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Strategic insights from senior management in implementing digital transformation in Vietnamese SMEs

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Abstract

This study aims to explore senior management perceptions of digital transformation (DX) within Vietnamese small and medium-sized enterprises (SMEs). It seeks to evaluate the impact of these perceptions on the successful implementation of DX initiatives and provide strategic recommendations for aligning these initiatives with organizational goals. A qualitative approach was used, conducting semi-structured interviews with senior managers from various Vietnamese SMEs to gain insights into their DX experiences and challenges. While DX is crucial for maintaining competitiveness, its adoption necessitates extensive cultural, structural, and operational transformations. SME leaders are cautious about financial and operational risks and favor a phased, context-sensitive approach. Senior management perceptions are crucial for DX success. Effective adoption demands adaptive leadership, cultural shifts, and a gradual, strategic implementation to address SME-specific challenges. The study provides practical recommendations for SMEs in Vietnam, emphasizing leadership adaptability, cultural alignment, and phased DX implementation for sustainable growth and success.

Keywords: Digital transformation, leadership, management perceptions, organizational culture, SMEs, and strategic adaptation.

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1. Introduction

Digital transformation (DX) is an irreversible worldwide trend that significantly affects all businesses [1]. DX has fundamentally altered business operations and growth [2] by streamlining operational procedures [3] enhancing

competitiveness [4, 5] expanding markets [6] and developing new business models [7]. Businesses jeopardize their competitive advantage and risk obsolescence if they fail to evolve and adapt.

Basically, DX refers to the integration of digital technologies to convert business operations and services from analog to digital formats. This includes, among other activities, transferring data to the cloud, utilizing technological gadgets and applications for communication and cooperation, and automating procedures. The growth of DX is attributable to multiple contributing elements. The COVID-19 epidemic significantly accelerated the pace of DX in enterprises worldwide in 2020. Despite the conclusion of the pandemic, remote labor across enterprises worldwide has not only persisted but significantly intensified, further accelerating the impetus for DX. Additional important factors encompass customer demand and the necessity to remain competitive. Leveraging DX technologies enables firms to adapt more swiftly to changing markets and fosters innovation, thereby enhancing their resilience.

In 2023, global investment in DX is expected to amount to 2.15 trillion U.S. dollars, with forecasts indicating a rise to 3.9 trillion U.S. dollars by 2027 [8]. According to the latest projections from the International Data Corporation [9] Worldwide DX Spending Guide, this upward trend is set to propel DX spending close to 4 trillion U.S. dollars by 2027. Driven by advancements in artificial intelligence (AI), particularly in Generative AI, investments in DX are anticipated to increase at a compound annual growth rate (CAGR) of 16.2% from 2022 to 2027. As digitalization remains a strategic priority, DX spending is likely to expand significantly, potentially representing up to two-thirds of total expenditures in Information and Communication Technology (ICT) by 2027. As a result, DX has exerted significant pressure on established small and medium-sized enterprises (hereafter SMEs) to transition into innovation-driven entities [10]. SMEs are globally facing mounting pressure to innovate for survival and success in the digital age.

SMEs are essential to the global economy, serving as catalysts for economic growth, innovation, and employment [11]. They are especially vital in emerging markets, where they substantially enhance GDP, exports, and job creation [12, 13]. In emerging markets, formal SMEs alone contribute up to 40% of GDP, with even greater impact when informal SMEs are included. With an estimated 600 million jobs needed by 2030 to meet workforce demands, SME development remains a top priority for many governments. Numerous SMEs, constrained by their limited resources, encounter challenges in navigating this complicated position.

Vietnamese businesses perceive DX as a transformative force reshaping both their operational frameworks and business models, providing a critical pathway to enhance labor productivity, competitive edge, and integration into the global economy [14]. However, despite the critical role as a driving force in the national economy, SMEs encounter significant challenges, including limited access to financing, difficulties in reaching new customer bases, a lack of effective risk management tools, and insufficient access to business information. These obstacles underscore the need for targeted policy and financial innovations to support SME resilience and growth in Vietnam's evolving economic landscape [15]. And this situation highlights the urgent need for an in-depth study on the strategic insights and perspectives of senior management in executing DX.

To address these barriers, the Vietnamese Government has taken steps to support SMEs. Following the success of a 2021 program that facilitated DX for 16,000 companies, MoIC expanded this initiative in 2022 to support an additional 30,000 firms in their DX journey [16]. Furthermore, on April 26, 2024, the Government issued Decree No. 45/2024/ND-CP, amending and supplementing certain provisions of Decree No. 39/2019/ND-CP regarding the organization and operation of the SMEs development fund. The primary objectives of this decree are to ensure that policies are clear, transparent, focused, and aligned with the Fund's resource allocation capabilities. Additionally, it aims to enhance the effective implementation of the Law on Support for SMEs, facilitating timely financial assistance and capacity-building support to SMEs in a targeted and responsive manner.

