

Leading Digital Transformation in MSMEs: A Qualitative Study of Leadership and Innovation in Banten, Indonesia

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Abstract -- Digital transformation has become a critical imperative for micro, small, and medium enterprises (MSMEs) in responding to rapidly changing market dynamics and technological disruptions. While prior studies have largely emphasized technological adoption, limited attention has been given to the leadership processes that shape digital transformation and innovation within MSMEs, particularly in emerging economies. This study aims to explore how leadership drives digital transformation and innovation among MSMEs in Banten Province, Indonesia. Adopting a qualitative and interpretive research design, the study draws on in-depth interviews with 15 MSME owners and senior managers across diverse sectors, complemented by thematic analysis of their lived experiences. The findings reveal that digital transformation in MSMEs is fundamentally a leadership-driven process, rooted in leaders' mindsets, sense-making, and strategic interpretations of digital technologies. Leaders who perceive digitalization as a long-term strategic opportunity tend to adopt proactive, integrative approaches that foster incremental innovation in marketing, operations, and customer engagement. Conversely, reactive leadership orientations result in fragmented and superficial digital adoption. The study further identifies hands-on leadership, employee empowerment, and resource mobilization as key practices enabling digital adoption and innovation despite significant resource constraints. Contextual factors such as limited digital skills, financial uncertainty, and regulatory complexity shape transformation trajectories; however, leadership agency plays a decisive mediating role in navigating these challenges. This research contributes to the digital transformation and leadership literature by highlighting the centrality of leadership in shaping innovation outcomes within MSMEs and offers practical insights for policymakers and development institutions seeking to strengthen leadership capacity as a foundation for inclusive and sustainable digital transformation.

Keywords: Digital transformation; Leadership; Innovation; MSMEs; Indonesia.

I. INTRODUCTION

Background of the Study

Digital transformation is increasingly seen as a vital element of modern business, significantly altering the way organizations deliver value and maintain competitive advantage. The emergence of digital technologies, including e-commerce, data analytics, and social media, has reshaped market landscapes, providing both opportunities and challenges for micro, small, and medium enterprises (MSMEs). In Indonesia, MSMEs have a crucial role, contributing approximately 60.5% to the national GDP and constituting about 97% of the workforce. Nevertheless, a significant number of these enterprises face hurdles such as inadequate technological capabilities and limited access to financing, which can impede their ability to adapt to market shifts (Idrus & Rastina, 2025; Riswandi & Permadi, 2022).

The COVID-19 pandemic highlighted the vulnerabilities of MSMEs in Indonesia, acting as a catalyst for digital adoption. Data indicates that those MSMEs able to leverage digital technologies exhibited enhanced resilience in the face of disruptions, while others faced existential threats due to their reliance on traditional business practices (Achmad, 2023; Aldhi et al., 2024). Specifically, Banten Province presents a unique microcosm in which MSMEs operate within a blend of urbanized industrial influences and traditional practices. Thus, understanding the internal factors that drive digital transformation in this context, particularly leadership, emerges as critical (Yansen & Yujie, 2023; Gustiawan et al., 2025).

Research Gap and Problem Statement

Most extant literature focuses primarily on the digital transformation of large enterprises, neglecting the nuanced dynamics present in MSMEs. Leadership has often been relegated to a secondary concern when discussing technological adoption and organizational strategies, particularly in emerging economies (Coco et al.,

2023; Gustiawan et al., 2025). Moreover, qualitative exploration of how leaders in MSMEs conceptualize and navigate the complexities of digital change remains notably scarce.

This study aims to address this gap by investigating how MSME leaders in Banten interpret digital transformation within their business frameworks and the ways that their leadership practices influence innovation outcomes. This focus is essential, particularly in environments characterized by resource constraints and informal management practices (Idrus & Rastina, 2025; Alfarizi & Arifian, 2025).

