The Impact of AI-Enabled Digital Transformation on Firms' Financial Performance: The Mediating Role of Business Model Innovation

Armin Garmroudi

M.Sc. Student in Business Administration (Technology Management), Islamic Azad University, Miyaneh Branch,
Armin.garmroudi@gmail.com

Abstract-**Digital transformation (DT) is fundamentally reshaping how companies operate and compete in the era of artificial intelligence (AI) and advanced digital technologies. This study examines the impact of AI-enabled digital transformation on firms' financial performance and analyzes the mediating role of business model innovation (BMI) enabled by AI-driven decision-making capabilities. Drawing on the dynamic capabilities and organizational ambidexterity perspectives, we develop a theoretical framework in which digital transformation is hypothesized to enhance financial performance directly and indirectly by enabling innovative business models. Survey data were collected from senior managers in technology-intensive and leading industrial firms (n = 220). The research employs a partial least squares structural equation modeling (PLS-SEM) approach to test the proposed hypotheses. Results indicate that digital transformation has a positive and significant effect on financial performance ($\beta \approx 0.41$, $p < 0.001$), and that effect is partially mediated by business model innovation. Firms undertaking comprehensive digital transformation report higher profitability and revenue growth, and a substantial portion of this benefit is channeled through innovations in their business models. The findings underscore that simply investing in digital technologies is not sufficient – realizing financial gains requires concurrent business model reconfiguration. This study enriches the literature by bridging digital transformation with business model innovation and AI-enabled capabilities, highlighting how dynamic managerial practices and ambidexterity help convert digital investments into superior performance. Managerially, it suggests that executives should pursue digital initiatives hand-in-hand with business model innovation and cultivate organizational cultures that support agility, learning, and AI-driven decision-making. Limitations (such as the cross-sectional design) are acknowledged, and future research avenues are proposed to explore longitudinal impacts and contingent factors.**

Keywords: Digital transformation; Business model innovation; Financial performance; Artificial intelligence; Dynamic capabilities

I. INTRODUCTION

In the digital economy, leveraging transformative technologies has become a strategic imperative for businesses seeking competitiveness and growth. Digital transformation (DT) refers to the integration of digital technologies into all aspects of a business to drive fundamental changes in processes, customer experiences, and value delivery models. At its most advanced level, digital transformation is not merely about automating existing practices; it constitutes a holistic reinvention of how an organization operates across departments and functions. Technologies

such as cloud computing, big data analytics, the Internet of Things (IoT), and artificial intelligence (AI) are enabling firms to optimize operations, develop new products and services, and engage customers in novel ways. As a result, companies with higher digital maturity have been found to significantly outperform their less digitally mature peers on key financial metrics. For example, a Deloitte survey reported that digitally advanced firms were three times more likely to exceed their industry's average financial performance than lower-maturity firms. These benefits manifest through improved efficiency, revenue growth, better customer satisfaction, and higher product/service quality. Indeed, digital transformation is associated with cost reductions and operational efficiencies that can directly boost profitability. It is also linked to overall economic performance gains for firms that successfully implement it.

Despite these promising outcomes, many firms struggle to realize the financial benefits of digital transformation. Global studies consistently indicate that around 70% of digital transformation initiatives fail to meet their objectives. Often, the failure is not due to a lack of technological capability, but rather due to shortcomings in strategy execution, organizational alignment, and business model adaptation. In other words, deploying new technologies without rethinking the business model and organizational context can lead to suboptimal results. Some companies invest heavily in digital systems only to find little improvement in revenue or even a decline in return on investment, whereas others achieve remarkable growth and profitability post-transformation. This discrepancy suggests that contextual and mediating factors play a crucial role in determining how digital transformation translates into financial performance.

One key mediating factor proposed in recent literature is business model innovation (BMI) – the process of innovating a firm's value creation, delivery, and capture mechanisms. Researchers have posited that digital transformation's impact on performance is often realized through its enablement of new or improved business models. If firms merely overlay digital technologies onto existing processes without reconfiguring their business model, they may not unlock significant new value. By contrast, when digital initiatives are coupled with business model innovation – such as new revenue streams, redesigned value propositions, or novel delivery channels – firms can fully leverage technology to drive financial success. For example, a study by Merín-Rodrígáñez et al. (2024) on Spanish SMEs found that digital transformation had both direct and indirect effects (through business model innovation) on firm performance. Similarly, Wang et al. (2023) observed in a Chinese context that digital capabilities improved financial performance, and a substantial portion of this effect was mediated by innovations in the business model. These studies underscore that business model innovation can serve as the "missing link" that connects digital investments to tangible financial outcomes.

However, prior research on the digital transformation–performance relationship has often focused on direct effects, leaving a theoretical and empirical gap in understanding the mechanisms behind this relationship. There is a need for a clearer explication of how and under what conditions digital transformation leads to improved financial performance. The present study addresses this gap by investigating the mediating role of business model innovation and by grounding the analysis in complementary organizational theories. In particular, we draw on the dynamic capabilities framework (Teece, 2018) and the concept of organizational ambidexterity (O'Reilly & Tushman, 2013) to explain why firms that effectively adapt their business models alongside digital change are more likely to see performance gains. Dynamic capabilities -the firm's ability to sense opportunities, seize them through investments, and reconfigure its assets and processes- are critical in the context of digital transformation. Firms with strong dynamic capabilities can integrate digital technologies with strategic and organizational changes, enabling them to innovate their business models in response to technological opportunities (Teece, 2018). Likewise, organizational ambidexterity, the ability to balance exploitation of existing operations with exploration of new innovations, is essential during digital transformation. Successful digital transformers often both "do old things better" (improving efficiency of current operations) and "do new things" that were not possible before, effectively balancing two modes of learning. Such

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ambidextrous organizations can simultaneously drive incremental improvements (through digitalizing core processes) and radical innovations (through new digitally-enabled business ventures), leading to superior financial outcomes.

In summary, this research is centered on the question: Does digital transformation improve firms' financial performance, and is this effect mediated by business model innovation? We extend this question by considering theoretical insights from the dynamic capabilities and ambidexterity perspectives, as well as the emerging role of AI-enabled decision-making in enhancing organizational capabilities. By answering this question, the study aims to contribute to both theory and practice. Theoretically, it will clarify the pathways through which digital transformation creates value – highlighting the mediating role of business model innovation and the enabling role of organizational capabilities. Practically, it will offer guidance to managers on how to maximize returns from digital investments, stressing that technology adoption should go hand-in-hand with business model reinvention and cultural readiness for change. The remainder of this paper is structured as follows: Section 2 provides a focused literature review on digital transformation, business model innovation, and their linkages (including emerging insights on AI). Section 3 presents the theoretical framework and hypothesis development. Section 4 outlines the research methodology, including measurement of key constructs and the PLS-SEM approach. Section 5 reports the results of the structural model analysis. Section 6 discusses the findings in light of prior research and highlights theoretical and managerial implications. Finally, Section 7 concludes the paper with a summary of contributions, limitations, and suggestions for future research.

