



Influence Of Digital Transformation On Firm Performance With Digital Innovation As An Intervening Variable

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ARTICLE INFO ABSTRACT

In the era of rapid technological advancements, digital transformation has emerged as a pivotal element for organizations seeking to enhance their competitive advantage and overall performance. This paper explores the relationship between digital transformation and firm performance, with a specific focus on digital innovation as an intervening variable. By synthesizing existing literature and presenting empirical evidence, we aim to elucidate how digital transformation initiatives influence organizational outcomes through the lens of digital innovation. Banking institutions are facing increasing pressure due to the swift evolution of technologies and work methodologies. Implementation of digital transformation is crucial for them to stay current, but there are numerous other considerations that organizations must address within the fiercely competitive landscape they operate in. Hence, a holistic analysis of the impact of digital transformation on Indian Banks is imperative. This research endeavors to explore this impact by assessing how digital innovation mediates organizational performance. To achieve this, a survey was carried out among employees of selected private banks of Chhattisgarh. The results indicate that the Social and technological performance, intricately intertwined, finds its catalyst in digital innovation. Guided by the diverse perspectives of social and technological realms, digital innovation serves a driving force behind the transformation of businesses in the digital era.

Keywords: Digitalization, digital transformation, technical and social performance, Firm performance, Digital innovation

1. Introduction

A digital transformation (DT) is essentially the integration of digital technology into every aspect of a business that drastically alters the way it operates and delivers value to its customers. As firms embark on their digital transformation journeys, they often encounter significant challenges and opportunities. The concept of firm performance, typically measured through financial metrics, customer satisfaction, and market share, is closely linked to the successful implementation of digital initiatives. Furthermore, digital innovation—characterized by novel products, services, processes, and business models generated through digital technologies—serves as a critical mechanism through which digital transformation influences firm performance.

The ongoing and relentless advancements in technology are exerting a significant impact on diverse facets of our daily lives, with the business sector being notably influenced. In response to these transformative effects, numerous companies are prompted to reevaluate their operational strategies and adjust their established business frameworks. Consequently, there is a growing necessity for organizations striving to stay competitive within the ever-evolving digital landscape to embark on a journey of digital transformation. This strategic shift involves the seamless integration of cutting-edge digital tools and technologies into existing business processes, a paradigm that was underscored by Bharadwaj (2000).

In the realm of the digital economy, the transition to a digital framework represents not only a technical challenge but also a crucial strategic management consideration (Wang et al., 2020). Defined as a contemporary concept by scholars, digital transformation holds variable meanings contingent upon the specific setting in which it is referenced. Moreover, the absence of a formal, universally agreed definition within academic literature surrounding the term "digital transformation" can contribute to its misinterpretation and

incorrect application (Mahraz, M. I., Benabbou, L., & Berrado, A., 2022). This absence of a concrete definition sometimes leads to ambiguity, fostering potential misuse of the term.

2. Problem Statement

The problem statement focuses on investigating the impact of digital transformation on the performance of private banks in Chhattisgarh, with a specific emphasis on how digital innovation functions as an intervening variable. This study aims to delve into the relationship between the integration of digital technologies and the overall success of private banks within the region, shedding light on the role that innovative digital practices play in shaping their performance outcomes. By exploring the complex dynamics between digital transformation initiatives and the intermediary influence of digital innovation, this research seeks to provide valuable insights into how Chhattisgarh's private banks can optimize their operations and strategies to adapt to the evolving digital landscape effectively. It is essential to understand how these interconnected factors interact and contribute to the broader context of firm performance, ultimately contributing to the body of knowledge on leveraging digital advancements in the banking sector. The study's scope encompasses a detailed examination of the unique challenges and opportunities faced by private banks in Chhattisgarh concerning digital transformation and innovation, highlighting the significance of addressing these aspects to enhance organizational efficiency and competitiveness in the contemporary business environment.

• The purpose of this paper is to address the following research questions:

1. How does digital transformation impact firm performance?
2. In what ways does digital innovation serve as an intervening variable between digital transformation and firm performance?

3. Literature Review

The phenomenon of digital transformation has gained considerable attention in academic and practitioner circles. Scholars define digital transformation as a multi-faceted process involving technological, organizational, and cultural changes. In today's fast-evolving digital economy, the shift towards digitalization encompasses not only technical aspects but also strategic management considerations (Aryan, 2023). The concept of digital transformation is increasingly emphasized by researchers as it denotes a fundamental change in leveraging technology for organizational growth. Nevertheless, the precise definition of digital transformation varies depending on its application context, a factor that contributes to potential misunderstandings and misapplications of the term in academic discourse (John, Atharv, Row, 2022).

