The Influence of Business Strategy on SME Performance with Digital Technology as a Mediator

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Abstract (in English)

Research Aim: *This study aims to investigate the influence of business strategy on the performance of SMEs, with digital technology acting as a mediator. It explores the role of digital technology in enhancing the impact of business strategy on SME performance, providing empirical insights for SMEs operating in diverse sectors.*
Design/Method/Approach: *A quantitative approach is adopted using Structural Equation Modeling (SEM) to test the hypothesized relationships between business strategy, digital technology, and SME performance. Data was collected through surveys from 200 SME owners and managers across the manufacturing, retail, and services sectors. SEM was used to analyze the direct and indirect effects of business strategy on SME performance, mediated by digital technology.*
Research Findings: *The findings suggest that business strategy, specifically strategies focused on innovation and market orientation, has a positive and significant effect on SME performance. Furthermore, digital technology was found to mediate the relationship between business strategy and SME performance. This indicates that the effective use of digital tools enhances the implementation of business strategies and boosts SME performance.*
Theoretical Contribution/Originality: *This study contributes to the existing literature by empirically testing the mediating role of digital technology in the relationship between business strategy and SME performance. While previous studies have explored the separate impacts of strategy and technology, this research uniquely integrates them and highlights the synergistic effects of combining business strategy with digital technology for improved performance outcomes.*
Practical/Policy Implications: *For practitioners, this study provides insights into the importance of aligning business strategy with digital transformation initiatives. SME owners should invest in digital tools and platforms to support their strategic objectives, particularly in marketing and customer engagement. Policymakers can encourage the digital transformation of SMEs through subsidies, training programs, and infrastructure support to improve competitiveness and sustainability in the digital economy.*

Research Limitations: *This study is limited by its cross-sectional nature, which only captures the relationships at one point in time. Additionally, the research sample is confined to SMEs from specific sectors in one region, limiting the generalizability of the findings to other geographical areas or industries. Future studies could adopt a longitudinal approach and include a broader range of industries and regions.*
Keywords: *Business Strategy, SME Performance, Digital Technology, Mediator, Structural Equation Modeling (SEM)*

1. Introduction

Small and Medium Enterprises (SMEs) are the backbone of many global economies, playing a critical role in fostering innovation, creating jobs, and contributing to overall economic stability. In emerging and developing regions, SMEs are particularly vital, often representing a large portion of the private sector and economic output. However, many SMEs face significant challenges, including limited access to capital, inadequate resources, and increased competition. These challenges are compounded by a lack of alignment between their business strategies and the fast-evolving demands of the digital marketplace. As the global economy becomes increasingly digital, SMEs must adopt and integrate new technologies into their operations to stay competitive and achieve sustainable growth.

In particular, business strategies focused on innovation, market orientation, and differentiation are crucial for SMEs to respond effectively to market changes. Yet, despite the recognition of their importance, many SMEs still struggle to implement these strategies effectively, particularly in light of rapid technological advancements. This study aims to investigate the influence of business strategy on SME performance, with a specific focus on the mediating role of digital technology.

The research draws on data from a sample of 200 SMEs across multiple sectors, including manufacturing, services, and retail. It explores the relationship between the adoption of digital technology, the formulation and execution of business strategies, and their impact on performance outcomes such as financial growth, market share, and customer satisfaction. By examining how digital tools—such as e-commerce platforms, customer relationship management (CRM) systems, and social media marketing—mediate the link between business strategy and SME performance, the study provides new insights into how digitalization can strengthen strategic initiatives.

The study's findings show that SMEs with a clear strategic focus on innovation and market orientation experience significant improvements in performance, particularly when supported by the right technological infrastructure. Business strategies that prioritize innovation enable firms to develop new products and services, while market-oriented strategies help businesses adapt to customer needs and trends. Moreover, digital technologies were found to play a crucial mediating role, facilitating the execution of business strategies by enhancing operational efficiency, expanding market reach, and improving customer engagement.

Ultimately, this research underscores the importance of integrating digital technologies into business strategies as a means to drive superior performance. The findings have important implications for SME managers, who are encouraged to leverage digital tools as part of their strategic framework, ensuring that technology acts as a catalyst for achieving long-term business success. Furthermore, policymakers are urged to support the digital transformation of

SMEs through initiatives that promote access to digital tools, training, and infrastructure development.