II.   LITERATURE REVIEW

A. Digital Transformation and Financial Performance

Digital transformation is defined as the process of leveraging digital technologies to create significant improvements or innovations in business operations, offerings, and business models. It encompasses a broad range of initiatives, from automating internal processes to implementing enterprise-wide platforms, cultivating data-driven decision-making, and adopting AI and analytics for strategic insights. The ultimate goal of digital transformation is often to enhance organizational performance and value creation. A growing body of empirical studies confirms a positive link between digital transformation and firm performance. For instance, a study of Chinese firms by Zhai, Yang, and Chan (2022) found that digital transformation led to higher profitability and efficiency, as transformed firms achieved lower operating costs and improved productivity compared to non-transformed firms. These firms not only saw financial metrics improve but also gained agility in their operations. Likewise, Merín-Rodrígáñez et al. (2024) analyzed 434 innovative SMEs in Spain and reported that greater adoption of digital technologies was associated with increased sales growth and overall firm performance. Notably, they discovered that the performance benefits were partially indirect – meaning digital transformation fostered conditions (like business model changes) that in turn boosted performance. This indicates that while digital transformation can have a direct impact (e.g., through automation-driven cost savings or enhanced customer reach), full realization of financial gains often involves intermediate steps.

Research and industry surveys also highlight digital transformation as a driver of competitive advantage and superior financial metrics. Deloitte's global digital transformation survey (2020) provides striking evidence: companies identified as "digitally mature" significantly outperformed their industry averages, and were 2–3 times more likely to report profit margin and revenue growth leadership in their sector. These high-maturity organizations attributed a range of benefits to digital transformation, including not just cost efficiencies but also new revenue generation and improved product/service quality. The survey results imply that digital transformation contributes to both top-line (revenue) and bottom-line (cost/profit) improvements. Another recent analysis by Li (2022) noted that firms undertaking comprehensive digitalization experience better economic performance – for example, higher market

valuation and return on assets – compared to those slower in digital adoption.

At the same time, literature cautions that simply investing in digital tools is not a guarantee of success. Many organizations have faced "productivity paradox" scenarios where IT investments did not yield expected performance gains, often due to poor implementation or lack of complementary changes. As Rogers (2016) pointed out, a common reason for failure is treating digital transformation purely as a technology project rather than a business transformation. McKinsey and BCG have reported that around 70% of digital transformation programs fail to achieve their goals, frequently because of fragmented execution and lack of strategic alignment. These findings reinforce that contextual factors (e.g., leadership, culture, strategy) and complementary organizational changes matter greatly. In fact, digital transformation success is intertwined with organizational change management: companies that align their people, processes, and strategy with the new technology are the ones that reap financial rewards.

1) *Business Model Innovation and the Digital Era*

Business model innovation (BMI) refers to significant changes or novel designs in a firm's business model – that is, how it creates value for customers, delivers that value, and captures value (profits). This can include changes in the value proposition, target customer segments, revenue models, cost structures, or partnerships and distribution channels (Amit & Zott, 2012). Innovating the business model is increasingly recognized as a key lever for firms to remain competitive, especially in disruptive environments. In recent years, the surge of digital technologies has acted as a catalyst for business model innovation. Digitalization allows companies to do things not previously possible: for example, leveraging data and AI to offer personalized services, using platforms to orchestrate ecosystems, or shifting from selling products to offering subscription-based solutions.

Prior research has linked business model innovation to improved firm performance and competitive advantage. Firms that proactively redefine their business model can open up new revenue streams and achieve cost advantages that are hard for competitors to replicate. For instance, Ancillai et al. (2023) note that in sectors like retail and services, embracing digital business model innovation (such as adopting omni-channel platforms or leveraging analytics for customer insights) is key to sustaining performance, yet empirical studies in these domains remain scarce. Nevertheless, general evidence suggests that companies engaging in business model innovation tend to outperform those with static models, especially under conditions of technological change or market disruption. Business model innovation has been associated with gains in competitive advantage (e.g., through uniqueness of offering or efficiency), greater resilience in turbulent markets, and even contributions to sustainability and international expansion. For example, Geissdoerfer et al. (2018) highlight how BMI can drive sustainability-oriented outcomes, underlining that innovative business models can help firms meet environmental and social goals while prospering financially. More recent work likewise suggests that BMI contributes to sustainable performance and long-term growth of firms. Overall, a well-executed innovative business model can significantly enhance a firm's financial performance, market positioning, and long-term success.

Importantly, business model innovation is often not an isolated process; it may be triggered or enabled by digital transformation. Digital technologies can serve as both an inspiration and a toolset for rethinking business models. For example, the rise of AI and data analytics has led some firms to reimagine their value proposition (such as offering predictive services or data-driven advisory products) and revenue models (e.g., usage-based pricing driven by IoT data). The literature describes how under "digital empowerment," business models acquire new characteristics and possibilities. A digital innovation in a product or process can necessitate changes in the broader business logic – thus requiring business model innovation to fully

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capitalize on the technology. In support, empirical studies have found that digital capability significantly influences business model innovation. Companies strong in digital capabilities (e.g., data management, IT infrastructure, digital skills) are more likely to innovate their business model, since they can better envision and implement new ways of creating and capturing value in the digital environment.

2) *Digital Transformation, Business Model Innovation, and AI*

Emerging research is beginning to explicitly tie digital transformation and business model innovation with AI capabilities. AI technologies (machine learning, predictive analytics, intelligent automation, etc.) are becoming core enablers in digital transformation initiatives. AI can drive more informed and rapid decision-making, uncover patterns for innovation, and even create personalized customer experiences at scale. Studies have started to examine "AI-driven business model innovation," recognizing that AI not only optimizes existing processes but can enable fundamentally new ways of doing business (e.g., platform-based models, algorithmic product offerings). A recent systematic review by Ancillai et al. (2023) finds that AI is increasingly leveraged to reconfigure business models in industries ranging from finance to manufacturing, often leading to improved organizational performance.

One specific link between AI and firm performance is through AI-enabled decision-making. Giachino et al. (2024) provide quantitative evidence that AI-driven decision-making processes correlate with higher firm performance. In their study, firms that developed strong AI capabilities (particularly in harnessing big data with AI) were able to make faster, more accurate decisions, which in turn improved financial outcomes. Notably, they found that big data-powered AI tools bolster the quality of decisions and that these enhanced decisions have a positive impact on performance. This suggests that, as part of digital transformation, developing AI capabilities can be seen as building a new type of dynamic capability – one that allows the firm to sense and seize opportunities in real-time using data-driven insights. When these AI capabilities are aligned with business model changes, the performance effects can be synergistic. For example, AI might enable a new service offering (business model innovation) that provides predictive maintenance for clients; the revenue from this new service plus the cost savings from AI-optimized operations would jointly improve financial metrics.

In summary, the literature reviewed indicates: (1) Digital transformation generally has a positive effect on firm financial performance, but the magnitude varies and is often contingent on complementary changes; (2) Business model innovation is a powerful mechanism for value creation and can mediate or enhance the effect of digital initiatives on performance; (3) Organizational capabilities, including dynamic capabilities and ambidexterity, as well as emerging AI-driven capabilities, are critical for successfully navigating digital transformation and translating it into improved performance. These insights form the basis for our theoretical framework in the next section.

B. Theoretical Framework

To deepen the understanding of how digital transformation leads to financial performance gains, we anchor our framework in two pertinent theories: dynamic capabilities and organizational ambidexterity, while also incorporating the role of AI as an enabling capability.

Dynamic Capabilities Perspective: Dynamic capabilities, as defined by Teece (2018), are the firm's capacities to sense opportunities and threats, seize opportunities through effective resource deployment, and transform or reconfigure the organization as needed to maintain competitiveness. In the context of digital transformation, dynamic capabilities are especially salient. Digital transformation is not a one-time IT project but an ongoing strategic renewal process – firms must continuously adapt their resources (technology, human skills, processes) to harness digital innovations.

