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Strategic Leadership and the Digital-Performance Nexus: Evidence from Women-Led Enterprise in Nasarawa State, Nigeria

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Abstract

The rapid expansion of digital technologies has transformed entrepreneurial practices worldwide, yet women entrepreneurs in developing economies continue to face unequal access and utilization challenges. This study seeks to examine strategic leadership and the digital performance nexus, with evidence from women led enterprises in Nasarawa State, Nigeria. The study examines strategic leadership influence, the level of digital technology adoption, the impact of digital technology on business performance, and leadership support for capability development. The study is anchored in Strategic Leadership Theory and adopted a survey design. The data were collected through a structured questionnaire administered to 400 women entrepreneurs. Data were analyzed using descriptive statistics and correlation analysis. Findings indicate a significant positive relationship between digital technology use and business growth indicators, including market expansion, operational efficiency, and revenue improvement. Additionally, limited digital skills, weak infrastructure, and financial constraints restrict effective technology utilization. The study concludes that digital technology adoption is essential for entrepreneurial sustainability and competitiveness.

Keywords: *Digital technology, Women entrepreneurs, Business performance, Strategic leadership*

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Background to the Study

Strategic leadership involves visionary decision making, resource allocation, and change management to drive innovation, such as digital tool integration. In women led enterprises, it fosters resilience against barriers such as limited skills and funding, thereby enabling the adoption of technologies such as e commerce and data analytics. This linkage enhances performance metrics, including sales growth and efficiency (Dennis John Tisso, Ahmed Abdullahi Ibrahim and Kolo Ibrahim, 2024). Through the function of providing a visionary direction that informs improved resource allocation and nurtures a learning culture, women leaders who champion digital technology adoption in various forms and functionalities, including artificial intelligence, e commerce technology, and business process automation, can find valuable avenues to strengthen organizational resilience in women owned enterprises vis a vis structural barrier in the form of limited access to finance. This can consequently translate into improved organizational performance in terms of profitability and operational efficiency (Avolio, Kahai, and Dodge, 2001; Northouse, 2021).

The adoption of technology is not gender neutral, and research indicates that women are underrepresented in high technology companies and roles (Domecq et al., 2020). Women's participation in entrepreneurial activities remains extremely low, as men often view the rise of female entrepreneurs as a threat to the business world (Shivappa, 2021). According to Srividhya and Paramasivam (2022), women are still less successful than men in launching and managing their own businesses, and their enterprises tend to grow more slowly. Compared to men, women entrepreneurs are less likely to utilize digital technologies (Orser and Riding, 2018; Lashitew, 2023). Women entrepreneurs are still in the early stages of digital technology adoption (Bhagat et al., 2021). Male entrepreneurs have benefited far more from increased access to digital technology than female entrepreneurs (Manocha et al., 2021).

Statement of the Problem

Performance outcomes among women led businesses remain uneven, especially in developing economies, despite growing scholarly and policy attention to digital technology as a catalyst for enterprise growth. Digital technologies such as e commerce, mobile platforms, and data driven applications can improve productivity, market access, and competitiveness, according to earlier research (Nambisan, 2017; OECD, 2021). Additional empirical studies by Bharadwaj et al. (2013) and Ayyagari, Demirguc Kunt, and Maksimovic (2011) show a positive correlation between digital adoption and business performance. However, studies focusing specifically on women owned businesses indicate that structural obstacles such as limited access to finance, inadequate digital skills, and cultural constraints continue to hinder the effective use of digital technologies, thereby reducing their impact on performance (Klapper and Parker, 2011; World Bank, 2020).

Although these studies provide valuable insights, much of the existing literature views digital technology adoption primarily as a technical or resource driven process, with limited attention to leadership dynamics. Leadership studies often emphasize general entrepreneurial traits or managerial competence rather than strategic leadership as a

deliberate process of aligning technology, organizational vision, and capability development (Avolio, Kahai, and Dodge, 2001; Northouse, 2021). Consequently, a significant knowledge gap exists regarding the role of strategic leadership in linking digital technology adoption with performance outcomes in women led enterprises. This study seeks to bridge this gap by examining the strategic leadership roles adopted by women entrepreneurs to enhance business performance through investment in digital technology.

