

**THE IMPACT OF ORGANIZATIONAL INNOVATION CAPABILITY,
ORGANIZATIONAL AGILITY, AND DIGITAL STRATEGY ON BUSINESS
RESILIENCE IN FOOD AND BEVERAGE SMES: THE MEDIATING ROLE OF
ADAPTABILITY AND THE MODERATING ROLE OF TRANSFORMATIONAL
LEADERSHIP**



Umi Suryani
Universitas Bunda Mulia, Jakarta, Indonesia
12194@lecturer.ubm.ac.id

Irsyad Parama Dwiputra
Institut Pertanian Bogor University, Bogor, Indonesia
irsyadparama@apps.ipb.ac.id

Abstract

This study explores the influence of innovation capability, organizational agility, and digital strategy on business resilience in food and beverage (F&B) SMEs, focusing on the mediating role of organizational adaptability and the moderating role of transformational leadership. Conducted in Malang City, Indonesia, the research involves 100 SME owners and managers selected using purposive sampling. Data were collected through structured questionnaires and analyzed SEM-PLS. The findings indicate that organizational agility and digital strategy significantly impact business resilience directly, while innovation capability affects resilience indirectly through organizational adaptability. Organizational adaptability emerges as the strongest predictor of resilience, emphasizing its critical role in enabling SMEs to respond effectively to market dynamics. Although transformational leadership was not a statistically significant moderator, it shows the potential to foster adaptability and integrate innovation. The study concludes that SMEs should prioritize enhancing adaptability through strategic flexibility, continuous learning, and collaboration. Leveraging digital tools and fostering agility are also essential for building resilience. Policymakers are advised to support SMEs by addressing digital transformation challenges, such as resource limitations and low digital literacy. Additionally, investment in leadership development and adaptable innovation strategies can further strengthen SME resilience. This research contributes to academic literature and provides practical insights for F&B SMEs in navigating uncertainty, ensuring sustainability, and improving competitiveness in a dynamic market environment.

Keywords: Innovation Capability, Organizational Agility, Digital Strategy, Transformational Leadership, Business Resilience

INTRODUCTION

The food and beverage (F&B) industry is a key sector that plays a significant role in global and national economic growth (Gupta, 2023). This sector makes substantial contributions to the Gross Domestic Product (GDP), creates employment opportunities, and supports the fulfillment of basic needs. Especially in developing countries, the presence of Small and Medium Enterprises (SMEs) in this sector serves as a backbone of the economy (Awwal, 2023). SMEs in the F&B industry are often the primary innovators in introducing local products to global markets, thus possessing great potential to support exports. However, this sector also faces complex challenges, from changing consumer needs to increasing competition from larger players. These challenges have been exacerbated by global uncertainties such as the COVID-19 pandemic, which significantly impacted SMEs in the F&B sector. Decreased demand, supply chain disruptions, and shifting consumption patterns forced businesses to adapt quickly (Abhari, 2022). Many small businesses were forced to shut down due to limited resources to survive through the crisis. Additionally, barriers such as limited access to capital, low digital literacy, and inefficiencies in human resource management have been common obstacles. These conditions highlight the importance of building business resilience as a key factor for the sustainability of SMEs amid the dynamic market challenges.

One strategic step to enhancing resilience is through innovation capability and organizational agility. Innovation capability enables SMEs to create products and services that are more relevant to market needs, improve operational efficiency, and provide unique value for customers (Valdez, 2021). However, innovation alone is not enough without the support of organizational agility, which allows companies to respond to market changes quickly and efficiently. In the F&B industry, where consumer trends can change rapidly, agility becomes a crucial competitive advantage. Therefore, the combination of innovation and agility forms a strong foundation for building business resilience (Amaechi, 2023).

Digital transformation is also another inevitable factor in strengthening SMEs' resilience in the F&B sector. Digitalization offers great opportunities for companies to reach broader markets, optimize operations, and enhance customer experience. However, implementing a digital strategy is not always straightforward (Khalil et al., 2022; Sulastri,

2023; He et al., 2022). Many SMEs face obstacles in integrating digital technologies into their operations, whether due to resource constraints, lack of expertise, or resistance to change. Therefore, digital transformation needs to be supported by effective change management and the development of digital skills across the organization (Zirar, 2024; Robertson et al., 2022). To support the success of innovation, agility, and digital strategies, organizational adaptability becomes an essential element that cannot be overlooked (Fitriasari, 2020; Lestari, 2024). Organizational adaptability, which reflects the ability to respond to external changes quickly and effectively, helps ensure that strategies can be implemented successfully (Suseno, 2023; Memon et al., 2021). Organizational adaptability plays a key mediating role between innovation, agility, digital strategy, and business resilience. Without adequate adaptability, the potential benefits of these strategies may not be optimized, particularly when facing continuously evolving market challenges (Sulastri, 2023; He et al., 2022).

On the other hand, the success of these strategies is also highly dependent on the leadership style implemented. Transformational leadership is a crucial factor that can strengthen the relationship between innovation, agility, and digitalization with business resilience (AlNuaimi, 2022). Transformational leaders inspire employees to innovate, empower them to make decisions and create an organizational culture that supports adaptability. In the context of SMEs in the F&B sector, this leadership style can help reduce resistance to change, accelerate technology adoption, and foster collaboration across the organization (Dos Anjos, 2024). Although numerous studies have explored innovation, agility, and digital strategy, few have integrated these factors comprehensively within the context of SMEs in the F&B sector. Furthermore, the role of organizational adaptability as a mediator and transformational leadership as a moderator in the relationships between variables has not been widely studied (Madi, 2023). These factors play a significant role in determining the success of organizational strategies (Rehman, 2019). Therefore, this research aims to fill this gap by exploring how innovation, agility, and digital strategies can contribute to business resilience in SMEs in the F&B sector through the mediation of organizational adaptability and the moderation of transformational leadership. The findings of this research are expected not only to contribute to academic literature but also to provide practical

guidance for business owners in building resilience in their operations amidst increasingly complex challenges. With a holistic approach, this study aims to help SMEs in the F&B sector survive and thrive in an era of uncertainty. This study aims to investigate the impact of innovation capability, organizational agility, and digital strategy on business resilience in food and beverage SMEs, emphasizing the mediating role of organizational adaptability and the moderating influence of transformational leadership. The specific objectives of the research are: To examine how innovation capability, organizational agility, and digital strategy contribute to enhancing business resilience in food and beverage SMEs. To analyze the role of organizational adaptability as a mediating factor in strengthening the relationship between innovation capability, organizational agility, digital strategy, and business resilience. To evaluate the moderating effect of transformational leadership on the relationship between organizational adaptability and business resilience

