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## **Business Model Innovation among Vietnamese SMEs in the Context of Digital Transformation**

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### **Abstract**

This paper examines business model innovation among Vietnamese small and medium-sized enterprises (SMEs) in the context of digital transformation. Although digital technologies create opportunities for SMEs to redesign value propositions, customer interfaces, operating architectures, partnership systems, and revenue mechanisms, many Vietnamese firms still approach digital transformation as an isolated technology-adoption project rather than a strategic renewal process. Drawing on the business model innovation literature, dynamic capability theory, resource-based theory, digital transformation studies, and recent policy evidence on Vietnam, the paper develops an integrated analytical framework explaining how digital transformation triggers, enables, and constrains business

model innovation in SMEs. The study uses a conceptual and narrative review method combined with contextual policy analysis. Its main contribution is a multi-layer framework that links digital readiness, entrepreneurial orientation, sensing-seizing-reconfiguring capabilities, ecosystem participation, and institutional support to five forms of business model innovation: value proposition renewal, digital customer engagement, process and data-driven operations, platform-based collaboration, and revenue model redesign. The paper provides implications for SME owners, managers, digital-service providers, and policymakers seeking to move from basic digitization toward scalable and resilient digital business models.

**Keywords:** Business Model Innovation, Digital Capabilities, Digital Transformation, Dynamic Capabilities, SMEs, Vietnam

### **1. Introduction**

Digital transformation has become a central strategic issue for contemporary firms because it changes not only the tools used to conduct business but also the logic through which firms create, deliver, and capture value. Cloud computing, e-commerce platforms, social media, artificial intelligence, data analytics, enterprise resource planning systems, digital payments, logistics technologies, and online customer relationship management systems have reduced the cost of coordination and expanded the boundaries of competition. For large corporations, the challenge is often the renewal of complex legacy systems and the orchestration of digital ecosystems. For SMEs, the challenge is more basic but equally strategic: how to use limited resources to redesign a viable business model while coping with financial constraints, skill shortages, fragmented data, and volatile markets.

The topic is particularly relevant for Vietnam. The country has pursued a national digital transformation agenda built around digital government, digital economy, and digital society. Decision No. 749/QĐ-TTg, issued in 2020, approved the National Digital Transformation Program through 2025 with orientations toward 2030. Since then, ministries, local governments, industry associations, banks, technology firms, and platform operators have launched initiatives to accelerate digital adoption among enterprises. At the same time, SMEs remain the dominant population of firms in the Vietnamese economy. International assessments have emphasized that SMEs constitute the overwhelming majority of Vietnamese enterprises, but their contributions to employment, value added, and productivity remain constrained by small scale, informal practices, limited managerial capability, and restricted access to finance and advanced technology.

This mismatch creates both a policy problem and a research problem. On the one hand, digital transformation is expected to raise enterprise competitiveness, productivity, and resilience. On the other hand, technology adoption does not automatically generate strategic benefits. Many SMEs purchase software, join online marketplaces, or open social-commerce channels without changing the deeper configuration of their activities, partners, capabilities, cost structures, and revenue logic. The

result is partial digitization rather than digital transformation. A firm may use digital tools to communicate with customers yet still rely on manual inventory control, fragmented accounting, informal procurement, and non-systematic data use. Another firm may invest in digital marketing but fail to redesign its product offering or customer experience. Therefore, business model innovation is the missing strategic link between digital technology adoption and improved enterprise performance.

The concept of a business model refers to the architecture of value creation, delivery, and capture. It specifies what value the firm offers, to whom it offers that value, how it organizes resources and activities, how it collaborates with partners, and how it converts value into revenue and profit. Business model innovation occurs when a firm introduces meaningful changes in one or more of these interdependent elements. In the digital era, business model innovation may take many forms: a manufacturing SME may shift from product sales to service-enhanced solutions; a retail SME may combine offline stores with livestream commerce and mobile payments; a tourism SME may redesign its customer journey through digital booking, personalized recommendations, and data-based reputation management; a logistics SME may use real-time tracking and platform coordination to expand service reliability; and a professional-service SME may package expertise into digital products, subscriptions, or online consulting.

For Vietnamese SMEs, business model innovation is not simply a matter of copying digital models from advanced economies. The Vietnamese context includes specific institutional, market, and organizational features. Many SMEs are family-owned, resource-constrained, and strongly dependent on owner-manager decisions. Managerial practices are often experience-based rather than data-based. Digital adoption varies significantly across regions, sectors, and firm sizes. Manufacturing suppliers face pressure from lead firms and global value chains; retailers and service firms face pressure from e-commerce platforms and digitally empowered consumers; agricultural and food-processing firms face pressure related to traceability, quality control, and logistics. These conditions require an analytical framework that connects international theories with Vietnam-specific realities.

This paper addresses the following research question: How can Vietnamese SMEs innovate their business models in the context of digital transformation, and what managerial and policy conditions are required to support that process? To answer this question, the paper pursues four objectives. First, it synthesizes the theoretical foundations of business model innovation and digital transformation. Second, it identifies the mechanisms through which digital technologies reshape SME business models. Third, it develops an analytical framework suitable for Vietnamese SMEs. Fourth, it derives managerial implications and policy recommendations that can help SMEs move beyond basic digitization toward strategic transformation.

The paper is designed as a conceptual research article and integrative review rather than an empirical survey. This approach is appropriate because the phenomenon remains emergent, heterogeneous, and under-theorized in Vietnam. The paper does not claim to estimate causal effects or measure the statistical impact of digital transformation on firm performance. Instead, it systematizes the literature, interprets contextual evidence, and proposes a framework

and propositions for future empirical testing. Its contribution is therefore theoretical, analytical, and practical. Theoretically, it connects business model innovation, dynamic capabilities, and digital transformation in an SME context. Analytically, it identifies five layers of digital business model innovation. Practically, it offers a roadmap for SME managers and policymakers.

The remainder of the paper is organized as follows. Section 2 reviews the literature, presents the theoretical framework, and explains the research method. Section 3 presents the results of the analysis by developing a framework, identifying the main innovation patterns, and discussing barriers and enablers. Section 4 discusses the findings, derives managerial and policy implications, and presents the conclusion. Section 5 lists the references used in the paper.