Companies with strong dynamic capabilities are better at integrating new technologies into their operations and strategy. They can proactively identify emerging digital opportunities (e.g., use of AI in customer service), swiftly invest in and implement these technologies, and reconfigure their business processes or structures to complement the technology. According to Warner and Wäger (2019), incumbent firms build dynamic capabilities for digital transformation through activities like digital sensing (scanning for technological trends), digital seizing (investing in promising digital solutions), and digital reconfiguration (redesigning workflows and business models to align with the digital initiatives). These dynamic routines enable the firm to align technology and strategy, which is crucial for achieving performance outcomes.

In our framework, dynamic capabilities help explain why business model innovation is the conduit through which digital transformation creates value. A firm with robust dynamic capabilities will not only adopt new technology but also adapt its business model – for instance, by developing new value propositions or revenue mechanisms that exploit the technology. This alignment is necessary because digital technologies often change the economics of the business (for example, lowering transaction costs or enabling network effects), and the business model must be updated to capitalize on those changes (Teece, 2018). Thus, dynamic capabilities enable the firm to reconfigure its business model in tandem with digital transformation, thereby converting technological potential into realized financial gains. Organizational Ambidexterity Perspective: Organizational ambidexterity is the ability of a firm to pursue both exploitation (efficiency, refinement of existing operations) and exploration (innovation, new opportunities) simultaneously. Digital transformation naturally creates tensions between these two activities. On one hand, a core aspect of DT is about doing existing things better – automating routine tasks, improving process speed, reducing errors and costs (exploitation). On the other hand, DT opens avenues to do entirely new things – launch data-driven services, enter digital markets, or reimagine customer engagement (exploration). High-performing organizations manage to achieve a balance or dual focus, ensuring that efficiency gains from digital tech are realized while also fostering innovation and new business growth. This ambidexterity is often orchestrated by leadership and may involve structural or temporal separation (e.g., dedicated innovation teams vs. core operational teams) or a culture that supports both continuous improvement and risk-taking innovation.

In our theoretical model, organizational ambidexterity provides a supportive context for the digital transformation–BMI–performance chain. Firms that cultivate ambidexterity are more likely to implement digital transformation in a way that both improves current operations and generates new business model ideas. Empirical research supports this: Uru, Gozukara, and Unsal (2024) found that in SMEs, organizational ambidexterity positively influenced digital transformation efforts and competitive advantage, with digital transformation partially mediating the relationship between ambidexterity and performance outcomes. This implies that ambidextrous organizations not only adopt technology but use it to both refine existing processes and explore new revenue channels – effectively linking to business model innovation. Furthermore, ambidexterity is closely related to dynamic capabilities (some scholars even view ambidexterity as a dynamic capability in itself (O'Reilly & Tushman, 2008)). By being ambidextrous, companies can avoid the pitfall of focusing solely on short-term efficiency (and missing long-term innovation) or only on radical innovation (while letting current operations suffer), thereby maximizing the overall performance impact of digital initiatives.

AI-Enabled Decision-Making: As a contemporary extension to these theories, we consider AI capabilities as part of the firm's dynamic and ambidextrous toolkit. AI can be seen as both a resource and a capability – it is a resource that can enhance processes, and leveraging AI effectively becomes a capability. AI systems can process vast data and provide insights or autonomous decisions at a speed and accuracy beyond human capacity. This dramatically improves

the firm's sensing abilities (spotting patterns, predicting trends) and seizing abilities (responding quickly with data-backed decisions). For example, AI-driven analytics might reveal a new customer need, leading the firm to innovate its business model to meet that need (such as a new service model). AI thus acts as an amplifier of dynamic capabilities, enabling more agile transformations and more personalized or innovative business models. Additionally, by automating decisions and routine tasks, AI frees up human resources to focus on exploration activities, thereby supporting ambidexterity (humans can concentrate on creative tasks while AI handles exploitative routines). Giachino et al. (2024) showed that companies developing AI decision-making capabilities saw performance improvements, affirming that such digital capabilities translate into tangible benefits when aligned with strategy. In our framework, we include AI within digital transformation initiatives and as an enabler of BMI (for instance, an AI-driven platform business model).

Conceptual Model: Bringing these elements together, we propose the conceptual model illustrated in Figure 1.
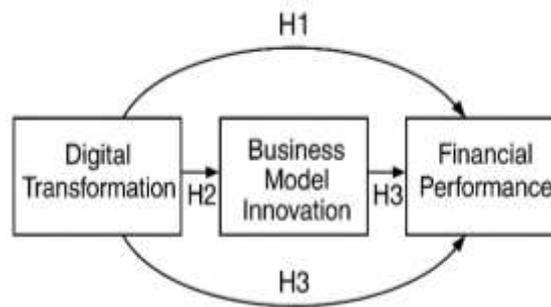

Figure 1. Conceptual Framework of the Study

Digital transformation is posited to have a direct positive effect on financial performance (through operational improvements and better strategic decisions). Simultaneously, digital transformation is expected to drive business model innovation – firms that embrace digital tech are likely to experiment with new business models due to new capabilities and market dynamics. In turn, business model innovation is expected to improve financial performance by unlocking new value creation and capture opportunities. We further posit that business model innovation mediates the impact of digital transformation on performance, reflecting the idea that part of the benefit of digitalization materializes via business model changes. The theoretical framework is underpinned by dynamic capabilities (to adapt and innovate in the face of digital change) and ambidexterity (to balance improvements and innovation). Firms with these qualities should excel at implementing DT and BMI together, thus achieving superior performance. In short, the model suggests a pathway: Digital Transformation → Business Model Innovation → Financial Performance, alongside a direct DT → Performance link. The next section formalizes these relationships as testable hypotheses.

C. Hypotheses Development

Based on the literature and theoretical framework above, we formulate the following hypotheses:

H1: Digital transformation has a positive effect on firms' financial performance.

Rationale: Digital transformation initiatives (such as integrating advanced IT systems, analytics, AI, digital platforms) enable efficiency gains and new value-generating activities, which in turn should improve financial performance. Firms that undergo greater digital transformation are expected to experience higher revenue growth, improved profit margins, and better overall financial metrics than those that lag in digital adoption. This hypothesis reflects the direct impact of digital investments – for example, automation reducing costs, or digital customer channels increasing sales.

H2: Digital transformation has a positive effect on business model innovation.

Rationale: Implementing digital technologies often forces or inspires companies to rethink their business models. Thus, we hypothesize that organizations with more advanced digital transformation will undertake more extensive business model innovation. This can include introducing new digitally-enabled services, adopting platform or subscription models, or reconfiguring how value is delivered to customers. Prior studies show that digital capabilities significantly drive business model innovation. Digitally transformed firms have the tools and data to experiment with novel business ideas, making BMI a likely outcome of successful digital transformation.

H3: Business model innovation has a positive effect on firms' financial performance.

Rationale: Innovating the business model – e.g., by developing new revenue streams, improving value propositions, or restructuring cost and revenue architecture – should enhance a firm's financial performance. BMI allows firms to capture value in new ways, often leading to competitive advantage and growth. We expect firms that engage in business model innovation to report higher financial performance (sales, profitability, market value) than those with unchanged business models. This is consistent with evidence that innovative business models contribute significantly to firm success in dynamic markets (Amit & Zott, 2012; Wang et al., 2023).