REVIEW OF LITERATURE

Innovation Capability

Innovation capability refers to an organization's ability to develop new products, services, processes, or strategies that improve its competitive position in the market (Rehman, 2019). It is the collective capacity of the organization to leverage existing knowledge and resources to create innovations that can respond to changing market needs, technological advances, and customer demands (Manafe, 2024). In a fast-evolving industry like food and beverage, innovation capability enables businesses to stay relevant, attract customers, and adapt to industry trends (Dairo, 2024). It is also a critical driver of growth and resilience in an increasingly competitive and unpredictable business environment. According to Thongsri (2019), the dimensions and indicators of innovation capability are as follows:

Table 1
Innovation Capability

Dimension	Indicators
Product Innovation	· Development of new products or services
	· Introduction of unique features to existing products
Process Innovation	· Improvements in production efficiency
	· Streamlining operations through new methods or technologies
	· Adoption of advanced technologies

Technological Innovation	· Integration of digital tools and systems to enhance business operations
Market Innovation	· Exploration of new markets or customer segments
	· Differentiation of product offerings to cater to diverse customer needs

Organizational Agility

Organizational agility refers to an organization's ability to respond quickly and effectively to changes in the market or business environment (Anca-loana, 2019). It encompasses the ability to adapt to new opportunities, threats, and technological advancements without disrupting operations. Agility involves flexibility in decision-making, the speed of response to changes, and the capacity to shift resources or processes to accommodate new demands (Chester, 2019). In the context of SMEs in the food and beverage industry, agility is crucial for coping with fluctuating consumer preferences, economic uncertainties, and market disruptions. According to Barno (2024), the dimensions and indicators of organizational agility are as follows:

Table 2
Organizational Agility

Dimension	Indicators
Strategic Agility	· Flexibility in adapting business strategies based on market trends
	· Ability to innovate quickly in response to external changes
Operational Agility	· Ability to adjust production and service processes rapidly
	· Quick decision-making in day-to-day operations
Structural Agility	· Ability to reorganize teams and resources efficiently to meet new demands
	· Use of cross-functional teams to respond to challenges
Leadership Agility	· Flexibility in leadership styles to support change
	· Empowering employees to make decisions that drive organizational change

Digital Strategy

Digital strategy refers to the use of digital technologies and tools to drive business objectives, enhance operational efficiency, and deliver value to customers (Martinez, 2020). In today's competitive landscape, a well-developed digital strategy is essential for leveraging the power of digital platforms, data analytics, and online communication. For food and

beverage SMEs, a digital strategy can involve e-commerce, digital marketing, and the integration of digital tools into production and distribution processes (Pranata, 2020). A strong digital strategy can improve customer engagement, reduce operational costs, and open up new market opportunities, making it a key component for business resilience in the digital age (Casalino, 2019). According to Gao (2023), the dimensions and indicators of digital strategy are as follows:

Table 3
Digital Strategy

Dimension	Indicators
Digital Marketing	· Use of social media, SEO, and email marketing
	· Engaging with customers through digital platforms
E-Commerce Integration	· Availability of products on online platforms
	· Integration of online ordering systems and payment gateways
Data Analytics	· Use of data for decision-making and consumer insights
	· Application of predictive analytics for forecasting trends
Technology Adoption	· Integration of digital tools in business operations
	· Use of automation technologies to improve efficiency and scalability

Organizational Adaptability

Organizational adaptability is the ability of an organization to adjust its structure, processes, and strategies in response to internal and external changes (Jiang, 2019). This concept involves both proactive and reactive approaches, where organizations not only anticipate and prepare for change but also adapt quickly to unforeseen disruptions. Adaptability is crucial in industries such as food and beverage, where market dynamics, consumer preferences, and global events can change rapidly. Organizations with high adaptability can thrive under uncertainty, continuously aligning their capabilities with the changing environment (Haarhaus, 2020). According to Alzoraiki (2024), the dimensions and indicators of organizational adaptability are as follows:

Table 4
Organizational Adaptability

Dimension	Indicators
Cultural Adaptability	· Openness to new ideas and feedback
	· Encouraging learning and knowledge sharing across the organization

Structural Flexibility	· Ability to modify organizational structure based on market needs
	· Quick reallocation of resources to critical areas
Operational Flexibility	· Ability to redesign processes to meet changing customer needs
	· Capacity to scale operations up or down based on demand fluctuations
Strategic Flexibility	· Ability to shift business strategies in response to market trends
	· Exploration of new business models when required

Transformational Leadership

Transformational leadership is a leadership style that focuses on inspiring and motivating employees to achieve exceptional outcomes by fostering an environment of trust, innovation, and personal development (Mandagi, 2023). Transformational leaders engage with their teams by setting a clear vision, encouraging creativity, and supporting employees' growth (Febrian, 2023). In the context of SMEs in the food and beverage industry, transformational leadership plays a pivotal role in enabling change, particularly during periods of innovation and adaptation (Marfo, 2024). This leadership style promotes resilience by fostering a positive organizational culture that embraces change and drives continuous improvement (Orieno, 2024). According to Khan (2022), the dimensions and indicators of transformational leadership are as follows:

