

## **From Knowledge to Capability: The Role of Adaptability in Transforming Digital Creativity and Government Support into SME Sustainability**

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### **Article History**

**Received: 04-05-2026**

**Revised: 15-05-2026**

**Published: 30-05-2026**

**Keywords: *Adaptability, Digital Creativity, Government***

### **ABSTRACT**

This study investigates the role of adaptability as a mediating mechanism in the relationship between entrepreneurial knowledge, digital creativity, government support, and business sustainability among Small and Medium Enterprises (SMEs). In the context of increasing digital transformation and market uncertainty, SMEs are required not only to possess resources but also to develop adaptive capabilities to ensure long-term sustainability. This research adopts a quantitative approach using data collected from 280 SMEs operating in the food and beverage sector in Pangkalpinang City, Indonesia. The data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM). The results reveal that digital creativity and government support have a positive and significant effect on adaptability, while entrepreneurial knowledge does not show a significant influence. Furthermore, adaptability has a strong and significant impact on business sustainability. However, entrepreneurial knowledge and digital creativity do not directly affect sustainability, indicating that their influence operates indirectly through adaptability. Mediation analysis confirms that adaptability significantly mediates the relationship between digital creativity and government support with business sustainability. These findings highlight that sustainability is not driven by static resources, but by dynamic capabilities that enable firms to respond effectively to environmental changes. This study contributes to the development of dynamic capability theory and provides practical implications for SME development strategies in the digital era.

***Support, SME Sustainability,  
Dynamic Capability*****INTRODUCTION**

Small and Medium Enterprises (SMEs) play a strategic role in economic development, particularly in emerging economies such as Indonesia, where they contribute significantly to employment generation and regional economic growth. However, the increasingly complex business environment, driven by digitalisation, market globalisation, and changing consumer behaviour, has created new challenges for business sustainability (OECD, 2020; World Bank, 2021). In this context, sustainability is no longer defined merely as survival, but as the ability to continuously adapt and transform in response to environmental changes.

Digital transformation has significantly altered how SMEs operate, particularly in marketing, operations, and customer engagement. The adoption of digital technologies enables firms to expand market reach, improve efficiency, and create new value propositions (Nambisan et al., 2019; Verhoef et al., 2021). However, many SMEs still face limitations in leveraging digital opportunities due to constraints in digital literacy, resources, and managerial capabilities (OECD, 2020).

In addition to internal factors, SME sustainability is also influenced by external factors, particularly government support. Policy interventions such as financial assistance, digital training programs, and regulatory support have been shown to enhance SME capacity (Aslam et al., 2023). Nevertheless, the effectiveness of such support largely depends on the ability of SMEs to adapt to rapidly changing business environments (Sari, 2022; Nurhadi, 2021).

From a theoretical perspective, the relationship between resources and firm performance can be explained through several frameworks. The *Knowledge-Based View* (KBV) emphasizes knowledge as a strategic resource (Nonaka, 1994), while the *Resource-Based View* (RBV) highlights the importance of unique capabilities such as digital creativity in achieving competitive advantage (Barney, 1991). However, these perspectives are limited in explaining how resources are effectively utilized in dynamic environments. Therefore, *Dynamic Capability Theory* provides a more comprehensive explanation by emphasizing a firm's ability to sense, seize, and transform in response to environmental changes (Teece, 2018).

Previous studies have examined the effects of entrepreneurial knowledge, digital creativity, and government support on business sustainability. However, empirical findings remain inconsistent. Some studies report significant relationships (Hakim, 2023; Prasetyo et al., 2020), while others reveal weak or insignificant effects (Rahman, 2022; Nugroho, 2021). These inconsistencies indicate the presence of an underlying mechanism that has not been fully explored.

Based on this gap, this study proposes adaptability as a mediating variable that functions as a dynamic capability linking internal resources and external support to business sustainability. Adaptability reflects a firm's ability to respond flexibly to environmental changes through innovation, learning, and strategic adjustment. Therefore, this study aims to analyze the effect of entrepreneurial knowledge, digital creativity, and government support on business sustainability with adaptability as a mediating variable among SMEs.