Over the years, digital transformation and its impact on organizational performance have been a focal point for researchers spanning various disciplines. One notable discussion by Chen et al. (2023) delves into the influence of specific technologies and the digital transformation framework on reshaping business strategies, as exemplified by the insights from Temenos's SDK (2020). On the other hand, a broader examination has been undertaken to ascertain the ramifications of digital transformation across all facets of organizational performance. For instance, the analysis carried out by Oracle FLEXCUBE in 2019 sheds light on the driving forces compelling companies to embark on digital transformation initiatives. The study reveals a common thread among different industries and company sizes, demonstrating a universal recognition of the imperative need to undergo transformation in order to maintain market relevance and competitiveness in the face of rapidly evolving digital landscapes.

Furthermore, research conducted by Haffke et al. (2021) and Schmidt, Drews, and Schirmer (2021) highlights both internal and external triggers that propel organizations to actively embrace digital transformation. This heightened awareness within companies stems from a profound realization that their respective industries are undergoing significant shifts driven by digital advancements, necessitating a timely alignment with these changes. One of the key driving factors identified by Berghaus & Back (2021) centers on the evolving customer behaviors and expectations, alongside the evolving competitive dynamics, prompting companies to adopt digital transformation strategies.

Shubhas and his colleagues emphasized the significant impact of new technologies such as social and mobile technologies, analytics, cloud services, and the Internet of Things (IoT) on modern businesses. They highlighted that these technologies have revolutionized the way business is conducted, not only opening up new possibilities and opportunities but also presenting considerable threats to established companies. It is evident that businesses failing to embrace these cutting-edge technologies and a digital transformation approach are at risk of falling behind in today's rapidly evolving market landscape, as per the research conducted by Sebastian et al. (2020) and Al Ayed (2023). Additionally, Abul (2018) delved into why organizations are driven to undergo digital transformation and shed light on the profound impact it has on organizational performance, whether through direct or indirect means.

Firm performance is a multifaceted concept that encompasses different dimensions. These dimensions include financial performance, which looks at aspects such as revenue growth and profitability. Operational performance, on the other hand, focuses on metrics like productivity and efficiency. In addition, customer-centric measures play a crucial role, including factors like customer satisfaction and retention. The relationship

between digital transformation and these performance indicators has been extensively studied, resulting in a variety of findings that are often contradictory or inconclusive (Rogers, 2023).

The world of digital innovation is truly a revolution that continues to evolve over time, reshaping the landscape of businesses and industries globally. Digital innovation, at its core, involves harnessing cutting-edge digital technologies to creatively tackle and resolve current business challenges, driving organizations towards enhanced efficiency and competitiveness in the ever-evolving market environment. As companies strive to stay ahead in the competitive market, they are increasingly turning towards innovative methodologies that not only address longstanding obstacles but also pave the way for sustainable growth and strategic goal achievement. This relentless pursuit of digital innovation not only unlocks novel opportunities for product and service enhancements but also presents a perpetual challenge for businesses to adapt and excel in the dynamic market realm.

Emphasized by Hunif & Aly (2023), innovation is undeniably a crucial driver for organizational progress and success, underpinning the pillars of growth and sustainability within firms. The multifaceted nature of innovation spans across a myriad of dimensions, encapsulating not just product and service development but also organizational dynamics and behavioral changes, as articulated by Hauser, Tellis, & Aly (2020).

While some organizations may perceive innovation as a costly venture with uncertain returns, it is imperative to recognize innovation as an indispensable component that directly contributes to overall business profitability and longevity. Striking a delicate balance, innovation endeavors should seamlessly align with the organization's brand ethos and strategic positioning, with the innovation office strategically focusing on addressing consumer needs, fulfilling business imperatives, and streamlining operational efficiencies, as advocated by Abdul & Ferreira (2022).

4. Digital transformation (DT)

Digital transformation has undoubtedly played a pivotal role in steering institutions towards remarkable success, revolutionizing how businesses operate in the modern era. Through the implementation of the balanced scorecard approach, organizations are able to thoroughly analyze the impact of digital transformation on their overall performance. For instance, the advent of digital tools enables a closer monitoring of employees' activities, allowing for more efficient oversight on all fronts. Moreover, digital transformation empowers decision-making processes by facilitating the ability to predict the outcomes of choices made by employees. In cases where decisions deviate from the firm's strategic objectives, swift retracting is possible, thereby ensuring alignment with organizational goals.

