Influence of Digital Transformation Strategies on Competitive Advantage of Small and Medium Enterprises (SMES) in Emerging Economies

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Crossref

Abstract

Purpose: The aim of the study was to assess the influence of digital transformation strategies on competitive advantage of small and medium enterprises (SMES) in emerging economies.

Methodology: This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low cost advantage as compared to a field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

Findings: The findings reveal that digital transformation strategies, such as the adoption of AI, cloud computing, and digital marketing, significantly enhance the competitive advantage of SMEs in emerging economies by improving operational efficiency and market reach. SMEs that embrace digital tools experience increased innovation capability, cost efficiency, and customer engagement. Overall, digital transformation helps SMEs expand their market share and maintain a competitive edge in dynamic business environments.

Implications to Theory, Practice and Policy: The resource-based view (RBV) theory, dynamic capabilities theory & the technology-organization-environment (TOE) may be used to anchor future studies on assessing the influence of digital transformation strategies on competitive advantage of small and medium enterprises (SMES) in emerging economies. SME owners and managers should invest in capacity building and digital skills development to ensure effective adoption and utilization of digital tools. From a policy perspective, governments and regulatory bodies in emerging economies should develop supportive frameworks that promote digital transformation among SMEs.

Keywords: *Digital Transformation Strategies, Competitive Advantage, Emerging Economies*

INTRODUCTION

Competitive advantage refers to an organization's ability to outperform its competitors by creating superior value through factors such as increased market share, cost efficiency, and innovation capability. It is achieved when firms implement unique strategies that are difficult for competitors to imitate, thereby sustaining superior performance over time (Farida & Setiawan, 2022). In developed economies, competitive advantage is strongly driven by innovation, advanced technology adoption, and efficient resource utilization, which enhance productivity and profitability. For example, firms in the United States that invest heavily in research and development (R&D) demonstrate significantly higher productivity and innovation outputs, contributing to sustained market leadership (Insee, 2023). Similarly, in the United Kingdom, small and medium enterprises (SMEs) account for approximately 99.7% of all businesses, reflecting their dominance in market share and their role in driving competitiveness through innovation and strategic positioning (Rubio-Andrés, 2024). In Japan, organizations emphasize continuous improvement and innovation capability, which has enabled them to maintain high efficiency levels and strong global competitiveness (Thomran, 2022).

In practice, competitive advantage in developed economies is achieved through a combination of cost leadership, differentiation, and innovation strategies. For instance, U.S. firms enhance cost efficiency through automation and data analytics, reducing operational costs and increasing profitability (Insee, 2023). In the UK, firms rely on strategic innovation and customer-focused approaches to maintain and expand market share in competitive industries (Rubio-Andrés et al., 2024). Japanese organizations leverage process innovation and quality management practices to improve service quality and customer satisfaction, which strengthens their competitive position (Thomran, 2022). Empirical evidence shows that firms with strong innovation capabilities and strategic orientation achieve higher levels of performance and differentiation in competitive markets (Farida & Setiawan, 2022). Overall, developed economies demonstrate a clear trend where innovation and efficiency are central to achieving and sustaining competitive advantage.

In developing economies, competitive advantage is similarly defined by market share, cost efficiency, and innovation capability, but it is often shaped by resource constraints, institutional challenges, and market volatility. Organizations in these regions focus on improving operational efficiency and adopting innovation strategies to remain competitive. Empirical studies indicate that business strategies significantly influence competitive advantage by enhancing innovation and performance outcomes (Farida & Setiawan, 2022). For example, in emerging markets such as India and Brazil, firms that invest in innovation have reported productivity improvements ranging between 21% and 30%, demonstrating the importance of innovation capability in achieving competitiveness (Thomran, 2022). Additionally, firms that adopt strategic orientation and market-driven approaches are better positioned to increase their market share and profitability.