## **2. Literature Review, Theoretical Framework and Method**

### **2.1 Business Models and Business Model Innovation**

The business model concept has become an important analytical device in strategic management, entrepreneurship, and information systems research. It is broader than a revenue model and more operational than a corporate strategy. A strategy explains how a firm positions itself against competitors and achieves advantage; a business model explains how the firm configures activities and exchanges to create and capture value. Amit and Zott conceptualized value creation in e-business as a system of interdependent activities involving novelty, lock-in, complementarities, and efficiency. Teece argued that a business model articulates the logic of value creation and value capture, while Osterwalder and Pigneur popularized a practical canvas that decomposes the business model into customer segments, value propositions, channels, customer relationships, revenue streams, key resources, key activities, key partnerships, and cost structure.

Business model innovation differs from product innovation, process innovation, and organizational innovation, although it may incorporate all three. A firm can introduce a new product without changing its business model. It can improve a production process without changing its customer interface or revenue mechanism. Business model innovation occurs when changes in product, process, organization, customer relationships, partnerships, and revenue logic interact to form a new value-creation architecture. For SMEs, this distinction is essential. Many SMEs think of innovation primarily as new products or new marketing channels, but digital competition increasingly rewards firms that redesign the whole configuration of activities rather than isolated components.

The literature identifies several dimensions of business model innovation. First, value proposition innovation changes what customers receive and why the offering is attractive. In digital contexts, value propositions often become more personalized, data-rich, convenient, transparent, and service-oriented. Second, value delivery innovation changes how the offering reaches customers. Digital platforms, omnichannel retail, mobile applications, online communities, and logistics integration are typical mechanisms. Third, value creation innovation changes the resources, processes, and partnerships used to produce value. This includes automation, data analytics, open innovation, supplier integration, and ecosystem collaboration. Fourth, value capture innovation changes how

the firm earns revenue and sustains profitability. This may include subscription pricing, freemium models, commission-based platform models, service contracts, data-enabled pricing, and bundled product-service offerings.

From a managerial perspective, business model innovation is difficult because it requires experimentation under uncertainty. SMEs rarely possess large research and development departments, dedicated transformation teams, or sophisticated data infrastructure. Their advantage is flexibility, entrepreneurial speed, and proximity to customers. Their disadvantage is limited slack resources and weak formalization. Business model innovation therefore often emerges through iterative learning rather than formal strategic planning. An SME may begin with a simple digital marketing experiment, learn from customer data, redesign its product bundle, change its distribution channel, integrate digital payment, and later restructure its inventory and partner network. The process is cumulative and path-dependent.

A core insight from the business model innovation literature is interdependence. Changes in one element produce consequences for other elements. A retailer joining an e-commerce platform must adjust pricing, inventory, packaging, delivery, customer service, and return policies. A manufacturer offering digitally supported after-sales services must develop data collection, field-service coordination, and new revenue mechanisms. A tourism firm selling online experiences must redesign storytelling, booking, payment, and reputation management. For this reason, the performance effect of digital adoption depends on whether the firm can align business model components.

## 2.2 Digital Transformation and SMEs

Digital transformation is frequently used as a broad term, but a precise distinction is necessary. Digitization refers to the conversion of analog information into digital form. Digitalization refers to the use of digital technologies to improve specific business processes. Digital transformation refers to a more profound organizational change in which digital technologies alter business models, organizational routines, customer value, and competitive positioning. A firm that scans paper invoices has digitized information. A firm that uses accounting software has digitalized a process. A firm that integrates accounting, inventory, customer data, online sales, and supplier coordination into a new business model is undergoing digital transformation.

For SMEs, digital transformation is shaped by three characteristics. The first is resource scarcity. SMEs have limited capital, managerial bandwidth, specialized human resources, and time to experiment. Digital projects must therefore be staged and linked to immediate value. The second is owner-manager centrality. In many SMEs, strategic decisions are concentrated in the founder or family owner. Digital transformation depends on the owner-manager's perception of opportunity, risk tolerance, learning orientation, and willingness to change routines. The third is ecosystem dependence. SMEs often rely on external providers, platforms, banks, logistics firms, government support programs, and larger customers. Their transformation is thus partly internal and partly relational.

Digital technologies can help SMEs overcome some disadvantages of scale. Cloud services reduce the need for large upfront IT investment. Social media and e-commerce platforms expand market access. Digital payments and

fintech services can reduce transaction costs and improve transparency. Data analytics can help firms understand customer behavior and manage inventories. Enterprise systems can improve operational control. Artificial intelligence tools can support content creation, demand forecasting, translation, customer service, and decision support. However, these opportunities are unevenly realized. SMEs may lack the skills to select appropriate tools, integrate systems, protect data, or convert digital data into managerial insight.

OECD analysis emphasizes that SME digitalization can improve performance, resilience, productivity, innovation, and competitiveness, but smaller firms continue to lag because of awareness gaps, internal resource constraints, skill deficiencies, and financial limitations. These barriers are highly relevant to Vietnam. Vietnamese SMEs operate in a rapidly digitalizing market but differ in readiness. Urban service firms may adopt social commerce quickly, while small manufacturers may digitalize more slowly because production systems are asset-intensive and supplier relationships are less standardized. Firms linked to foreign direct investment supply chains may face stronger pressure to improve traceability, quality management, and data reporting than purely domestic firms.

In Vietnam, the digital transformation agenda is driven by both market forces and policy interventions. Consumers increasingly use smartphones, e-wallets, online marketplaces, delivery platforms, and social networks. Public agencies promote e-government, e-invoicing, digital signatures, online tax filing, digital identity, and digital public services. Banks and fintech firms promote digital finance. Technology providers offer cloud, enterprise software, cybersecurity, and platform solutions. Nevertheless, the diffusion of digital tools does not automatically solve SME productivity challenges. The central issue is whether SMEs can integrate digital tools into coherent business models that improve value creation and value capture.

## 2.3 Theoretical Foundations

This paper draws on four theoretical perspectives. The first is the resource-based view. According to this perspective, sustainable competitive advantage depends on resources and capabilities that are valuable, rare, difficult to imitate, and organizationally embedded. Digital technologies themselves are rarely a source of sustained advantage because they can be purchased by competitors. Advantage arises when firms combine digital tools with customer knowledge, operational routines, brand reputation, supplier relationships, data assets, and managerial capabilities. For SMEs, this means that digital transformation should not be interpreted as the acquisition of software but as the development of firm-specific digital capabilities.