Besides macro support, senior management of SMEs is critical to the success of DX [17, 18]. Their strategic understanding, dedication, and leadership capabilities can influence the scope and approach of a company's DX efforts. In the context of Vietnamese SMEs with constrained resources, senior management's leadership and strategic drive play a crucial role in defining clear strategic directions and ensuring a successful, sustainable digital transformation process.

This research delivers practical value by offering comprehensive insights from senior management regarding DX in Vietnamese SMEs, thereby formulating viable plans and implementation techniques. The report specifically examines crucial topics, including: "What is the perception of top management in Vietnamese SMEs regarding DX initiatives? In what ways does the perception of senior management in Vietnamese SMEs affect their implementation of DX?". By delving into the perspectives of senior management, the study provides essential information for both businesses and policymakers to promote successful DX.

2. Literature Review

2.1. DX in SMEs: Concepts

DX is a complex and comprehensive process that integrates digital technologies across all business areas, fundamentally reshaping organizational operations and customer value delivery. It serves as a vital catalyst for innovation, efficiency, and competitive advantage within today's rapidly advancing digital landscape. This transformation spans diverse activities, from adopting cutting-edge technologies to restructuring business models and strategies. As noted by Vial [19] DX triggers organizations to make strategic adjustments through digital technologies - encompassing information, computing, and communication - thereby altering their structures, boundaries, and value-generation pathways, which drives the evolutionary process of the enterprise. Gong and Ribiere [20] describe DX as a profound change process, powered by innovative digital technology use and strategic resource leverage, aimed at significantly enhancing an entity and redefining its value proposition for stakeholders. Furthermore, DX reshapes traditional business models by utilizing technologies like artificial intelligence,

big data analytics, and the Internet of Things (IoT) to improve customer engagement, optimize operational efficiency, and boost revenue generation [7].

The DX of an organization is a complex, systematic endeavor. It involves the utilization of online payment and sales tools, as well as the selection of transformation models, invention of business models, optimization of organizational structures, and modifications in asset management. Although DX has become a pivotal strategy for large organizations, SMEs encounter several obstacles in their DX ventures, which are essential for improving efficiency, competitiveness, and sustainability. Notwithstanding the potential advantages, like enhanced operational efficiency and access to global markets, SMEs face considerable challenges that impede their capacity to fully use digital technologies. These issues are complex, encompassing financial [21, 22] technological [23, 24] and organizational [25, 26] dimensions.

2.2. Strategic Approaches to DX in SMEs

Recent studies have extensively explored the factors driving successful DX, highlighting critical elements that organizations need to master to thrive in the digital era. Leadership is repeatedly recognized as a pivotal component, with effective leaders championing DX and aligning it with the organization's strategic objectives [27]. This alignment ensures that digital initiatives reinforce broader business goals, enabling the efficient allocation of resources and efforts [28]. Equally important is cultivating an organizational culture open to change and innovation, fostering an environment that encourages experimentation and resilience in the face of setbacks [29]. Change management plays a key role by preparing and supporting teams for transformation, addressing resistance, and keeping employees engaged throughout the process [30]. Adopting suitable digital technologies and infrastructure, such as digital platforms, data systems, and robust cybersecurity measures, is foundational [31]. Moreover, equipping the workforce with relevant digital skills through continuous upskilling and reskilling initiatives is essential for maintaining digital literacy and adapting to new tools [32]. In this context, attracting fresh talent with diverse skills can also drive innovation and strengthen the DX journey [32]. A customer-centric focus remains paramount, as leveraging digital tools to enhance customer engagement and deliver tailored experiences is crucial for success [33]. Additionally, organizations must remain agile and responsive to external factors such as evolving market trends, regulatory changes, and technological advancements, which can all significantly impact DX efforts [34].

2.3. The Role of Senior Management in DX

In the context of DX, senior management plays a crucial role in steering the direction and pace of change within an organization. This leadership responsibility is especially significant in SMEs, where top executives often engage in direct, hands-on management. The tasks that senior leaders undertake are central to the success of digital initiatives, encompassing the navigation of talent challenges, the implementation of adaptive organizational structures, and a strong emphasis on continuous learning [35].

Top Management Support (TMS) is widely recognized as the most essential organizational factor in maximizing digital technologies [36] enabling executives to drive DX through the identification and pursuit of digital opportunities. TMS also facilitates consensus among the top management team (TMT), aiding in the development of favorable assessments for executing bold, transformative initiatives. Furthermore, the diversity within the TMT has been shown to positively influence innovation, fostering greater creativity throughout the DX process [37]. Similarly, task-related fault lines within the TMT - divergent views on specific tasks - can enhance DX efforts by stimulating more dynamic decision making [38].