## RESEARCH METHODOLOGY

Metode penelitian yang digunakan dalam penelitian ini untuk memecahkan permasalahan termasuk metode analisis. Metode yang digunakan dalam penelitian dituliskan di bagian ini.

This study adopts a quantitative approach with an explanatory research design to analyze the relationships between entrepreneurial knowledge, digital creativity, government support, adaptability, and business sustainability among Small and Medium Enterprises (SMEs). The study specifically focuses on SMEs operating in the food and beverage (F&B) sector in Pangkalpinang City, Bangka Belitung Islands Province, Indonesia. This sector was selected due to its significant contribution to local economic activity and its high exposure to digital transformation, particularly in marketing, service delivery, and customer engagement.

The population of this study consists of SME actors in the F&B sector in Pangkalpinang City. Given the absence of an exact population frame, a non-probability sampling technique was applied using purposive sampling. Respondents were selected based on specific criteria, namely: actively managing an SME, having operated the business for at least one year, and being involved in business decision-making processes. A total of 280 respondents participated in this study, which is considered adequate for Structural Equation Modeling analysis and sufficient to represent the characteristics of SMEs in the selected sector.

Data were collected using a structured questionnaire distributed directly to SME actors. The instrument was designed using a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The questionnaire items were adapted from previous empirical studies and adjusted to the context of SMEs in the digital era. Each construct in the study—entrepreneurial knowledge, digital creativity, government support, adaptability, and business sustainability—was measured using multiple reflective indicators to ensure measurement accuracy.

The data analysis was conducted using Structural Equation Modeling (SEM) with the Partial Least Squares (PLS) approach. This method was selected due to its ability to analyze complex relationships between latent variables, its suitability for predictive research, and its robustness in handling relatively large models with multiple constructs. The analysis process was carried out in two main stages, namely the evaluation of the measurement model (outer model) and the structural model (inner model).

The measurement model evaluation was conducted to assess the validity and reliability of the constructs. Convergent validity was evaluated based on factor loadings, while construct

reliability was assessed using composite reliability and average variance extracted. Meanwhile, the structural model evaluation was conducted to examine the relationships between variables through path coefficients, t-statistics, and p-values obtained from the bootstrapping procedure.

Hypothesis testing in this study was performed using a bootstrapping technique with a significance level of 5 percent. In addition to direct effects, this study also examines the mediating role of adaptability in the relationship between independent variables and business sustainability. The use of this approach allows for a more comprehensive understanding of how internal capabilities and external support are transformed into sustainable business performance.

**Table 1. Operational Definition of Variables**

Variable	Definition	Indicators	Measurement Scale	Source
Entrepreneurial Knowledge (PK)	The level of understanding and knowledge possessed by SME actors regarding business management, opportunity recognition, and decision-making processes.	PK1: Understanding of business management principles PK2: Ability to identify business opportunities PK3: Knowledge of financial management PK4: Understanding of market trends PK5: Risk management knowledge	Likert Scale (1–5)	Adapted from KBV (Nonaka, 1994); Siddiqui (2024)
Digital Creativity (KD)	The ability of SMEs to generate innovative ideas and utilize digital technologies creatively in business activities.	KD1: Ability to create engaging digital content KD2: Innovation in digital marketing strategies KD3: Use of digital platforms for business development KD4: Ability to adapt content to trends KD5: Creative use of technology in promotion	Likert Scale (1–5)	RBV (Barney, 1991); Prasetyo et al. (2020)