Table 5
Transformational Leadership

Dimension	Indicators
Inspirational Motivation	· Setting a clear vision and aligning team goals with the organization's mission
	· Providing encouragement and fostering team spirit
Intellectual Stimulation	· Encouraging creative thinking and problem-solving
	· Promoting innovation and challenging conventional practices
Individualized Consideration	· Providing mentorship and support for personal development
	· Showing empathy and understanding toward employees' needs
Idealized Influence	· Leading by example and embodying organizational values
	· Earning respect and trust through ethical behavior

Business Resilience

Business resilience refers to an organization's ability to withstand and recover from challenges, disruptions, or crises while maintaining its core functions and objectives (Saad, 2021). It includes the capacity to adapt, innovate, and grow even in the face of adversity. Resilient businesses are better positioned to manage risks, recover from economic shocks, and continue their operations with minimal disruption (Chang, 2022). In the food and beverage industry, where external factors such as supply chain disruptions, changing consumer preferences, and regulatory changes can heavily impact business operations, business resilience is essential for long-term sustainability and competitive advantage. According to Schulte (2018) the dimensions and indicators of business resilience are as follows

Table 6
Business Resilience

Dimension	Indicators
Crisis Management	· Ability to effectively handle unforeseen disruptions or emergencies
	· Maintaining core business functions during crises
Risk Management	· Identifying, assessing, and mitigating potential risks to business stability
	· Implementing risk prevention and contingency plans
Adaptation to Change	· Quick adaptation to changing market or industry conditions
	· Flexibility in modifying business strategies to ensure continuity
Long-Term Sustainability	· Fostering innovation and continuous improvement
	· Focus on strategic growth while managing risks and uncertainties

Research Framework

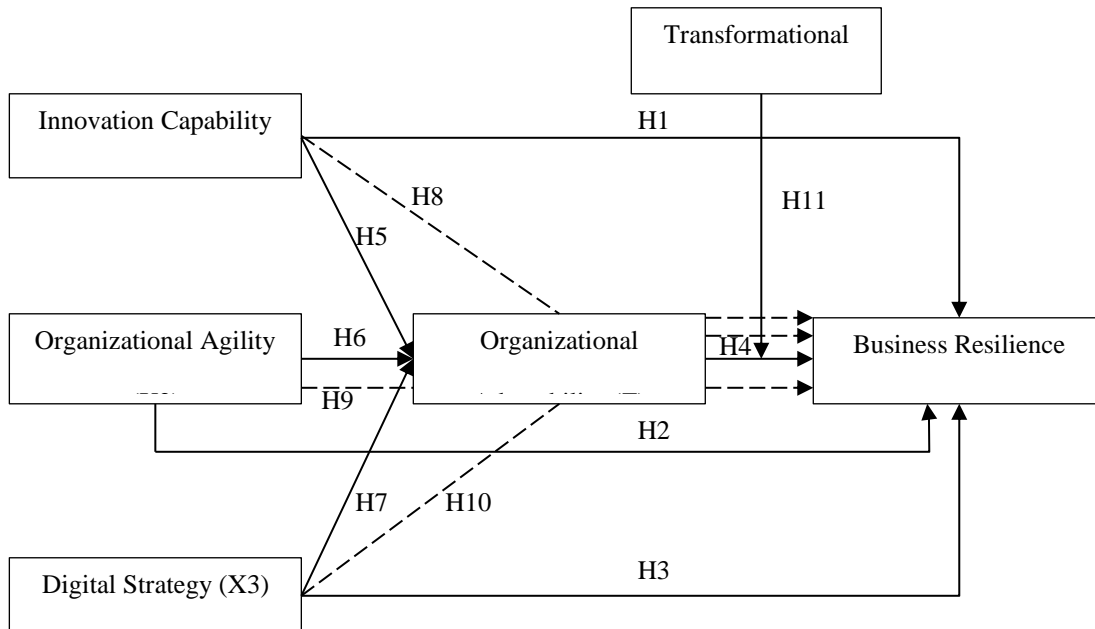


Figure 1
Research Framework

Based on Figure 1, the hypothesis is as below:

Direct Effects

- H1: Innovation capability has a positive and significant impact on business resilience.
- H2: Organizational agility has a positive and significant impact on business resilience.
- H3: Digital strategy has a positive and significant impact on business resilience.
- H4: Organizational adaptability has a positive and significant impact on business resilience.
- H5: Innovation capability has a positive and significant impact on organizational adaptability.
- H6: Organizational agility has a positive and significant impact on organizational adaptability.
- H7: Digital strategy has a positive and significant impact on organizational adaptability.

Indirect Effects

- H8: Organizational adaptability mediates the relationship between innovation capability and business resilience.
- H9: Organizational adaptability mediates the relationship between organizational agility and business resilience.
- H10: Organizational adaptability mediates the relationship between digital strategy and business resilience.

Moderating Effect

- H11: The effect of organizational Adaptability on business resilience is positively moderated by transformational leadership.

RESEARCH METHOD

This research adopts a quantitative approach with an explanatory research design to examine the impact of innovation capability, organizational agility, digital strategy, organizational adaptability, and transformational leadership on business resilience in food and beverage SMEs. The explanatory approach is selected because it allows for testing and explaining the relationships between variables through empirical data. By using this method, the study aims to establish causal relationships and provide insights into how the independent variables influence business resilience while considering both direct and indirect effects. This approach is well-suited for investigating the complex interactions and moderating roles of variables in the business environment of SMEs.

The data for this research will be collected using a structured questionnaire based on a Likert scale ranging from 1 to 5, where respondents will rate their level of agreement with various statements related to the variables of interest. The questionnaire will be designed to measure key dimensions of each variable, including innovation capability, organizational agility, digital strategy, organizational adaptability, transformational leadership, and business resilience. The food and beverage SMEs in Malang City will constitute the population for this study, and a sample of 100 respondents will be selected to ensure a robust and statistically significant dataset. This approach enables the research to capture diverse perspectives within the sector, providing valuable insights into the factors influencing business resilience in the context of SMEs.