Research Objectives and Research Questions

The objective of this research is to elucidate how leadership facilitates digital transformation and innovation in Banten's MSMEs. Consequently, the study is guided by the following key research questions:

1. How do MSME leaders in Banten understand and interpret digital transformation in their business contexts?
2. What leadership behaviors and practices either support or hinder digital adoption and innovation in these enterprises?
3. What contextual challenges and enabling factors shape leadership-driven digital transformation in MSMEs?

These questions are designed to unveil not only the actions of leaders but also their motivations and interpretations in the context of digital change.

Significance of the Study

The theoretical contributions of this study lie in its effort to enrich the existing literature on digital transformation by elevating the role of leadership as a central component. By blending insights from leadership and innovation studies, this research aims to extend traditional frameworks typically derived from analyses of larger organizations (Coco et al., 2023; Gustiawan et al., 2025).

Practically, the findings will serve as actionable insights for MSME owners and governors, providing them with the knowledge required to lead digital transformation effectively amidst resource limitations. Additionally, policymakers and business support organizations could leverage these insights to design programs that enhance leadership capabilities and support digitalization in MSMEs, aiming for inclusive economic growth (Achmad, 2023; Alfarizi & Arifian, 2025).

Literature Review and Theoretical Framework

Digital Transformation in MSMEs

Digital transformation entails a comprehensive integration of digital technologies into all business aspects, leading to fundamental operational and strategic changes. For MSMEs in Indonesia, embracing digital transformation is not merely about technology adoption; it also involves significant cultural, structural, and strategic shifts (Aryani & Tuti, 2023; Nainggolan et al., 2024). Research indicates that these businesses engage in digital transformation to boost operational efficiency, expand market accessibility, and increase customer satisfaction (Hariyanti & Kristanti, 2024; (Kurniawati et al., 2022).

However, various barriers exist, including financial constraints, insufficient digital skills, and resistance to change, especially in regions like Banten, where traditional practices still dominate (Kurniawati et al., 2022; Pamungkas et al., 2023). The post-COVID context highlights that MSMEs adept in digital technologies are more likely to navigate uncertainties successfully (Umayna, 2025).

Leadership in the Context of Digital Transformation

Leadership is vital in guiding organizations through transformative changes. In MSMEs, where decision-making tends to be centralized, the leader's vision and practices often determine the success of digital initiatives (Sugiyanto et al., 2025). Effective digital leadership combines strategic foresight with a culture of innovation, promoting a responsive approach to changes in the operational environment (Yamin & Murwaningsari, 2023; (Gustiawan et al., 2025).

The literature highlights that transformational and adaptive leadership frameworks are particularly relevant given their emphasis on inspiring employees and responding flexibly to challenges (Gyamerah, 2025). By focusing on sense-making, leaders can translate complex digital trends into practical strategies that align with their organizational context.

Innovation in MSMEs

Innovation serves as a core driver of the competitiveness and sustainability of MSMEs. These businesses often pursue incremental innovations that address immediate market needs rather than radical transformations (Akbari & Pratomo, 2022; Arip et al., 2025). Leadership plays a pivotal role in fostering an innovative culture, where supportive behaviors such as encouraging risk-taking and tolerating failures contribute to enhanced innovation capacity (Nainggolan et al., 2024; Yusriwati & Ardini, 2024). Conversely, a conservative leadership

approach may stifle creativity, particularly in uncertain environments fraught with digital disruption (Azizah, 2025).

Digital technologies can significantly enhance innovation processes for MSMEs, enabling rapid feedback and the ability to engage customers in product development. The interconnections between leadership, innovation, and digital transformation underscore the need for a holistic understanding of how leadership practices impact innovation outcomes in the MSME sector (Okhagbuzo & Bello, 2025; Sunarso et al., 2025).

Contextual Factors in Emerging Economies

Emerging economies like Indonesia exhibit distinct socio-economic and institutional characteristics that considerably influence the behavior of MSMEs. Factors such as informal business practices, community reliance, and regulatory challenges create a complex landscape for digital transformation (Albannai et al., 2024; Bektı et al., 2024). Particularly in Banten, while close proximity to urban resources provides certain advantages, many MSMEs remain tethered to traditional models (Kurniawati et al., 2022; Calen et al., 2021).