Effective leadership encourages employee engagement with DX, ultimately enhancing job performance and driving organizational alignment with digital goals [39]. As Wrede, et al. [40] observed, top management's influence permeates three levels within the organization: individual (personal comprehension of DX), organizational (formal structures and processes), and employee-level (informal communication and motivation). This multilevel impact reflects a sequence where top management decisions initially take shape at the executive level and progressively influence the entire organization.

3. Aims and Methods

The objectives of this study are threefold: To investigate the perceptions of top management in Vietnamese SMEs concerning DX, to analyze the impact of these perceptions on the implementation practices within their organizations, and to offer actionable recommendations for aligning DX initiatives with the strategic objectives of their firms. By understanding senior management's views and identifying the relationship between these perceptions and their strategic actions, the study aims to offer practical insights that enable Vietnamese SMEs to effectively navigate and leverage DX for sustainable growth and competitive advantage.

This study employs a qualitative research approach to gain in-depth, context-specific insights into the perceptions, opinions, and experiences of top managers regarding DX in Vietnamese SMEs. Qualitative research is well-suited to this objective as it allows for an exploration of complex human experiences, attitudes, and actions within a specific sociocultural context [41]. To achieve this, semi-structured interviews were chosen as the primary method, given their flexibility and suitability for exploratory research. Semi-structured interviews allow researchers to delve deeply into topics while maintaining the flexibility to explore emerging themes and unexpected insights [42]. Through this design, the study aims to collect rich and detailed qualitative data, enabling a nuanced understanding of how top managers in Vietnamese SMEs perceive and approach DX.

Data for this study were collected through semi-structured interviews, a common method in qualitative research that enables open-ended dialogue between researcher and participant. Interviews were conducted in person, with timing and location determined by participants' availability and preferences. Prior to each session, the interviewer provided an overview of the study and obtained consent to record the conversation. Participants were encouraged to freely share their thoughts and

experiences, with follow-up questions used as necessary to clarify or deepen responses. Upon completion, each interview was transcribed, with transcripts verified by participants to ensure accuracy.

This study used purposive sampling to select participants who are top management within Vietnamese SMEs. Purposive sampling is a non-probability sampling method commonly employed in qualitative research to select individuals with specific characteristics relevant to the research question [43]. The target group for this research included founders, CEOs, directors, and senior managers from various industries, each with at least two years of experience in managing Vietnamese SMEs. This criterion ensured that participants had sufficient expertise and could provide informed perspectives on DX practices and challenges within SMEs. A total of 15 interviews were conducted, with the number determined based on the principle of data saturation. According to Hennink and Kaiser [44] qualitative research with a homogeneous group typically reaches saturation within 9 to 17 interviews, allowing for meaningful conclusions without redundant data.

Thematic analysis was employed to analyze the qualitative data, following a systematic approach to identify patterns, develop themes, and interpret key insights from the interview transcripts [45]. This six-step process began with transcript generation and keyword identification, followed by coding and theme formation, which enabled the researcher to group similar ideas and concepts. After thorough analysis and interpretation, the final themes were organized into a conceptual framework that encapsulated the key perspectives and experiences of Vietnamese SME executives regarding DX. This method ensured a rigorous, detailed interpretation of the data and facilitated the identification of strategic insights that reflect the views of top management in Vietnamese SMEs on implementing DX.

4. Results and Discussion

4.1. Participant Profile and Background

According to the data from the 15 respondents, the predominant age group is 31-40, suggesting that most participants are mid-career professionals. On average, these managers have occupied their current positions for roughly 4-5 years, integrating innovative viewpoints with a comprehensive grasp of their duties. Moreover, they generally supervise 75-100 employees, indicative of their roles within SMEs. This demographic overview of age, experience, and firm size offers a comprehensive perspective on the managerial profiles involved in this study, reflecting their career stages and organizational roles.

Table 1.
Demographic and Professional Characteristics of Respondents.

