

The Role of Digital Transformation in Linking Organizational Ambidexterity and Business Resilience to MSME Performance: Evidence from the Culinary Sector in Medan, Indonesia

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ABSTRACT

This study investigates the mediating role of digital transformation in linking organizational ambidexterity and business resilience to the performance of culinary MSMEs in Medan, Indonesia. Employing a quantitative method and a second-order analysis using the embedded two-stage approach in SEM-PLS, data were collected from 160 respondents. The results demonstrate that organizational ambidexterity and business resilience significantly improve MSME performance. Furthermore, digital transformation not only has a direct positive impact but also partially mediates the relationship between these dynamic capabilities and performance. The findings highlight that integrating innovation, resilience, and digital adoption is crucial for enhancing the competitiveness and sustainability of MSMEs in a volatile business environment.

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of Indonesia's economy, contributing more than half of the national gross domestic product and providing employment for the majority of the population. Within this landscape, the culinary sector has become one of the most vibrant engines of local economic growth, driven by cultural diversity, tourism, and shifting consumer lifestyles. Despite their strategic role, many MSMEs in Indonesia continue to face persistent challenges in maintaining stable performance. Rapid market changes, rising competition, and technological disruption have made it increasingly difficult for small business owners to sustain profitability and growth. These realities underline the importance of strengthening managerial capabilities and adaptive strategies that can help MSMEs remain competitive and resilient in uncertain business environments.

Organizational ambidexterity has emerged as a critical concept to explain how firms can simultaneously pursue innovation and operational efficiency. It refers to an organization's ability to balance exploration, such as developing new products or ideas, with exploitation, which focuses on improving existing processes and resources (O'Reilly and Tushman, 2013). Firms that manage to integrate these two orientations are generally more adaptable and achieve higher performance levels in dynamic environments (Kafetzopoulos, 2020). However, empirical research on ambidexterity has been predominantly conducted on large or multinational enterprises (Birkinshaw and Gupta, 2013), while studies focusing on MSMEs, especially in developing economies, remain limited. Small enterprises often face resource constraints, limited human capital, and simpler organizational structures, which make it difficult to sustain a balance between innovation and operational stability (Turner et al., 2022). This research gap highlights the need to explore how ambidexterity functions within small-scale enterprises in emerging markets such as Indonesia.

Beyond ambidexterity, business resilience is another strategic capability that enables firms to withstand and recover from disruptions. It reflects the capacity to adapt, absorb shocks, and reconfigure resources in response to crises (Kozcu and Özmen, 2023). Prior studies indicate that resilient MSMEs tend to perform better during economic downturns or unexpected events such as the COVID-19 pandemic (Fath et al., 2021; Dinh et al., 2024). Nevertheless, resilience is not always uniformly beneficial. Overemphasis on recovery may lead firms to focus on short-term survival rather than continuous innovation and long-term growth (Al-Omouh et al., 2023). In some cases, excessive resilience can create organizational inertia and reduce agility (Beuren et al., 2021). Therefore, the relationship between business resilience and performance remains ambiguous and warrants further investigation, particularly among MSMEs that operate with limited resources.

Recent literature suggests that digital transformation may serve as a key mechanism linking organizational ambidexterity and business resilience to firm performance. The integration of digital technologies allows businesses to streamline operations, enhance decision-making, and foster innovation (Varshney, 2025; Hawa et al., 2023). Digital transformation not only improves

operational efficiency but also increases organizational flexibility, enabling firms to respond quickly to market changes and external shocks (Firmansyah et al., 2023). However, despite its potential, digital adoption among MSMEs in developing economies remains partial and fragmented (Scuotto et al., 2023). Many MSMEs utilize digital tools primarily for marketing purposes but fail to incorporate technology into financial management, production, or customer relationship systems (Zahoor et al., 2022). Such limited adoption prevents them from realizing the full benefits of digital transformation.

Several scholars have argued that digital transformation can mediate the relationship between ambidexterity and resilience, enhancing both simultaneously. Digital technologies enable organizations to access real-time data, support agile decision-making, and facilitate the balance between exploration and exploitation (Fachridian et al., 2024). At the same time, they strengthen resilience by improving situational awareness, coordination, and recovery capabilities during disruptions (Akib et al., 2022; Zhang et al., 2021). Nonetheless, empirical evidence on how digital transformation moderates or mediates these relationships within MSMEs, particularly in Indonesia, is still scarce. Most existing studies have concentrated on larger firms in advanced economies, leaving a significant gap in understanding the dynamics of small enterprises in emerging markets.

