study highlights the impact of digital capability, digital orientation, and digital transformation on business resilience of MSMEs in Greater Area of Jakarta. Given the main focus of MSMEs development program in digitalization, the findings of this study indicate that digital capabilities

and digital orientation positively influence the business resilience of 380 MSMEs in the Jabodetabek area, with digital transformation acting as a mediating variable. Digital capability and digital orientation have a positive influence on the business resilience and on the digital transformation of MSMEs in the region. Furthermore, digital transformation itself contributes positively to the business resilience of MSMEs in Jabodetabek. Lastly, digital capability and digital orientation not only directly influence the business resilience of MSMEs but also positively influence digital transformation, which acts as a mediating variable in its relationship with the business resilience of MSMEs in Jabodetabek. The findings suggest that the current programs especially developed for MSMEs in Indonesia are in need of adjustment toward the build-up of digital ecosystems.

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