The second perspective is dynamic capability theory. Dynamic capabilities are the firm's abilities to sense opportunities and threats, seize opportunities through investment and organizational action, and reconfigure resources as conditions change. Digital transformation requires all three capabilities. SMEs must sense changes in customer behavior, platform ecosystems, regulatory requirements, and technological possibilities. They must seize opportunities by allocating resources, redesigning products, training employees, and forming partnerships. They must reconfigure routines, governance, data flows, and

revenue mechanisms. Dynamic capabilities are particularly important in volatile environments because static resources can quickly lose value.

The third perspective is the activity-system view of business models. This perspective emphasizes that a business model is a system of interdependent activities rather than a list of isolated elements. Digital transformation changes activity systems by altering who performs activities, how activities are connected, and how information flows across boundaries. Platform participation can shift sales, promotion, payment, logistics, and customer feedback into a digitally mediated ecosystem. Data integration can connect procurement, inventory, sales, and finance. Artificial intelligence can modify content production, customer service, and forecasting. Business model innovation occurs when these activity changes create a new architecture of value.

The fourth perspective is institutional and ecosystem theory. SMEs do not transform in isolation. Their behavior is shaped by regulations, digital infrastructure, government programs, industry norms, platform rules, financial systems,

and the availability of service providers. In emerging economies, institutional gaps can create friction in digital transformation. Unclear data governance, uneven cybersecurity awareness, limited digital skills, and differences in local infrastructure can reduce adoption. Conversely, supportive institutions can lower experimentation costs through training, standards, subsidies, advisory services, and shared digital platforms. Vietnam’s policy agenda therefore matters not only as a background condition but as an active determinant of SME business model innovation.

Taken together, these theories suggest that digital business model innovation in SMEs is a capability-building and ecosystem-mediated process. It is not linear. It does not begin and end with technology adoption. It involves interpretation, experimentation, resource orchestration, organizational learning, and external collaboration. The analytical framework developed in this paper uses these theoretical insights to explain how Vietnamese SMEs can move from simple digitization to strategic business model renewal.

**Table 1:** Main Theoretical Perspectives Used in the Paper

Perspective	Core Assumption	Relevance to SME Digital Transformation	Implication for Business Model Innovation
Resource-based view	Competitive advantage depends on valuable and embedded resources and capabilities.	Digital tools create value when combined with customer knowledge, routines, data, and managerial capability.	SMEs should build firm-specific digital capabilities rather than merely buying generic software.
Dynamic capability theory	Firms need to sense, seize, and reconfigure resources under change.	Digital transformation requires opportunity recognition, investment, and reconfiguration of activities.	Business model innovation should be managed as iterative strategic renewal.
Activity-system view	A business model is a system of interdependent activities.	Digital technologies change the connections among sales, operations, logistics, finance, and customer service.	SMEs must align changes across value proposition, delivery, creation, and capture.
Institutional and ecosystem theory	Firm behavior is shaped by rules, infrastructure, platforms, and support systems.	Vietnamese SMEs depend on digital infrastructure, public policy, platforms, finance, and technology providers.	Business model innovation requires ecosystem participation and enabling policy conditions.

**2.4 Research Gaps**

Despite extensive research on digital transformation and business model innovation, four gaps remain important. First, much of the literature focuses on large firms, platform leaders, or technology-intensive companies. SMEs are often treated as smaller versions of large firms, although their resource base, governance structure, decision process, and risk profile differ significantly. A framework suitable for large corporations cannot be transferred mechanically to SMEs.

Second, many studies of SME digitalization emphasize adoption barriers or technology use, such as website adoption, e-commerce participation, cloud computing, or social media marketing. These studies are valuable but often stop at the process level. They do not explain how technologies reshape the business model as an integrated value architecture. The strategic question is not whether SMEs use digital tools, but whether digital tools change what they sell, how they interact with customers, how they coordinate activities, and how they capture value.

Third, the literature on business model innovation is still weakly contextualized in emerging economies. Institutional environments, informality, financing constraints, public digital infrastructure, platform dependence, and state-led digital transformation programs can substantially influence SME behavior. Vietnam represents a useful context because

it combines rapid digital-market growth, strong government commitment, active platform development, and a large SME sector with productivity and capability constraints.

Fourth, existing research has not sufficiently connected micro-level managerial capabilities with macro-level policy support. SME digital transformation is often described either as a managerial problem or as a policy agenda. In practice, both levels interact. Public programs may provide training, subsidies, standards, and infrastructure, but their effectiveness depends on SME absorptive capacity and willingness to redesign business models. Conversely, managerial initiatives may fail if infrastructure, finance, skills, and regulatory support are weak. This paper addresses these gaps by integrating firm-level and ecosystem-level factors.

**2.5 Method**

The paper uses a conceptual research design based on an integrative narrative review and contextual policy analysis. This design is suitable when the objective is to synthesize fragmented knowledge, clarify theoretical relationships, and develop a framework for an emergent phenomenon. The study does not use primary survey data, interviews, or econometric estimation. Instead, it builds an analytical argument from peer-reviewed literature, policy documents, and institutional reports relevant to business model

innovation, digital transformation, SMEs, and Vietnam.

The review followed three steps. First, the author identified core theoretical streams: business model innovation, dynamic capabilities, digital transformation, SME digitalization, and digital ecosystems. Seminal and recent studies were selected based on relevance, conceptual influence, and citation significance. Second, the author reviewed policy and contextual evidence related to Vietnamese SMEs and the national digital transformation agenda, including materials from the Government of Vietnam, OECD, World Bank, and Asian Development Bank. Third, the author synthesized the literature into a framework that links antecedents, mechanisms, innovation patterns, and outcomes.

The analytical procedure was interpretive rather than statistical. Concepts were compared across theoretical streams, and recurring mechanisms were extracted. Particular attention was paid to the distinction between technology adoption and business model innovation. The framework was then adapted to the Vietnamese context by considering firm size, sectoral heterogeneity, owner-manager dominance, platform dependence, digital skills, access to finance, and institutional support. The outcome of this method is a set of analytical findings and research propositions that can guide future empirical work.