Given the strategic importance of MSMEs in driving inclusive economic growth, exploring how digital transformation connects organizational ambidexterity and business resilience to performance is both timely and necessary. The culinary MSMEs in Medan, Indonesia, provide an appropriate context for this investigation, as they operate in a highly competitive and rapidly changing market that requires innovation, adaptability, and technological readiness. This study aims to address the empirical gap by examining the mediating role of digital transformation in the relationship between organizational ambidexterity and business resilience toward MSME performance. The findings are expected to contribute to the theoretical development of dynamic capabilities in small business settings and offer practical insights for MSME owners and policymakers to strengthen competitiveness and resilience through effective digital integration.

LITERATURE REVIEW

Theoretical Framework

Organizational ambidexterity provides an essential framework for understanding how firms achieve sustained performance through the balance of exploration and exploitation. Initially introduced by Duncan (1976) and later refined by Raisch and Birkinshaw (2008), the concept describes the ability of organizations to pursue innovation while maintaining operational efficiency. Firms that successfully combine these two orientations are more adaptive to change and achieve stronger long-term outcomes. Ambidexterity is shaped not only by structural design and managerial systems but also by human factors such as leadership support, team collaboration, and individual creativity (Pertusa-Ortega et al., 2020; Hwang et al., 2021).

The Resource-Based View (RBV) theory (Barney, 1991) complements this perspective by emphasizing that performance depends on how organizations manage and utilize their internal resources. In this view, ambidexterity represents a strategic capability that allows firms to leverage existing strengths while developing new competencies. For MSMEs, which often face resource limitations, the ability to manage and renew internal assets becomes vital to sustaining competitiveness and growth.

Building on RBV, the Dynamic Capabilities Theory (Teece et al., 1997) explains how organizations adapt and reconfigure resources in response to environmental changes. This theory aligns closely with digital transformation, which enables firms to integrate technology into their operations, improve innovation capacity, and respond effectively to market shifts (Amar et al., 2021). Through digital transformation, organizations strengthen their ability to sense opportunities, seize them, and maintain strategic agility.

Ambidexterity Organizational and MSME Performance

Organizational ambidexterity was first introduced by Duncan (1976) to describe an organization's ability to simultaneously engage in two types of activities: exploration and exploitation. Exploration encompasses activities related to seeking new opportunities, innovation, and experimentation, whereas exploitation focuses on enhancing efficiency, refining processes, and leveraging existing resources (March, 1991). O'Reilly and Tushman (2004) emphasize that ambidextrous organizations can create structures that support both types of activities, allowing them to remain efficient while adapting to change. Raisch and Birkinshaw (2008) further argue that the balance between exploration and exploitation determines an organization's ability to sustain and grow.

Subsequent studies indicate that ambidexterity does not solely rely on formal structures but is also influenced by managerial behaviors, organizational culture, and individual capabilities (Pertusa-Ortega et al., 2020; Hwang et al., 2021). In the context of micro and small enterprises (MSMEs), ambidexterity is reflected in the owner's ability to manage operational activities efficiently while simultaneously developing new innovations to respond to market dynamics (Stein et al., 2024). This capability constitutes a crucial factor supporting both the performance and sustainability of MSMEs.

Business Resilience and MSME Performance

The term resilience originates from the Latin word *resilire*, meaning to bounce back or recover from shocks (Nielsen et al., 2023). Business resilience refers to an organization's capacity to anticipate risks, respond to disruptions, and adapt to changes while maintaining performance (Duchek et al., 2020). According to Su and Junge (2023), resilient organizations are not only able to withstand crises but also to transform and create new opportunities.

Li et al. (2021) explain that business resilience is a dynamic process involving the utilization of internal and external resources to ensure optimal organizational functioning. Key drivers of resilience include adaptive leadership (Hollands et al., 2023), flexible organizational culture (Isensee et al., 2023), human resource development, social networks, and digitalization (Do et al., 2022).

Empirical evidence shows that organizations with high resilience tend to achieve superior performance in terms of profitability, sustainability, and operational effectiveness (Moreno et al., 2024; Su & Junge, 2023). For MSMEs, business resilience plays a critical role in enabling entrepreneurs to cope with external pressures such as market fluctuations, financial constraints, and supply chain disruptions. Therefore, business resilience is considered a strategic capability that positively influences both the performance and sustainability of enterprises..