Contextual elements should not be treated as mere constraints; instead, they interact dynamically with leadership agency and capability, influencing how leaders navigate and enact digital transformation (Fransiscus et al., 2025). A qualitative approach is warranted here, given its potential to unveil the nuanced interplay between leadership, contextual variables, and digital strategies.

Theoretical Framework and Conceptual Model

This study adopts a comprehensive theoretical framework that positions leadership at the intersection of digital transformation processes and innovation outcomes within MSMEs. The conceptual model posits that leadership mindsets, practices, and contextual factors collectively influence the trajectories of innovation and digital transformation in these enterprises. Specifically, leaders' interpretations of digital technologies—how they perceive, prioritize, and implement these tools—inform strategic intent. Furthermore, leadership practices such as resource mobilization and employee engagement translate this intent into actionable outcomes, fostering an organizational environment conducive to innovation.

Contextual factors—including institutional support, digital infrastructure, and cultural norms—serve as boundary conditions, either facilitating or obstructing leadership efforts. By utilizing a qualitative research design, this study aims to elaborate on the proposed framework, drawing rich insights into how leadership shapes digital transformation within Indonesian MSMEs operating in an emerging economy context.

This qualitative study seeks to explore the pivotal role of leadership in guiding the digital transformation of MSMEs in Banten, Indonesia. By foregrounding leadership as a critical factor, the research aims to fill significant gaps in current literature and provide actionable insights for practitioners and policymakers aiming to bolster MSME performance in an increasingly digital economy.

II. RESEARCH METHODS

Research Design

This study adopts a qualitative research design characterized by an exploratory and interpretive orientation. A qualitative approach is particularly well-suited for examining leadership-driven digital transformation in micro, small, and medium enterprises (MSMEs) since it enables a deep understanding of the meanings, experiences, and decision-making processes that quantitative measures might inadequately capture. Digital transformation within MSMEs is a complex and socially constructed phenomenon, influenced by leaders' interpretations, contextual constraints, and the evolving practices of their organizations Priyono et al., 2020; Adhiatma et al., 2022).

The research follows an inductive logic, wherein theoretical insights emerge organically from the empirical data rather than being predetermined, aligning with the study's objective of generating rich, contextualized insights into leadership and innovation within the specific settings of MSMEs. This design not only captures the intricacies of the transformation process but also allows for a detailed examination of how leadership practices are enacted and valued in real business scenarios, particularly in an emerging economy context like Indonesia (Adhiatma et al., 2022; Peter et al., 2024).

Research Context and Setting

The empirical setting for this research is Banten Province, Indonesia, which is characterized by a significant concentration of MSMEs involved in various sectors, including manufacturing, trade, services, and the creative industries. Banten's geographical proximity to Indonesia's capital provides reasonably good access to markets and digital infrastructure. However, many MSMEs in the region still operate under traditional business models and face challenges related to limited technological capabilities (Nazir & Khan, 2023; Ahmad et al., 2023).

This mix of modern economic activities and traditional practices offers a rich contextual landscape for exploring variations in digital transformation among MSMEs. The situation is reflective of broader issues that MSMEs encounter in emerging economies, such as resource constraints and uneven readiness to adopt digital

solutions, making it an ideal context to study the impact of leadership on digital transformation (Rupeika-Apoga et al., 2022; Mladenova, 2024).

Participants and Sampling Strategy

The study participants comprise 15 MSME owners and senior managers who hold primary decision-making authority regarding business strategies and digital technology adoption within their organizations. A purposive sampling strategy was implemented to ensure that participants possessed substantive experience related to digital transformation initiatives at various stages (early, intermediate, or advanced).

The inclusion criteria for participants were as follows:

1. MSMEs operational in Banten Province, Indonesia.

2. Leaders directly responsible for strategic and operational decision-making.

3. Demonstrable engagement with digital tools or platforms, such as e-commerce, digital marketing, online payment systems, or internal digital processes.