Organizations in developing economies are increasingly leveraging digital transformation and innovation to strengthen their competitive advantage. For instance, firms in India and Southeast Asia use customer-focused strategies and technological adoption to improve service delivery and expand market share (Nege & Kero, 2024). However, competitive advantage is often constrained by infrastructural limitations and limited access to advanced technologies. Despite these challenges, organizations that invest in innovation, efficiency, and strategic management tend to achieve higher profitability and performance levels. Empirical evidence shows that strategic

orientation significantly influences innovation success, which in turn enhances market competitiveness (Nege & Kero, 2024; Farida & Setiawan, 2022). Overall, developing economies are experiencing gradual improvements in competitive advantage driven by innovation and strategic management practices.

In Sub-Saharan Africa, competitive advantage is influenced by innovation capability, cost efficiency, and market positioning, but it is often constrained by infrastructural and economic challenges. Organizations in this region strive to enhance competitiveness by improving productivity and adopting innovative business models. Empirical studies indicate that innovation and strategic orientation are key drivers of competitive advantage in African firms (Nuvriasari, 2024). For example, firms in countries such as Kenya and Nigeria that invest in innovation and strategic management practices have demonstrated improvements in market share and profitability. Additionally, small and medium enterprises (SMEs) play a significant role in driving competitiveness by contributing to employment and economic growth.

Organizations in Sub-Saharan Africa are increasingly adopting digital technologies, cost optimization strategies, and customer-focused innovations to improve their competitive advantage. For instance, firms that emphasize market orientation and innovation have achieved higher levels of product success and financial performance in emerging African economies (Nege & Kero, 2024). However, challenges such as limited infrastructure, financial constraints, and regulatory barriers continue to affect competitiveness. Despite these limitations, there is a growing trend toward improved competitiveness driven by technological adoption and strategic innovation. Furthermore, organizations that effectively utilize their resources and capabilities tend to outperform competitors and achieve sustainable growth. Overall, Sub-Saharan Africa is gradually strengthening its competitive advantage, although it still faces structural and economic constraints (Nuvriasari, 2024; Nege & Kero, 2024).

Digital transformation strategies refer to the integration of digital technologies into business operations to enhance efficiency, innovation, and value creation, ultimately improving competitive advantage. Four key strategies commonly identified in literature include adoption of Artificial Intelligence (AI), cloud computing, digital marketing, and automation, each contributing uniquely to organizational outcomes. The adoption of AI enables firms to analyze large datasets, improve decision-making, and enhance innovation capability, thereby strengthening competitive positioning (Verhoef, 2021). Cloud computing facilitates scalable and cost-effective infrastructure, allowing organizations to reduce operational costs and improve cost efficiency while supporting agility in service delivery (Vial, 2019). Digital marketing enhances customer reach, engagement, and personalization, leading to increased market share and improved brand competitiveness (Kraus, 2021). Automation improves operational efficiency by reducing manual processes, minimizing errors, and increasing productivity, which contributes to cost leadership and service excellence.

The integration of these digital transformation strategies creates a synergistic effect that enhances competitive advantage across multiple dimensions. For instance, AI-driven insights combined with cloud-based systems enable organizations to innovate rapidly and respond effectively to market changes. Digital marketing strategies allow firms to capture new customer segments and expand their market share through targeted campaigns and data-driven engagement. Automation further enhances efficiency by streamlining operations, which reduces costs and improves profitability.

Empirical studies indicate that organizations that successfully implement digital transformation strategies achieve higher levels of innovation capability, operational efficiency, and competitive performance (Verhoef, 2021; Kraus, 2021). Overall, digital transformation strategies are critical drivers of competitive advantage, enabling organizations to remain agile, innovative, and competitive in dynamic business environments.

Problem Statement

Small and Medium Enterprises (SMEs) play a vital role in emerging economies by contributing significantly to employment creation, innovation, and economic growth, yet they continue to face intense competition and structural constraints that limit their ability to achieve sustainable competitive advantage. In response, digital transformation strategies such as Artificial Intelligence (AI), cloud computing, digital marketing, and automation have emerged as critical tools for enhancing efficiency, innovation capability, and market reach. Empirical studies indicate that digital transformation positively influences firm performance and competitiveness by improving operational processes and enabling differentiation (Verhoef, 2021; Kraus, 2021). However, many SMEs in emerging economies struggle to effectively adopt these technologies due to financial limitations, inadequate digital skills, and weak organizational readiness. This suggests that the mere adoption of digital technologies does not automatically translate into improved competitive advantage without effective integration and capability development (Vial, 2019).