Data unequivocally illustrates the significant impact that organizations achieve when they proactively prioritize and allocate resources towards digital transformation initiatives. By doing so, these organizations not only witness a marked enhancement in employee performance but also lay the foundation for a vibrant work culture that not only attracts but also retains top talent. This is achieved through the strategic implementation of robust training programs and the seamless integration of digital tools that facilitate easy access to invaluable customer insights. Consequently, these forward-thinking organizations create an inclusive ecosystem where employees feel not just empowered, but also equipped with the requisite skills to thrive and succeed in their roles. This empowerment, a direct result of their commitment to digital transformation, proves instrumental in bolstering task efficiency and elevating overall organizational success.

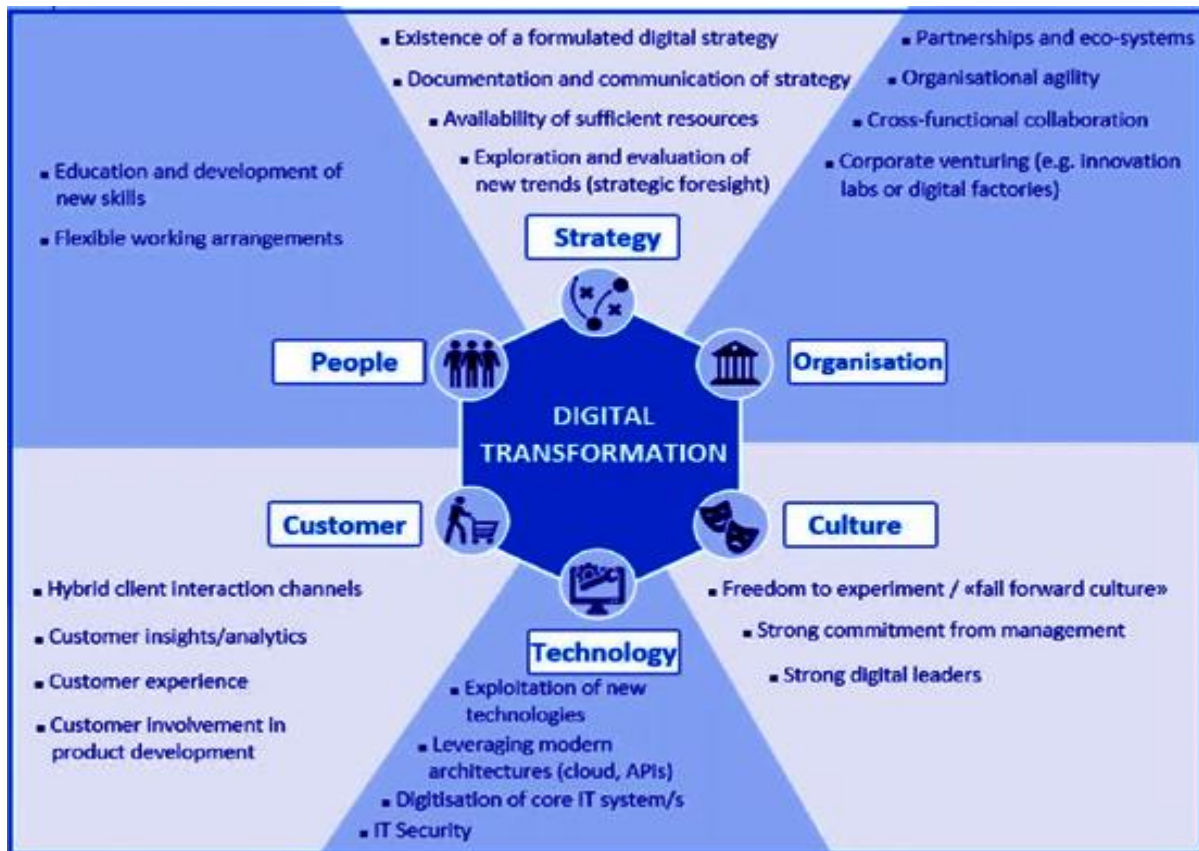


Figure. 1. Digital transformation (DT)

4.1. Digital Innovation as an Intervening Variable

Digital innovation encompasses the process of leveraging digital technologies to develop new or enhanced offerings that meet emerging consumer demands. It is posited as an intervening variable that mediates the relationship between digital transformation and firm performance. While digital transformation establishes the foundational changes within an organization, it is digital innovation that enables firms to capitalize on those changes and translate them into tangible performance improvements (Vial, 2019).