Literature Review

Strategic Leadership and Digital Technology Adoption

In the current context of rapidly evolving technological dynamics and the challenges faced by society as a whole, the intersection of strategic leadership and digital technology adoption represents a vital concept for ensuring organizational success and survival (Teichert, 2019). Strategic leadership for the digital age encompasses attributes that extend beyond traditional executive principles to ensure that organizations adapt to emerging challenges while achieving both organizational and social objectives (Schwarzmüller et al., 2018). The ongoing process of digital transformation should not be misconstrued as merely the implementation of new technological advancements into existing organizational processes, but rather as a distinctive mechanism for value creation that requires specialized forms of leadership (Zulu and Khosrowshahi, 2021). Emphasis on successful organizational transformation involves rethinking customer value propositions and operational processes through the application of digital technologies to foster greater interrelatedness and collaboration with stakeholders in an environment that encourages cooperation with clients, as argued by Berman (2012). Over the past few decades, the definition of leadership has evolved such that contemporary perspectives no longer focus solely on the leader, but also incorporate followers, as well as the environment and culture collectively created, as noted by Kokot et al. (2021).

Digital Technology Adoption and Enterprise Performance

The concept of digital technology adoption can be defined as the adoption and use of digital platforms like e-commerce, artificial intelligence, and other related digital technologies. The studies and previous research on the adoption of digital technology indicate that there is a direct positive correlation between digital adoption and company performance. However, some studies indicate that there is an impact of digitalization on company performance, and it is not automatic for small and women-owned businesses (Bharadwaj et al., 2013; Nambisan, 2017). The development of digital technology impacts various aspects of a business organization. It not only affects internal operations but also influences multiple stakeholders. Digital technology manifests in various modern technological platforms, such as cloud computing, big data analytics, and IoT, facilitating automation and interconnectivity (Ardolino et al., 2018; Nassani et al., 2023).

Nevertheless, the link between digital technology adoption and performance is mediated by a non-linear, non-automatic process. Several scholarly works have underlined the notion that simply striving to adopt digital technology is unlikely to yield positive performance

outcomes, especially if the business is a small, women-led business operating in a resource-constrained environment. The research done by Ayyagari, Demirgüç Kunt, & Maksimovic (2011) reveals that productivity increases arising from digital technology adoption are conditioned upon a range of enhancing factors, including managerial capabilities, employee skills, and business-preparedness. In addition to this, OECD (2021) points out that enterprises that are unable to cultivate adequate digital skills alongside an articulated business approach are unlikely to exploit the positive performance impacts of digitalization fully.

Strategic Leadership and Digital Performance Linkages

The shift occasioned by the arrival of digital technology has markedly changed the face of businesses, bringing with its great opportunities as well as challenges for various businesses globally (Navaridas-Nalda et al., 2020). Digital transformation, which is the integration of all areas of businesses through the use of technology, transforming the way businesses function, thus offering value to customers, has become a strategic need, as opposed to a business need, for businesses. However, past studies reveal a high degree of failure of digital transformations in reaching the set goals, with leadership challenges being cited as a major contributor. Strategic leadership associated with the digital transformation concept deals with the ability of the organizational senior leadership to create and conduct holistic digital strategies, thereby enabling better transformed organizational capabilities for strategic performance achievements SINGH et al., 2023). Unlike traditional leadership approaches, strategic leadership in digital transformation requires a unique combination of technological acumen, strategic thinking, change management expertise, and cultural transformation capabilities. Leaders must navigate complex technological ecosystems, manage organizational resistance to change, and balance short-term operational demands with long-term strategic objectives (Gilli et al., 2024).

The inter-linking of technology adoption and enterprises performance occurs even more intensely when the strategic leadership of the organization invests more on the development of human capital and promotes the organizational culture for innovation and learning. Some empirical evidence reveals that training programs, knowledge sharing, and empowering employees pursued by the leadership of the organization greatly improve the optimal use of technology to improve organizational performance or responsiveness to the market environment (Bharadwaj et al., 2013; Northouse, 2021).

Empirical Review

Kádárová et al. (2023) carried out a study in the European Union (EU), which focused on assessing the effect of digitalisation on the performance of SMEs. Data was collected from 27 EU countries for a period of five years. A panel regression model was adopted to analyse the 135 observations. The results indicated that digitalisation was positively linked with the performance of SMEs. through productivity improvements, process advancements, as well as customer experiences. Such findings provide us with crucial evidence regarding the adoption of digital technology and its effect on SMEs' performance.