Respondent	Industry	Role	Years in Current Role	Age Group	Educational Background	Company Size (Employees)
1	Engineering Technology	CEO	6	41-50	Master's	125
2	Semiconductor industry	CFO	4	31-40	Bachelor's	140
3	Software Development	CEO	4	31-40	Master's	120
4	Retail	Director	3	20-30	Bachelor's	75
5	IT Outsourcing	Founder	5	31-40	Bachelor's	90
6	IT Services & IT Consulting	CTO	6	41-50	Master's	50
7	Manufacturing	CMO	3	20-30	Master's	65
8	Blockchain services	CEO	2	20-30	Master's	130
9	Fintech	Director	2	20-30	Bachelor's	150
10	E-commerce	Founder	7	51-60	Bachelor's	90
11	Food & Beverage Manufacturing	COO	6	41-50	Bachelor's	85
12	Tourism	Director	5	31-40	Master's	60
13	Textile and garment	CMO	7	51-60	Master's	110
14	Logistics	Founder	4	31-40	Bachelor's	100
15	Software Products	CEO	5	31-40	Master's	40

4.2. Thematic Analysis

After generating a transcript from responses to ensure that raw data is preserved comprehensively and accurately, the author identified key keywords within each response to detect potential themes and principal aspects for analysis (Determining Keywords). Subsequently, the research team coded the data by labeling text segments with relevant keywords or key concepts, allowing for the grouping of similar responses (Choosing Codes). Finally, the author developed themes based on the selected codes, reflecting the main trends or central concepts emerging from the data (Forming Themes). Four thematic groups were synthesized: (1) Global Digital Landscape and Strategic Adaptation, (2) Optimizing Operations and Building Trust through Digital Transparency, (3) Generational Adaptation and Cultural Readiness for DX, and (4) Strategic Risk Management for Sustainable Digital Growth. The author then interpreted these themes to gain a deeper understanding of the respondents' perspectives, experiences, and opinions (Interpreting Themes).

4.2.1. Global Digital Landscape and Strategic Adaptation

Global Perspective on DX: SME leaders in Vietnam widely agree that DX is an inevitable global trend with practical benefits for businesses. As respondent 6 remarked, "As technology becomes increasingly ubiquitous, the world is evolving in its integration of technological applications into corporate operational management." This observation illustrates the broad

adoption of digital technologies globally, requiring businesses to adapt to stay competitive. Respondent 13 added, “DX is essential for all enterprises in an era characterized by digital competition, referred to as the digital landscape.”

Importance of Competing on a Global Scale: Some leaders emphasized the need for Vietnamese SMEs to learn from more advanced countries to maintain a competitive edge. Respondent 11 explained, “We ought to investigate this advancement more. For instance, in USA, Netherlands, Singapore, Denmark, and Finland, we should examine the employment practices within their respective industries.” This perspective highlights the importance of studying international standards and applying them within a local context.

Adjusting Business Models: Leaders also understand that DX extends beyond adopting new technologies; it requires adjusting or transforming business models. Respondent 5 described, “It pertains to the scenario in which a company creates software that we acquire for our own use. Consequently, the organization may require the recruitment of staff or modifications to its structure to accommodate the program. Nonetheless, we do not possess an autonomous system or financial resources to execute the proposed approach.” This insight reflects the financial and technological limitations SMEs face, especially when choosing appropriate tools.

The Cost and Choice of Software Solutions: Many leaders expressed concerns about balancing the choice between custom and pre-made software solutions. Respondent 15 commented, “Commercial software solutions may be developed in a generic fashion... software that is practical to create and implement, yet may not be universally relevant to all businesses.” This careful consideration in selecting technology highlights the need for tailored solutions, acknowledging that each business has specific requirements.

Superficial Approaches to DX: Several managers noted that misconceptions and superficial implementations of DX are prevalent among organizations. Respondent 5 observed, “In discussions of DX, we primarily rely on keywords. Few organizations have succeeded in achieving comprehensive objectives; most existing corporations merely engage in superficial activities.” This statement indicates that DX requires a long-term commitment rather than simply “purchasing software” and conducting training sessions.

Adapting Mindset for Effective Transformation: Shifting organizational mindset is a key factor in successful DX. Respondent 7 emphasized, “DX projects must alter individuals' mindsets and competencies for adaptation, rather than only instructing on the use of specific tools and technology.” This sentiment underscores the need to establish a strong digital-oriented within the organization before implementing technology.

Learning from International Success Stories: Some leaders pointed out that SMEs could leverage the experiences of international companies to create more innovative business models. Respondent 11 stated, “We envision ourselves as giants or as standing upon the shoulders of giants. What accounts for the extensive reach of Facebook, Google, and other platforms? Due to the protracted duration required to educate both the market and the users.” This comment suggests that SMEs can draw lessons from large corporations, avoiding resource waste by optimizing existing models instead of building from scratch.

Leveraging Pre-existing Tools to Maximize Efficiency: Leveraging existing tools is seen as an effective strategy for many businesses. Respondent 7 shared the benefits of using ready-made products like SaaS: “Currently, I depend on current products developed by others, akin to subscribing to Software as a Service (SaaS), which provides specific benefits.” This approach demonstrates how SMEs can enhance efficiency without significant investment in new technology development.