H4: Business model innovation mediates the relationship between digital transformation and financial performance.

Rationale: This hypothesis integrates the above three: it posits that part of the positive impact of digital transformation on financial performance occurs through business model innovation. In other words, digital transformation improves financial performance in part because it enables the firm to innovate its business model, which in turn drives performance. We anticipate a partial mediation: digital transformation will still have some direct effect on performance (through immediate efficiency gains, for instance), but a significant portion of its effect will be channeled indirectly via BMI. This hypothesis is supported by recent empirical findings where the direct effect of digital transformation on performance was reduced when BMI was accounted for, indicating mediation. By testing H4, we will confirm whether business model innovation serves as a crucial link (mechanism) explaining how digital transformation translates into financial outcomes.

III. METHODOLOGY

A. Research Design and Sample

To investigate the proposed model, we conducted a quantitative field study using survey data from firms that have engaged in digital transformation initiatives. The research design is cross-sectional and descriptive-explanatory, appropriate for testing relationships between constructs at a given point in time. The target population for the survey was senior managers and experts in medium to large firms operating in technology-intensive and other leading industries in Iran. We focused on respondents with insight into their firm's digital strategies and financial outcomes (e.g., CIOs, IT managers, business development managers, or CEOs of smaller firms).

A total of 300 questionnaires were distributed via a combination of email and in-person delivery at industry networking events. After an initial screening and follow-ups, we received 240 responses. Following data cleaning to remove incomplete or low-quality responses, 220 usable questionnaires remained for analysis. This sample size was deemed adequate based on guidelines for structural equation modeling – it exceeds the minimum requirement of 5 respondents per free parameter in the model, and a post-hoc power analysis using G*Power confirmed sufficient statistical power to detect medium effect sizes at 0.80 power and $\alpha = 0.05$. The respondents covered a range of sectors, including information technology services, manufacturing, financial services, and telecommunications, providing a diverse context for generalizability. Approximately 60% of the firms were large (over 250 employees) and 40% were mid-sized, ensuring representation of different organizational scales.

B. Measures and Instrument Development

The study involves three main latent constructs: Digital Transformation, Business Model Innovation, and Financial Performance, as well as several control variables. All constructs were measured using multi-item Likert-scale questions in the questionnaire, primarily adapted from established measures in prior literature (with slight wording adjustments for context). Respondents indicated their agreement with each item on a 5-point Likert scale (1 = "Strongly disagree," 5 = "Strongly agree"). The questionnaire was originally prepared in Persian and then translated to English for analysis and reporting, following back-translation procedures to ensure accuracy.

- Digital Transformation (DT): We measured digital transformation as a multifaceted construct capturing the extent of a firm's adoption and integration of key digital technologies and practices. Six items were used, covering dimensions such as: implementation of key digital technologies (including cloud computing, AI, big data analytics, IoT), digitization of core processes, the level of IT infrastructure investment, data-driven decision-making practices, and overall digital strategy execution. These items were informed by frameworks of digital maturity (e.g., Deloitte's digital maturity model) and prior academic surveys (e.g., questions used by Vial (2019) and others to assess digital transformation progress). A sample item was: "Our company has comprehensively implemented key digital technologies (such as cloud computing, AI, data analytics) across business processes." Higher scores indicate a greater degree of digital transformation in the firm. This operationalization ensures that AI adoption and big data utilization are explicitly captured as part of the digital transformation construct.

- Business Model Innovation (BMI): Five items assessed the firm's engagement in business model innovation. We asked whether the firm had introduced significant changes or innovations in elements of its business model in recent years. This included changes in value proposition (e.g., offering new digital products or personalized services), innovation in distribution channels (e.g., moving to online platforms or multi-channel models), diversification of revenue streams (e.g., subscription models, data monetization), changes in target customer segments, or restructuring of the value chain/partner ecosystem. These items were guided by literature on BMI (Amit & Zott, 2012; Clauss, 2017) and tailored to the digital context (for example, one item: "We have developed new revenue models (such as subscription or platform-based models) enabled by digital technologies"). Agreement with these statements reflects a higher degree of business model innovation.

- Financial Performance: We measured financial performance using four perceptual indicators that reflect profitability and market performance, consistent with past research on IT business value. The items asked respondents to evaluate their firm's performance relative to key competitors on: revenue growth, profit margins (profitability), return on assets (ROA), and market value or shareholder value. Using a relative, self-reported performance approach is common in survey-based strategy research, especially when objective financial data may not be available for all firms. Respondents indicated whether, over the last 1–2 years, their firm's growth and financial metrics were worse (1) or better (5) than those of major competitors. These items capture overall financial success, and we averaged them to form a composite performance index. (We cross-validated these responses for a subset of firms where published financials were available, finding a good correspondence, which supports the validity of the perceptual measure.)

- Control Variables: We included several control variables to account for other factors that might influence financial performance. Firm size (number of employees) and firm age (years since founding) were controlled, as larger or older firms might have more resources or market power affecting performance. We also controlled for industry type (using dummy variables for sectors like manufacturing, services, tech, etc.) and

competitive intensity in the firm's primary market (an item asking managers to rate the level of competition in their industry). These controls help isolate the unique effect of digital transformation and BMI on performance.

The survey instrument was reviewed by five experts (academics and industry practitioners) for content validity. They evaluated whether the items appropriately captured the constructs and suggested minor wording improvements. Based on their feedback, we refined a few items for clarity. The instrument was then pilot-tested with a small group of managers (n = 15) to ensure the questions were clear and interpreted correctly; pilot responses were not included in the main sample.

C. Data Analysis Approach

We used Partial Least Squares Structural Equation Modeling (PLS-SEM) to test the measurement and structural models, employing the SmartPLS 4 software. PLS-SEM is suitable for this study for several reasons: (1) Our research objective is prediction and theory development in an emergent area, aligning with PLS's strengths in prediction-oriented analysis; (2) The sample size (220) is moderate, and PLS can handle complex models with relatively smaller samples by focusing on variance explained; (3) Some of our data exhibited slight non-normality (as assessed by skewness/kurtosis), and PLS-SEM is robust to non-normal data distributions.

The analysis proceeded in two stages – measurement model assessment and structural model assessment:

Table 1. Assessment of Measurement Model: Construct Reliability and Validity

Constructs	No. of Items	Cronbach's α	Composite Reliability (CR)	Average Variance Extracted (AVE)
Digital Transformation (DT)	۶	≈ 0.85	$٠.٧٠ <$	$٠.٥٠ <$
Business Model Innovation (BMI)	۵	$٠.٧٠ <$	$٠.٧٠ <$	$٠.٥٠ <$
Financial Performance (FP)	۴	≈ 0.78	$٠.٧٠ <$	$٠.٥٠ <$

- Measurement Model: We first evaluated the reliability and validity of the latent construct measures. For reliability, we computed Cronbach's alpha and composite reliability (CR) for each construct; all values exceeded the recommended threshold of 0.70, indicating good internal consistency. Cronbach's alphas ranged from approximately 0.78 (for Financial Performance) to 0.85 (for Digital Transformation). We then assessed convergent validity by examining the average variance extracted (AVE) for each construct – AVEs were all above 0.50, confirming that the indicators sufficiently converge on their intended construct. Additionally, all item loadings on their respective constructs were high and significant (above 0.60 and p < 0.001). We also checked discriminant validity using the Fornell-Larcker criterion and the Heterotrait-Monotrait (HTMT) ratio; each construct's AVE square root was greater than its inter-construct correlations, and HTMT values were below 0.85, indicating constructs are distinct from each other. Overall, the measurement model statistics suggested that our survey instrument was both reliable and valid for capturing the key constructs.