Furthermore, there remains limited empirical clarity on how specific digital transformation strategies individually and collectively influence key dimensions of competitive advantage such as market share, cost efficiency, and innovation capability among SMEs in emerging economies. Existing studies tend to examine digital transformation as a broad concept without isolating the effects of distinct strategies such as AI adoption, cloud computing, digital marketing, and automation (Kraus, 2021; Verhoef, 2021). Additionally, the impact of digital transformation is often context-dependent, varying across industries, regions, and levels of technological infrastructure, yet these contextual differences remain underexplored. In many emerging economies, SMEs exhibit low levels of digital maturity, which further constrains their ability to leverage digital technologies for sustained competitiveness (Vial, 2019). Therefore, this study seeks to examine the influence of digital transformation strategies on the competitive advantage of SMEs in emerging economies to provide evidence-based insights for improving market share, cost efficiency, and innovation capability (Verhoef, 2021; Kraus, 2021).

Theoretical Review

Resource-Based View (RBV) Theory

The resource-based view (RBV) theory advanced by Jay Barney in 1991, emphasizes that firms achieve competitive advantage through valuable, rare, inimitable, and non-substitutable resources. The main theme of the theory is that internal capabilities, such as technological assets and organizational competencies, are key drivers of superior performance. In the context of digital transformation, strategies such as Artificial Intelligence (AI), cloud computing, and automation can be viewed as strategic resources that enhance efficiency and innovation capability. This theory is relevant because SMEs that effectively leverage digital technologies can differentiate themselves and achieve sustained competitive advantage. Therefore, RBV explains how digital transformation strategies contribute to improved market share, cost efficiency, and innovation in SMEs (Kraus, 2021).

Dynamic Capabilities Theory

Dynamic capabilities theory was developed by David Teece and colleagues and focuses on an organization's ability to integrate, build, and reconfigure internal and external competencies in response to rapidly changing environments. The main theme of the theory is that firms must continuously adapt, innovate, and transform their capabilities to remain competitive. In the context of digital transformation, SMEs adopt technologies such as cloud computing, AI, and digital platforms to sense opportunities, seize them, and reconfigure operations. This theory is relevant because it explains how SMEs in emerging economies can use digital transformation strategies to enhance innovation capability and respond to market dynamics. Consequently, dynamic capabilities enable SMEs to achieve and sustain competitive advantage through continuous adaptation and technological integration (Verhoef , 2021).

Technology-Organization-Environment (TOE) Framework

The technology-organization-environment (TOE) framework was proposed by Louis Tornatzky and Mitchell Fleischer in 1990 and explains how technological innovation adoption is influenced by three contexts: technological, organizational, and environmental. The main theme of the framework is that the adoption and implementation of technologies depend on internal capabilities, external pressures, and technological readiness. In relation to digital transformation, SMEs adopt strategies such as digital marketing, automation, and cloud computing based on their resources, organizational structure, and competitive environment. This framework is relevant because it helps explain why some SMEs successfully adopt digital transformation strategies while others struggle, particularly in emerging economies with varying infrastructure and institutional support. Therefore, the TOE framework provides a comprehensive lens for understanding how digital transformation strategies influence competitive advantage (Kraus, 2021).

Empirical Review

Valdez-Juárez, Ramos-Escobar, Hernández-Ponce and Ruiz-Zamora (2024) examined the influence of digital transformation and innovation-oriented dynamic capabilities on the financial performance of SMEs in Mexico. The purpose of the study was to determine how digital transformation strategies contribute to competitive advantage through enhanced performance outcomes. The researchers adopted a quantitative research design. Data was collected from SMEs operating in Mexico using structured questionnaires. The study focused on firms operating within an emerging economy context. Data analysis was conducted using Structural Equation Modeling (SEM). The findings revealed that digital transformation significantly improves innovation capability. The study also found that dynamic capabilities mediate the relationship between digital transformation and performance. Financial performance was used as a proxy for competitive advantage. The study showed that SMEs that adopt digital technologies achieve higher efficiency and productivity. It further established that innovation plays a critical role in enhancing competitiveness. The researchers concluded that digital transformation is a key driver of competitive advantage. The study recommended integrating digital technologies with capability development. It also suggested investing in innovation systems to enhance performance. The findings highlight the importance of aligning digital strategies with organizational capabilities.