Digital Transformation and MSME Performance

Digital transformation refers to the process of utilizing digital technologies to redesign operations, create new value, and adapt to changing market conditions. It involves not only the adoption of technology but also a fundamental shift in organizational culture and structure to promote innovation and collaboration (Vial, 2021; Zhao, 2024). Grounded in the Dynamic Capabilities Theory, digital transformation emphasizes an organization's ability to sense environmental changes, seize opportunities, and reconfigure internal resources to sustain competitiveness (Xu et al., 2022).

For MSMEs, digital transformation plays a crucial role in overcoming resource limitations and improving efficiency. By integrating technologies such as cloud computing, artificial intelligence, and mobile platforms, MSMEs can streamline operations, reduce costs, and reach broader markets (Dong and Dai, 2023; Warner and Wäger, 2019). Garzoni et al. (2020) identify digital maturity as a multidimensional process involving strategic alignment, innovation, and collaboration, where readiness for digital adoption determines how effectively small firms can leverage technology for performance improvement.

Empirical studies consistently demonstrate the positive influence of digital transformation on firm performance. García and Salamanca (2024) found that effective implementation of digital strategies enhances competitiveness and productivity, especially when supported by government initiatives and adequate firm size. Similarly, Zang et al. (2024) highlight that strategic decision-making in digital reform can stimulate innovation and create new growth opportunities for smaller enterprises. Through digitalization, MSMEs can expand market access, accelerate responsiveness, and strengthen customer relationships (Yu and Moon, 2021).

Hypothesis Development

Organizational ambidexterity describes the ability of firms to simultaneously pursue exploration and exploitation activities to achieve sustainable performance. Exploration enables firms to discover new opportunities and innovations, while exploitation ensures the effective use of existing resources and processes. When both are balanced, organizations can adapt more quickly to environmental changes and improve operational outcomes (Stei et al., 2024; Brix, 2019). Prior studies indicate that ambidextrous firms tend to achieve higher innovation performance and maintain competitiveness under uncertainty (Bérard and Fréchet, 2020; Popa and Soto-Acosta, 2019). For MSMEs operating in dynamic markets such as Medan's

culinary sector, ambidexterity helps integrate innovation with efficiency, which is essential for sustaining performance and growth.

H1: Organizational ambidexterity has a positive and significant effect on MSME performance in Medan.

Business resilience reflects the firm's capability to withstand, adapt, and recover from adverse events. Rooted in the Resource-Based View and Dynamic Capabilities Theory, resilience represents a strategic strength that enables organizations to utilize internal resources effectively while adjusting to changing conditions (Jansen et al., 2012; Günsel et al., 2018). Empirical studies suggest that resilient MSMEs are better equipped to sustain operations during crises, reduce performance volatility, and maintain stakeholder trust (Pratama et al., 2023; Chowdhury et al., 2018). This capacity to remain stable and adaptive allows them to achieve stronger long-term performance in uncertain environments.

H2: Business resilience has a positive and significant effect on MSME performance in Medan.

Digital transformation, viewed through the lens of Dynamic Capabilities Theory, enables organizations to renew their business models, integrate technology into daily operations, and respond swiftly to environmental shifts (Teece et al., 1997). Through digitalization, MSMEs can streamline processes, improve communication, and make data-driven decisions that enhance agility and innovation. Studies show that digital adoption strengthens competitiveness, boosts efficiency, and improves customer reach (Lei et al., 2022; Priyono et al., 2020). Therefore, MSMEs that embrace digital transformation are more likely to achieve superior performance outcomes.

H3: Digital transformation has a positive and significant effect on MSME performance in Medan.

Organizational ambidexterity plays a critical role in driving successful digital transformation. Firms that are capable of exploring new ideas while exploiting current strengths tend to be more open and prepared for technological innovation (Jansen et al., 2012; Yap et al., 2020). Ambidextrous organizations are also better at aligning digital initiatives with strategic goals and adapting to new digital tools and systems (Gao et al., 2020). For MSMEs, this dual capability can facilitate the adoption of technology while ensuring its effective integration into business processes.

H4: Organizational ambidexterity has a positive and significant effect on digital transformation in MSMEs in Medan.