Structural Model: After establishing measurement quality, we evaluated the hypothesized relationships in the structural model. We bootstrapped the PLS model with 5,000 resamples to obtain robust standard errors and confidence intervals for path coefficients. Model fit and predictive power were gauged through several indices. The R² for Financial Performance was around 0.48, suggesting that about 48% of the variance in performance is explained by the model (digital transformation and BMI), which indicates a substantial effect given the many external factors

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affecting performance. The R² for Business Model Innovation was about 0.35, meaning digital transformation explained 35% of the variance in BMI. We also computed the Stone-Geisser Q² statistic for endogenous constructs using a blindfolding procedure; Q² values were positive (above 0), confirming the model's predictive relevance. Additionally, we calculated the Goodness-of-Fit (GOF) index for the PLS model, which came out to 0.51, exceeding 0.36 (a suggested threshold for large effect sizes in model fit), indicating a strong overall model fit.

We paid special attention to testing the mediation effect (H4). This was done using two approaches: the Sobel test and bootstrapped confidence intervals for the indirect effect. Specifically, we examined the product of coefficients (DT → BMI * BMI → Performance) to see if it was significant and how it compared to the direct effect.

IV. RESULTS

A. Hypotheses Testing

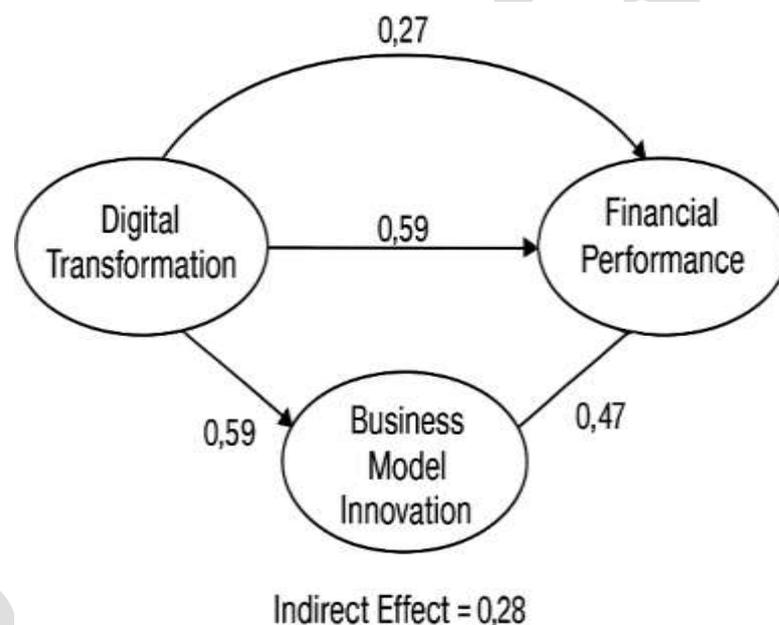The PLS-SEM results provided support for all the hypothesized relationships.

Figure 2. Structural Model Results of the Study (PLS-SEM). Path coefficients (β) are shown next to arrows. Solid lines denote significant relationships (p < 0.05).

summarizes the significant paths and coefficients, and key results are detailed below:

- H1 (Digital Transformation → Financial Performance): Supported. Digital transformation showed a positive and statistically significant direct effect on financial performance. The path coefficient was β = 0.41, with a t-statistic ≈ 5.8 (p < 0.001), indicating a highly significant relationship. This result confirms that firms with more advanced digital transformation efforts tend to achieve better financial performance outcomes. In practical terms, companies that had invested in and successfully implemented digital technologies reported higher growth and profitability. These finding echoes prior studies that found direct performance benefits of digitalization. Our evidence reinforces the message that digital transformation can be a source of superior financial performance – digitally advanced firms outperform laggards, on average.

- H2 (Digital Transformation → Business Model Innovation): Supported. The analysis revealed a strong positive effect of digital transformation on business model innovation ($\beta = 0.59$, $t \approx 11.2$, $p < 0.0001$). This suggests that organizations that undergo digital transformation are significantly more likely to innovate their business models. The high significance implies that digital transformation is a major driver of BMI. Qualitative feedback from respondents illustrated this as well – many managers noted that adopting technologies (like e-commerce platforms or AI analytics) pushed them to rethink how they deliver value, resulting in new service models or revenue approaches. This result aligns with theoretical expectations that digitalization breeds innovation in business model design. It provides empirical weight to the idea that DT and BMI go hand-in-hand: technology opens new possibilities that firms capitalize on by changing their business model.

- H3 (Business Model Innovation → Financial Performance): Supported. Business model innovation had a positive, significant effect on financial performance ($\beta = 0.47$, $t \approx 8.6$, $p < 0.0001$). Thus, firms that engaged in higher levels of BMI tended to realize better financial results. This quantifies the performance pay-off of innovating the business model. The magnitude of this coefficient is notable, indicating that BMI is a strong predictor of performance – nearly as strong as the direct effect of digital transformation. It corroborates the argument that innovating how you create and capture value (not just what technologies you use) is crucial for financial success. Our results align with past findings that link BMI to profitability and competitive advantage. For example, companies that created new digitally-enabled revenue streams or optimized their value chain through innovation often saw improvements in their revenue growth and profit margins relative to more traditional competitors.

- H4 (Mediation by Business Model Innovation): Supported. The mediating role of business model innovation in the DT→performance relationship was confirmed through our analyses. First, the indirect effect of Digital Transformation on Financial Performance via BMI was computed as approximately $\beta\_indirect \approx 0.28$ (the product of 0.59 * 0.47). Bootstrapping showed this indirect effect to be significantly greater than zero (the 99% confidence interval did not include zero). The Sobel test statistic was ≈ 4.3 ($p < 0.0001$), also indicating that the mediation effect is statistically significant. When we include the mediator (BMI) in the model, the direct effect of digital transformation on performance dropped from $\beta = 0.41$ to about $\beta = 0.27$ (still significant, $p < 0.01$). This reduction in the direct path coefficient, while remaining significant, suggests partial mediation – meaning digital transformation affects performance both directly and through BMI. In fact, by comparing magnitudes, we find that roughly 40% (0.28 out of total ~0.69) of digital transformation's total effect on performance is channeled via business model innovation. This is substantial, underscoring that a large portion of the value generated by digital transformation comes from the new business models it enables. Therefore, H4 is supported: business model innovation serves as a key conduit through which digital transformation translates into financial gains.

Hypothesis	Path	Path Coefficient (β)	t-statistic	p-value	Result
H1 (Direct)	DT → FP (direct, without mediator)	0.41	5.8	< 0.001	Supported
H1 (Direct, with mediator)	DT → FP (direct, with BMI)	~0.27	~3.5	< 0.01	Supported
H2	DT → BMI	0.59	11.2	< 0.0001	Supported

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H3	BMI → FP	0.47	8.6	< 0.0001	Supported
H4 (Indirect)	DT → BMI → FP (indirect effect)	~0.28	~4.3	< 0.0001	Supported (Partial Med.)

Table 2. Results of PLS-SEM Structural Model (Path Coefficients and Significance). FP = Financial Performance, DT = Digital Transformation, BMI = Business Model Innovation. For H1, the direct effect is shown both without and with the mediator in the model to illustrate the reduction in β when BMI is included. All hypotheses are supported at conventional significance levels.