Government Support (DP)	External assistance provided by the government to enhance SME capacity and performance.	DP1: Access to financial support DP2: Participation in training programs DP3: Ease of business licensing DP4: Access to digital infrastructure DP5: Government policy support	Likert Scale (1–5)	Institutional theory; Aslam et al. (2023)
Adaptability (APS)	The ability of SMEs to adjust strategies, operations, and business models in response to environmental changes.	APS1: Ability to respond to market changes APS2: Flexibility in business strategy APS3: Speed of decision-making APS4: Ability to adopt new technology APS5: Capacity for continuous learning	Likert Scale (1–5)	Dynamic Capability (Teece, 2018)
Business Sustainability (KU)	The ability of SMEs to maintain long-term business performance, stability, and growth.	KU1: Stability of business income KU2: Business growth consistency KU3: Ability to survive market competition KU4: Customer retention KU5: Long-term business viability	Likert Scale (1–5)	SME sustainability literature; OECD (2020)

## RESULTS AND DISCUSSION

As shown in Table 2, the majority of respondents operate in the food sector (58.9%), followed by the beverage sector (41.1%). Most SMEs have been operating for 1–6 years, indicating relatively established business experience. In terms of education, the majority of respondents have a Diploma or Bachelor’s degree (57.1%). Furthermore, most respondents actively use digital technologies in their business activities (75%), suggesting that the sample is appropriate for examining digital creativity and adaptability in SMEs.

**Table 2. Respondent Characteristics**

Characteristics	Category	Frequency	Percentage (%)
Business Type	Food	165	58.9
	Beverage	115	41.1
Business Experience	1–3 years	102	36.4
	4–6 years	98	35.0
	>6 years	80	28.6
Education	High School	120	42.9
	Diploma/Bachelor	160	57.1
Digital Usage	Active	210	75.0
	Not active	70	25.0

Table 3 shows that all indicators have loading values above 0.70, indicating that the measurement model meets the criteria for convergent validity. This result confirms that all indicators adequately represent their respective latent constructs.

**Table 3. Factor Loadings**

Variable	Indicator	Loading
PK	PK1	0.873
	PK2	0.803
	PK3	0.793
	PK4	0.778
	PK5	0.848
KD	KD1	0.871
	KD2	0.840
	KD3	0.851
	KD4	0.848
	KD5	0.855
DP	DP1	0.880
	DP2	0.887
	DP3	0.856
	DP4	0.861
	DP5	0.894
APS	APS1	0.886
	APS2	0.832
	APS3	0.860
	APS4	0.827
	APS5	0.863
KU	KU1	0.875
	KU2	0.825
	KU3	0.855
	KU4	0.839
	KU5	0.867

As presented in Table 4, all constructs have Composite Reliability values above 0.70 and AVE values above 0.50. These results indicate that the constructs demonstrate good reliability and convergent validity.

**Table 4. Composite Reliability and AVE**

Variable	CR	AVE
PK	0.89	0.62
KD	0.91	0.67
DP	0.92	0.70
APS	0.93	0.72
KU	0.91	0.68

The R<sup>2</sup> value for adaptability is 0.64, indicating that 64% of its variance is explained by entrepreneurial knowledge, digital creativity, and government support. Meanwhile, the R<sup>2</sup> value for business sustainability is 0.58, suggesting that 58% of its variance is explained by the model. These values indicate that the model has strong explanatory power.

**Table 5. R-Square Values**

Variable	R <sup>2</sup>
Adaptability (APS)	0.64
Business Sustainability (KU)	0.58

The results indicate that digital creativity and government support have a positive and significant effect on adaptability. Adaptability also significantly affects business sustainability. However, entrepreneurial knowledge and digital creativity do not have a direct significant effect on business sustainability.

**Table 6. Path Coefficients**

Relationship	Coefficient	t-stat	p-value	Result
PK → APS	0.064	1.45	0.146	Not significant
KD → APS	0.582	8.21	0.000	Significant
DP → APS	0.350	5.12	0.000	Significant
APS → KU	0.477	4.90	0.001	Significant
PK → KU	0.068	1.58	0.112	Not significant
KD → KU	0.131	1.04	0.297	Not significant
DP → KU	0.310	3.45	0.000	Significant

The mediation analysis reveals that adaptability significantly mediates the relationship between digital creativity and government support on business sustainability. However, adaptability does not mediate the relationship between entrepreneurial knowledge and business sustainability.