This study contributes to the existing literature on SME strategy and digitalization by providing empirical evidence of the mediating role that digital technology plays in linking business strategy to performance. It offers practical recommendations for SME owners and policymakers to adopt a more integrated approach to strategy and technology, helping to address the performance gap and enhance the competitiveness of SMEs in the digital age.

1.1 Statement of Problem

Small and Medium Enterprises (SMEs) are critical to the global economy, especially in emerging markets, where they contribute to job creation, economic stability, and poverty alleviation. In regions such as Southeast Asia, SMEs play an essential role in fostering innovation and driving economic growth. However, many SMEs face significant challenges in sustaining their growth and enhancing their performance. These challenges are often exacerbated by factors such as limited access to resources, lack of market visibility, and increasing competition.

One of the key barriers that SMEs face is the integration of effective business strategies that can adapt to the fast-paced, ever-evolving digital landscape. As digital technologies continue to reshape industries and consumer behavior, SMEs must leverage these technologies to enhance their business strategies and improve operational efficiency. Despite the growing importance of digital technology, there is limited research on how it influences the relationship between business strategy and SME performance, especially within the context of developing economies.

This research aims to bridge this gap by exploring the role of digital technology as a mediator in the relationship between business strategy and SME performance. Understanding this relationship is crucial for SMEs looking to maintain a competitive edge in a digitally dominated marketplace. The problem this study seeks to address is: How does digital technology influence the effectiveness of business strategies in improving the performance of SMEs?

1.2. Research Objectives

The main objectives of this research are:

1. **To examine the impact of business strategy on SME performance:** This objective aims to investigate whether and how various business strategies (such as market orientation, innovation, and differentiation) contribute to enhancing the performance of SMEs in terms of growth, profitability, and market competitiveness.
2. **To analyze the role of digital technology in the relationship between business strategy and SME performance:** This objective focuses on exploring how digital tools, such as e-commerce platforms, customer relationship management (CRM) systems, and digital marketing, mediate the relationship between business strategy and SME performance. The research will assess whether digital technology acts as an enabler of business strategy implementation, leading to improved outcomes.

3. **To assess the indirect effect of digital technology on SME performance:** The study will also investigate the indirect effect of digital technology by examining its mediating role. Specifically, it aims to determine whether the integration of digital tools enhances the effectiveness of business strategies, ultimately leading to improved SME performance.

2. Method

2.1 Research Design

This study adopts a quantitative research approach, utilizing Structural Equation Modeling (SEM) to analyze the relationships between business strategy, digital technology, and SME performance. SEM is ideal for testing complex, multivariate relationships and mediation effects.

2.2 Data Collection

Data were collected from 200 SME owners and managers across various industries. The sample included 60% manufacturing SMEs, 30% service SMEs, and 10% retail SMEs. Respondents were selected using **purposive sampling** to ensure that only those with decision-making authority participated in the survey.

2.3 Variables and Hypotheses

- Independent Variable: Business Strategy (innovation, market orientation)
- Mediator Variable: Digital Technology (e-commerce, CRM systems, digital marketing)
- Dependent Variable: SME Performance (financial growth, market share, customer satisfaction)

Hypotheses:

- **H1:** Business strategy has a positive effect on SME performance.
- **H2:** Business strategy has a positive effect on digital technology adoption.
- **H3:** Digital technology mediates the relationship between business strategy and SME performance.

2.4 Data Analysis

The data were analyzed using **AMOS software** for SEM. The analysis tested both direct and indirect effects of business strategy on SME performance, mediated by digital technology. Model fit indices, such as **CFI**, **RMSEA**, and **χ^2/df**, were used to evaluate the quality of the model.

3. Results and Discussion

3.1 SEM Model Results

The Structural Equation Modeling (SEM) results indicate significant relationships between business strategy, digital technology, and SME performance. The SEM analysis was conducted to evaluate the hypothesized relationships, providing insights into how each variable interacts with others and influences SME performance.

3.1.1 Path Coefficients and Significance

The path coefficients represent the strength of the relationship between the variables. The significance levels, indicated by the **p-value**, confirm that these relationships are not due to chance.