In terms of sampling technique, the study will employ a purposive sampling method, which is appropriate for targeting respondents who possess specific knowledge or experience in the food and beverage sector. Purposive sampling will ensure that the respondents are knowledgeable about the dynamics of their business and can provide relevant responses regarding the variables being studied. For data analysis, the research will use Structural Equation Modeling (SEM) with Partial Least Squares (PLS), a powerful technique for analyzing complex relationships among multiple variables. SEM PLS is particularly suitable for this research as it allows for the estimation of both direct and indirect effects while handling multiple independent and dependent variables. By using SEM PLS, the study will be able to evaluate the goodness of fit of the proposed model and test the hypothesized

relationships, providing a comprehensive understanding of how the various factors contribute to business resilience in food and beverage SMEs.

RESULTS AND DISCUSSION

Socio-Demographic Characteristics

Table 7
Socio-Demographic Characteristics of the Study Sample

No	Characteristics of Respondents		Amount	Percentage
1	Gender	Male	49	49%
		Female	51	51%
	Amount		100	100%
2	Age	< 21 Years	14	14%
		21 - 30 Years	33	33%
		31 - 40 Years	25	25%
		41 - 50 Years	18	18%
		> 50 Years	10	10%
	Amount		100	100%
3	Type of Business	Food	46	46%
		Beverages	23	23%
		Food & Beverages	31	31%
	Amount		100	100%
4	Length of Business	< 1 Years	2	2%
		1 - 5 Years	33	33%
		6 - 10 Years	24	24%
		11 - 15 Years	12	12%
		> 15 Years	29	29%
	Amount		100	100%
5	Revenue	< Rp. 5.000.000	24	24%
		Rp. 6.000.000 - Rp. 10.000.000	42	42%
		Rp. 11.000.000 - Rp. 15.000.000	12	12%
		> Rp. 15.000.000	22	22%
	Amount		100	100%

Source: Primary Data Processed (2024)

Based on Table 7, the respondent characteristics table shows that most respondents are female (51%), with the majority aged between 31 to 40 years (26%), indicating an age group that is ready to accept innovation and change in their businesses. The type of business is dominated by the food sector (46%), followed by combined food and beverage businesses

(31%). More than half of the respondents have been running their businesses for 1 to 10 years (57%), with varying revenues, mostly in the range of IDR 6 million to IDR 10 million (42%). This reflects a relatively stable group of MSMEs that need adaptation to improve their business resilience through innovation and transformational leadership.

Outer Model

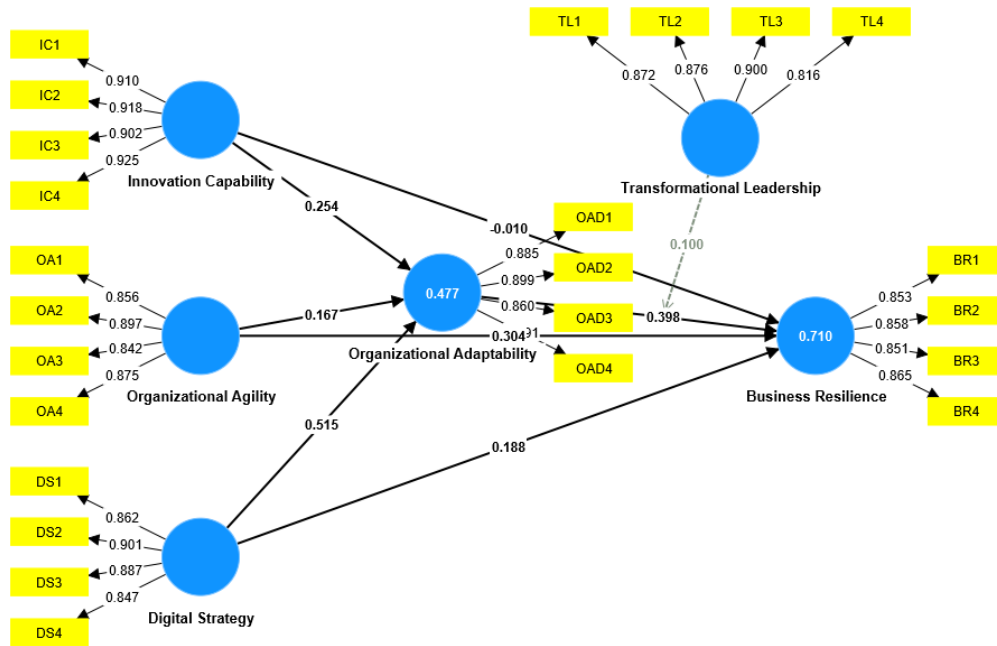


Figure 2
Outer Model

Source: Primary Data Processed (2024)

Table 8
Outer Loading

	Business Resilience	Digital Strategy	Innovation Capability	Organizational Adaptability	Organizational Agility	Transformational Leadership	Transformational Leadership x Organizational Adaptability
BR1	0,853						
BR2	0,858						
BR3	0,851						
BR4	0,865						
DS1		0,862					
DS2		0,901					
DS3		0,887					
DS4		0,847					
IC1			0,910				

IC2	0,918	
IC3	0,902	
IC4	0,925	
OA1		0,856
OA2		0,897
OA3		0,842
OA4		0,875
OAD1	0,885	
OAD2	0,899	
OAD3	0,860	
OAD4	0,891	
TL1		0,872
TL2		0,876
TL3		0,900
TL4		0,816
Transformational Leadership x Organizational Adaptability		1,000

Source: Primary Data Processed (2024)

Based on Table 8, the results of measuring the outer loading of reflective indicators, most of the research indicators have met the characteristics of convergent validity with an outer loading value greater than 0.7 (outer loading > 0.7). This shows that all valid indicators can be utilized in further research analysis.