Theoretical Framework

This study adopted Strategic Leadership Theory:

Strategic Leadership Theory

Strategic Leadership Theory emerged from the broader field of leadership and strategic management studies, gaining prominence in the late twentieth century as scholars sought to explain how top executives influence organizational outcomes in complex and dynamic environments. Early foundations of the theory can be traced to the upper echelons perspective developed by Hambrick and Mason in 1984, which argued that organizational strategies and performance outcomes reflect the values, cognitive bases, and experiences of top leaders. Building on this foundation, subsequent scholars expanded the concept to emphasize the role of leaders in shaping strategic direction, managing organizational resources, and guiding long term performance. Strategic leadership theory provides a robust framework for understanding how senior executives influence organizational outcomes through their strategic decisions and actions. Bass (1990) conceptualized strategic leadership as the ability to influence others to voluntarily make day-to-day decisions that enhance the long-term viability of the organization (Reuter & Floyd, 2024). The digital transformation literature identifies several unique leadership challenges that distinguish digital strategic leadership from traditional strategic leadership (McKenzie et al., 2023). These include the need to understand emerging technologies, manage digital talent, navigate data privacy and security concerns, and balance automation with human capital. Digital strategic leaders must also possess the ability to think systemically about interconnected digital ecosystems and understand how digital technologies can create network effects and platform dynamics. The Strategic Leadership theory of organization outcomes centers on the role of executives who occupy the strategically significant positions of founder, chief executive, or other top managers of the organization. Key factors within the Strategic Leadership theory include the ability to formulate a clear sense of the organization's strategy, or strategic vision. The ability to strategically allocate the organization's financial, human, or technology resources, or resource orchestration, is also included. In the case of the use of technology, the role of the executive includes the ability to make technology an adjunct or mainstream aspect of the organization's strategies or merely operational.

According to Strategic Leadership Theory, enterprise performance outcomes such as profitability, growth, and competitiveness are therefore not merely the result of external market forces or technological availability, but are shaped by leadership driven strategic choices. This theoretical perspective is particularly relevant for women led enterprises, where leadership actions play a decisive role in overcoming structural constraints and translating digital adoption into improved performance.

Methodology

Research Design

This study adopts a survey research design, which is appropriate for examining the relationships among strategic leadership, digital technology adoption, and enterprise

performance in women led businesses. Survey research is suitable for collecting quantitative data from a large number of respondents and therefore allows for statistical analysis of patterns, relationships, and trends. Given the focus on exploring how strategic leadership influences the adoption of digital technologies and how this, in turn, affects enterprise performance, the survey design is appropriate for capturing both the perceptions and practices of women entrepreneurs across diverse business sectors in Nasarawa State.

Population of the Study

The population of the study comprises women entrepreneurs operating registered and unregistered enterprises across the major local government areas of Nasarawa State. These enterprises span sectors such as retail, agribusiness, services, and manufacturing. Based on data from the Nasarawa State Ministry of Commerce and Industry and local trade associations, the estimated population of active women-led enterprises in the state is approximately **1,500 businesses** (NSMC, 2026).

Sample Technique and Sample Size

A stratified random sampling technique was employed to ensure that the sample reflected the diversity of sectors and local government areas within the state. The population was stratified according to enterprise sector, such as retail, services, manufacturing, and agribusiness, and respondents were randomly selected from each stratum. Using Taro Yamane's (1967) formula for sample size determination, a total of 400 respondents was targeted to ensure statistical reliability and enhance the generalizability of the findings.

Method of Data Collection

The data collection method **was a structured questionnaire.** Data collection **was carried out** both face-to-face and through electronic surveys where possible, in collaboration with local trade associations and business development centers in Nasarawa State. Ethical considerations, including informed consent and confidentiality, **were strictly observed** throughout the data collection process. The appropriate method was the survey, as it allowed the collection of quantitative data from a large number of women entrepreneurs for the investigation of relationships between strategic leadership, digital adoption, and enterprise performance. It also facilitated efficient data gathering across diverse sectors and Local Government areas in Nasarawa State.