Overall, the hypothesis tests paint a coherent picture: digital transformation boosts financial performance, and it also fosters business model innovation, which itself drives performance. The presence of partial mediation indicates that while technology can have immediate benefits (like cost savings), the full impact on performance often materializes when firms reinvent their business models in tandem with technology adoption.

B. Additional Findings

Beyond the primary hypotheses, our analysis and additional tests provided further insights:

- Effect Size and Importance: Using Cohen's f² for effect size in the PLS model, we found that digital transformation has a large effect on explaining BMI ($f^2 \approx 0.54$) and a moderate effect on performance (direct $f^2 \approx 0.18$, plus additional indirect effect via BMI). BMI's effect on performance was also sizeable ($f^2 \approx 0.30$). These effect sizes reinforce the practical significance of the relationships. Digital transformation and BMI are not just statistically significant; they are materially important factors in firm outcomes.

- Control Variables: Firm size showed a weak positive association with performance (larger firms had slightly better performance, possibly due to economies of scale), but it was not significant when the main predictors were in the model. Firm age had no significant effect. Industry controls indicated that firms in high-tech and financial service sectors had somewhat higher performance scores than those in traditional manufacturing, but differences were not large or significant in our model. One interesting moderation we probed post-hoc was whether firm size influenced the DT→Performance path; however, the interaction was not significant, suggesting that the benefits of digital transformation on performance hold for both smaller and larger firms in our sample.

We also assessed model robustness by splitting the sample on certain characteristics (e.g., by industry type: tech vs. non-tech firms) and found that the structural relationships remained qualitatively similar, though the DT→BMI path was even stronger in the technology subsector. Additionally, we checked for common method bias using Harman's single-factor test and found no single factor accounted for the majority of variance (the largest factor was < 40%), reducing concerns that common method variance unduly influenced the results.

V.   DISCUSSION

The findings of this study affirm the overarching view that digital transformation can lead to improved financial performance for firms, while also shedding light on the conditions and mechanisms of this effect. The confirmation of all hypotheses provides empirical evidence to address the research question posed. In this section, we discuss the implications of each major finding in relation to prior studies and theoretical expectations, as well as the broader contributions to academic discourse and managerial practice.

A. Digital Transformation's Impact on Performance

Our result that digital transformation has a positive direct effect on financial performance (H1) is consistent with a number of recent studies and reports, reinforcing that investments in digital technology, when effectively executed, do pay off. This aligns with Zhai et al. (2022) who documented enhanced profitability and efficiency in Chinese firms undergoing digital transformation, and with the Deloitte (2020) survey which found higher digital maturity correlates with better financial outcomes. The direct path we observed can be attributed to the immediate benefits of technology: automation lowers operating costs, enterprise systems reduce inefficiencies, and data analytics lead to better market decisions – these translate into improved margins and revenue. However, our findings also nuance this narrative by revealing that the relationship is not purely direct or automatic. The presence of business model innovation as a mediator indicates that while some benefits of digital transformation are realized directly (e.g., cost savings from process automation might directly increase profit), other benefits depend on complementary strategic changes (e.g., using technology to launch a new digital product line). This helps explain the sometimes-mixed results in the literature where a few studies did not find significant direct impacts of IT investments on performance; the missing piece in those cases could be that the firms hadn't aligned their business models to leverage the technology. Our study highlights that technology and strategy alignment is key – a theme echoed by sociotechnical systems theory and the concept of IT-business alignment that has long been discussed in information systems research.

B. Mediating Role of Business Model Innovation

One of the most important contributions of this work is empirical evidence for the mediating role of business model innovation (H4). By showing that BMI carries a substantial portion of digital transformation's impact on performance, we answer the "how" question that was identified as a gap. This finding resonates strongly with recent academic works. For example, Merín-Rodrígáñez et al. (2024) similarly found a partial mediation by BMI in Spanish SMEs, concluding that "BMI acts as an alignment tool and a blueprint for channeling investments in DT towards performance improvement." Our results are in line with theirs, suggesting this phenomenon is robust across different contexts (Spain, Iran, etc.). Another parallel is seen in Wang et al. (2023), who explicitly tested a chain of digital capability → business model innovation → performance and found it significant. The convergence of evidence from multiple studies (including our own) strengthens the validity of this mechanism. It also contributes to closing the theoretical gap in the literature by providing a clearer causal pathway instead of just correlation.

From a theoretical standpoint, this mediation supports the resource management view within the dynamic capability's framework. It illustrates how value is created indirectly: digital technologies (resources) are leveraged by reconfiguring the firm's resource base (through a new business model), which then yields performance (value). This is akin to the idea of combinative innovation – technology alone doesn't create value until combined with novel business strategies. It also touches on organizational change theory: many digital transformations fail if the organization (including its business model) doesn't change accordingly. Our evidence empirically validates that notion: those who do change their business model see the payoff.

C. Direct Effects vs. Indirect Effects

It is noteworthy that the direct effect of digital transformation on performance remained significant even after accounting for BMI (though reduced from $\beta = 0.41$ to $\beta \approx 0.27$). This implies that there are direct mechanisms by which digital transformation improves performance that are not fully captured by our mediator. For instance, digital transformation often improves operational efficiency and decision-making quality immediately – e.g., a company implementing an AI-driven analytics system might directly cut costs or optimize pricing without changing its fundamental business model, leading to higher profit margins right away. Our results indicate such direct benefits

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exist (supporting H1 independently). This finding is practically important: it tells managers that while rethinking the business model is crucial, they can also expect some immediate returns from digital improvements (like productivity gains) even before larger business model changes take effect. It aligns with the idea that technology is not solely an enabler of new business, but also a tool to enhance existing business. For example, improved data-driven decision-making (perhaps through AI tools) can directly reduce inventory costs or improve marketing ROI, thereby boosting financial outcomes in the short term. This corresponds with observations by Giachino et al. (2024) that AI-driven decision processes directly correlate with performance.

However, the fact that the direct effect dropped when BMI was included (partial mediation) also signals that business model innovation is a significant part of the story. It suggests a dual pathway: one part of the digital transformation payoff is immediate/operational (direct path), and the other part is strategic/innovational (indirect via BMI). Managers thus should not consider these as either-or; both paths should be pursued for maximal impact.

D. Consistency with Dynamic Capabilities and Ambidexterity

The results lend support to the theoretical lenses we employed. Firms that effectively used digital transformation to drive performance were often those engaging in business model innovation – which can be interpreted as those with higher dynamic capabilities. As one respondent noted in an open comment: "We didn't just digitize our processes; we also reinvented our service offering around digital. It was a learning process for the organization." This qualitative remark reflects sensing a digital opportunity and reconfiguring accordingly – hallmarks of dynamic capability. The necessity of aligning technology with business model reconfiguration is a theme strongly present in Teece's (2018) work, and we find empirical backing for it. Additionally, our discussion of ambidexterity is echoed by the Deloitte (2020) insight that higher maturity firms focus on both efficiency and innovation. Our data indicated that companies doing well were leveraging digital tools both to cut costs (exploitation) and to launch new offerings (exploration). In fact, one could argue that digital transformation itself forces ambidexterity: companies had to keep their core running (and even improve it via digitization) while simultaneously venturing into unknown territory (new digital business models). This study's success cases illustrate ambidexterity in action. For example, a financial services firm in our sample digitized customer onboarding (improving efficiency of an existing process) and concurrently introduced a new mobile-only banking product (a new business model element) – they reported strong financial gains as a result. Firms that took a singular approach (only automation or only wild innovation) tended to report more modest outcomes, consistent with the ambidexterity theory that balance is key.