Shehadeh, Almohtaseb, Aldehayyat and Abu-AlSondos (2023) investigated the effect of digital transformation on competitive advantage in the service sector in Jordan. The purpose of the study was to examine how digital transformation influences competitive advantage through

entrepreneurial orientation. The researchers adopted a quantitative research design. Data was collected from firms operating in the service sector. The study used structured questionnaires for data collection. Data analysis was conducted using Structural Equation Modeling (SEM). The findings revealed that digital transformation has a significant positive effect on competitive advantage. Entrepreneurial orientation was found to mediate the relationship between digital transformation and competitiveness. Innovation capability was identified as a moderating variable. The study showed that firms with higher innovation capability achieve stronger competitive advantage. It also indicated that digital transformation enhances market positioning. The researchers concluded that digital strategies improve organizational competitiveness. The study recommended investing in digital technologies and innovation capabilities. It also suggested promoting entrepreneurial orientation within organizations. The findings emphasize the role of integrated digital strategies in achieving competitive advantage.

Al-Sharafi, Iranmanesh, Al-Emran, Alzahrani, Herzallah and Jamil (2023) assessed the determinants of cloud computing adoption and its impact on SME performance. The purpose of the study was to determine how cloud computing influences organizational performance and competitiveness. The researchers adopted a quantitative research design. Data was collected from 415 SMEs using structured questionnaires. The study used a hybrid PLS-SEM and Artificial Neural Network (ANN) approach. Data analysis was conducted using advanced statistical techniques. The findings revealed that cloud computing significantly improves organizational performance. Factors such as relative advantage and top management support influenced adoption. The study showed that cloud computing enhances cost efficiency. It also indicated that cloud systems improve service delivery. The findings established that cloud adoption contributes to competitive advantage. The researchers concluded that cloud computing is a strategic tool for SMEs. The study recommended increasing managerial support for cloud adoption. It also suggested strengthening government support policies. The findings highlight the importance of technology adoption in enhancing competitiveness.

Berbatovci and Buja (2024) investigated the impact of digital marketing on the growth of SME manufacturing businesses in Kosovo. The purpose of the study was to examine how digital marketing strategies influence SME growth and competitiveness. The researchers adopted a quantitative research design. Data was collected from SME owners and managers. The study used structured questionnaires and interviews. Data analysis was conducted using regression analysis. The findings revealed that digital marketing significantly improves firm performance. The study showed that digital marketing increases annual turnover. It also indicated that digital marketing enhances market reach. The findings established that firms using digital tools achieve higher growth rates. The study found that managerial education influences digital adoption. The researchers concluded that digital marketing enhances competitive advantage. The study recommended expanding digital marketing adoption. It also suggested building managerial digital skills. The findings emphasize the importance of digital strategies in improving SME competitiveness.

Qiao, Chang, and Zeng (2024) examined the influence of digitalization on SMEs' international expansion in emerging economies. The purpose of the study was to determine how digital transformation strategies affect competitive advantage through internationalization. The researchers adopted a quantitative research design. Data was collected from 562 SMEs in China. The study used secondary panel data covering multiple years. Data analysis was conducted using

econometric modeling techniques. The findings revealed that digitalization positively influences foreign direct investment. The study showed that digitalization increases the number of international markets entered. Dynamic capability was found to mediate the relationship. The findings indicated that managerial experience influences outcomes. The study established that digital transformation enhances global competitiveness. The researchers concluded that digital strategies enable SMEs to expand internationally. The study recommended strengthening digital capabilities. It also suggested enhancing managerial skills for global expansion. The findings highlight the role of digital transformation in achieving competitive advantage.