Method of Data Analysis

Data collected from the questionnaires **was analyzed** using the Statistical Package for the Social Sciences (SPSS) version 28. Descriptive statistics such as frequencies, percentages, means, and standard deviations **were used** to summarize demographic characteristics and the levels of strategic leadership, digital adoption, and enterprise performance. For inferential analysis, Pearson's correlation coefficient **was employed** to examine the strength and direction of relationships between strategic leadership, digital technology adoption, and enterprise performance.

Analysis of the Findings

Table 1: Socio-demographic profile of Respondents:

Variable	Categories	Frequency	Percentages
Age	18–25	67	17.5%
	26–35	181	47.5%
	36-45	50	13.1
	46–55	48	12.5%
	56 and above	35	9.1%
Educational Qualification	No formal education	31	8.1%
	Primary education	70	18.3%
	Secondary education	197	51.7%
	Tertiary education	83	21.7%
Years of Business	Less than 2 years	74	19.4%
	2–5 years	151	39.6%
	6–10 years	89	23.3%
	11–15 years	48	12.5%
	More than 15 years	19	4.9%
Business Sector	Retail	144	37.7%
	Services	138	38.2%
	Manufacturing	41	10.7%
	Agribusiness	39	10.2%
	Others	19	4.9%
Number of Employees	1–5	162	42.5%
	6–10	109	28.6
	11–20	58	15.2%
	21–50	38	9.9%
	Above 50	14	3.6%
Total		**381**	**100.0**

Source: Field Survey, 2026

Age Distribution: The majority of respondents (47.5%, n = 181) were between 26 and 35 years, indicating that women in the prime working age group dominate entrepreneurial activities in the state. This is followed by those aged 18–25 years (17.5%, n = 67) and 36–45 years (13.1%, n = 50), while respondents above 55 years constitute the smallest proportion (9.1%, n = 35). The data suggests that entrepreneurial participation is most concentrated among young to middle-aged women.

Educational Qualification: Over half of the respondents (51.7%, n = 197) have completed secondary education, while 21.7% (n = 83) attained tertiary education. About 18.3% (n = 70) have primary education, and a small proportion (8.1%, n = 31) have no formal education. This indicates a relatively high level of human capital among women entrepreneurs, which may

influence their capacity to adopt digital technologies and implement strategic leadership practices.

Years of Business Operation: A significant number of respondents (39.6%, n = 151) reported operating their businesses for 2–5 years, followed by less than 2 years (19.4%, n = 74) and 6–10 years (23.3%, n = 89). Enterprises operating for more than 15 years represent only 4.9% (n = 19) of the sample. This suggests that women entrepreneurship in Nasarawa State is largely characterized by relatively young and emerging businesses.

Business Sector: Services (38.2%, n = 138) and retail (37.7%, n = 144) are the dominant sectors, while manufacturing (10.7%, n = 41) and agribusiness (10.2%, n = 39) are less represented. A small proportion (4.9%, n = 19) operate in other sectors. This highlights that women entrepreneurs are concentrated in service-oriented and retail businesses, which are often more flexible for adopting digital technologies.

Number of Employees: Most enterprises are small in size, with 1–5 employees (42.5%, n = 162), followed by 6–10 employees (28.6%, n = 109). Medium-sized enterprises employing 11–50 people account for 25.1% (n = 96), while only 3.6% (n = 14) have more than 50 employees. This indicates that the sample is largely made up of micro and small enterprises, which may face resource constraints affecting digital adoption and strategic leadership initiatives.

Analysis of Study Objectives

Section B: Strategic Leadership Influence

Table 2: Strategic decisions guide the adoption and use of digital technologies in business

Likert scale	Frequency	Percentages %
Strongly Agree	179	46.9
Agree	149	39.1
Neutral	31	8.1
Disagree	15	3.9
Strongly Disagreed	8	2
Total	**381**	**100.0%**

Source: Field Work, 2026

The findings in Table 2 show that the adoption and application of digital technologies in business are significantly influenced by strategic leadership. A significant percentage of respondents agreed (39.1%) and strongly agreed (46.9%) with the statement, for a total positive response of 86.0%. Just 5.9% of respondents disagreed, and 8.1% were neutral.

According to this pattern of responses, the majority of managers and business owners actively make strategic choices that affect how digital technologies are embraced and used within their organizations.

Section C: Digital Technology Adoption Level.
Table 3: Business actively uses digital tools (e.g., e-commerce platforms, mobile apps, automation) to improve operations.