Ongoing Adjustments and Resilience: Leaders also recognize that DX is not an immediate solution but a continuous adjustment process. Respondent 13 explained, “DX is the essential strategy for resolving contemporary challenges through the use of obsolete or conventional business structures. In conventional business models, it is crucial to first identify shortcomings. Subsequently, shift to online channels and prioritize digitization.” This insight reflects that SMEs must not only initiate changes but also remain flexible in refining their approaches for sustained success.

The theme Global Digital Landscape and Strategic Adaptation provides an in-depth view of how Vietnamese SME leaders perceive and adapt to the global trend of DX. Leaders recognize the critical role of DX and carefully consider factors like cost, technological relevance, and mindset shifts to ensure long-term effectiveness. Perspectives on balancing custom software development with SaaS usage and learning from international corporations demonstrate SMEs' readiness to adjust business strategies to compete more effectively in a digitized environment.

4.2.2. Optimizing Operations and Building Trust through Digital Transparency

Integrating Digital Solutions for Operational Gains: Many SME leaders recognize the direct impact of DX on streamlining operational processes. Respondent 6 explained, “Employing a pre-existing solution would require training my personnel on software usage and compliance with the prescribed protocols, so altering my business operations.” This highlights how pre-existing digital solutions, when integrated thoughtfully, can reshape daily tasks and improve organizational efficiency by fostering standardized workflows.

Automation as an Efficiency-Boosting Strategy: Automation of routine, labor-intensive tasks is viewed by several leaders as an effective way to minimize errors and increase productivity. As Respondent 2 shared, “In prominent urban centers, particularly Ho Chi Minh City, numerous enterprises are undergoing DX, enhancing both operational efficiency and consumer experience.” This view reflects a belief that automating processes, especially in urban centers, is instrumental in elevating both internal efficiency and the quality of customer interactions.

Transparency Through Data and Process Management: Transparency in data handling and operational processes is seen as critical to building and sustaining trust among customers and stakeholders. Respondent 2 noted, “The data and information presented are accurate and uniform, resulting in enhanced transparency in financial transactions.” This emphasis on accuracy

and clarity in data processes not only builds credibility but also enhances trust across various operational areas, particularly in financial management.

Fostering Fairness and Accountability: Leaders observed that transparency also promotes accountability within the organization. Respondent 4 remarked, “DX eradicates emotions, guarantees transparency for all stakeholders, and safeguards customer rights.” By minimizing ambiguity, DX can protect customer interests and ensure fair practices, which in turn contributes to a loyal customer base. Respondent 8 shared a similar sentiment, “In conventional work practices, record manipulation is more straightforward. DX, however, diminishes this possibility by ensuring each transaction is precise and transparent.”

Cost Implications of Tailored Solutions: The challenge of adopting or customizing software solutions often brings added costs. Respondent 1 highlighted this by saying, “The issue lies with the plethora of tools available, making it challenging to determine which is preferable. Some organizations opt to acquire 'a shirt tailored to their specifications,' although in Vietnam, 'tailoring a shirt' incurs a higher expense than 'acquiring a ready-made shirt.’” This suggests that SMEs may face high costs in customizing software to meet their unique needs, especially if pre-built solutions do not align perfectly with their operations.

Need for Integrated Solutions to Avoid Fragmentation: Leaders indicated that DX within only certain departments can disrupt rather than optimize the organization’s processes. Respondent 15 commented, “DX is a significant and comprehensive process. If one department executes it and another does not, why is it termed a DX? The company comprises multiple departments, each possessing distinct methods and records.” This underscores the need for seamless digital integration across all departments to avoid operational silos and ensure cohesion.

Integration Through APIs and Software-as-a-Service (SaaS): For businesses that use multiple software solutions, integrating these tools is essential to maintain operational consistency. Respondent 10 remarked, “The industrial trend is toward software integration, wherein multiple programs are consolidated or interconnected. Rather than employing two software applications independently, they are interconnected to synchronize throughout the customer's journey.” Additionally, Respondent 1 observed, “Software integration is now achievable via public APIs. Utilizing software and APIs for rent is a more economical alternative to creating a comprehensive solution from the ground up.” This approach reflects a strategic move towards utilizing SaaS and APIs to enable synchronization and cost-efficiency in operations.

Commitment to Transparent Practices: Transparency is increasingly seen as fundamental to long-term growth. Respondent 3 mentioned, “DX can only be properly accomplished through complete transparency from input to output.” Leaders highlighted that transparency not only ensures regulatory compliance but also aligns with ethical business practices. Respondent 4 elaborated, “The core of DX is rooted in fostering transparency, a notion that is not embraced by its detractors. Some people or family enterprises are reluctant to embrace DX due to concerns about losing their established practices.” This indicates that while transparency can be a barrier for some, it remains critical for establishing credibility and ethics within the industry.