**Table 7. Indirect Effects**

<b>Relationship</b>	<b>Coefficient</b>	<b>p-value</b>	<b>Result</b>
KD → APS → KU	0.278	0.000	Significant mediation
DP → APS → KU	0.167	0.000	Significant mediation
PK → APS → KU	0.030	0.120	Not significant

The findings of this study provide a comprehensive explanation of how internal resources and external support mechanisms are transformed into sustainable business outcomes through adaptability as a central mechanism. The structural model results indicate that not all resources directly contribute to business sustainability; instead, their effectiveness depends on the firm's ability to convert them into adaptive capabilities.

First, the insignificant effect of entrepreneurial knowledge on both adaptability ( $\beta = 0.064$ ;  $p > 0.05$ ) and business sustainability ( $\beta = 0.068$ ;  $p > 0.05$ ) reveals a critical insight that challenges the traditional assumption of the *Knowledge-Based View* (KBV). While KBV posits that knowledge is a key strategic resource (Nonaka, 1994), the findings of this study suggest that knowledge alone does not automatically translate into actionable capabilities within the SME context. In practice, many SME actors possess basic entrepreneurial knowledge; however, such knowledge tends to remain at a cognitive level and is not effectively transformed into adaptive behavior or strategic execution. This phenomenon is particularly evident in resource-constrained environments, where limited access to technology, financial capital, and experiential learning reduces the ability to operationalize knowledge. This finding is consistent with Rahman (2022), who argues that entrepreneurial knowledge does not significantly influence business sustainability unless it is supported by strong execution capabilities. Therefore, knowledge in this context can be conceptualized as a *latent resource* that requires transformation through dynamic capabilities to generate tangible outcomes.

Second, digital creativity demonstrates a strong and significant effect on adaptability ( $\beta = 0.582$ ;  $p < 0.001$ ), yet its direct effect on business sustainability is not significant ( $\beta = 0.131$ ;  $p > 0.05$ ). This dual finding reinforces the logic of the *Resource-Based View* (RBV), which emphasizes the importance of unique and inimitable capabilities in enhancing firm performance (Barney, 1991). Digital creativity enables SMEs to experiment with new ideas, utilize digital platforms effectively, and respond more flexibly to market changes, thereby strengthening adaptability. However, the absence of a direct impact on sustainability suggests that creativity alone is insufficient to ensure long-term business performance. Instead, digital creativity operates as an *enabling capability* that enhances responsiveness rather than directly generating sustained outcomes. This aligns with Nugroho (2021), who found that digital creativity primarily improves marketing performance but does not necessarily guarantee business sustainability. In other words, creativity must be strategically aligned with operational stability, financial management, and long-term planning to produce sustainable value.

Third, government support exhibits a significant positive effect on adaptability ( $\beta = 0.350$ ;  $p < 0.001$ ) and a moderate direct effect on business sustainability ( $\beta = 0.310$ ;  $p < 0.001$ ). These findings support the *Institutional Theory* perspective, which highlights the role of external structures in shaping organizational behavior. Government interventions—such as financial assistance, training programs, and digitalization initiatives—serve as external enablers that facilitate the development of adaptive capacity among SMEs. However, the moderate magnitude of its direct effect indicates that government support alone is not a dominant determinant of sustainability. Instead, its effectiveness is contingent upon how SMEs internalize and utilize such support. This finding is consistent with Aslam et al. (2023), who argue that government support enhances SME capacity but does not automatically lead to sustained performance without internal readiness. Thus, government support functions as a *catalytic factor* that accelerates capability development rather than as a primary driver of sustainability.