Likert scale	Frequency	Percentages %
Strongly Agree	182	47.7
Agree	151	39.6
Neutral	29	7.6
Disagree	18	4.7
Strongly Disagreed	1	0.2
Total	**381**	**100.0%**

Source: Field Work, 2026

A high degree of digital technology adoption among the businesses surveyed is shown in Table 3. While 39.6% of respondents agreed that their companies actively use digital tools like e-commerce platforms, mobile applications, and automation to improve operations, nearly half of the respondents strongly agreed (47.7%). Positive agreement was expressed by 87.3% of respondents overall. Just 4.9% disagreed or strongly disagreed, compared to 7.6% who were neutral.

Section C: Impact of Digital Technology on Performance
Table 4: Adopting digital technologies has improved the overall performance business (e.g., revenue growth, efficiency, market reach).

Likert scale	Frequency	Percentages %
Strongly Agree	159	41.7
Agree	198	51.9
Neutral	20	5.2
Disagree	2	0.5
Strongly Disagreed	2	0.5
Total	**381**	**100.0%**

Source: Field Work, 2026

The results in Table 4 show that people have a very positive opinion of how digital technology affects business performance. The majority of respondents agreed (51.9%) or strongly agreed (41.7%) that the use of digital technology has enhanced performance metrics like market reach, efficiency, and revenue growth. This is a staggering 93.6% positive response rate. Just 1.0% of respondents disagreed, and only 5.2% of respondents were neutral.

Section D: Leadership Support for Capability Development

Table 5: Providing training and support to employees increase the effective use of digital technologies in business

Likert scale	Frequency	Percentages %
Strongly Agree	177	46.4
Agree	155	40.6
Neutral	28	7.3
Disagree	16	4.1
Strongly Disagreed	5	1.3
Total	**381**	**100.0%**

Source: Field Work, 2026

Table 5 emphasizes how crucial leadership support is to improving the efficient use of digital technologies. The majority of respondent's 87.0 percent strongly agreed (46.4 percent) and agreed (40.6 percent) that giving employees training and support boosts their ability to use technology effectively. While disagreement was comparatively low at 5.4 percent, neutral responses made up 7.3 percent.

Table 6: Test of Hypotheses

Relationship between Strategic Leadership and performance outcomes in women-led enterprises

Strategic Leadership X	Digital Technology used Y
895	885
596	620
93	84
30	32
8	5

Source: Field Work, 2026

Table 7: Our Pearson correlation coefficient is:

X	Y	XY	X^2	Y^2
895	885	792075	801025	783225
596	620	369520	355216	384400
93	84	7812	8649	7056
30	32	960	1024	169
8	5	40	64	25
Σ=1622	Σ=1626	Σ=1170407	Σ=1165978	Σ=1174875

Source: Field Work, 2025

$$N\Sigma XY=1170407,\ \Sigma X=1622,\ \Sigma y=1626$$

$$Pr = \frac{5(1170407) - (1622\times1626)}{\sqrt{[5(1165978-(1622)^2] - [5(1174875-(1626)^2]}}$$

$$R= \frac{5852035-2637372}{\sqrt{[5829890-2630884]\ [5874375-2643876]}} = \frac{3214663}{\sqrt{(3199006)\ (3230499)}}$$

$$= \frac{3214663}{\sqrt{10334385683994}} = \frac{3214663}{3214713.935}$$

$$Pr = 0.99$$

Decision:
The Pearson correlation coefficient (r) between Strategic Leadership (X) and performance outcomes in women-led enterprises (Y) is 0.99. This value is very close to +1, indicating a very strong positive relationship between the two variables. This result implies that as the level of strategic leadership increases, performance outcomes also increase correspondingly.

Discussion of Findings
The study found that strategic leadership significantly guides the adoption and use of digital technologies in business organizations. The high level of agreement among respondents indicates that leaders play a decisive role in setting priorities, allocating resources, and shaping organizational readiness for digital transformation. This finding aligns with the views of Upper Echelons Theory, which posits that organizational outcomes reflect managerial values and strategic choices. Empirical studies by Hambrick and Mason (1984) and later by Hitt, Ireland, and Hoskisson (2017) similarly established that strategic leadership influences innovation decisions and technology adoption in firms.