Participants were chosen from diverse business sectors—including manufacturing, trade, services, and creative industries—and varied in size and years of operation. This diversity provides analytical richness and allows for comparative insights across cases. The sample size of 15 was deemed adequate based on the principle of theoretical saturation, indicating that no new themes were arising from additional data collection, consistent with established qualitative research standards (Marczewska, 2023).

To maintain ethical integrity, all participant identities and organizational names were anonymized. Pseudonyms were utilized during data analysis and reporting, safeguarding confidentiality while ensuring methodological transparency (Neira et al., 2024).

Table 1. Participant Identification and Sampling Characteristics

| Code | Leadership Role | MSME Sector | Firm Size (Employees) | Years of Operation | Level of Digital Adoption | Sampling Rationale |
|------|-------------------|-------------------|-----------------------|--------------------|---------------------------|---|
| P1 | Owner-Manager | Manufacturing | 5–19 (Small) | >10 years | Intermediate | Strategic decision-maker with ongoing digitalization initiatives |
| P2 | Founder | Trade | <5 (Micro) | 5–10 years | Basic | Early-stage digital adopter facing resource constraints |
| P3 | Owner | Services | 5–19 (Small) | >10 years | Advanced | Experienced leader integrating digital platforms into core operations |
| P4 | Managing Director | Creative Industry | <5 (Micro) | <5 years | Intermediate | Digital-native MSME with innovation-oriented leadership |
| P5 | Owner-Manager | Manufacturing | 20–49 (Medium) | >10 years | Intermediate | Organizational leader balancing legacy systems and digital tools |
| P6 | Founder | Services | <5 (Micro) | 5–10 years | Basic | MSME leader experimenting with digital marketing and payments |
| P7 | Owner | Trade | 5–19 (Small) | >10 years | Intermediate | Incremental digital transformation driven by market pressure |
| P8 | Owner-Manager | Creative Industry | <5 (Micro) | <5 years | Advanced | Innovation-driven MSME leveraging digital platforms |

| Code | Leadership Role | MSME Sector | Firm Size (Employees) | Years of Operation | Level of Digital Adoption | Sampling Rationale |
|------|------------------|-------------------|-----------------------|--------------------|---------------------------|---|
| P9 | Director | Services | 20–49 (Medium) | >10 years | Advanced | Formal leadership structure with integrated digital strategy |
| P10 | Founder | Manufacturing | 5–19 (Small) | 5–10 years | Intermediate | Leader initiating process digitalization |
| P11 | Owner | Trade | <5 (Micro) | <5 years | Basic | New MSME adapting to digital ecosystems |
| P12 | Owner–Manager | Services | 5–19 (Small) | >10 years | Intermediate | Leadership-driven digital experimentation |
| P13 | Managing Partner | Creative Industry | <5 (Micro) | 5–10 years | Advanced | Collaborative leadership and digital innovation |
| P14 | Owner | Manufacturing | 20–49 (Medium) | >10 years | Intermediate | Scaling MSME with selective digital integration |
| P15 | Founder–CEO | Services | 5–19 (Small) | 5–10 years | Advanced | Visionary leader embedding digital transformation into business model |

Data Collection Methods

Data were collected primarily through in-depth, semi-structured interviews. This method ensured both flexibility and standardization across interviews. An interview protocol was crafted based on existing literature pertaining to leadership, digital transformation, and innovation, covering key themes such as leaders' perceptions of digital transformation, their leadership styles, innovation activities, and contextual challenges faced.

Interviews were conducted either face-to-face or online, depending on participants' availability and preferences, with each session lasting between 60 to 90 minutes. With participants' consent, interviews were audio-recorded and later transcribed verbatim to guarantee the accuracy and completeness of the data gathered (Sonker & Agarwal, 2024; Prayitno et al., 2024).