Validity Test

A validity assessment is conducted to evaluate the reliability of a questionnaire. In this study, validity was measured by examining convergent validity and Average Variance Extracted (AVE). A questionnaire is deemed valid if the AVE value exceeds 0.5 and the outer loading value surpasses 0.7.

Table 9
Average Variant Extracted (AVE)

	Average variance extracted (AVE)
Business Resilience	0,734
Digital Strategy	0,765
Innovation Capability	0,835
Organizational Adaptability	0,782
Organizational Agility	0,752
Transformational Leadership	0,751

Source: Primary Data Processed (2024)

Table 9 indicates that all research variables have achieved an AVE value that exceeds the standard threshold of 0.5 ($AVE > 0.5$).

Reliability Test

Researchers used two reliability test methods: Cronbach's Alpha (CA) and Composite Reliability. CA evaluates the minimum reliability of a variable, with values above 0.7 considered good. Composite Reliability assesses the true reliability of a variable, with values above 0.7 considered highly reliable.

Table 10
Composite Reliability and Cronbach Alpha

	Cronbach's Alpha	Composite Reliability (rho_a)
Business Resilience	0,879	0,881
Digital Strategy	0,897	0,901
Innovation Capability	0,934	0,942
Organizational Adaptability	0,907	0,909
Organizational Agility	0,891	0,902
Transformational Leadership	0,889	0,890

Source: Primary Data Processed (2024)

Based on table 10 the results of Composite Reliability and Cronbach Alpha, it can be seen that all variables used have a value above 0.7 following the requirements for the value of the provisions of Composite Reliability and Cronbach Alpha.

Inner Model

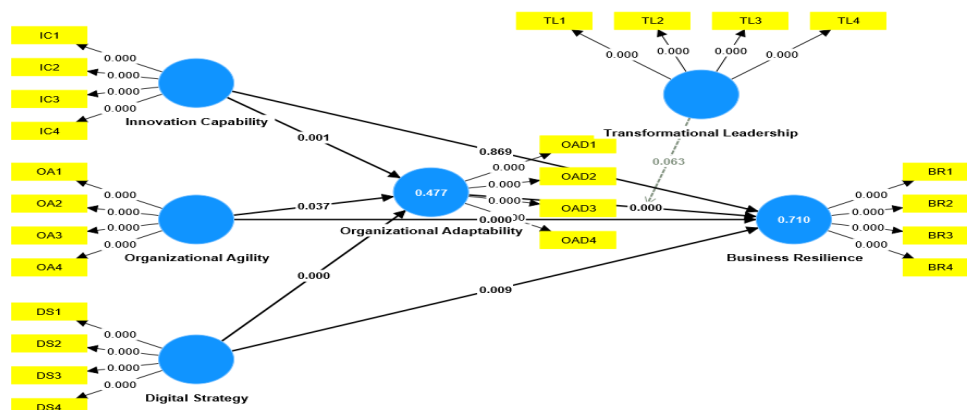


Figure 3
Inner Model

Source: Primary Data Processed (2024)

R-Square Test

The following is the R-Square value in this study:

Table 11
R-Square Value

	R-square	R-square adjusted
Business Resilience	0,710	0,691
Organizational Adaptability	0,477	0,461

Source: Primary Data Processed (2024)

Based on the R-square value shown in table 11, it provides a significant picture of the influence of independent variables on business resilience and organizational adaptability in food and beverage MSMEs. For business resilience, the R-square value of 0.710 indicates that 71% of the variation in business resilience can be explained by innovation, organizational agility, and digital strategy factors. Meanwhile, for organizational adaptability, the R-square value of 0.477 indicates that about 47% of the variation in adaptability can be explained by these factors, which still shows a significant although slightly lower effect.

Hypothesis Test

Table 12
Hypothesis Value

Hypothesis	Variable Impact	Original sample (O)	T statistics (O/STDEV)	P values
H1	Innovation Capability -> Business Resilience	-0,010	0,164	0,869
H2	Organizational Agility -> Business Resilience	0,304	4,098	0,000
H3	Digital Strategy -> Business Resilience	0,188	2,619	0,009
H4	Organizational Adaptability -> Business Resilience	0,398	4,661	0,000
H5	Innovation Capability -> Organizational Adaptability	0,254	3,348	0,001
H6	Organizational Agility -> Organizational Adaptability	0,167	2,083	0,037
H7	Digital Strategy -> Organizational Adaptability	0,515	7,769	0,000

H8	Innovation Capability -> Organizational Adaptability -> Business Resilience	0,101	2,436	0,015
H9	Organizational Agility -> Organizational Adaptability -> Business Resilience	0,066	2,003	0,045
H10	Digital Strategy -> Organizational Adaptability -> Business Resilience	0,205	4,055	0,000
H11	Transformational Leadership x Organizational Adaptability -> Business Resilience	0,100	1,856	0,063

Source: Primary Data Processed (2024)

Based on table 12 the results of hypothesis testing in this study show that of the 11 hypotheses, 9 hypotheses show significant results, which means that the research hypothesis is accepted, while the remaining 2 hypotheses show insignificant results, which means that the research hypothesis is rejected.

Discussion

Direct Effect:

H1: Innovation capability has a positive and significant impact on business resilience.

The hypothesis that innovation capability directly enhances business resilience was not supported ($\beta = -0.010$; $t = 0.164 < 1,96$; $p = 0.869 > 0,05$). This insignificant result challenges the prevailing assumption that innovation capability is inherently a positive determinant of resilience (Valdez, 2021). The finding suggests that while innovation enables the development of new products, processes, and market strategies, its impact on resilience may be indirect, requiring an enabling factor such as organizational adaptability. As Fitriasari (2020) highlights, adaptability mediates the alignment of innovation efforts with dynamic external environments. This outcome underscores the need for SMEs to not only focus on fostering innovation but also on ensuring that these innovations are effectively integrated into adaptable frameworks that respond to market demands.