Findings from the study revealed that active use of digital technologies positively influences enterprise performance, particularly in terms of efficiency, market reach, and revenue growth. This outcome is consistent with the Resource Based View, which identifies digital capabilities as strategic resources that enable firms to achieve superior performance. Prior studies by Bharadwaj (2000) and Wade and Hulland (2004) also reported that firms that effectively deploy digital technologies tend to record improved productivity and financial outcomes.

The study further demonstrated that digital technology adoption contributes significantly to overall business performance. Respondents largely agreed that digitalization improved revenue growth, operational efficiency, and market expansion. This finding supports the Dynamic Capabilities Theory, which emphasizes the ability of firms to integrate, reconfigure, and leverage technological resources in response to changing environments. Scholarly evidence from Teece (2007) and OECD (2019) equally confirms that digital transformation enables firms to adapt to market changes and sustain competitive advantage.

The results also showed that leadership support through training and employee development enhances the effective use of digital technologies. The strong agreement among respondents suggests that human capital development is central to realizing the full benefits of digital tools. This finding aligns with Human Capital Theory, which argues that investment in skills and knowledge improves organizational productivity. Studies by Becker (1993) and Avolio and Yammarino (2013) similarly emphasized that leadership commitment to training strengthens technology utilization and organizational performance.

Conclusion

According to the study's findings, strategic leadership is essential for bridging the gap between enterprise performance and digital technology adoption in women-led businesses. The effective use of digital tools is greatly increased by leaders who actively direct decision-making, supply resources, and encourage staff capability development. This improves operational effectiveness, market reach, and revenue growth. The results show that digital technology is not enough on its own; when combined with strong strategic leadership and organizational support, its effect on performance is enhanced. Therefore, encouraging leadership-driven digital strategies is crucial for female entrepreneurs looking to grow their businesses sustainably in fast-paced markets.

Recommendations

i. Women entrepreneurs should enhance strategic decision-making and digital management capabilities through training and mentorship.
ii. Businesses should integrate tools like e-commerce platforms, mobile apps, and automation to improve efficiency and market reach.
iii. Leadership should provide continuous training and support for employees to ensure effective use of digital technologies.
iv. Government agencies and non-governmental organizations should create targeted policies that reduce barriers to technology adoption, such as access to affordable finance, digital infrastructure, and business advisory services.

References

Avolio, B. J., Kahai, S. S., & Dodge, G. E. (2001). E-leadership: Implications for theory, research, and practice. *The Leadership Quarterly, 11*(4), 615–668.

Avolio, B. J., & Yammarino, F. J. (2013). *Transformational and charismatic leadership: The road ahead*. Bingley, UK: Emerald Group Publishing.

Ardolino, M., Saccani, N., Gaiardelli, P., Nuzzi, G., & Arena, A. (2018). The role of digital technologies for the service transformation of industrial companies, *International Journal of Production Research, 56*(6), 2116–2132.

Ayyagari, M., Demirgüç-Kunt, A., & Maksimovic, V. (2011). Small vs. young firms across the world: Contribution to employment, job creation, and growth. *World Bank Economic Review, 25*(3), 467–492.

Bass, B. M. (1990). *Bass and Stogdill's handbook of leadership: Theory, research, and managerial applications* (3rd ed.). New York, NY: Free Press.

Becker, G. S. (1993). *Human capital: A theoretical and empirical analysis, with special reference to education* (3rd ed.). Chicago, IL: University of Chicago Press.

Berman, S. J. (2012). Digital transformation: Opportunities to create new business models, *Strategy & Leadership, 40*(2), 16–24.

Bharadwaj, A. S. (2000). A resource-based perspective on information technology capability and firm performance. *MIS Quarterly, 24*(1), 169–196.

Bharadwaj, A., El Sawy, O. A., Pavlou, P. A., & Venkatraman, N. (2013). Digital business strategy: Toward a next generation of insights. *MIS Quarterly, 37*(2), 471–482.

Bhagat, S., Ranganathan, R., & Muralidharan, E. (2021). Digital adoption among women entrepreneurs: Evidence from emerging economies. *Journal of Entrepreneurship in Emerging Economies, 13*(4), 654–672.

Domecq, J. P., Albright, B., Ingersoll, M. A., & Sood, A. (2020). Women's representation in leadership roles in high-tech industries, *Journal of Business Ethics, 164*(3), 553–568.