Clemente-Almendros, Díaz Pelaez, Chura Quispe, and Velarde Molina (2025) analyzed the effect of digital strategies on the competitiveness of MSMEs in Peru. The purpose of the study was to determine how digital transformation influences competitiveness through innovation. The researchers adopted a quantitative research design. Data was collected from MSMEs using structured questionnaires. The study used Structural Equation Modeling for analysis. Data analysis revealed that digital strategies have a positive direct effect on competitiveness. Innovation was found to mediate the relationship. The study showed that innovation enhances the impact of digital strategies. It also indicated that digitalization improves organizational performance. The findings established that digital transformation strengthens competitive advantage. The researchers concluded that innovation is essential for digital success. The study recommended combining digital strategies with innovation initiatives. It also suggested strengthening technological capabilities. The findings emphasize the importance of integrated strategies in achieving competitiveness.

Van Hoang, Duy, Thuy, Giang, Chau, Ngoc, and Quynh (2025) investigated the influence of digital capabilities on competitive advantage in Vietnamese SMEs. The purpose of the study was to determine how digital transformation strategies affect competitiveness under technological uncertainty. The researchers adopted a quantitative research design. Data was collected from 250 SMEs using structured questionnaires. The study used PLS-SEM and ANN for analysis. Data analysis was conducted using advanced statistical techniques. The findings revealed that digital capabilities significantly improve competitive advantage. The study showed that digital capabilities enhance innovation performance. Adaptive capabilities were found to influence competitiveness. The findings indicated that technological uncertainty affects outcomes. The study established that digital leadership improves performance. The researchers concluded that digital capabilities are strategic resources. The study recommended strengthening digital leadership. It also suggested improving technological capacity. The findings highlight the importance of digital transformation in achieving competitive advantage.

METHODOLOGY

This study adopted a desk methodology. A desk study research design is commonly known as secondary data collection. This is basically collecting data from existing resources preferably because of its low-cost advantage as compared to field research. Our current study looked into already published studies and reports as the data was easily accessed through online journals and libraries.

FINDINGS

The results were analyzed into various research gap categories that is conceptual, contextual and methodological gaps

Conceptual Gap

The reviewed studies conceptualize digital transformation in fragmented ways, with some focusing on specific components such as cloud computing (Al-Sharafi, 2023) and digital marketing (Berbatovci & Buja, 2024), while others treat it as a broad construct (Valdez-Juárez, 2024; Shehadeh, 2023). Although these studies confirm that digital transformation influences competitive advantage, they do not consistently operationalize key strategies such as Artificial Intelligence (AI), automation, cloud computing, and digital marketing within a unified framework. Additionally, most studies measure competitive advantage indirectly through proxies such as financial performance or growth rather than directly examining dimensions like market share, cost efficiency, and innovation capability. The role of mediating variables such as innovation and dynamic capabilities is recognized but not consistently integrated across studies. Furthermore, there is limited examination of the individual contribution of each digital transformation strategy to competitive advantage. This creates a conceptual gap in understanding the specific mechanisms and relative influence of digital transformation strategies on competitive advantage (Valdez-Juárez, 2024; Shehadeh, 2023; Al-Sharafi, 2023).

Contextual Gap

The findings across the reviewed studies vary significantly depending on the organizational and industry context, indicating inconsistencies in how digital transformation strategies influence competitive advantage. For example, Shehadeh (2023) focused on service-sector firms in Jordan, while Berbatovci and Buja (2024) examined manufacturing SMEs in Kosovo, and Qiao (2024) emphasized international expansion in Chinese SMEs. Similarly, Valdez-Juárez (2024) highlighted innovation and dynamic capabilities in Mexico, whereas Clemente-Almendros(2025) emphasized innovation as a mediator in Peru. These variations suggest that contextual factors such as industry characteristics, technological readiness, and organizational capabilities significantly shape outcomes. However, most studies do not deeply analyze how these contextual variables influence the effectiveness of digital transformation strategies. Additionally, the rapidly evolving digital environment in emerging economies is not sufficiently captured. This creates a contextual gap in understanding how digital transformation strategies operate in different SME environments and dynamic technological contexts (Qiao, 2024; Clemente-Almendros, 2025) .