The scope of the paper is limited to SMEs operating in Vietnam, including manufacturing, trade, services, tourism, logistics, agriculture-related businesses, and professional services. Micro-enterprises and household businesses are relevant to the broader Vietnamese business landscape, but the paper focuses on formally registered SMEs because business model innovation requires organizational boundaries, managerial decision-making, and measurable value-capture mechanisms. Nevertheless, several insights may also apply to high-growth household businesses that are transitioning toward formal enterprise status.

As with any conceptual paper, the validity of the findings depends on logical coherence, literature coverage, and contextual relevance rather than statistical generalization. To strengthen analytical rigor, the paper distinguishes between established theoretical claims, context-specific observations, and propositions for future testing. It avoids presenting illustrative examples as empirical proof. The framework should therefore be read as a structured explanation and research agenda, not as a completed empirical model.

### 3. Results

#### 3.1 Digital Transformation as a Trigger of Business Model Innovation

The first result of the analysis is that digital transformation triggers business model innovation through five interrelated mechanisms: market access expansion, information transparency, process integration, ecosystem connectivity, and data-driven learning. These mechanisms help explain why the adoption of digital technologies may lead to business model change, but only when the firm reconfigures its value architecture.

Market access expansion occurs when digital channels reduce geographic and temporal constraints. SMEs can reach customers beyond their local markets through e-commerce platforms, social media, digital advertising, online booking systems, and cross-border marketplaces. However, market access alone is not business model innovation. It becomes business model innovation when the

firm changes its customer segmentation, value proposition, channel strategy, pricing, and after-sales service. For example, a local specialty-food SME may move from selling to nearby retailers to building a direct-to-consumer model based on storytelling, traceability, subscription boxes, and online community engagement.

Information transparency is the second mechanism. Digital systems make prices, customer feedback, delivery times, product quality, and supplier performance more visible. Transparency increases competition but also enables differentiation. SMEs that can use digital information to build trust, prove quality, personalize service, and respond quickly to complaints may strengthen customer relationships. In Vietnam, this is especially important in food, tourism, education, healthcare-related services, construction materials, and other sectors where trust and reputation are decisive.

Process integration is the third mechanism. Many SMEs suffer from fragmented internal processes. Sales data, inventory records, accounting information, and supplier orders may be stored separately or handled manually. Digital transformation creates value when these processes are connected. Integrated systems reduce errors, improve decision speed, and support better cash-flow management. Business model innovation emerges when integration enables new service promises, such as faster delivery, customized production, reliable availability, transparent warranties, or data-based maintenance.

Ecosystem connectivity is the fourth mechanism. Digital platforms and networks allow SMEs to collaborate with logistics providers, financial institutions, suppliers, freelancers, technology vendors, and lead firms. This can reduce the need for internal ownership of all resources. A small retailer can outsource delivery, use platform analytics, access digital payments, and obtain working-capital services. A manufacturer can share data with suppliers and customers. Yet ecosystem participation also creates dependence on platform rules, commissions, algorithms, and data access. SMEs must therefore manage the trade-off between reach and dependency.

Data-driven learning is the fifth mechanism. Digital interactions generate data about customers, products, operations, and partners. When SMEs develop the capability to interpret and act on this data, they can experiment with new offerings, pricing models, promotions, and service bundles. Data-driven learning is a key bridge between digitalization and business model innovation. Without it, digital tools remain operational utilities. With it, the firm can continuously refine the logic of value creation and capture.

#### 3.2 A Multi-layer Framework for Digital Business Model Innovation

The second result is the development of a multi-layer framework for digital business model innovation among Vietnamese SMEs. The framework contains five layers: digital readiness, strategic orientation, dynamic capabilities, business model innovation domains, and performance outcomes. These layers are connected but analytically distinct.

Digital readiness is the foundation. It includes basic digital infrastructure, connectivity, data availability, cybersecurity awareness, digital literacy, and managerial understanding. A firm with low digital readiness may struggle even to adopt

basic tools. A firm with moderate readiness may use digital technologies in selected functions. A firm with high readiness can integrate data, automate workflows, and coordinate with partners digitally. In the Vietnamese context, readiness varies widely across regions, sectors, and firm sizes.

Strategic orientation refers to the owner-manager’s intention to use digital transformation as a source of competitive renewal. It includes entrepreneurial orientation, customer orientation, learning orientation, and innovation orientation. SMEs may have access to the same tools but use them differently depending on strategic orientation. A defensive firm may use digital tools only to comply with tax or invoicing requirements. An opportunity-oriented firm may use the same tools to redesign customer value, improve transparency, and access new markets.

Dynamic capabilities constitute the transformation engine. Sensing capabilities enable the SME to identify digital opportunities and threats. Seizing capabilities enable the SME to invest, experiment, and mobilize resources. Reconfiguring capabilities enable the SME to redesign processes, roles, partnerships, and revenue mechanisms. Without these capabilities, digital readiness and strategic

orientation may not translate into business model innovation.

Business model innovation domains are the visible outputs of transformation. This paper identifies five domains: value proposition, customer interface, operating model, ecosystem architecture, and revenue logic. These domains map onto the broader logic of value creation, delivery, and capture. In practice, business model innovation may begin in one domain but must eventually align with the others. For example, a new digital customer interface requires changes in operations, customer service, data management, and cost structure.

Performance outcomes include competitiveness, productivity, resilience, market expansion, innovation capacity, and long-term sustainability. These outcomes may not appear immediately. Some digital investments initially increase cost and complexity. The performance effect depends on the firm’s ability to align technologies with strategy and to institutionalize new routines. This explains why some SMEs report positive results from digital transformation while others experience disappointment or project abandonment.