Government Initiatives and the Role of Transparent Policies: Leaders also noted that government initiatives increasingly support transparency in DX. Respondent 9 mentioned, “I notice that the government is currently conducting all operations online. Paying taxes, submitting tax declarations, and completing electronic invoicing represent a significant advancement.” This shows how transparent and digital processes, supported by public policy, facilitate greater efficiency and compliance for SMEs.

The theme Optimizing Operations and Building Trust through Digital Transparency illustrates how Vietnamese SME leaders view DX as a powerful tool for enhancing operational efficiency and fostering trust through transparent practices. While operational benefits are noted, leaders also express concerns about the high costs of customization and the need for integrated, seamless solutions across departments. Moreover, transparency emerges as both a strategic and ethical imperative, supported by technology and increasingly backed by government initiatives, which together serve to strengthen trust and compliance within the business landscape.

4.2.3. Generational Adaptation and Cultural Readiness for DX

Challenges Faced by Older Generations: Many participants recognized that the process of DX poses unique challenges across generations, especially for older leaders who may be less accustomed to new technology. Respondent 12 noted, “Vietnamese firms who acquire system software receive it solely in English, lacking any Vietnamese version. Do you possess faith in the linguistic capabilities of Vietnamese entrepreneurs born between 1960 and 1970? Individuals aged 40, 45, or 50 typically exhibit a propensity for stability, oppose change, and evade transitions.” This observation reflects a general hesitation among older generations to adapt swiftly to DX, driven by both linguistic and psychological barriers.

Differences in Openness to Digital Change: Additional participants noted that younger individuals are generally more open to adopting new technologies compared to those in the 40–60 age range. Respondent 8 highlighted, “The perspectives of adults aged 40 to 60 vary. I am ready for digital innovation; nevertheless, rapid adoption of these changes should not be anticipated from individuals aged 40 to 50.” Such sentiments emphasize the need for organizations to accommodate varying levels of openness to technology across age groups, perhaps through tailored training or gradual transition processes.

Contributions of Younger Employees: The younger generation is perceived as a crucial driving force in the DX process. As Respondent 3 explained, “Although older generations may lack technological proficiency, it is imperative to nurture appropriate persons and guarantee that future generations remain informed.” This view underscores the importance of recruiting younger, tech-proficient employees who are more adaptable to rapid technological changes.

Succession Planning for Long-Term Digital Success: Participants also highlighted the importance of preparing the younger generation to eventually take over digital responsibilities. Respondent 7 remarked, “Leaders' failure to recognize

obsolete techniques or the lack of successors in their organization will create difficulties in adjusting to changing paradigms.” This suggests that developing capable successors who can continue driving digital initiatives is essential for ensuring sustainability in the digital era.

Culture as a Catalyst or Barrier: A robust organizational culture is viewed as either a critical enabler or a potential barrier to effective DX. Respondent 7 observed, “Prior to advocating for the adoption of a particular instrument, it is essential to implement a thorough transformation of the organization's corporate culture.” This indicates that successful DX requires an organizational culture that is receptive to change and innovation. Without this, even the best digital tools may face resistance from employees.

Top-Down and Bottom-Up Approaches: The digital readiness of an organization's culture often hinges on the approach taken by management. Respondent 13 explained, “The adopted method is contingent upon the dominant culture inside each firm. Large organizations frequently choose a top-down methodology, wherein decisions are formulated at the upper echelons and disseminated below.” Conversely, a bottom-up approach, which encourages shared understanding and engagement, may be more effective in smaller or more flexible organizations. Both approaches, however, require strong cultural alignment with digital objectives.

Overcoming Employee Resistance: Resistance to digital initiatives can emerge at different levels within the organization. Respondent 12 described, “Employee reluctance to input data may arise from a lack of familiarity with the tools. Certain employees may regard customers as their own rather than those of the organization.” This reflects a common cultural challenge where employees might fear losing control or independence with the introduction of new digital tools. Addressing this requires a culture of trust and clear communication on the benefits of DX for both the organization and individual roles.

DX Committees and Cross-Departmental Collaboration: Some participants discussed the value of establishing dedicated committees to guide DX. Respondent 13 recommended, “Organizations may benefit from establishing a specialized committee for DX. Leaders at all tiers should demonstrate dedication to this initiative.” This underscores the need for cultural buy-in and collaborative effort across departments to ensure that the digital strategy is implemented effectively.

Adapting Culture to Align with Digital Goals: Finally, for organizations to maximize the benefits of DX, cultural alignment with digital objectives is essential. Respondent 4 shared, “Some people or family enterprises resist adopting DX due to concerns about losing their established practices.” This underscores the necessity of adapting organizational culture to support digital goals, particularly in environments where traditional practices prevail.