Business resilience also contributes to the successful implementation of digital transformation. Resilient firms possess the flexibility and mindset needed

to adapt to technological changes and capitalize on digital opportunities (Vakilzadeh and Haase, 2020). Studies reveal that resilient organizations adopt digital tools more proactively, allowing them to maintain stability and operational efficiency during disruption (Sharma et al., 2024; Al-Omoush et al., 2023). Thus, resilience not only supports survival in challenging conditions but also accelerates the digitalization process within MSMEs.

H5: Business resilience has a positive and significant effect on digital transformation in MSMEs in Medan.

Digital transformation is further expected to mediate the relationship between ambidexterity and performance. By embracing digital technologies, ambidextrous MSMEs can better translate their innovation and efficiency capabilities into improved business outcomes (Voss and Voss, 2013; Faro et al., 2024). Technology enables real-time learning, faster adaptation, and more effective decision-making, amplifying the benefits of ambidexterity. Consequently, digital transformation acts as a bridge that strengthens the impact of ambidexterity on performance improvement.

H6: Organizational ambidexterity has a positive and significant effect on MSME performance through digital transformation in Medan.

Similarly, digital transformation is expected to mediate the relationship between business resilience and performance. Resilient MSMEs are better positioned to leverage digital tools for adaptation, innovation, and long-term growth (Purnomo et al., 2021; Hokmabadi et al., 2024). Through digital initiatives, these firms enhance their ability to manage risks, maintain customer engagement, and optimize operations even in uncertain conditions. Therefore, digital transformation serves as a reinforcing mechanism that connects resilience with improved MSME performance.

H7: Business resilience has a positive and significant effect on MSME performance through digital transformation in Medan.

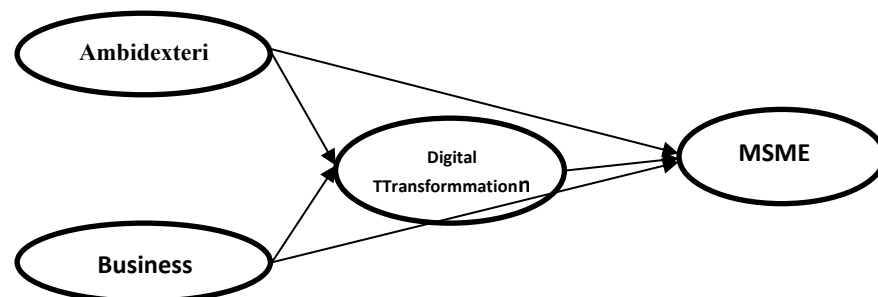


Figure 1. Conceptual Framework

METHODOLOGY

This study employs a quantitative approach using a descriptive design and an embedded two-stage approach to test the proposed hypotheses and examine the relationships among organizational ambidexterity, business resilience, digital transformation, and MSME performance. The method allows for objective data collection and analysis through statistical techniques. The research was conducted among culinary MSMEs in Medan, Indonesia, from May to August 2025. The population included MSMEs operating for at least one year, utilizing digital technologies, and participating in local MSME communities. Using purposive sampling, 160 respondents were selected, satisfying the minimum requirements for SEM-PLS analysis (Hair et al., 2010).

Primary data were collected through structured questionnaires supplemented by interviews, while secondary data were sourced from literature and reports. All variables were measured on a five-point Likert scale. Data analysis involved descriptive statistics and SEM-PLS, with the outer model evaluated for validity and reliability, and the inner model assessing causal relationships via path coefficients, R^2 , and effect sizes. Hypothesis testing was conducted using bootstrapping to determine significance at standard confidence levels.

RESEARCH RESULT

Respondent Characteristics Analysis

Table 1. Respondent Characteristics

	Respondent Characteristics	Frequency	Percentage
Gender	Male	28	17.5
	Female	132	82.5
Age	20 – 29 Years	26	16.3
	30 – 39 Years	36	22.5
	40 – 49 Years	58	36.3
	50 – 59 Years	27	16.9
	60 – 69 Years	11	6.9
	> 70 Years	2	1.3
Length of Business	1-4 Years	82	51.2
	5-8 Years	48	30.0
	9-12 Years	15	9.4
	13-16 Years	4	2.5
	17-20 Years	4	2.5
	>20 Years	7	4.4
Community	IWAPI	28	17.5
	Binaan Dinas Koperasi	25	15.6
	HIPPI	7	4.4
	IPEMI	9	5.6
	Portugal	12	7.5
	FKMI	6	3.8
	Binaan Rumah BUMN	16	10.0
	HMW	6	3.8
	UMKM PLUT Sumut	7	4.4
	Gemawira	11	6.9
Koperasi Wanita Pesisir	20	12.5	