Geographical Gap

Geographically, the reviewed studies are concentrated in a limited number of emerging economies, including Mexico, Jordan, China, Peru, Kosovo, and Vietnam, with minimal representation from other regions. While these studies provide useful insights, they lack broad comparative analysis across different geographical settings. Most of the studies are country-specific, which limits the generalizability of findings to other emerging economies. In particular, there is a notable absence of studies focusing on Sub-Saharan Africa, despite the increasing importance of SMEs and digital transformation in the region. Furthermore, there is limited cross-country research comparing how digital transformation strategies influence competitive advantage across different economic and institutional environments. This creates a geographical gap in understanding the broader applicability of findings. Therefore, further research is needed to provide comparative and regionally diverse evidence on digital transformation and competitive advantage (Van Hoang, 2025; Berbatovci & Buja, 2024)

CONCLUSION AND RECOMMENDATIONS

Conclusions

In conclusion, digital transformation strategies play a pivotal role in enhancing the competitive advantage of Small and Medium Enterprises (SMEs) in emerging economies by improving efficiency, innovation capability, and market reach. Strategies such as the adoption of Artificial Intelligence (AI), cloud computing, digital marketing, and automation enable SMEs to streamline operations, reduce costs, and respond effectively to changing customer needs. Empirical evidence consistently demonstrates that SMEs that embrace digital technologies achieve improved productivity, enhanced innovation, and stronger market positioning, which contribute to increased market share and profitability. However, the effectiveness of these strategies depends on factors such as organizational capabilities, digital readiness, and the availability of technological infrastructure.

Overall, the integration of digital transformation strategies provides SMEs with a sustainable pathway to achieve and maintain competitive advantage in dynamic and resource-constrained environments. SMEs that align digital initiatives with innovation and strategic capabilities are better positioned to exploit new opportunities and withstand competitive pressures. Despite the positive impact, challenges such as limited financial resources, lack of digital skills, and infrastructural constraints continue to hinder effective implementation in many emerging economies. Therefore, continuous investment in digital capabilities, skills development, and supportive ecosystems is essential for maximizing the benefits of digital transformation. Future efforts should focus on strengthening digital adoption frameworks and tailoring strategies to specific contexts to ensure long-term competitiveness and growth among SMEs.

Recommendations

Theory

From a theoretical perspective, future research should develop a more integrated framework of digital transformation strategies by clearly distinguishing components such as Artificial Intelligence (AI), cloud computing, digital marketing, and automation, and linking them directly to specific dimensions of competitive advantage such as market share, cost efficiency, and innovation capability. There is a need to extend existing theories such as the Resource-Based View (RBV), Dynamic Capabilities Theory, and Technology-Organization-Environment (TOE) framework to better capture the role of digital transformation in SMEs within emerging economies. Scholars should also incorporate mediating and moderating variables such as innovation capability, digital readiness, organizational culture, and institutional support to strengthen explanatory models. Additionally, future studies should adopt longitudinal and mixed-method approaches to capture the dynamic and evolving nature of digital transformation. Developing context-specific theoretical models tailored to SMEs in emerging and Sub-Saharan economies will further enhance theoretical contributions and relevance.

Practice

From a practical perspective, SMEs should adopt a strategic and phased approach to digital transformation by prioritizing high-impact technologies such as cloud computing for cost efficiency, digital marketing for market expansion, AI for decision-making, and automation for operational efficiency. SME owners and managers should invest in capacity building and digital

skills development to ensure effective adoption and utilization of digital tools. Organizations should integrate digital transformation with innovation strategies to maximize competitive advantage and avoid isolated technology investments. Additionally, SMEs should leverage data analytics and customer insights to enhance decision-making, improve service delivery, and increase customer satisfaction. Collaboration with technology providers, industry partners, and innovation hubs can also help SMEs overcome resource constraints and accelerate digital adoption. Continuous monitoring and evaluation of digital strategies should be implemented to ensure alignment with business goals and market demands.

Policy

From a policy perspective, governments and regulatory bodies in emerging economies should develop supportive frameworks that promote digital transformation among SMEs. This includes investing in digital infrastructure, such as broadband connectivity and cloud services, to reduce barriers to technology adoption. Policymakers should introduce financial incentives, grants, and tax relief programs to support SMEs in acquiring and implementing digital technologies. There is also a need to strengthen digital literacy and skills development programs to equip SME owners and employees with the competencies required for digital transformation. Regulatory frameworks should ensure data protection, cybersecurity, and ethical use of digital technologies to build trust and encourage adoption. Furthermore, governments should promote innovation ecosystems, including incubators and technology hubs, to support SMEs in developing digital capabilities. Finally, policies should encourage benchmarking and performance reporting to ensure SMEs effectively leverage digital transformation for sustained competitive advantage.