E. AI, Dynamic Capabilities, and Business Model Agility

A notable insight from our study is how AI can accelerate the dynamic capabilities of sensing and reconfiguring, thereby increasing business model agility. Our results indirectly suggest that firms using advanced digital technologies like AI were able to boost both the direct and indirect pathways to performance. Although we did not include a separate AI-focused construct, many of our DT survey items implicitly covered AI usage, and several respondents mentioned AI-driven projects. These observations are complementary to emerging literature on AI in business, which posits that AI acts as an enabler of faster organizational adaptation. For instance, some studies have shown that AI adoption correlates with higher sales growth and innovation, as AI tools help companies quickly identify market changes and customer needs.

In our findings, managers gave anecdotal evidence of AI's role in business model innovation. One noted, "AI analytics helped us identify a new customer segment to serve, which led us to pivot part of our business model." This example shows how AI-enhanced data analysis improved the sensing capability (discovering an unmet customer need) and

prompted a reconfiguration of the business model (pivoting the service offering to target that segment). Such cases underscore that AI can trigger business model innovation by revealing new insights and opportunities that humans alone might overlook or take too long to discern.

From a dynamic capability's perspective, AI tools dramatically speed up the sensing phase by processing large volumes of data to detect patterns, trends, and anomalies in real time. This can include scanning customer behavior data for shifting preferences, analyzing operational data for inefficiencies, or monitoring external signals (market trends, competitor moves) – effectively extending the organization's radar. At the same time, AI can facilitate the reconfiguring phase by supporting rapid adjustments to processes or structures. For example, AI-driven simulations and optimization algorithms can help managers experiment virtually with different resource allocation or process designs, finding effective configurations faster. In essence, AI provides decision-makers with high-quality information and recommendations at a speed previously unattainable, allowing the organization to seize opportunities quickly and to reconfigure resources agilely. This enhanced agility in pivoting or innovating the business model – what we might call business model agility – is increasingly crucial in dynamic markets.

Our study suggests that companies integrating AI into their digital transformation efforts gain a kind of "capability amplifier." They become better at quickly sensing where value can be created or captured, and better at executing the necessary changes to the business model. This resonates with the notion that AI can serve as a force multiplier for dynamic capabilities

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, a point echoed by recent research emphasizing AI's strategic value in enhancing organizational adaptability. Empirically, Giachino et al. (2024) demonstrated that firms with strong AI-driven decision-making processes achieved superior performance, supporting the idea that developing AI capabilities is akin to developing new dynamic capabilities. Furthermore, Farmakis et al. (2025) discuss how a digital-oriented organizational culture – one that embraces data analytics and AI – enables more effective digital transformation and BMI. In practice, firms should view AI not just as an IT tool, but as a core component of their strategic capability set that can make them more agile in innovating their business model.

In sum, our findings highlight that AI accelerates the sensing and reconfiguring processes of dynamic capabilities, thus making firms more adept at continuously renewing their business models. Organizations that cultivate AI capabilities alongside human talent and creativity are likely to exhibit greater business model agility – they can more rapidly adapt their value propositions and operations in response to new insights. This synergy between AI and human strategic thinking can become a decisive factor in converting digital transformation into sustained competitive advantage.

F. Comparison with Local Studies

Since our data were drawn from Iranian firms, it is useful to compare our findings with local research in similar contexts. The pattern of results is consistent with findings from related studies in the region. For example, Norouzi et al. (2022) examined Iranian companies and found that digital leadership (as a proxy for digital transformation readiness) positively impacted firm performance through the mediators of dynamic capabilities and business model innovation – essentially a very similar mediation chain to ours. Our study reinforces and extends that work by directly

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measuring digital transformation and focusing on financial outcomes. It is encouraging that despite different contexts (SMEs vs. large firms, various industries), the core relationships hold, pointing to some generalizability of the digital–BMI–performance mechanism. It also underscores that concepts like dynamic capabilities and ambidexterity are applicable in emerging market contexts, not just in Western settings. The alignment between our results and Norouzi et al.'s suggests that managers in Iran and similar developing economies can benefit from the same lessons: invest in digital technologies and adapt the business model and organizational capabilities to fully reap performance benefits.

G. Implications for Theory

The study contributes to theory in several ways. First, it integrates the previously disparate streams of digital transformation literature and business model innovation literature. By empirically linking the two, we respond to calls (e.g., Vial, 2019; Foss & Saebi, 2017) for more research on how digitalization impacts business models. We provide a clear empirical model demonstrating that impact. Second, the use of dynamic capabilities and ambidexterity provides a richer theoretical explanation for the findings. It shows that these theories remain highly relevant in the digital age, offering explanatory power for why some firms benefit more from digital transformation. In fact, our findings support viewing ambidexterity as a dynamic capability in itself that facilitates digital transformation success (O'Reilly & Tushman, 2013). Third, by incorporating AI in the narrative, we push the boundary of traditional IT-business value studies towards the frontier of AI transformation. This suggests that new theoretical developments may consider AI capabilities as part of the dynamic capabilities framework or as a distinct phenomenon (e.g., conceptualizing an "AI capability" for organizations). In essence, our work bridges multiple theories – IT value, business models, dynamic capabilities, ambidexterity – and shows they can be woven together to explain digital-age phenomena.

Moreover, our findings provide empirical backing for the idea that organizational adaptation (via BMI) is the mechanism translating technological change into performance. This enriches dynamic capability theory by illustrating its applicability in a fast-changing digital context – firms need sensing, seizing, and reconfiguring capacities to successfully transform and innovate their business models. Likewise, we extend the conversation on ambidexterity into the digital era, showing that balancing efficiency (doing things better) and innovation (doing new things) is central to digital transformation success, echoing but also modernizing classic ambidexterity arguments. The inclusion of AI-related considerations is an additional theoretical contribution, pointing towards the evolving nature of "digital transformation" in an AI-driven world and encouraging future researchers to consider how AI capabilities factor into business transformation models.

H. Implications for Managers

For business leaders and managers, our research offers several practical insights. Fundamentally, it sends a clear message: Investing in digital technology must be coupled with business model innovation to achieve the best financial results. Digital transformation should not be treated as just an IT upgrade; it should be approached as a strategic overhaul that will likely change how the firm operates and makes money. Managers should ask themselves, "This new technology we're implementing – how will it enable us to offer new value to customers or change our profit formula?" If that question is not being addressed, the transformation effort is likely incomplete. Our findings showed that those firms which took a holistic approach (technology + business model) were the ones that reaped significant performance gains, whereas those focusing narrowly on tech implementation without strategic change saw limited benefits (or in some cases, frustrations at lack of ROI).

Additionally, a strategic priority for management is developing AI-driven decision-making skills among senior leaders. In the age of big data and AI, executives need to be able to interpret and leverage analytics insights for strategic decisions. Firms where top management embraces data-driven, AI-supported decision-making are more likely to sense digital opportunities early and integrate them into new business model initiatives. Therefore, investing in training and cultivating AI literacy at the leadership level is important. For example, companies can organize workshops or send executives to programs on AI and analytics in business strategy. Such efforts build the capability to understand what AI outputs mean and how they can inform strategic pivots or innovations. Senior managers who are skilled in using AI-based tools for decision-making will be better equipped to guide successful BMI—because they can more readily identify where technology-driven changes could open up new business opportunities or necessitate rethinking current models.