	UMKM Wanita Mandiri	11	6.9
	KPPI	2	1.3
Level of Education	SD	12	7.5
	SMP	23	14.4
	SMA	73	45.6
	Sarjana	47	29.4
	Master	5	3.1
Turnover (Million)	< 20	21	13.1
	21 - 100	117	73.1
	101 - 180	12	7.5
	181 - 260	2	1.3
	261 - 340	3	1.9
	341 - 420	4	2.5
	> 420	1	.6

Source : 2025 Questionnaire

The study involved 160 respondents from MSMEs in the culinary sector of Medan. The majority were female (82.5%), reflecting the strong representation of women entrepreneurs in the local MSME landscape. Most participants were between 40 and 49 years old (36.3%), indicating that mid-career entrepreneurs dominate the sector. Regarding business experience, over half of the respondents (51.2%) had operated their businesses for 1–4 years, suggesting a relatively young yet growing entrepreneurial base. In terms of education, nearly half of the respondents (45.6%) were high school graduates, while 29.4% held undergraduate degrees, demonstrating a moderate level of formal education among MSME owners. Most businesses (73.1%) reported an annual turnover between IDR 21–100 million, signifying small-scale but active economic participation. The respondents were affiliated with various MSME communities and organizations, including IWAPI, IPEMI, and Rumah BUMN, which support business development and networking across the region..

Analysis of The Results of SEM PLS Data Processing

1. Outer Model

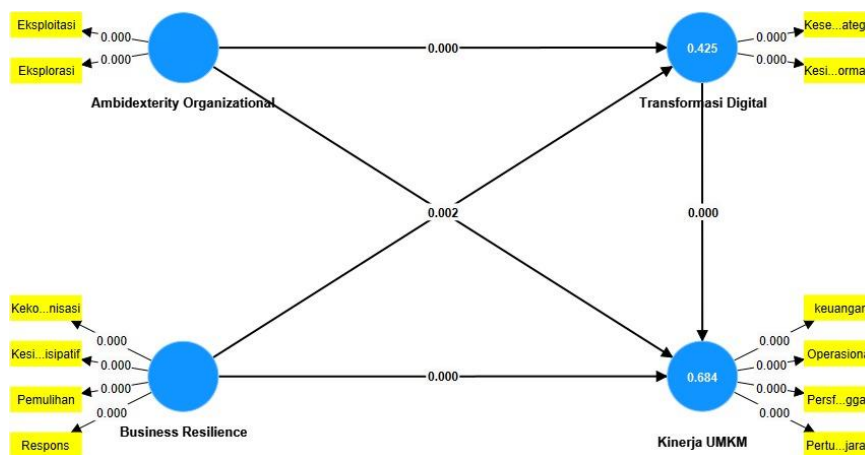


Figure 2. Outer Loading (Second Stage)

This study employed the embedded two-stage approach to assess the measurement and structural models. In the first stage, the outer loadings of all indicators for each first-order construct exceeded the threshold value of 0.70, confirming that each indicator reliably represented its respective construct. These results indicated strong convergent validity, providing a solid foundation for developing the higher-order model.

In the second stage, a higher-order construct analysis with a reflective-reflective type was conducted to evaluate the relationships between second-order constructs and their dimensions. Each second-order construct was formed from several first-order constructs, with both levels modeled reflectively to capture complex conceptual structures more comprehensively. As illustrated in Figure 2, all variables demonstrated outer loading values greater than 0.50. These results confirm that each dimension adequately reflects its corresponding higher-order construct and satisfies the criteria for convergent validity.