**Table 2:** Analytical Framework for Digital Business Model Innovation among Vietnamese SMEs

Layer	Key Components	Typical SME Weakness	Transformation Task	Expected Contribution
Digital readiness	Infrastructure, data, cybersecurity, digital skills, software use	Fragmented systems and low digital literacy	Build minimum digital foundation and data discipline	Reduces transaction costs and enables process visibility
Strategic orientation	Entrepreneurial, customer, innovation, and learning orientation	Technology viewed as an expense rather than strategic investment	Frame digital transformation as business model renewal	Creates managerial commitment and direction
Dynamic capabilities	Sensing, seizing, reconfiguring	Reactive decisions and limited experimentation	Develop iterative learning and resource orchestration routines	Converts tools into strategic change
BMI domains	Value proposition, customer interface, operations, ecosystem, revenue logic	Isolated digital projects and weak alignment	Redesign interdependent business model elements	Creates new or improved value architecture
Performance outcomes	Productivity, resilience, market reach, innovation, sustainability	Short-term cost focus and limited measurement	Measure strategic and operational outcomes over time	Improves competitiveness and scalability

**3.3 Five Domains of Business Model Innovation**

The first domain is value proposition renewal. Digital transformation enables SMEs to offer more than a physical product or a simple service. They can add convenience, transparency, personalization, speed, reliability, traceability, digital content, and post-purchase support. In Vietnam, this is relevant to sectors such as food processing, handicrafts, tourism, education, apparel, construction materials, and professional services. A product that previously competed mainly on price can be repositioned through storytelling, verified origin, design customization, digital warranty, or service bundling.

The second domain is digital customer engagement. SMEs traditionally rely on face-to-face relationships, personal networks, and local reputation. Digital tools expand and formalize customer relationships through websites, social media, marketplaces, chatbots, customer databases, loyalty programs, livestreaming, and customer relationship management systems. This domain is highly visible because many SMEs begin digital transformation with marketing and sales. However, superficial online presence is insufficient. Business model innovation requires a designed customer journey that connects discovery, consultation, ordering, payment, delivery, feedback, and repeat purchase.

The third domain is process and data-driven operations. Operational innovation is less visible than marketing innovation but often more important for productivity. SMEs can use accounting software, e-invoicing, inventory systems, production planning tools, digital procurement, workflow automation, and data dashboards. These tools improve coordination, reduce waste, and enable better decision-making. The business model changes when process integration allows the firm to promise higher reliability, faster response, better customization, or lower cost. Without operational redesign, online sales growth may create chaos rather than competitiveness.

The fourth domain is ecosystem and platform collaboration. Vietnamese SMEs increasingly participate in digital ecosystems involving e-commerce platforms, social-commerce channels, logistics providers, banks, fintech firms, software providers, large buyers, and government portals. Ecosystem participation can help SMEs access capabilities they cannot build internally. Yet it also introduces governance risks. Platform commissions, algorithm changes, data asymmetry, and customer ownership issues can reduce autonomy. Innovative SMEs therefore need a portfolio approach: using platforms for reach while gradually building their own customer assets,

brand identity, and data capabilities.

The fifth domain is revenue model redesign. Many SMEs continue to rely on one-off product sales and cost-plus pricing. Digital technologies open possibilities for subscription, membership, service contracts, usage-based pricing, bundled solutions, freemium digital content, commission models, and data-enabled cross-selling. Revenue innovation is usually the most difficult domain because it changes customer expectations and internal performance metrics. However, it may also create more stable cash flows and stronger customer relationships. For example, equipment SMEs can sell maintenance packages; education SMEs can combine offline classes with online learning subscriptions; tourism SMEs can offer personalized packages and loyalty programs; and software-enabled service SMEs can offer tiered monthly plans.

### 3.4 Common Innovation Patterns among Vietnamese SMEs

Based on the literature and contextual analysis, Vietnamese SMEs are likely to follow several common pathways of digital business model innovation. These pathways are not mutually exclusive; a firm may move from one pattern to another as its capabilities mature.

**Table 3:** Common Digital Business Model Innovation Patterns

Pattern	Typical Starting Point	Business Model Change	Risks to Manage
Omnichannel SME	Offline sales supplemented by social media and e-commerce	Integration of physical stores, online channels, digital payments, delivery, and customer data	Channel conflict, inventory inconsistency, price transparency, service overload
Data-driven operator	Manual or fragmented internal processes	Integration of sales, inventory, accounting, procurement, and dashboards	Poor data quality, employee resistance, cybersecurity weakness
Platform-enabled specialist	Small firm with niche products or services	Use of marketplaces and digital platforms to reach broader customers and partners	Platform dependency, fee pressure, limited access to customer data
Service-augmented producer	Manufacturing or product-based SME	Addition of digital warranty, after-sales service, customization, maintenance, or traceability	Capability gaps, service-cost control, unclear pricing
Community-based brand	Local brand relying on reputation and personal networks	Digital storytelling, customer communities, loyalty programs, and direct-to-consumer relationships	Content consistency, brand trust, online reputation management
Subscription or membership model	Repeated customer needs but one-off transactions	Recurring revenue through packages, memberships, maintenance contracts, or digital content	Customer retention, perceived value, billing and service discipline

The omnichannel pattern is the most common in retail, consumer goods, hospitality, and local services. It begins when SMEs add online channels to traditional sales. The strategic challenge is integration. Customers expect consistent prices, product information, service quality, and delivery promises across channels. If the SME simply opens multiple channels without integration, it may increase complexity and cost. Business model innovation occurs when the firm designs a coherent omnichannel system supported by inventory visibility, customer data, payment integration, and service standards.

The data-driven operator pattern is particularly relevant for SMEs seeking productivity improvement. These firms may not radically change their product offering but improve reliability, cost control, and decision quality. The transformation begins with internal systems: accounting, inventory, procurement, production planning, and dashboards. The business model effect appears when better data allows the firm to provide faster delivery, reduce stockouts, negotiate better with suppliers, improve cash-flow management, or offer customized service. This pattern is less glamorous than platform participation, but it is often the foundation for long-term competitiveness.

The platform-enabled specialist pattern fits SMEs with niche products, unique local resources, or specialized services. Platforms help them access customers and partners beyond local boundaries. Examples include specialty food, handicrafts, tourism services, professional consulting, design, and small manufacturing components. The key challenge is avoiding passive dependence. SMEs should use platforms as market-access infrastructure while building brand identity, direct customer relationships, and internal data assets. Otherwise, the platform captures most of the strategic value.