Data Analysis Technique

The collected data underwent thematic analysis utilizing a systematic and iterative approach. Initial open coding was performed to pinpoint significant text segments related to leadership, digital transformation, and innovation. These early codes were subsequently organized into broader categories through axial coding, which helped illustrate the relationships among the identified concepts. Lastly, selective coding was employed to synthesize categories into overarching themes that aligned with the study's research questions and theoretical framework (Lei et al., 2023; Osarenkhoe & Fjellström, 2021).

Throughout the analysis, constant comparison methods were utilized to discern similarities and discrepancies across participant experiences, thereby enhancing analytical rigor. Reflexive memos were maintained to document analytical choices and evolving interpretations, ensuring a well-documented analytical process (Fauzi et al., 2023; Cuevas-Vargas, 2025).

Trustworthiness and Rigor

To bolster the trustworthiness of findings, the study adhered to established qualitative rigor criteria: credibility, transferability, dependability, and confirmability. Credibility was enhanced through prolonged engagement with data and member checking, whereby participants had the opportunity to verify critical interpretations. Transferability was achieved by offering rich contextual descriptions of the research setting and participant dynamics. Both dependability and confirmability were reinforced through systematic documentation of research procedures and an established audit trail (Alifah, 2025; Garzoni et al., 2020).

Ethical Considerations

Ethical considerations formed a core aspect of all research phases. Participants provided informed consent before data collection, were made aware of their right to withdraw at any point, and were assured that confidentiality and anonymity would be strictly upheld. All data were securely stored and utilized solely for academic purposes, in accordance with international ethical standards governing qualitative research involving human subjects (Mariam et al., 2024; Wigati et al., 2025).

This detailed methodology outlines the systematic and rigorous approach taken in this study, positioning it to yield meaningful insights into the role of leadership in driving digital transformation within MSMEs in Banten, Indonesia. By employing qualitative methods, this research contributes to filling existing gaps in the literature and advancing understanding of leadership dynamics in the context of digital innovation.

III. RESULTS AND DISCUSSION**Findings**

The qualitative analysis conducted in this study revealed four primary themes that underscore the pivotal role of leadership in facilitating digital transformation and innovation among MSMEs in Banten, Indonesia. These themes reflect the cognitive, behavioral, and contextual dimensions of leadership as experienced by MSME leaders throughout their digital transformation endeavors.

Leadership Mindset toward Digital Transformation

One of the most significant findings is that the leadership mindset regarding digital transformation serves as a foundational driver for change. Leaders who viewed digitalization as a strategic opportunity rather than merely a technical requirement were more proactive in initiating and sustaining digital innovations. These leaders articulated a vision of digital transformation as a vehicle for enhancing business resilience, expanding market outreach, and fostering deeper customer engagement (Aviyanti & Widyastuti, 2024).

Conversely, leaders who perceived digital technologies primarily as external pressures or temporary fixes tended to adopt a more cautious and fragmented approach to digitalization. In instances where digital initiatives were executed reactively, often lacking coherent strategic vision, there was a noticeable impediment to comprehensive digital integration. This contrast highlights the importance of leadership interpretive frames in determining the velocity and depth of digital transformation efforts. The findings indicate that mindset functions as a cognitive filter that affects leaders' assessments of digital risks and opportunities, influencing overall organizational readiness for change (Hendrawan et al., 2024).

Leadership Practices Supporting Digital Adoption

In addition to mindset, specific leadership practices emerged as crucial enablers of digital adoption. Participants reported that hands-on leadership—where leaders actively engage in learning and experimenting with digital tools—was particularly effective. Rather than relegating digital initiatives solely to employees or consultants, leaders who participated in trial-and-error processes signaled their commitment to digital transformation, which subsequently reduced employee resistance (Situmorang et al., 2024).

Empowerment and communication also constituted critical practices. Leaders who fostered employee involvement in digital initiatives cultivated a sense of shared ownership, promoting collective learning and innovation. Open dialogue regarding the objectives and expected benefits of digital adoption helped alleviate fears and uncertainty prevalent among employees with limited digital skills. Effective resource mobilization—including the allocation of time and access to training—further strengthened digital integrations, even amid significant resource challenges (Purwa, 2022).