Convergent Validity

Table 2. Construct Reliability and Validity Second Order Construct

Construct	Dimension	Loading	Cr Alpha	Composite Reliability	Average Variance Extracted (AVE)
Ambidexterity Organizational	Exploration	0,920	0,647	0,844	0,731
	Exploitation	0,785			
Business Resilience	Robustness	0,8625	0,878	0,916	0,732
	Readiness	0,836			
	Response	0,814			
	Recovery	0,909			
Digital Transformation	IT Readiness	0,774	0,851	0,821	0,697
	Strategic Alignment	0,892			
MSME Performance	Finance Perspective	0,845	0,616	0,900	0,692
	Customers Perspective	0,837			
	Operational Perspective	0,748			
	Learn and Growth Perspective	0,892			

The first-stage analysis confirmed that all first-order constructs met the required reliability and validity criteria, with Cronbach’s Alpha values above 0.86, Composite Reliability (CR) exceeding 0.90, and Average Variance Extracted (AVE) above 0.60. These results indicate that each indicator consistently represented its corresponding construct. At the second stage, all higher-order constructs demonstrated satisfactory reliability and convergent validity.

Organizational Ambidexterity recorded CR = 0.944 and AVE = 0.731, while Business Resilience achieved CR = 0.916 and AVE = 0.732. Digital Transformation obtained CR = 0.821 and AVE = 0.697, and MSME Performance showed CR = 0.900 and AVE = 0.692. All CR values exceeded 0.70 and AVE values were greater than 0.50, confirming high internal consistency and adequate convergent validity. These findings validate that all constructs were measured reliably and are suitable for subsequent structural model analysis..

Validity of Discrimination

Table 3. Fornell Lackel and HTMT Second Order

	Ambidexterity Organizational	Business Resilience	Kinerja UMKM	Transformasi Digital
Fornell Lackel				
Ambidexterity Organizational	0,855			
Business Resilience	0,775	0,856		
MSME Performance	0,748	0,746	0,832	
Digital Transformation	0,631	0,593	0,692	0,835
HTMT				
Ambidexterity Organizational				
Business Resilience	0,860			
Kinerja UMKM	0,768	0,858		
Transformasi Digital	0,776	0,810	0,752	
Ambidexterity Organizational				

In the first-stage analysis, the discriminant validity assessment confirmed that all constructs were distinct from one another. The Fornell-Larcker criterion showed that the square roots of the AVE values were higher than the correlations between constructs, while all HTMT ratios were below the 0.90 threshold. These results indicate that no multicollinearity issues were present and that each first-order construct measured unique conceptual dimensions. At the second stage, as presented in Table 3, the Fornell-Larcker criterion and HTMT results further confirmed adequate discriminant validity for the higher-order constructs. The square roots of the AVE values for all constructs exceeded their inter-construct correlations, and all HTMT values were below 0.90. These findings validate that each construct is empirically distinct and capable of explaining its own variance, confirming the measurement model's discriminant validity and its readiness for structural model analysis.

Inner Model

Table 4. R Square

Item	R Square	R Square Adjusted
MSME Performance	0,684	0,678
Digital Transformation	0,425	0,418

The analysis of R Square values indicates that the model's ability to explain the dependent variables varies across constructs. For the SME Performance variable, the R Square value is 0.684, meaning that Ambidexterity Organizational and Business Resilience together explain 68.4% of the variance in SME Performance. The remaining 31.6% is influenced by factors outside the study model. In contrast, the R Square value for Digital Transformation is 0.425, suggesting that the model accounts for 42.5% of its variance. The remaining 57.5% is determined by other factors not included in this research. Overall, these results show that the model is more effective in predicting SME Performance than Digital Transformation, indicating a stronger impact of Ambidexterity Organizational and Business Resilience on SME Performance

Table 5. f Square

	Ambidexterity Organizational	Business Resilience	MSME Performance	Digital Transformation
Ambidexterity Organizational			0,097	0,127
Business Resilience			0,136	0,048
MSME Performance				
Digital Transformation			0,172	

Based on Table 5, the F Square or effect size values indicate that the largest effect is observed for Digital Transformation on SME Performance, with a value of 0.172, which falls into the moderate category. Conversely, the smallest effect size is found for Business Resilience on Digital Transformation, with a value of 0.048, classified as weak.

Hypothesis Testing

Table 6. Direct Effect

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Remarks
Ambidexterity Organizational -> MSME Performance	0,294	0,292	0,094	3,114	0,002	Supported**
Ambidexterity Organizational -> Digital Transformation	0,428	0,430	0,100	4,270	0,000	Supported**
Business Resilience -> MSME Performance	0,336	0,340	0,082	4,103	0,000	Supported**
Business Resilience -> Digital Transformation	0,262	0,262	0,108	2,428	0,015	Supported**

Digital Transformation -> MSME Performance	0,307	0,305	0,078	3,926	0,000	Supported**
Note (s): *($p < 0.10$); **($p < 0.05$).						