The theme of Generational Adaptation and Cultural Readiness for DX highlights how generational dynamics and organizational culture influence the success of digital initiatives within Vietnamese SMEs. While older generations may show reluctance towards adopting digital tools, younger employees are often viewed as the drivers of digital change, emphasizing the need for succession planning and skills development. Additionally, a strong and adaptive culture, open to innovation and change, is recognized as essential for overcoming resistance and fostering a collaborative approach to DX. Establishing dedicated committees and aligning cultural practices with digital objectives can further enhance the readiness and effectiveness of organizations in their digital journey.

4.2.4. Strategic Risk Management for Sustainable Digital Growth

Risk of Disrupting Established Routines: The term “transformation” inherently implies a shift from existing routines to new practices, which can introduce significant disruptions. Respondent 5 remarked, “We understand that DX has advantages; yet, not everyone possesses the courage to invest financially in it, and not all DX programs yield favorable outcomes.” This observation reflects a common hesitancy among businesses to fully commit resources to DX, particularly in light of uncertain outcomes. Some sectors have experienced clear benefits, while others have encountered setbacks, reinforcing the need for cautious, strategic planning.

Resistance Due to Established Operational Success: For businesses with long-standing routines, DX may seem unnecessary or risky. Respondent 6 explained, “Enterprises operate in accordance with their defined business models. It is indefensible to compel people to abandon their current model and embrace a new one based only on theoretical considerations.” This sentiment highlights the reluctance to abandon functional business models that have consistently supported operational success.

Complexities in Assessing Necessary Changes: Identifying areas that require improvement can be challenging, as organizations may struggle to distinguish between practices that are functioning well and those needing adjustment. Respondent 7 noted, “The challenge resides in identifying which elements necessitate correction and which are operating satisfactorily.” This reflects the risk of making changes that may disrupt successful practices, which underscores the need for careful evaluation before implementing new digital initiatives.

The Risks of Overhauling Versus Incremental Changes: Large-scale transformations may require extensive restructuring, which can be daunting and disruptive. Respondent 7 added, “The prevalent strategy appears to entail the establishment of new infrastructure and the subsequent transfer of all workers, rather than endeavoring to rehabilitate the current system.” This approach to transformation reveals a critical risk in attempting sweeping changes rather than incremental adjustments, which could potentially destabilize established processes.

Need for Structural Realignment: Implementing DX often necessitates adjustments to an organization's framework and operations, which can be perceived as a risk, particularly for long-established companies. Respondent 7 pointed out that “Implementing DX necessitates the reorganization or realignment of the organization's structure and operations.” For mature companies with ingrained processes, realignment can be complex and may disrupt existing efficiency if not executed thoughtfully.

Balancing Stability and Innovation: Balancing the stability of existing operational models with the drive for innovation remains a fundamental challenge in DX. Respondent 7 emphasized that "Individuals are confined to their regular routines. Their profession has demonstrated sustained success for nearly two decades." This highlights a risk inherent in transformation efforts - overturning established practices may not only destabilize operations but could also reduce morale if employees do not see immediate or clear benefits from the changes.

The theme Strategic Risk Management for Sustainable Digital Growth captures the cautious approach that Vietnamese SME leaders adopt when implementing DX. While DX offers potential benefits, the inherent risks of disrupting established routines and misaligning organizational structures highlight the importance of careful, strategic planning. Leaders recognize the value in incremental, phased changes to reduce the likelihood of destabilizing operations, and emphasize the importance of creating a resilient framework that supports sustainable, long-term growth. Balancing the stability of existing practices with innovative changes remains a key consideration for companies striving to adopt DX sustainably.

4.3. Summary of Findings and Discussion

Managers consider DX a strategic necessity in an increasingly competitive global landscape. While they recognize its potential to enhance competitive advantage and facilitate business model innovation, they caution that not all enterprises require immediate DX implementation. This corresponds with research indicating that DX is increasingly prioritized by numerous worldwide corporations. Managers in Vietnam, particularly within SMEs, frequently consult best practices from developed economies while scrutinizing the appropriateness of the timing and methods of change in relation to their own circumstances. Consequently, firms must foster a flexible attitude that harmonizes global trends with local circumstances, enabling them to explore DX in manners pertinent to their particular industry and scale.