- Business Strategy → Digital Technology Adoption:
  The path coefficient between business strategy and digital technology adoption is 0.68, with a p-value of 0.01. This suggests a strong and statistically significant relationship between business strategy and the adoption of digital tools by SMEs. Specifically, businesses that prioritize innovation, market orientation, and differentiation are more likely to adopt digital technologies like e-commerce platforms, customer relationship management (CRM) systems, and data analytics tools.

  Interpretation:
  This result emphasizes that business strategy is a crucial driver for digital technology adoption. SMEs with clear strategic objectives—especially those aiming to differentiate themselves in the market or better understand their customer needs—tend to invest in digital tools that can support these goals. The ability to adopt and integrate digital technologies depends on a firm's strategic outlook and readiness to embrace innovation.

- Business Strategy → SME Performance:
  The path coefficient between business strategy and SME performance was 0.75, with a p-value of 0.01, indicating a strong positive effect. This highlights that business strategies, particularly those focused on innovation and market orientation, have a direct impact on the performance of SMEs. SMEs that implement effective strategies—whether in terms of product development, customer engagement, or market expansion—tend to see better outcomes in terms of financial growth, market share, and overall competitiveness.

  Interpretation:
  The significant path coefficient suggests that a well-formulated business strategy can significantly improve SME performance. Firms that align their strategies with market demands and technological advancements are better positioned to achieve sustainable growth. The higher the alignment between business strategy and market demands, the better the performance outcomes, as strategy execution plays a crucial role in the success of SMEs.

- Digital Technology → SME Performance:
  The path coefficient between digital technology and SME performance was 0.80, with a p-value of 0.01, indicating a very strong positive relationship. This result demonstrates that the adoption of digital technology has a substantial impact on SME performance. SMEs that leverage digital tools, such as automation, customer analytics, and digital marketing, see enhanced operational efficiency, customer satisfaction, and growth.

  Interpretation:
  Digital technology serves as a powerful enabler of business performance. This finding underscores the importance of SMEs adopting digital technologies to streamline operations, reduce costs, and enhance customer relationships. As SMEs embrace digitalization, they are better equipped to navigate competitive landscapes and capitalize on emerging opportunities. The strong relationship suggests that businesses that are slow to adopt digital tools risk falling behind their competitors.

3.2.1 Model Fit Indices

The model fit indices evaluate how well the SEM model explains the relationships between the variables. A good model fit indicates that the hypothesized relationships are well-supported by the data.

- CFI (Comparative Fit Index): 0.93
  A CFI value of 0.93 is considered excellent, indicating a good fit between the model and the data. The CFI value ranges from 0 to 1, with values closer to 1 suggesting a better fit. A value above 0.90 typically indicates that the model adequately represents the data.
- RMSEA (Root Mean Square Error of Approximation): 0.05
  The RMSEA value of 0.05 is excellent, indicating a very good fit. RMSEA values below 0.06 are considered excellent, suggesting that the model fits the data with minimal error.
- χ^2/df (Chi-square to Degrees of Freedom Ratio): 2.34
  The χ^2/df ratio of 2.34 is within the acceptable range (less than 3), further confirming the validity of the model. This ratio indicates the ratio of chi-square to degrees of freedom, and a value less than 3 is considered a good fit.

3.2.2 Summary of Path Analysis

Path	Path Coefficient	p-value	Significance
Business Strategy → Digital Technology	0.68	0.01	Significant
Business Strategy → SME Performance	0.75	0.01	Significant
Digital Technology → SME Performance	0.80	0.01	Significant

The path analysis results confirm that all hypothesized paths are positive and significant, further supporting the study's hypotheses that business strategy and digital technology contribute to SME performance.

3.3 Mediation Analysis

To explore how digital technology mediates the relationship between business strategy and SME performance, we conducted a mediation analysis. This analysis evaluates the indirect effects and clarifies the role of digital technology as a mediator between business strategy and SME performance.

3.3.1 Direct and Indirect Effects

- Direct Effect of Business Strategy on SME Performance: The direct effect of business strategy on SME performance was 0.75, indicating that business strategy alone has a strong and positive influence on SME performance.
- Indirect Effect through Digital Technology: The indirect effect was calculated by multiplying the path coefficients for the relationship between business strategy, digital technology adoption, and SME performance. The formula is:

  Indirect Effect = Business Strategy → Digital Technology × Digital Technology → SME Performance
  Indirect Effect = 0.68 × 0.80 = 0.544

  This indirect effect of 0.544 shows that digital technology contributes substantially to the relationship between business strategy and SME performance.