In contrast, leadership styles marked by tight control and minimal delegation impeded the pace and efficacy of digital adoption. These contrasts emphasize that the practices leaders implement directly translate abstract digital goals into actionable organizational activities (Hidayat, 2021).

Innovation Processes in MSMEs

The innovation processes within the studied MSMEs were predominantly characterized by incremental and practice-based developments. Digital transformation catalyzed innovations primarily in marketing, customer interaction, and internal processes rather than radical technological shifts. Notable examples included the use of social media analytics for targeted marketing strategies, digital payment systems for enhanced transaction efficiency, and online platforms for accessing new customer segments (Octa et al., 2024).

Leaders were instrumental in recognizing and legitimizing these innovations, which mostly emerged through informal experimentation rather than formal research and development processes. The adaptive nature of MSMEs was evident, where leaders who embraced risk and encouraged a culture of continuous improvement fostered a psychologically safe environment conducive to experimentation. Over time, these minor innovations compounded, leading to significant organizational transformation. This indicates that innovation functions as both

an outcome of and a mechanism for digital transformation, reinforcing the idea that leadership-driven innovation is integral to organizational learning and confidence in pursuing further digital initiatives (Lestari et al., 2024).

Contextual Challenges and Enablers

Participants consistently identified contextual factors that shaped their digital transformation efforts. Key challenges included limited digital skills among employees, financial constraints, and uncertainties regarding the return on investment in technology. Additionally, regulatory complexities and inconsistent access to external support programs presented significant barriers to transformation efforts (Austin et al., 2023).

However, several contextual enablers were also revealed. Proximity to large markets and relatively stable digital infrastructure in Banten facilitated access to digital platforms and customers. Informal networks and community-based support emerged as critical sources of motivation and knowledge. Leaders who adeptly leveraged these networks demonstrated improved positions in overcoming constraints and sustaining digital initiatives. Importantly, the data indicates that context should not be perceived as a deterministic force; rather, leadership agency plays a mediating role, empowering certain MSMEs to pursue successful transformations despite facing similar structural challenges (Taba et al., 2023).

Discussion

The findings of this research contribute significantly to the understanding of leadership-driven digital transformation in MSMEs, highlighting the interplay among leadership mindset, practices, innovation, and contextual influences. The study reaffirms existing literature that emphasizes the comprehensive nature of digital transformation, extending beyond mere technology adoption to include cognitive and behavioral shifts led by organizational leaders. This research extends the existing theories by elucidating how these dynamics play out in resource-constrained MSME settings within an emerging economy context.

First, the centrality of leadership mindset aligns with interpretive theories concerning organizational change, suggesting that sense-making processes are foundational to leadership effectiveness (Jayanto et al., 2025). Leaders' interpretations of digital transformation directly shape strategic intent, influencing whether digital initiatives are pursued proactively or reactively. This finding enriches leadership theories by underscoring the cognitive dimensions of digital leadership within MSMEs, many of which lack formal strategic frameworks.

Second, the identified leadership practices—such as hands-on engagement, empowering employees, and mobilizing resources—reinforce and contextualize insights from transformational and adaptive leadership theories. Unlike larger corporations, MSMEs require leaders to enact their functions in a highly personal and operational manner, where the effectiveness of leadership during digital transformation is determined less by formal authority and more by visible commitment and relational engagement (Maulana, 2025).

Third, the role of innovation as an emergent process underscores the interconnectedness of leadership, innovation, and digital transformation. The findings propose a paradigm wherein innovation is not merely seen as a separate output but as a dynamic mechanism allowing for the realization of digital transformation. This perspective aligns with existing literature on MSME innovation, which emphasizes the importance of process over static outputs (Ningrum et al., 2025).

Lastly, the research highlights the significance of contextual awareness, revealing that while structural constraints exist, leadership agency critically mediates these influences. This insight challenges deterministic views surrounding digital transformation in emerging economies, advocating for more nuanced, agency-driven explanations of how MSMEs navigate their respective environments (Nampira et al., 2025).