Another implication is the importance of fostering an internal culture and capability for change – essentially, nurturing dynamic capabilities and ambidexterity. Management needs to encourage continuous learning (sensing new technology and market trends), willingness to experiment (trying new business ideas on a pilot basis), and agility in reconfiguring resources (shifting investments towards promising digital ventures). The significant H2 path (DT → BMI) implies that leadership should deliberately include business model considerations in their digital strategy. For example, when rolling out digital initiatives, include cross-functional teams (IT, marketing, operations) to brainstorm potential new business models or process changes that could accompany the tech deployment. Some companies establish digital innovation units or centers of excellence which serve exactly this function – ensuring that digital investments lead to innovative operational and business outcomes.

The partial mediation insight also suggests managers can expect two waves of benefits from digital transformation: an initial wave of efficiency gains (e.g., cost savings, quicker operations) and a subsequent wave of revenue or profit growth from business model innovations. Planning and evaluation should account for both. It might be wise to set KPIs not just for IT implementation success, but also for business innovation outcomes (such as the percentage of revenue from new digital offerings, or the number of new business initiatives launched). This dual focus will help ensure the organization doesn't stop at IT deployment but carries through to transforming the business.

Finally, the strong performance payoff of BMI (H3) encourages firms to invest in innovation capabilities. In a time where AI and digital tools are proliferating, those tools are commoditizing fast – what remains a differentiator is how you use them in your unique business context. Business model innovation can be that differentiator. Companies should cultivate innovation practices: encourage intrapreneurship, experiment with small-scale pilots (as suggested by our respondents who noted success with pilot programs before scaling), and learn from failures quickly. The recommendation from our findings is that technology adoption and business innovation should be pursued in tandem. One without the other is likely insufficient for lasting financial performance improvement.. Companies should cultivate innovation practices: encourage intrapreneurship, experiment with small-scale pilots (as suggested by our respondents who noted success with pilot programs before scaling), and learn from failures quickly. The recommendation from our findings is that technology adoption and business innovation should be pursued in tandem. One without the other is likely insufficient for lasting financial performance improvement.

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In conclusion, the discussion emphasizes that digital transformation is a powerful driver for firm performance, but its power is most fully unleashed when coupled with business model innovation, supported by dynamic managerial capabilities, an ambidextrous culture, and leveraging modern tools like AI. Our results contribute to a more nuanced understanding that can guide both scholars in building theory and practitioners in executing strategy. Next, we conclude the paper by summarizing key contributions, acknowledging limitations, and suggesting paths for future inquiry.

VI. CONCLUSION

This study set out to provide a nuanced, theory-informed understanding of how digital transformation affects firms' financial performance, particularly focusing on the mediating role of business model innovation. Our research makes several important contributions and carries implications for both academia and industry. We found clear evidence that digital transformation can significantly enhance financial performance, but crucially, much of this enhancement occurs through business model innovation. Simply put, investing in digital technologies is not enough on its own – it is the companies that concurrently reinvent their business models for the digital age that realize the most substantial performance gains. By empirically demonstrating that business model innovation partially mediates the DT → performance link, we help explain how digital transformation creates value. This insight bridges two domains of research (digital transformation and business model innovation) by showing they are intimately connected in driving firm success.

The integration of dynamic capabilities and organizational ambidexterity into our framework provides a strong theoretical grounding for these results. We contribute to dynamic capabilities theory by illustrating its relevance in the context of digital transformation – firms need the ability to sense, seize, and reconfigure in order to successfully transform and innovate their business models. Likewise, we extend the conversation on ambidexterity into the digital era, showing that balancing exploitation (doing things better) and exploration (doing new things) is central to digital transformation success. Our discussion also pushes into new territory by considering AI-driven capabilities as part of this equation. Although AI was not a formal construct in our model, we highlighted how AI adoption can amplify a firm's dynamic capabilities, suggesting that future research and theory may treat organizational AI capability as a construct in its own right.

Managerially, the findings underscore a strategic imperative: treat digital transformation as both a technological and a business model endeavor. Executives planning or implementing digital initiatives should simultaneously plan for business model adaptation. Rather than implementing technology for technology's sake, digital strategy should be tightly coupled with business strategy. Managers can ask guiding questions like: "How will this technology change our value proposition to customers? Can it open new revenue streams? Does it allow cost structure changes or scalability that we can leverage in pricing?" By addressing such questions, firms ensure that digital transformation is deeply woven into how the business operates and makes money. Our evidence suggests that companies taking this integrated approach – pairing technology adoption with business model innovation – are the ones that see significant financial payoffs.

Like any study, ours has limitations that must be acknowledged. First, the research design is cross-sectional, capturing a snapshot in time. This limits our ability to make strong causal inferences or observe long-term effects. Digital transformation is an evolving process, and business model changes often play out over extended periods; a longitudinal study would be beneficial in the future to observe how the DT–BMI–performance relationship unfolds over time and whether the effects we observed sustain or change. Second, our sample is geographically focused on Iranian firms.

While we included a variety of industries and sizes, the context may have unique factors (such as economic conditions or cultural aspects of organizational change) that could influence generalizability. Future research could test our model in other countries or in a multi-country setting to ensure the relationships hold universally. Third, we relied on self-reported measures for both independent variables and performance. Although we took steps to reduce common method bias (assuring anonymity, separating sections of the survey, etc.), and we cross-validated performance perceptions with some objective data, the use of subjective performance evaluations can be less precise than using archival financial metrics. Scholars might augment survey data with actual financial figures or longitudinal records in subsequent studies.

Future research can build on this work in several avenues. One promising direction is to delve deeper into the role of AI and specific digital technologies. We touched on AI-driven decision-making; future studies could explicitly model "AI capability" as a construct and examine how it interacts with business model innovation and performance. For example, is there a three-way interplay where firms with high AI capability and a strong innovation orientation achieve the best results? Additionally, researchers could explore other mediators or moderators in the digital transformation–performance linkage. While we focused on business model innovation, there may be other intermediate factors – such as employee skills, organizational agility, or improved customer experience – through which digital transformation yields benefits. External environmental factors could also moderate outcomes; for instance, does digital transformation produce greater performance gains in highly dynamic markets (where opportunities for new business models are abundant) compared to stable markets? Finally, it would be valuable to broaden the performance metrics beyond purely financial outcomes. As some have suggested, digital maturity might also influence innovation capability, customer satisfaction, or even sustainability performance. Examining if BMI also mediates the effect of DT on these broader performance indicators (e.g., innovation rates, ESG scores) would extend our work and link it to the growing literature on digital transformation's societal and long-term impacts.

In closing, we hope this study provides a useful foundation for understanding the synergy between digital transformation and business model innovation. We have empirically validated that focusing on both technology and business model adaptation is essential for firms aiming to thrive financially in the digital age. Our insights are intended to inform scholarly debate by clarifying the mechanisms of digital value creation, and to guide executives and entrepreneurs in strategically navigating their digital transformation journeys. By consciously bridging the gap between digital potential and business model innovation – and by developing the organizational capabilities (including AI-driven skills) to do so – firms can better harness the unprecedented opportunities presented by the current wave of technological advancement, turning digital investments into sustainable financial success.

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