Based on the results presented in Table 6, the relationships among the variables are described as follows:

- a) The path coefficient for Ambidexterity Organizational is 0.294, which is positive and significant at the 5% level ($t = 3.114 > 1.96$; $p = 0.002 < 0.05$). This indicates that Ambidexterity Organizational has a positive and significant effect on SME Performance. In other words, stronger organizational ambidexterity (exploitation and exploration) leads to a significant improvement in SME Performance.
- b) The path coefficient for Ambidexterity Organizational is 0.428, positive and significant at the 5% level ($t = 4.270 > 1.96$; $p = 0.000 < 0.05$). This suggests that Ambidexterity Organizational positively and significantly influences Digital Transformation. Thus, higher organizational ambidexterity promotes the effective implementation of Digital Transformation.
- c) The path coefficient for Business Resilience is 0.336, positive and significant ($t = 4.103 > 1.96$; $p = 0.000 < 0.05$). This demonstrates that Business Resilience has a positive and significant effect on SME Performance. Hence, stronger business resilience contributes to a meaningful increase in SME Performance.
- d) The path coefficient for Business Resilience is 0.262, positive and significant ($t = 2.428 > 1.96$; $p = 0.015 < 0.05$). This shows that Business Resilience positively and significantly affects Digital Transformation. In practice, greater business resilience supports a more effective implementation of Digital Transformation.
- e) The path coefficient for Digital Transformation is 0.307, positive and significant ($t = 3.926 > 1.96$; $p = 0.000 < 0.05$). This indicates that Digital Transformation has a positive and significant impact on SME Performance. Therefore, better implementation of Digital Transformation enhances SME Performance significantly.

Table 7. Indirect Effect

		Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values	Remark
1	Ambidexterity Organizational -> MSME Performance	0,131	0,132	0,049	2,694	0,007	Supported*
2	Business Resilience -> MSME Performance	0,081	0,079	0,039	2,064	0,039	Supported**
Note (s): *($p < 0.10$); **($p < 0.05$).							

Based on the results presented in Table 7, regarding indirect effects, the interpretations for each relationship are as follows:

- a) The indirect effect of Ambidexterity Organizational on SME Performance through Digital Transformation is 0.131, positive and significant at the 5% level ($t = 2.694 > 1.96$; $p = 0.007 < 0.05$). This indicates that Digital Transformation significantly mediates the relationship between Ambidexterity Organizational and SME Performance. In other words, besides the direct effect, organizational ambidexterity also contributes to improving SME Performance by facilitating the implementation of Digital Transformation.
- b) The indirect effect of Business Resilience on SME Performance through Digital Transformation is 0.081, positive and significant ($t = 2.064 > 1.96$; $p = 0.039 < 0.05$). This shows that Digital Transformation significantly mediates the effect of Business Resilience on SME Performance. Hence, in addition to its direct impact, business resilience helps enhance SME Performance by promoting the adoption of Digital Transformation.

DISCUSSION

The findings of this study demonstrate that both Ambidexterity Organizational and Business Resilience significantly enhance the performance of culinary SMEs in Medan, with Digital Transformation playing a crucial mediating role. Ambidexterity Organizational, which reflects the ability of SMEs to balance exploratory innovation and exploitative efficiency, emerges as a key driver of business performance. Firms that can innovate, such as by developing new menu items, offering fusion cuisine, or experimenting with unique café concepts, while simultaneously maintaining operational efficiency through process optimization and quality control, achieve higher performance levels. This aligns with the Resource-Based View (RBV), which considers ambidexterity a valuable and rare strategic capability that is difficult for competitors to replicate. Prior studies, including those by Kafetzopoulos (2020), Lin et al. (2012), and Mankgele (2023), support this view, showing that the combination of exploration and exploitation generates synergistic effects that enhance firm performance and strengthen market competitiveness.

Similarly, Business Resilience significantly contributes to SME performance by enabling firms to adapt and sustain their operations amid challenges such as fluctuating raw material prices, changing customer preferences, and intense competition. Resilient SMEs can adjust their business models, for instance, shifting from dine-in to online delivery, sourcing alternative suppliers, and leveraging customer feedback to improve product quality. This capacity to learn from past experiences and implement continuous improvements allows firms to stabilize revenues, maintain sales, and enhance customer satisfaction. Evidence from Fath et al. (2021) and Dinh et al. (2024) indicates that firms with strong networks and proactive risk management are better positioned to withstand crises, highlighting the strategic value of resilience as an internal capability under RBV.