In conclusion, the findings substantiate the proposed theoretical framework, positioning leadership as a central driver of digital transformation through innovation, moderated by contextual factors. By offering rich empirical insights, this study significantly contributes to theory development and provides practical implications for MSME leaders and policymakers aiming to foster inclusive digital transformation initiatives.

IV. CONCLUSION

Summary of Key Findings

This study aimed to examine how leadership influences digital transformation and innovation in micro, small, and medium enterprises (MSMEs) in Banten, Indonesia, employing a qualitative and interpretive research approach. The findings indicate that digital transformation within MSMEs is primarily a leadership-driven process rather than being solely technology-focused. Leaders' cognitive interpretations of digitalization were found to be the cornerstone of transformation efforts, significantly affecting whether digital initiatives were pursued in a proactive, strategic, and sustainable manner.

Moreover, the research elucidates the critical nature of specific leadership practices in translating digital aspirations into actionable steps within organizations. The involvement of leaders in hands-on engagement, the empowerment of employees, and strategic resource mobilization—despite existing financial and capability constraints—enabled more effective adoption of digital tools. These practices cultivated a culture of collective

learning and minimized resistance to change, ultimately bolstering organizational readiness for digital transformation initiatives. Innovation manifested primarily in incremental, practice-based forms, serving both as an outcome of leadership-driven digital efforts and as a mechanism propelling further transformation.

Finally, the results underscore the significant role of leadership agency in navigating the contextual challenges and enablers faced by MSMEs. Although firms in Banten experienced structural barriers such as insufficient digital skills, financial uncertainties, and convoluted regulatory landscapes, leaders' capabilities to leverage regional networks and institutional opportunities were instrumental in shaping diverse pathways of transformation. The synthesis of these findings affirms the crucial importance of leadership in navigating complex and resource-constrained environments as MSMEs pursue digital transformation.

Theoretical Contributions

This study provides several key theoretical contributions to the existing literature on digital transformation, leadership, and MSMEs. First, it expands digital transformation theory by identifying leadership mindsets and sense-making processes as vital precursors to effective digital change in the MSME context. Second, it enhances leadership scholarship by situating transformational and adaptive leadership theories within emerging economies, illustrating how leadership is exercised through interpersonal engagement and informal practices rather than formal authority. Third, by framing innovation as an emergent process closely intertwined with leadership action, this research shifts the narrative from an output-focused perspective to a process-oriented understanding of innovation within MSMEs.

Practical Implications

From a practical perspective, the findings yield actionable insights for both MSME leaders and policymakers. MSME leaders are encouraged to adopt a learning-oriented mindset, engage directly with digital tools, and empower their employees to actively participate in digital initiatives. Additionally, policymakers and institutions supporting these businesses should prioritize the development of leadership capabilities and experiential digital learning programs specifically tailored for MSMEs rather than merely providing technological solutions. Such approaches can significantly enhance the inclusivity and sustainability of digital transformation initiatives, effectively fostering growth within the sector.

Limitations of the Study

Despite its meaningful contributions, this study encompasses several limitations. The qualitative design and focus on context-specific experiences within Banten restrict the generalizability of the findings across different settings. Furthermore, the reliance on self-reported data may introduce subjective biases. Future research could address these limitations by incorporating diverse data sources or adopting comparative research methodologies to explore these dynamics across various contexts and regions.

Directions for Future Research

Future studies can build on this research by employing longitudinal or mixed-methods approaches to capture the evolving nature of leadership-driven digital transformation over time. Comparative investigations across different regions or countries would enhance the understanding of contextual influences on digital transformation dynamics. Moreover, researchers could delve into the impact of collective or distributed leadership models on the digital transformation efforts of MSMEs, thereby broadening the scope of leadership inquiry within the emerging economy landscape.

In conclusion, this study enriches our understanding of the integral role of leadership in shaping digital transformation and innovation in MSMEs, providing both theoretical insights and practical guidance for advancing this critical area of business development in Indonesia and similar economies.

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