Gilli, L., Mazzola, E., & Perrone, G. (2024). Strategic leadership and digital transformation: Managing complexity and organizational change, *Journal of Business Research, 170*, 114304.

Hambrick, D. C., & Mason, P. A. (1984). Upper echelons: The organization as a reflection of its top managers, *Academy of Management Review, 9*(2), 193–206.

Hitt, M. A., Ireland, R. D., & Hoskisson, R. E. (2017). *Strategic management: Competitiveness and globalization* (12th ed.). Boston, MA: Cengage Learning.

Kádárová, J., Durana, P., & Valaskova, K. (2023). Digitalisation and SME performance: Evidence from the European Union. *Sustainability, 15*(3), 2145.

Klapper, L., & Parker, S. C. (2011). Gender and the business environment for new firm creation, *World Bank Research Observer, 26*(2), 237–257.

Kokot, J., Statnickė, G., & Savanevičienė, A. (2021). Leadership evolution in digital transformation processes, *Management of Organizations: Systematic Research, 87*(1), 45–60.

Lashitew, A. A. (2023). The gender gap in digital entrepreneurship: Barriers and opportunities, *World Development, 162*, 106132.

Manocha, R., Narang, S., & Shukla, A. (2021). Gender differences in digital technology utilization among entrepreneurs. *International Journal of Gender and Entrepreneurship, 13*(2), 173–191.

McKenzie, J., Smith, R., & Alvarez, G. (2023). Leading digital transformation: Strategic leadership challenges in emerging markets. *Technological Forecasting and Social Change, 189*, 122356.

Nambisan, S. (2017). Digital entrepreneurship: Toward a digital technology perspective of entrepreneurship, *Entrepreneurship Theory and Practice, 41*(6), 1029–1055.

Nassani, A. A., Aldakhil, A. M., Abro, M. M. Q., & Zaman, K. (2023). Digital transformation and firm performance: The moderating role of innovation capability, *Technological Forecasting and Social Change, 186*, 122146.

Navaridas-Nalda, F., González, J., & Iglesias-Sánchez, P. (2020). Digital transformation and strategic leadership in SMEs. *Journal of Small Business Management, 58*(4), 731–752.

Northouse, P. G. (2021). *Leadership: Theory and practice (9th ed.)*, Thousand Oaks, CA: Sage Publications.

OECD. (2019). *SME and entrepreneurship outlook 2019*, Paris, France: OECD Publishing.

OECD. (2021). *The digital transformation of SMEs*. Paris, France: OECD Publishing.

Orser, B., & Riding, A. (2018). The influence of gender on the adoption of digital technologies in entrepreneurship. *Entrepreneurship Theory and Practice, 42*(3), 467–499.

Reuter, J., & Floyd, S. W. (2024). Strategic leadership in uncertain environments, *Strategic Management Journal, 45*(2), 245–267.

Schwarzmüller, T., Brosi, P., Duman, D., & Welpe, I. M. (2018). How does the digital transformation affect organizations? Key themes of change in work design and leadership, *Management Review, 29*(2), 114–138.

Shivappa, R. (2021). Women entrepreneurship and empowerment: A conceptual perspective. *Journal of Entrepreneurship and Innovation in Emerging Economies,* 7(1), 1–14.

Singh, A., Klarner, P., & Hess, T. (2023). Strategic leadership for digital transformation: A capability-based perspective, *Journal of Strategic Information Systems, 32*(1), 101735.

Sow, M., & Aborbie, S. (2018). Leadership development and change management in digital transformation. *Journal of Organizational Change Management, 31*(2), 315–330.

Srividhya, M., & Paramasivam, C. (2022). Challenges and performance of women entrepreneurs in developing economies. *International Journal of Entrepreneurial Behavior & Research, 28*(5), 1204–1223.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of sustainable enterprise performance. *Strategic Management Journal, 28*(13), 1319–1350.

Teichert, R. (2019). Digital transformation maturity: A systematic review, *Journal of Business Research, 100*, 1–10.

World Bank. (2020). *Women, business and the law 2020*. Washington, DC: World Bank.

Zulu, S., & Khosrowshahi, F. (2021). Digital leadership competencies for organizational transformation. *Construction Innovation, 21*(4), 735–753.