H2: Organizational agility has a positive and significant impact on business resilience.

Organizational agility significantly influences business resilience ($\beta = 0.304$; $t = 4.098 > 1,96$; $p 0.00 < 0,05$), supporting the argument that agility is a critical determinant of resilience, particularly in highly volatile sectors like food and beverage. Agility refers to an organization's ability to anticipate, respond to, and capitalize on environmental changes without significant disruptions (Chester, 2019). The results are consistent with Amaechi (2023), who posited that agility enables firms to navigate external uncertainties effectively by leveraging strategic, operational, and structural flexibility. For SMEs, agility translates into faster decision-making, efficient resource allocation, and enhanced responsiveness to consumer trends, thereby reinforcing their capacity to withstand and recover from external shocks.

H3: Digital strategy has a positive and significant impact on business resilience.

The significant positive relationship between digital strategy and business resilience ($\beta = 0.188$; $t = 2.619 > 1,96$; $p = 0.009 < 0,05$) highlights the transformative role of digitalization in fostering organizational resilience. Digital strategy, encompassing the use of tools such as e-commerce platforms, data analytics, and automation technologies, empowers SMEs to optimize operations, engage customers effectively, and access new markets (He et al., 2022; Sulastri, 2023). The findings align with Khalil et al. (2022), who argue that digital tools enhance firms' ability to adapt to market dynamics and mitigate risks. However, the successful implementation of a digital strategy also depends on the organization's adaptability and readiness to integrate new technologies seamlessly into its operational workflows.

H4: Organizational adaptability has a positive and significant impact on business resilience

Organizational adaptability emerged as the most significant direct predictor of business resilience ($\beta = 0.398$; $t = 4.661 > 1,96$; $p 0.000 < 0,05$). Adaptability, defined as the ability to modify organizational processes, structures, and strategies in response to internal and external changes, is essential for maintaining continuity and competitiveness (Jiang et al., 2019). This finding aligns with Suseno (2023), who posited that adaptability enables firms to proactively address environmental uncertainties, thus mitigating risks and ensuring operational efficiency. For SMEs, cultivating adaptability involves fostering a culture of

learning, cross-functional collaboration, and strategic foresight to navigate disruptions effectively.

H5: Innovation capability has a positive and significant impact on organizational adaptability

Innovation capability significantly influences organizational adaptability ($\beta = 0.254$; $t = 3.348 > 1,96$; $p = 0.001 < 0,05$). This finding aligns with Valdez (2021), who argued that innovation fosters flexibility and readiness to change, enabling organizations to adjust their strategies and operations in response to external pressures. SMEs that prioritize innovation are better equipped to build adaptable structures and processes, which are critical for sustaining competitiveness in dynamic environments.

H6: Organizational agility has a positive and significant impact on organizational adaptability

Organizational agility positively affects adaptability ($\beta = 0.167$; $t = 2.083 > 1,96$; $p = 0.037 < 0,05$), reinforcing the idea that agility serves as a precursor to adaptability. Chester (2019) emphasized that agile organizations, characterized by rapid decision-making and resource reallocation capabilities, are more likely to develop adaptive systems that respond effectively to external changes.

H7: Digital strategy has a positive and significant impact on organizational adaptability.

Digital strategy significantly enhances organizational adaptability ($\beta = 0.515$; $t = 7.769 > 1,96$; $p = 0.000 < 0,05$). This result is consistent with findings by Khalil et al. (2022), which highlight that digital transformation demands a high degree of adaptability to integrate new technologies and navigate the associated challenges successfully. SMEs with robust digital strategies can leverage adaptability to align technological advancements with business objectives.

Indirect Effect:

H8: Organizational adaptability mediates the relationship between innovation capability and business resilience

Organizational adaptability significantly mediates the relationship between innovation capability and business resilience ($\beta = 0.101$; $t = 2.436 > 1,96$; $p = 0.015 < 0,05$).

This suggests that innovation capability, while essential for driving new solutions, requires adaptability to translate these innovations into resilience outcomes. Consistent with Fitriasari (2020), this result emphasizes that adaptability acts as a conduit through which innovative efforts are aligned with the dynamic needs of the market, enabling SMEs to derive sustainable competitive advantages from their innovation initiatives.

H9: Organizational adaptability mediates the relationship between organizational agility and business resilience

The mediating role of adaptability is also evident in the relationship between organizational agility and business resilience ($\beta = 0.066$; $t = 2.003 > 1,96$; $p = 0.045 < 0,05$). This finding corroborates Amaechi (2023), who highlighted that agility must be coupled with adaptability to institutionalize quick responses to environmental changes. While agility facilitates rapid decision-making and resource reallocation, adaptability ensures that these actions are sustainable and effectively embedded within the organization's operational framework.

H10: Organizational adaptability mediates the relationship between digital strategy and business resilience

Digital strategy exhibits a strong indirect effect on business resilience through organizational adaptability ($\beta = 0.205$; $t = 4.055 > 1,96$; $p = 0.000 < 0,05$). This underscores the critical role of adaptability in overcoming barriers to digital transformation, such as resistance to change and resource limitations, as noted by Khalil et al. (2022) and He et al. (2022). SMEs that invest in adaptability can more effectively integrate digital tools into their operations, ensuring that these technologies contribute to resilience rather than disrupt existing workflows.

Moderating Effect:

H11: The effect of organizational Adaptability on business resilience is positively moderated by transformational leadership

Transformational leadership was found to marginally moderate the relationship between adaptability and resilience ($\beta = 0.100$; $t = 1.856 < 1,96$; $p = 0.063 > 0,05$). Although the effect is not statistically significant, it underscores the potential of transformational leaders to foster a culture of innovation and adaptability. As noted by Khan et al. (2022) and

Mandagi (2023), transformational leaders inspire and motivate employees, reduce resistance to change, and create an environment conducive to adaptability, ultimately enhancing organizational resilience.