Most importantly, adaptability emerges as the strongest determinant of business sustainability ( $\beta = 0.477$ ;  $p < 0.01$ ), confirming its central role within the model. This finding provides strong empirical support for *Dynamic Capability Theory*, which posits that firms achieve long-term success not merely through resource possession but through the ability to continuously reconfigure those resources in response to environmental changes (Teece, 2018). Adaptability enables SMEs to sense market shifts, seize emerging opportunities, and transform their business models accordingly. In highly dynamic and uncertain environments, such as the digital economy, this capability becomes a critical survival mechanism. The result is also consistent with Saputra (2023) and Lestari & Ginting (2021), who found that adaptability significantly enhances SME resilience and long-term sustainability.

Furthermore, the mediation analysis strengthens the argument that adaptability acts as a *conversion mechanism* that bridges resources and outcomes. The significant indirect effects of digital creativity ( $\beta = 0.278$ ;  $p < 0.001$ ) and government support ( $\beta = 0.167$ ;  $p < 0.001$ ) on business sustainability through adaptability indicate that these factors do not operate independently but require adaptive processes to generate meaningful impact. Conversely, the non-significant mediation of entrepreneurial knowledge ( $\beta = 0.030$ ;  $p > 0.05$ ) further emphasizes that knowledge alone is insufficient to trigger adaptive transformation. This pattern suggests that adaptability is not merely a supporting variable but a *core mechanism* that determines whether resources can be effectively translated into sustainable performance.

Overall, the findings of this study demonstrate that business sustainability in SMEs is not driven by static resources, but by dynamic capabilities that enable continuous adaptation. Internal resources such as knowledge and creativity, as well as external support from government, only become valuable when they are integrated and transformed through adaptive processes. This highlights a fundamental shift from a resource-based perspective to a capability-based perspective in understanding SME sustainability. In this regard, adaptability serves as the

critical link that connects resources, actions, and outcomes in an increasingly volatile and digitalized business environment.

## CONCLUSION AND RECOMMENDATIONS

This study concludes that business sustainability among SMEs is primarily determined by the firm's ability to develop and utilize adaptability as a dynamic capability. The findings demonstrate that while entrepreneurial knowledge, digital creativity, and government support are important resources, their contribution to sustainability is not direct but depends on their transformation into adaptive capacity. Among the variables examined, adaptability emerges as the most critical factor influencing sustainable business performance, indicating that the ability to respond to environmental changes is more decisive than the mere possession of resources.

The results further reveal that digital creativity and government support significantly enhance adaptability, which in turn leads to improved business sustainability. In contrast, entrepreneurial knowledge does not significantly influence either adaptability or sustainability, suggesting that knowledge alone is insufficient without effective implementation and contextual application. These findings reinforce the perspective that sustainability is driven by dynamic capabilities rather than static resources, highlighting the importance of adaptability as a key mechanism in translating inputs into long-term outcomes.

From a theoretical standpoint, this study contributes to the development of *Dynamic Capability Theory* by empirically confirming the mediating role of adaptability in linking internal and external resources to sustainability outcomes. It also provides a critical refinement of the *Knowledge-Based View* and *Resource-Based View* by demonstrating that knowledge and creativity require adaptive processes to generate value. Thus, this study shifts the focus from resource possession to capability transformation in understanding SME sustainability.

From a practical perspective, the findings imply that SME actors should prioritize the development of adaptive capabilities through continuous learning, digital experimentation, and flexible business strategies. Government institutions are encouraged to design support programs that go beyond knowledge transfer and instead focus on strengthening adaptive capacity through hands-on training, mentoring, and digital ecosystem development.

Despite its contributions, this study has several limitations. First, the research is limited to SMEs in the food and beverage sector in Pangkalpinang City, which may restrict the generalizability of the findings to other sectors or regions. Second, the study adopts a cross-sectional design, which limits the ability to capture dynamic changes over time. Third, the variables included in the model are relatively limited, and other relevant factors such as innovation capability, market orientation, or digital maturity were not incorporated.

Therefore, future research is recommended to expand the scope of study by including different sectors and geographical contexts, as well as employing longitudinal approaches to better capture the evolution of adaptability and sustainability over time. Additionally, future

studies may integrate other strategic variables to provide a more comprehensive understanding of SME sustainability in the digital era.

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