Digital Transformation also has a direct positive effect on SME performance. The adoption of digital tools – ranging from financial management

applications to social media marketing platforms and digital payment systems – enhances operational efficiency, expands market reach, and improves customer service. SMEs that implement digital technologies can automate routine tasks, efficiently track inventory, promote their products visually, and facilitate online ordering and payments. These improvements translate into higher sales, broader customer engagement, and increased operational agility. These findings echo prior research by Varshney (2025), Firmansyah et al. (2023), and Hawa et al. (2023), which emphasize the productivity gains and market responsiveness enabled by digitalization.

Moreover, Ambidexterity Organizational and Business Resilience both positively influence the adoption of Digital Transformation. Ambidextrous SMEs, motivated to explore new business models and optimize existing processes, are naturally inclined to embrace digital tools to support innovation and operational efficiency. Similarly, resilient SMEs leverage digitalization to adapt during crises, such as shifting sales online when physical locations face restrictions, thereby transforming resilience into growth opportunities. The interaction between ambidexterity and digital transformation is mutually reinforcing: ambidexterity drives the adoption of digital technologies, while digital tools facilitate the effective implementation of both exploratory and exploitative activities. This dynamic is consistent with the findings of Li et al. (2024) and Hawari Nasution et al. (2025), who highlight the reciprocal relationship between organizational ambidexterity and digitalization.

The mediating role of Digital Transformation further strengthens the relationships between both Ambidexterity Organizational and Business Resilience with SME performance. Digital tools serve as a bridge, enabling SMEs to translate innovation and operational capabilities, as well as adaptive capacity, into tangible performance outcomes. By providing platforms for testing new ideas, streamlining production processes, and facilitating online engagement with customers, digitalization enhances the effectiveness of both ambidexterity and resilience in driving business results. This aligns with studies by Zhang et al. (2021), Purnomo et al. (2021), and Putritamara et al. (2023), which demonstrate that digital transformation amplifies the impact of dynamic capabilities on organizational performance and resilience.

Overall, these findings underscore the interdependent nature of ambidexterity, resilience, and digital transformation in supporting SME growth. Culinary SMEs that balance innovation with operational efficiency, cultivate internal resilience, and actively leverage digital technologies are better positioned to achieve superior performance, maintain competitiveness, and respond effectively to environmental challenges. The results highlight that combining internal capabilities with digital adoption not only sustains operations during uncertainty but also creates pathways for strategic growth and long-term success.

CONCLUSIONS AND RECOMMENDATIONS

This study confirms that Ambidexterity Organizational and Business Resilience significantly improve the performance of culinary SMEs in Medan, with Digital Transformation serving as a key mediator. Ambidexterity enables

SMEs to balance innovation and operational efficiency, while resilience allows them to adapt to challenges and maintain continuity. Digital Transformation enhances these effects by supporting efficient operations, broader market access, and the effective implementation of new strategies. SMEs integrating these capabilities demonstrate superior performance, adaptability, and competitiveness.

Based on these findings, SME owners should foster ambidexterity by promoting innovation alongside process optimization, strengthen resilience through adaptive strategies and robust networks, and adopt digital technologies for management, marketing, and customer engagement. Policymakers and support institutions can provide training, access to digital tools, and platforms for knowledge sharing to reinforce these capabilities. Future research may investigate additional mediators, such as entrepreneurial orientation, and examine the long-term impact of digital transformation across various sectors.

ADVANCED RESEARCH

Building on the limitations identified in this study, future research could expand the sample beyond micro and small culinary enterprises in Medan to include diverse sectors such as services and trade, enhancing the generalizability of findings. Longitudinal studies are recommended to capture temporal dynamics in business adaptation, innovation, and digital transformation, providing deeper insight into how these capabilities evolve over time. Additionally, further investigation could examine barriers to digital literacy and technology adoption, as well as the interaction between ambidexterity and resilience under varying market conditions. Incorporating mixed-methods approaches, such as case studies or interviews, may also reveal nuanced mechanisms through which innovation and operational efficiency contribute to sustainable performance in micro and small enterprises.

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