CONCLUSION

The findings of this study indicate that organizational adaptability plays a crucial role as a mediator in strengthening the relationship between innovation capability, organizational agility, digital strategy, and business resilience in food and beverage SMEs. Agility and digital strategy have a direct impact on business resilience, while innovation capability relies on adaptability to generate significant effects. Although transformational leadership was not statistically significant as a moderator, its potential role in fostering innovation integration and adaptability remains important. Therefore, SME owners are encouraged to enhance organizational adaptability through continuous learning programs, strategic flexibility, and strengthening collaborations with various stakeholders. Additionally, the effective use of digital tools and the development of operational agility should be prioritized to respond to market changes. SME owners are also advised to strengthen transformational leadership through training that supports visionary and adaptive leadership while aligning innovation efforts with flexible organizational structures. Support from policymakers, such as providing incentives and digital transformation training programs, is also crucial in helping SMEs overcome challenges in digital transformation and improve their competitiveness amidst uncertainty.

REFERENCES

- Abhari, S., Jalali, A., Jaafar, M., & Tajaddini, R. (2022). The Impact of Covid-19 Pandemic on Small Businesses In Tourism And Hospitality Industry In Malaysia. *Journal Of Research In Marketing And Entrepreneurship*, 24(1), 75-91.
- Alnuaimi, B. K., Singh, S. K., Ren, S., Budhwar, P., & Vorobyev, D. (2022). Mastering Digital Transformation: The Nexus Between Leadership, Agility, And Digital Strategy. *Journal Of Business Research*, 145, 636-648.
- Alzoraiki, M., Milhem, M., Ateeq, A., Almeer, S., & Hussein, T. M. (2024). Strategic Flexibility: An Essential Capability For Innovation And Sustainable Performance In Times Of Technological Uncertainty. In *Business Development Via Ai And Digitalization: Volume 1* (Pp. 271-281). Cham: Springer Nature Switzerland.

- Amaechi, I. D., & Onuoha, B. C. (2023). Organizational Flexibility And Adaptive Capability Of Food And Beverage Firms In Rivers State. *International Journal Of Business And Economics*, 8(6), 16-27.
- Anca-Ioana, M. (2019). A Review Of Organizational Agility Concept And Characteristics. *Annals Of The University Of Oradea, Economic Science Series*, 28(1).
- Awwal, M. A. F., Utami, E. Y., Sumerli A, C. H., & Purwoko, B. (2023). Technology Adaptation And Ceo Characteristics: Enhancing Competitive Advantage In Indonesia's Msme Of F&X& B In The Jabodetabek Region. *International Journal Of Business, Law, And Education*, 4(2), 1228-1241. <https://doi.org/10.56442/Ijble.V4i2.322>
- Barno, J. K., & Alice, M. W. (2024). Exploring Organizational Agility: Impacts On Organizational Performance In Kenya's Banking Sector. *The Strategic Journal Of Business & Change Management*, 6(2), 145–159
- Casalino, N., Żuchowski, I., Labrinos, N., Munoz Nieto, Á. L., & Martín, J. A. (2019). Digital Strategies And Organizational Performances Of Smes In The Age Of Coronavirus: Balancing Digital Transformation With An Effective Business Resilience. *Queen Mary School Of Law Legal Studies Research Paper* Forthcoming.
- Chang, S. E., Brown, C., Handmer, J., Helgeson, J., Kajitani, Y., Keating, A., ... & Roa-Henriquez, A. (2022). Business Recovery From Disasters: Lessons From Natural Hazards And The Covid-19 Pandemic. *International Journal Of Disaster Risk Reduction*, 80, 103191.
- Chester, M. V., & Allenby, B. (2019). Toward Adaptive Infrastructure: Flexibility And Agility In A Non-Stationarity Age. *Sustainable And Resilient Infrastructure*, 4(4), 173-191.
- Dairo, O. O., & Bekoe, B. B. (2024). The Effects Of Disruptive Thinking On The Food Industry. *Advances In Bioscience And Biotechnology*, 15(6), 360-379.
- Dos Anjos, S. J. G., & Kuhn, V. R. (2024). The Role Of Transformational Leadership And Innovation Adoption In Restaurant Performance. *Tourism & Management Studies*, 20(1), 49-64.
- Febrian, W. D., Rubadi, R., Sjarifudin, D., Tahir, A. M. S., & Perwitasari, E. (2023). Approach Transformational Leadership: Organizational Goal & Employee Retention. *Journal Of Economics, Management, Entrepreneurship, And Business (Jemeb)*, 3(1), 61-67.
- Fitriasari, F. (2020). How Do Small And Medium Enterprise (Sme) Survive The Covid-19 Outbreak? *Jurnal Inovasi Ekonomi*, 5(02). <https://doi.org/10.22219/Jiko.V5i3.11838>
- Gao, J., Siddik, A. B., Khawar Abbas, S., Hamayun, M., Masukujjaman, M., & Alam, S. S. (2023). Impact Of E-Commerce And Digital Marketing Adoption On The Financial