The service-augmented producer pattern is relevant for manufacturing, equipment, construction materials, furniture, agricultural inputs, and technology-related SMEs. Digital tools allow product-based firms to add service components: installation support, digital manuals, warranty tracking, maintenance reminders, traceability, usage advice, and customer analytics. This can shift competition from price to solution value. However, the pattern requires new capabilities in service design, customer support, data management, and pricing.

The community-based brand pattern is especially relevant in Vietnam’s social-commerce environment. SMEs can use storytelling, livestreaming, user-generated content, local identity, and customer communities to build trust. This pattern can be powerful for brands associated with region, culture, lifestyle, education, health, or sustainability. Its risk is reputational vulnerability. Online communities reward authenticity but punish inconsistency. SMEs must therefore formalize service standards, complaint response, and content governance.

The subscription or membership pattern remains less common among traditional SMEs but has potential in education, healthcare-related services, maintenance, food delivery, wellness, software-enabled services, and professional services. Recurring revenue improves predictability and customer lifetime value. However, it requires the SME to deliver continuous value, manage billing discipline, and track retention metrics. It also

requires a shift from transaction thinking to relationship thinking.

### 3.5 Drivers and Barriers

The analysis identifies four major drivers of business model innovation. The first driver is customer behavior. Vietnamese consumers and business customers increasingly expect digital convenience, transparent information, online consultation, mobile payments, fast delivery, and responsive service. SMEs that fail to adjust their business models may lose relevance even if their products remain acceptable. The second driver is competitive pressure. Digital channels reduce entry barriers and increase price transparency, forcing SMEs to differentiate through experience, reliability, specialization, or service quality.

The third driver is supply-chain pressure. SMEs linked to larger buyers, export markets, or regulated sectors face demands for quality documentation, traceability, data reporting, digital invoicing, and compliance. These pressures may initially be seen as burdens, but they can also trigger process modernization. The fourth driver is policy and infrastructure. Government programs, e-taxation, e-invoicing, digital signatures, digital public services, digital payments, and SME support initiatives create incentives and infrastructure for transformation.

At the same time, barriers remain substantial. Financial constraints are the most obvious. Many SMEs cannot easily finance software, hardware, consulting, cybersecurity, and training. Even when digital tools are affordable, indirect costs can be significant. Time spent learning systems, redesigning processes, cleaning data, and managing change can disrupt operations. Access to finance is therefore not only a growth issue but also a digital transformation issue.

Human-capital constraints are equally important. SMEs may lack employees who understand data, digital marketing, cybersecurity, process analysis, and system integration. Owner-managers may depend heavily on vendors, creating information asymmetry. Employees may resist digital systems if they fear monitoring, job loss, or increased workload. Training programs often focus on tool use rather than business model redesign. This limits strategic learning. Managerial cognition is another barrier. Some SME owners perceive digital transformation as a technical task delegated to IT staff, marketing employees, or external vendors. Others see it as a cost imposed by government or market pressure. These perceptions reduce commitment. Successful transformation requires owner-managers to understand the relationship between digital tools and business model logic. They must ask not only which software to buy, but which customer value, operating process, partnership model, and revenue logic to redesign.

Data governance and cybersecurity also constrain business model innovation. SMEs often collect data informally without clear ownership, quality standards, backup procedures, privacy awareness, or cybersecurity safeguards. Poor data quality undermines analytics. Weak cybersecurity exposes firms to fraud, data loss, reputational damage, and operational disruption. As SMEs become more digitally connected, these risks become strategic rather than purely technical.

Finally, platform dependence can constrain business model innovation. Platforms can accelerate market access but may also capture customer relationships and bargaining power. SMEs may become dependent on algorithms, commissions,

promotional spending, and platform policies. Business model innovation should therefore include strategic decisions about which assets to build internally and which capabilities to access externally. Customer data, brand trust, product know-how, and operational discipline should remain core assets of the SME.

### 3.6 Propositions for Future Empirical Research

Because this paper is conceptual, the framework can be translated into propositions for future empirical testing. These propositions provide a bridge between the analytical results and subsequent quantitative or qualitative research.

Proposition 1: Digital readiness has a positive association with business model innovation among Vietnamese SMEs, but this relationship is stronger when owner-managers possess a clear strategic orientation toward digital transformation.

Proposition 2: Dynamic capabilities mediate the relationship between digital technology adoption and business model innovation. SMEs that can sense, seize, and reconfigure are more likely to convert digital tools into strategic renewal.

Proposition 3: Business model innovation mediates the relationship between digital transformation and firm performance. Digital technology adoption improves performance primarily when it changes the logic of value creation, delivery, and capture.

Proposition 4: Ecosystem participation strengthens business model innovation when SMEs can access complementary capabilities, but excessive platform dependence weakens value capture.

Proposition 5: Institutional support moderates the relationship between digital readiness and business model innovation. Training, finance, infrastructure, advisory services, and standards can reduce transformation barriers.

Proposition 6: The effect of digital transformation on business model innovation differs across sectors. Service and retail SMEs may transform customer interfaces more quickly, while manufacturing SMEs may require deeper operational and supply-chain integration before business model effects appear.

Proposition 7: Data governance capability strengthens the relationship between digital customer engagement and revenue model innovation because high-quality customer data enables segmentation, personalization, loyalty programs, and recurring revenue mechanisms.

### 3.7 A Stage Model of SME Digital Business Model Innovation

The analysis suggests that SMEs usually pass through four maturity stages. The first stage is basic digitization. Firms convert information into digital form, use basic accounting software, open social media pages, use digital payments, or comply with e-invoicing requirements. At this stage, business model change is limited. The main benefits are convenience, compliance, and basic efficiency.

The second stage is functional digitalization. Firms use digital tools in specific functions such as marketing, sales, accounting, inventory, or customer service. Benefits become more visible, but systems remain fragmented. Many Vietnamese SMEs are located in this stage. The risk is digital fragmentation: each function uses separate tools without integrated data or strategic coherence.

The third stage is integrated transformation. Firms connect processes and data across functions. Online sales are linked

with inventory, accounting, payment, customer service, and logistics. Customer data informs product design and promotion. Suppliers and partners are digitally coordinated. At this stage, business model innovation becomes more substantial because the firm can make new promises to customers and manage operations accordingly.