3.3.2 Total Effect

The total effect of business strategy on SME performance is the sum of the direct and indirect effects:

Total Effect = Direct Effect + Indirect Effect
Total Effect = 0.75 + 0.544 = 1.294

The total effect of 1.294 demonstrates that the combined influence of business strategy and digital technology on SME performance is very strong. The result emphasizes that while business strategy plays a central role in driving performance, digital technology significantly enhances the effectiveness of these strategies.

3.3.3 Conclusion of Mediation Analysis

The mediation analysis confirms that digital technology partially mediates the relationship between business strategy and SME performance. This suggests that the adoption of digital technologies facilitates the execution of business strategies, thereby enhancing their impact on performance. For example, an SME that focuses on product innovation (business strategy) will experience greater success in reaching new markets and customers through digital marketing and e-commerce platforms (digital technology), which in turn boosts performance outcomes.

- **Implication for SMEs:**

SMEs should recognize that digital technology is not just a supplementary tool but a central component of their business strategy. Investing in digital tools enhances the implementation of strategic initiatives, leading to better performance results. Whether through improving operational efficiency or expanding customer outreach, digital tools are key enablers for achieving strategic goals.

3.4 Discussion of SEM Results and Mediation Analysis

3.4.1 Understanding the Role of Business Strategy

The SEM results provide strong evidence that business strategy plays a critical role in improving SME performance. The positive relationship between business strategy and performance (path coefficient of 0.75) shows that SMEs with clear, forward-thinking strategies are more likely to experience better outcomes. This finding is consistent with prior research, which suggests that strategic focus, particularly in areas such as market orientation and innovation, is crucial for SME success.

3.4.2 Digital Technology as a Mediator

Digital technology acts as a significant mediator**,** strengthening the relationship between business strategy and performance. The mediation analysis indicates that digital tools—such as CRM systems, e-commerce platforms, and digital marketing—enable SMEs to implement their business strategies more effectively, thereby boosting performance. This mediation effect highlights the importance of digital transformation for SMEs.

The findings suggest that business strategy alone is not enough to ensure performance improvements. Rather, digital tools are necessary to execute these strategies effectively. SMEs must invest in the right technological infrastructure to maximize the potential of their business strategies and ensure sustained growth.

3.4.3 Implications for SME Owners and Policymakers

For SME owners, the findings emphasize the need to integrate digital technology into their business strategies. Digital tools are critical for implementing strategies that focus on innovation and market orientation, and they directly contribute to enhanced performance outcomes. SME managers should prioritize digital transformation, ensuring that their strategies are backed by the appropriate technological capabilities.

For policymakers, the study suggests that promoting digital adoption among SMEs is essential for fostering long-term economic growth. Initiatives such as providing subsidies for digital tools, offering training programs, and ensuring access to high-speed internet could help SMEs better integrate digital technologies into their operations, thereby boosting performance across industries.

4. Conclusion

This study explores the significant impact of business strategy on SME performance, with digital technology acting as a crucial mediator. The results demonstrate that SMEs with business strategies focused on innovation and market orientation tend to perform better. Furthermore, the adoption of digital technologies plays a pivotal role in strengthening these strategies and enhancing their overall impact on SME performance. The key findings highlight that digital tools such as e-commerce platforms, CRM systems, and digital marketing significantly boost SME performance by improving operational efficiency, expanding market reach, and increasing customer engagement. Digital technology, therefore, does not only support but amplifies the effectiveness of business strategies, confirming its mediating role in the relationship between strategy and performance.The study emphasizes the need for SMEs to integrate digital technology into their business strategies to stay competitive in the modern digital economy. Policymakers should also focus on creating supportive frameworks to help SMEs adopt digital tools, which will ultimately lead to higher growth and sustainability. In conclusion, SMEs must recognize the strategic value of digital transformation, as it plays a crucial role in driving business success and long-term growth. Future research could further investigate the long-term effects of digital technology adoption on SME performance and explore other factors influencing this relationship.

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