- And Sustainability Performance Of Msmes During The Covid-19 Pandemic: An Empirical Study. *Sustainability*, 15(2), 1594.
- Gupta, K. (2023). The Importance Of Trade For Mses In The Indonesian F&B Sector (No. 55). Policy Paper.
- Haarhaus, T., & Liening, A. (2020). Building Dynamic Capabilities To Cope With Environmental Uncertainty: The Role Of Strategic Foresight. *Technological Forecasting And Social Change*, 155, 120033.
- He, Z., Huang, H., Choi, H., & Bilgihan, A. (2022). Building Organizational Resilience With Digital Transformation. *Journal Of Service Management*, 34(1), 147-171. <https://doi.org/10.1108/Josm-06-2021-0216>
- Jiang, Y., Ritchie, B. W., & Verreynne, M. L. (2019). Building Tourism Organizational Resilience To Crises And Disasters: A Dynamic Capabilities View. *International Journal Of Tourism Research*, 21(6), 882-900.
- Khalil, A., Abdelli, M., & Mogaji, E. (2022). Do Digital Technologies Influence The Relationship Between The Covid-19 Crisis And Smes' Resilience In Developing Countries?. *Journal Of Open Innovation Technology Market And Complexity*, 8(2), 100. <https://doi.org/10.3390/Joitmc8020100>
- Khan, I. U., Amin, R. U., & Saif, N. (2022). Individualized Consideration And Idealized Influence Of Transformational Leadership: Mediating Role Of Inspirational Motivation And Intellectual Stimulation. *International Journal Of Leadership In Education*, 1-11.
- Lestari, Y. (2024). Implementation Of Digital Transformation In Meatball MSMES Malang City. *Jurnal Manajemen Bisnis Akuntansi Dan Keuangan*, 3(1), 87-96. <https://doi.org/10.55927/Jambak.V3i1.9176>
- Madi Odeh, R. B., Obeidat, B. Y., Jaradat, M. O., Masa'deh, R. E., & Alshurideh, M. T. (2023). The Transformational Leadership Role In Achieving Organizational Resilience Through Adaptive Cultures: The Case Of Dubai Service Sector. *International Journal Of Productivity And Performance Management*, 72(2), 440-468.
- Manafe, M. W. N., Rizani, A., Purnawati, E., & Harsono, I. (2024). Analysis Of The Influence Of Technical Expertise, Market Orientation, Social Capital, And Innovation On The Performance Of Micro And Small Businesses In The Technology Sector. *International Journal Of Business, Law, And Education*, 5(1), 983-995.
- Mandagi, D. W., Rantung, D. I., Rasuh, D., & Kowaas, R. (2023). Leading Through Disruption: The Role Of Transformational Leadership In The Digital Age. *Jurnal Mantik*, 7(3), 1597-1161.
- Marfo, M., Armah, A. A., Ofei, E. F., Adadevoh, L., & Reindoph, C. A. (2024). Do Government Interventions And Transformational Leadership Matter? A Moderation-

- Mediation Analysis Of Sme Performance During Covid-19 In Ghana. *International Journal Of Organizational Leadership*, 13(1).
- Martínez-Caro, E., Cegarra-Navarro, J. G., & Alfonso-Ruiz, F. J. (2020). Digital Technologies And Firm Performance: The Role Of Digital Organisational Culture. *Technological Forecasting And Social Change*, 154, 119962.
- Memon, S., Pawase, V., Pavase, T., & Soomro, M. (2021). Investigation Of Covid-19 Impact On The Food And Beverages Industry: China And India Perspective. *Foods*, 10(5), 1069. <https://doi.org/10.3390/Foods10051069>
- Orieno, O. H., Udeh, C. A., Oriekhoe, O. I., Odonkor, B., & Ndubuisi, N. L. (2024). Innovative Management Strategies In Contemporary Organizations: A Review: Analyzing The Evolution And Impact Of Modern Management Practices, With An Emphasis On Leadership, Organizational Culture, And Change Management. *International Journal Of Management & Entrepreneurship Research*, 6(1), 167-190.
- Pranata, N., Soekarni, M., Mychelisda, E., Novandra, R., Nugroho, A. E., Rifai, B., ... & Yuliana, R. R. D. (2022). Technology Adoption Issues And Challenges For Micro, Small And Medium Enterprises: A Case Study Of The Food And Beverage Sub-Sector In Indonesia. *The Journal Of Asian Finance, Economics And Business*, 9(3), 265-274.
- Rehman, S. U., Bhatti, A., & Chaudhry, N. I. (2019). Mediating Effect Of Innovative Culture And Organizational Learning Between Leadership Styles At Third-Order And Organizational Performance In Malaysian Smes. *Journal Of Global Entrepreneurship Research*, 9(1), 1-24.
- Robertson, J., Botha, E., Walker, B., Wordsworth, R., & Balzarova, M. (2022). Fortune Favours The Digitally Mature: The Impact Of Digital Maturity On The Organisational Resilience Of Sme Retailers During Covid-19. *International Journal Of Retail & Distribution Management*, 50(8/9), 1182-1204. <https://doi.org/10.1108/Ijrdm-10-2021-0514>
- Saad, M. H., Hagelaar, G., Van Der Velde, G., & Omta, S. W. F. (2021). Conceptualization Of Smes' Business Resilience: A Systematic Literature Review. *Cogent Business & Management*, 8(1), 1938347.
- Schulte, J., & Hallstedt, S. I. (2018). Company Risk Management In Light Of The Sustainability Transition. *Sustainability*, 10(11), 4137.
- Sulastri, S. (2023). Resilience Acceleration Model Of Small And Medium Enterprises Through Digital Transformation. *Journal Of Eastern European And Central Asian Research (Jeecar)*, 10(4), 609-619. <https://doi.org/10.15549/Jeecar.V10i4.1355>
- Suseno, B. (2023). Role Of The Magnitude Of Digital Adaptability In Sustainability Of Food And Beverage Small Enterprises Competitiveness. *Hightech And Innovation Journal*, 4(2), 270-282. <https://doi.org/10.28991/Hij-2023-04-02-02>

- Thongsri, N., & Chang, A. K. H. (2019). Interactions Among Factors Influencing Product Innovation And Innovation Behaviour: Market Orientation, Managerial Ties, And Government Support. *Sustainability*, 11(10), 2793.
- Valdez-Juárez, L. E., & Castillo-Vergara, M. (2021). Technological Capabilities, Open Innovation, And Eco-Innovation: Dynamic Capabilities To Increase Corporate Performance Of Smes. *Journal Of Open Innovation: Technology, Market, And Complexity*, 7(1), 8.
- Zirar, A. (2024). Smart Contract Challenges And Drawbacks For Sme Digital Resilience. *Journal Of Enterprise Information Management*, 37(5), 1527-1550. <https://doi.org/10.1108/Jeim-02-2023-0082>