The fourth stage is ecosystem-based business model innovation. Firms use digital platforms, partnerships, data, and organizational capabilities to create new value propositions and revenue models. They may become niche platform participants, solution providers, subscription-based service firms, or data-driven operators. This stage requires

dynamic capabilities, governance discipline, and strategic control over core assets.

This stage model is not deterministic. Some SMEs may jump stages in specific functions, while others may remain hybrid for long periods. A firm may have advanced digital marketing but weak internal operations. Another may have strong accounting and inventory systems but weak customer engagement. The model should therefore be used diagnostically: managers can assess where the firm is mature, where it is weak, and which business model elements require alignment.

**Table 4:** Maturity Stages of Digital Business Model Innovation

S. No	Stage	Dominant Logic	Typical Tools	Business Model Effect	Managerial Priority
1	Basic digitization	Convert information and comply with digital requirements	E-invoices, digital payments, office software, social pages	Limited change; improved convenience and compliance	Create digital records and basic skills
2	Functional digitalization	Improve selected business functions	Digital marketing, inventory tools, accounting systems, online sales	Functional efficiency and broader customer reach	Avoid fragmentation and define strategic objectives
3	Integrated transformation	Connect processes and data across functions	ERP-lite, CRM, dashboards, logistics integration, data analytics	Improved reliability, customization, speed, and service quality	Integrate data, redesign workflows, and train employees
4	Ecosystem-based BMI	Redesign value architecture through platforms and partnerships	Platforms, APIs, fintech, AI tools, partner data systems	New value propositions, revenue models, and scalable ecosystem roles	Protect core assets and manage ecosystem governance

**4. Discussion and Conclusion**

**4.1 Discussion**

The findings reinforce a central argument: digital transformation should be understood as a business model problem, not merely a technology problem. This argument is consistent with the broader literature on digital transformation, which emphasizes organizational change, strategic renewal, and value creation. For Vietnamese SMEs, the distinction is especially important because limited resources make it costly to invest in tools that do not alter competitiveness. A small firm cannot afford digital transformation as symbolic modernization. It must connect digital initiatives to customer value, operational reliability, and revenue logic.

The proposed framework also clarifies why digital transformation outcomes differ across SMEs. Two firms may adopt the same e-commerce platform but achieve different results. One may treat the platform as an additional sales channel and compete mainly on price. Another may use platform data to identify customer segments, redesign packaging, improve delivery promises, create loyalty programs, and develop direct customer relationships. The difference lies in dynamic capabilities and business model alignment. Technology adoption is the input; business model innovation is the transformation mechanism.

The Vietnamese context adds further complexity. Digital markets are expanding quickly, but SME capabilities are uneven. The national digital transformation agenda creates direction and legitimacy, but implementation requires firm-level capacity. Many SMEs face skill shortages, financing constraints, fragmented systems, and limited strategic planning. Policy programs that provide generic awareness seminars may not be sufficient. SMEs need practical support that links digital tools to business model redesign, process mapping, data discipline, cybersecurity, and performance measurement.

The results also show that platform participation is double-

edged. Platforms can help SMEs overcome market-access limitations, but they can also create dependence. This finding is consistent with ecosystem theory. SMEs should not avoid platforms; rather, they should use platforms strategically. They need to distinguish between capabilities that can be rented from ecosystems and assets that must be owned or controlled. Logistics capacity may be outsourced, but customer trust, brand identity, product know-how, and key data should be deliberately developed.

Another important discussion point is the role of data. Digital transformation often begins with visible tools, but its strategic value depends on data quality and data use. SMEs that collect digital data without standardization, ownership, and analytical routines may not benefit. Data governance should therefore be introduced at an early stage, even for small firms. Simple practices such as consistent product codes, customer records, inventory discipline, backup routines, and dashboard-based reviews can prepare SMEs for more advanced analytics later.

The paper also highlights the need to avoid a one-size-fits-all approach. Retail and service SMEs may prioritize customer interface and omnichannel integration. Manufacturing SMEs may prioritize process integration, traceability, and supplier coordination. Tourism SMEs may prioritize digital reputation, booking systems, and customer experience. Agriculture-related SMEs may prioritize traceability, logistics, and quality certification. Professional-service SMEs may prioritize digital knowledge products, online delivery, and subscription packages. Policy and managerial guidance should therefore be sector-sensitive.

**4.2 Managerial Implications**

First, SME owners and managers should begin with a business model diagnosis rather than a technology shopping list. They should ask five questions: What customer problem do we solve? How is customer behavior changing digitally? Which activities create the most friction or cost? Which

partners can help us scale? How can we capture value more sustainably? These questions help ensure that technology choices support strategic renewal.

Second, SMEs should adopt a staged transformation roadmap. In the first stage, they should build basic digital records, digital payments, e-invoicing, and data discipline. In the second stage, they should digitalize functions with clear performance targets, such as online lead generation, inventory accuracy, customer response time, or accounting transparency. In the third stage, they should integrate systems and redesign workflows. In the fourth stage, they should experiment with new value propositions, ecosystem partnerships, and revenue models. A staged roadmap reduces risk and makes transformation financially manageable.

Third, SMEs should treat data as a strategic asset. Even simple customer, product, sales, and inventory data can generate insight if collected consistently. Managers should define data ownership, maintain data quality, protect sensitive information, and review data regularly. Data-driven routines can be simple: weekly sales dashboards, customer feedback summaries, stockout analysis, promotion performance reviews, and cash-flow monitoring. The objective is not advanced analytics at the beginning but disciplined learning.

Fourth, SMEs should build internal absorptive capacity. External consultants and software vendors can provide tools, but the SME must understand enough to define requirements, evaluate options, and use results. Training should involve owner-managers and key employees, not only technical staff. Digital transformation should be embedded in roles, incentives, and routines. Employees need to see how digital tools improve work rather than merely increase surveillance.

Fifth, SMEs should manage platform participation strategically. They should use platforms to acquire customers, test products, learn market signals, and expand reach. At the same time, they should gradually build owned channels such as websites, customer databases, communities, and loyalty programs. They should monitor platform costs, customer acquisition costs, repeat purchase, review quality, and dependency risk. A balanced channel strategy can preserve autonomy while capturing platform benefits.