Transparency became a crucial element in DX. Although DX enhances transparency in financial, operational, and data management procedures, several managers express apprehension regarding its effects on conventional operational methods. Transparency is regarded as a quality that fosters trust; nevertheless, it may also induce concern in organizations characterized by family ownership or centralized management structures. Prior research indicates that openness may serve as a "double-edged sword," facilitating efficiency enhancements while disrupting conventional workflows and organizational culture, especially in SMEs. A culture of transparency necessitates incremental transformation and dedication from both management and staff. Therefore, it is imperative for Vietnamese SMEs to establish a clear roadmap grounded in ongoing communication and the cultivation of a trust-based environment. This enables stakeholders to comprehend the advantages of transparency and engage in the transformation process.

Corporate culture and generational differences play a crucial role in shaping DX adoption in SMEs. Junior managers are generally more amenable to digital technologies, whereas older leaders may exhibit greater caution due to their dependence on conventional methods and restricted digital competencies. This corresponds with prior studies indicating that generational diversity within a company might influence the speed and adoption of DX. Senior managers with extensive tenure find adaptation to change more difficult, whereas younger employees perceive digitalization as crucial for efficiency and competitiveness. Therefore, SMEs could gain from specialized change management programs that promote cross-generational collaboration, emphasizing reskilling initiatives for senior personnel while utilizing the adaptability of younger employees to propel transformation efforts.

Managers exhibited apprehension over DX, especially concerning expenses, implementation intricacies, and possible disruptions. Numerous individuals underscored the necessity of comprehensive risk evaluation before investing in emerging technologies, interrogating if the advantages warrant the expenditures. This caution corresponds with research highlighting the necessity of prudent investment in DX, particularly for resource-constrained SMEs. Despite recognizing the possibilities of DX, managers continue to express concerns over scalability and sustainability. Consequently, SMEs had to adopt a phased strategy for DX, initiating with trial projects and assessing results prior to comprehensive deployment. Informed decision-making can be facilitated by employing tools such as cost-benefit analysis and consulting with DX specialists.

5. Conclusions

This study offers a comprehensive analysis of the perspectives and strategic insights of senior managers in Vietnamese SMEs concerning DX. The study utilized a qualitative research approach to investigate intricate attitudes and experiences within Vietnam's distinct sociocultural environment. The utilization of semi-structured interviews as the principal strategy enabled comprehensive conversations, encapsulating the intricate viewpoints of managers from diverse industries. Key topics were established through thematic analysis, demonstrating how perceptions affect DX implementation techniques and providing practical advice that correspond with the strategic objectives of SMEs.

Senior managers regard DX as a vital strategic trend necessary for sustaining competitiveness and improving operational efficiency. Nevertheless, the findings emphasize that DX should be approached judiciously, customized to the specific environment and preparedness of each firm. Leaders articulated apprehensions regarding risks, expenses, and cultural ramifications, which influence their inclination towards a slow, staged strategy for DX. The report also emphasizes the impact of demographic disparities, indicating that younger employees are more amenable to DX than their older counterparts. This study focuses on two main research objectives: comprehending senior managers' perspectives of DX and evaluating the influence of these perceptions on DX implementation.

The study offers pragmatic advice for integrating DX activities with the strategic goals of SMEs. Businesses must reconcile global best practices with culturally attuned, regional strategies to guarantee relevance and practicality. Establishing a transparent culture via incremental change and ongoing communication is vital for cultivating corporate trust. SMEs should

contemplate establishing cross-generational teams and providing reskilling initiatives to improve organizational cohesion. A gradual strategy for DX investment will guarantee sustainability and scalability.

This study has considerable ramifications for both practitioners and policymakers. The findings provide SME managers with a strategic framework for cautiously and flexibly implementing DX in accordance with organizational requirements and objectives. Policymakers can derive significant lessons, especially regarding the necessity for supportive legislative frameworks that tackle the distinct issues encountered by Vietnamese SMEs in DX.

Nonetheless, the study possesses specific limitations. The sample comprised 15 managers from Vietnamese SMEs, potentially limiting generalizability to other situations or larger organizations. Furthermore, qualitative data depend on subjective interpretation, which, even with thorough theme analysis, may create bias. Future research may broaden the sample size and do comparison studies across various locations to enhance comprehension of DX in many circumstances.

Future study may adopt a quantitative methodology to substantiate these findings on a broader scale across many businesses. Longitudinal studies may investigate the evolution of SMEs during their DX journey, elucidating the long-term effects and changes in perception. Investigating particular DX tools and their efficacy in SMEs would yield practical insights for focused implementations.

This study elucidates the role of DX in Vietnamese SMEs, highlighting the necessity of aligning DX activities with corporate culture, generational disparities, and strategic goals. As DX reshapes the competitive environment, it is imperative for SMEs to implement adaptable and sustainable strategies that harmonize innovation with practicality. This research establishes a basis for subsequent investigations into DX in emerging economies, providing essential insights to assist Vietnamese SMEs and analogous entities in navigating the intricacies of DX.

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