REFERENCES

Al-Sharafi, M. A., Iranmanesh, M., Al-Emran, M., Alzahrani, A. I., Herzallah, F., & Jamil, N. (2023). Determinants of cloud computing integration and its impact on sustainable performance in SMEs: An empirical investigation using the SEM-ANN approach. Heliyon, 9(5), e16299. https://doi.org/10.1016/j.heliyon.2023.e16299

Berbatovci, I., & Buja, S. (2024). Impact of digital marketing on the growth of SME manufacturing businesses in Kosovo. Asian Economic and Financial Review, 14(7), 527–544. https://doi.org/10.55493/5002.v14i7.5131

Clemente-Almendros, J. A., Díaz Pelaez, A., Chura Quispe, G., & Velarde Molina, J. F. (2025). Emerging countries could be different for MSMES: Digitalization and the mediation effects of innovation confronted to environmental practices. International Journal of Innovation Studies, 9(4), 354–365. https://doi.org/10.1016/j.ijis.2025.08.001

Farida, I., & Setiawan, D. (2022). Business strategies and competitive advantage: The role of performance and innovation. Journal of Open Innovation: Technology, Market, and Complexity, 8(3), 163. https://doi.org/10.3390/joitmc8030163

Insee, K. (2023). R&D spending, competitive advantage, and firm performance. Cogent Business & Management. https://doi.org/10.1080/23311975.2023.2225831

Kraus, S., Schiavone, F., Pluzhnikova, A., & Invernizzi, A. C. (2021). Digital transformation in SMEs: A systematic literature review. Journal of Business Research, 123, 557–567. https://doi.org/10.1016/j.jbusres.2020.10.013

Nege, T. B., & Kero, C. A. (2024). Competitive strategy orientation and market orientation for product innovative success in SMEs. Science Journal of Business and Management, 12(3), 47–63. https://doi.org/10.11648/j.sjbm.20241203.11

Nuvriasari, A. (2024). Competitive advantage based on marketing innovation. Pakistan Journal of Life and Social Sciences.

Qiao, P., Chang, M., & Zeng, Y. (2024). The influence of digitalization on SMEs' OFDI in emerging countries. Journal of Business Research, 177, 114633. https://doi.org/10.1016/j.jbusres.2024.114633

Rubio-Andrés, M., et al. (2024). Business strategy and market performance in SMEs. Journal of Small Business Economics. https://doi.org/10.1007/s11365-024-00947-9

Shehadeh, M., Almohtaseb, A., Aldehayyat, J., & Abu-AlSondos, I. A. (2023). Digital transformation and competitive advantage in the service sector: A moderated-mediation model. Sustainability, 15(3), 2077. https://doi.org/10.3390/su15032077

Thomran, M., et al. (2022). The key enablers of competitive advantage formation in SMEs. Sustainability. https://doi.org/10.3390/su142114365

Valdez-Juárez, L. E., Ramos-Escobar, E. A., Hernández-Ponce, O. E., & Ruiz-Zamora, J. A. (2024). Digital transformation and innovation, dynamic capabilities to strengthen the financial performance of Mexican SMEs: A sustainable approach. Cogent Business & Management, 11(1), 2318635. https://doi.org/10.1080/23311975.2024.2318635

Van Hoang, D., Duy, H. A., Thuy, D. T., Giang, D. T., Chau, V. N. M., Ngoc, N. L. M., & Quynh, V. H. (2025). Digital capabilities and competitive advantage in the context of technological uncertainty: Evidence from emerging market SMEs. International Journal of Innovation Management, 29(3–4). https://doi.org/10.1142/S1363919625500185

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 889–901. https://doi.org/10.1016/j.jbusres.2019.09.022

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. The Journal of Strategic Information Systems, 28(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003