Sixth, SMEs should experiment with revenue models carefully. Subscription, membership, service packages, and bundled solutions can improve stability, but they require continuous value delivery. Managers should pilot new revenue models with specific customer segments before scaling. They should measure retention, churn, service cost, customer satisfaction, and profitability. Revenue innovation should be supported by operational capability; otherwise, the firm may promise more than it can deliver.

Seventh, SMEs should integrate cybersecurity and trust into their business model. As firms become more digital, trust becomes a competitive asset. Basic cybersecurity practices, data backup, access control, transparent privacy communication, secure payments, and reliable complaint handling can strengthen customer confidence. Cybersecurity should not be seen as a technical afterthought but as part of value proposition and risk management.

### 4.3 Policy Implications

For policymakers, the first implication is that SME digital transformation programs should focus on business outcomes rather than technology adoption counts. Measuring the number of firms using software or joining platforms is not enough. Programs should track improvements in productivity, market reach, customer retention, process reliability, data governance, and revenue innovation. Support should help SMEs redesign business models, not only purchase tools.

Second, public support should be segmented by maturity level. Early-stage SMEs need awareness, basic digital literacy, digital records, e-invoicing support, and simple accounting or inventory tools. Intermediate SMEs need process integration, data management, cybersecurity, and digital marketing capability. Advanced SMEs need support for innovation, platform strategy, artificial intelligence, export readiness, intellectual property, and ecosystem collaboration. A maturity-based approach would avoid wasting resources on generic support.

Third, advisory services should be strengthened. Many SMEs cannot translate broad digital transformation slogans into actionable projects. Local support centers, business associations, universities, banks, and technology providers can collaborate to offer diagnostics, process mapping, digital roadmaps, and implementation mentoring. Advisory support should be practical, sector-specific, and tied to measurable improvements. Standard templates, checklists, and benchmark tools can reduce uncertainty.

Fourth, access to finance should be linked to digital transformation and business model innovation. Credit lines, guarantees, vouchers, tax incentives, or matching grants can help SMEs invest in software, training, cybersecurity, and consulting. However, finance should be tied to credible transformation plans. Banks and public agencies could evaluate whether proposed digital investments are connected to revenue generation, cost reduction, risk management, or market expansion.

Fifth, Vietnam should promote trusted digital infrastructure and standards for SMEs. This includes secure digital identity, interoperable e-invoicing, digital signatures, data protection guidance, cybersecurity awareness, industry-specific data standards, and transparent platform governance. Standards can reduce transaction costs and support ecosystem integration. They are particularly important for SMEs participating in supply chains and export markets.

Sixth, policy should encourage digital skill development for owner-managers as well as employees. Training programs often target young employees or IT staff, but SME transformation decisions are made by owners and senior managers. Executive-level digital business model training should therefore be expanded. Universities, vocational institutions, chambers of commerce, and local governments can develop short courses focused on digital strategy, business model design, data-driven management, and cybersecurity.

Seventh, policy should support sectoral digital platforms and shared services where individual SMEs cannot invest alone. For agriculture, shared traceability platforms and logistics information systems may be valuable. For tourism,

destination-level digital marketing and booking integration can support small providers. For manufacturing, supplier databases, quality standards, and digital collaboration tools can help SMEs integrate into value chains. Shared infrastructure can reduce the cost of transformation and improve collective competitiveness.

#### 4.4 Limitations and Future Research

This paper has several limitations. First, it is conceptual and does not test the proposed framework empirically. Future studies should collect firm-level data from Vietnamese SMEs to examine the relationships among digital readiness, dynamic capabilities, business model innovation, and performance. Quantitative studies could use structural equation modeling to test the mediating role of business model innovation. Qualitative studies could use case studies to examine transformation pathways across sectors.

Second, the paper treats Vietnamese SMEs as a broad category. In reality, SMEs differ by size, sector, region, ownership, export orientation, age, and growth ambition. Future research should compare micro, small, and medium-sized firms separately. It should also distinguish between traditional SMEs, high-growth startups, family-owned firms, and supplier SMEs linked to global value chains.

Third, the paper discusses digital technologies at an aggregate level. Future research should examine specific technologies such as artificial intelligence, cloud computing, e-commerce platforms, digital payments, enterprise systems, customer relationship management, digital twins, traceability systems, and cybersecurity tools. Each technology may affect business model elements differently.

Fourth, performance outcomes require careful measurement. Digital transformation may improve non-financial outcomes before financial performance. Future studies should measure operational efficiency, customer satisfaction, innovation speed, resilience, employee capability, data quality, and ecosystem position alongside revenue and profitability. Longitudinal designs would be particularly useful because business model innovation unfolds over time.

Fifth, platform governance deserves deeper analysis. As Vietnamese SMEs become more dependent on e-commerce and social-commerce ecosystems, questions of data ownership, algorithmic visibility, commissions, customer relationship control, and bargaining power become critical. Future studies should examine how SMEs can balance platform participation with strategic autonomy.

#### 4.5 Conclusion

This paper examined business model innovation among Vietnamese SMEs in the context of digital transformation. It argued that digital transformation should be understood not as the adoption of digital tools but as the strategic renewal of the firm's value-creation, value-delivery, and value-capture logic. For SMEs, this distinction is crucial because resources are scarce and digital investments must contribute directly to competitiveness, resilience, and growth.

Drawing on business model innovation research, dynamic capability theory, resource-based theory, activity-system thinking, and institutional perspectives, the paper developed a multi-layer analytical framework. The framework links digital readiness, strategic orientation, dynamic capabilities, business model innovation domains, and performance outcomes. It identifies five main domains of digital business model innovation: value proposition renewal, digital

customer engagement, process and data-driven operations, ecosystem and platform collaboration, and revenue model redesign. It also identifies common innovation patterns, drivers, barriers, maturity stages, and propositions for future empirical research.

The central conclusion is that Vietnamese SMEs can benefit from digital transformation when they move beyond fragmented digitalization toward coherent business model innovation. This requires owner-manager commitment, staged investment, data discipline, employee capability, ecosystem strategy, and policy support. Technology providers and policymakers should therefore support SMEs not only with tools but with diagnostics, advisory services, finance, standards, skills, and sector-specific platforms. Digital transformation will become a meaningful driver of SME competitiveness only when it helps firms redesign how they create value for customers, organize activities with partners, and capture value sustainably.

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