4.2. Firm performance

The performance of an organization, which is the culmination of its outputs juxtaposed with its inputs, plays a pivotal role in determining its success and sustainability. Managers, as the driving force behind organizational operations, continuously seek to augment performance through a myriad of strategies and initiatives. One such fundamental approach involves strategically selecting and recruiting the most suitable and skilled employees for various roles within the organization, thereby ensuring a capable workforce that can effectively contribute towards achieving organizational objectives. Moreover, the financial stability and robustness of an organization are vital components that significantly influence its overall performance. By maintaining a strong financial foundation, organizations can weather uncertainties and fluctuations in the market, thereby fortifying their position and competitiveness. Another critical factor that directly impacts organizational performance is the presence of a viable and thriving market for the goods and services offered. A receptive market not only facilitates consistent sales and revenue generation but also enables organizations to expand their customer base and reach a broader audience. In the dynamic landscape of business and commerce, studies conducted by industry experts and seasoned business leaders have identified three primary categories that serve as key indicators of organizational performance. These include financial performance metrics that gauge the fiscal health and profitability of the organization, product market performance indicators that assess the market penetration and acceptance of the organization's offerings, and shareholder returns that reflect the value generated for investors and stakeholders.

With the integration of technology in business operations, organizations are empowered to make informed decisions efficiently, consequently saving valuable time. The utilization of technological tools streamlines processes, enabling easy and swift access to important files. Additionally, communication within the company is greatly improved, fostering better collaboration and productivity among team members. Noteworthy is the ability for employees to seek advice and guidance from their peers seamlessly, eliminating the need for physical movement within the organization. Managers play a pivotal role in implementing these technological advancements to drive success and competitiveness in their respective firms. The imperative nature of

embracing digital transformation cannot be overstated, as it opens up avenues for leveraging data and analytics to make accurate sales forecasts. Sales forecasting is a critical aspect of businesses, directly impacting revenue generation and overall success. Leveraging tools like Salesforce technology empowers managers to customize reports and adapt strategies to maximize gains and ensure sustainable growth for their organizations.

A firm's financial strength and stability play a vital role in facilitating and overseeing its day-to-day operations effectively. It is crucial for firms to have a well-thought-out financial strategy in place to reap increased benefits and success. Financial managers are responsible for implementing and managing these financial plans to ensure smooth functioning and favorable outcomes. Additionally, the introduction of digital transformation has further enhanced the decision-making process, enabling firms to make more precise and objective judgments in their operations. The financial department within a firm is indispensable as it serves as the backbone for financial management, without which the firm would struggle to launch and sustain its business activities efficiently. To achieve outstanding financial results, firms must consider hiring employees with a proven track record in financial management, as their expertise and oversight can greatly contribute to the overall financial performance of the firm. Furthermore, it is essential to appoint managers with integrity and ethical values to prevent any potential mismanagement or misuse of the firm's resources, safeguarding its financial stability and reputation. This shift from traditional manual processes to digital solutions is considered a strategic move by many firms, allowing them to align their business culture with their strategic objectives more effectively. Leveraging technology enables firms to assess portfolio risks accurately and make informed decisions on investments, ultimately supporting the firm's growth and success in the long run.

5. Research Methodology

In this comprehensive study, a meticulously crafted mixed-methods approach will be employed, integrating both quantitative and qualitative methodologies to delve into the realm of digital transformation within various firm settings. The quantitative aspect will involve a rigorous analysis of survey data obtained from a diverse range of firms actively involved in different stages of digital transformation. These surveys, designed to target a specific audience of executives and managers, will delve deep into assessing not only the extent to which digital transformation initiatives are being pursued but also the level of innovation achieved through these digital endeavors. Moreover, this quantitative analysis will seek to uncover and evaluate the perceived impact of these digital transformation efforts on firm performance metrics. There were quantitative surveys as well as qualitative interviews conducted in this study, which employed a mixed-methods analysis. A sample of managers and employees from selected private banks in Chhattisgarh was surveyed to gauge their perceptions regarding digital transformation and its influence on firm performance. Additionally, interviews were conducted with key stakeholders to gather deeper insights into the role of digital innovation.

6. Theoretical Framework

This paper proposes a theoretical framework where digital transformation is the independent variable, firm performance is the dependent variable, and digital innovation acts as an intervening variable.

1. Digital Transformation and Digital Innovation: Firms that adopt digital transformation initiatives are more likely to invest in digital innovation. This investment can take various forms, including developing new digital products or improving existing processes through technology.

2. Digital Innovation and Firm Performance: The implementation of digital innovation allows firms to enhance efficiency, reduce costs, tailor customer experiences, and launch new revenue streams, ultimately leading to improved performance metrics.

3. Mediating Role of Digital Innovation: Digital innovation translates the benefits of digital transformation into measurable outcomes. Without digital innovation, simply adopting new technologies may not lead to significant improvements in firm performance.

By staying agile and responsive to emerging trends and consumer demands, companies can position themselves as industry leaders and gain a competitive edge in the market.

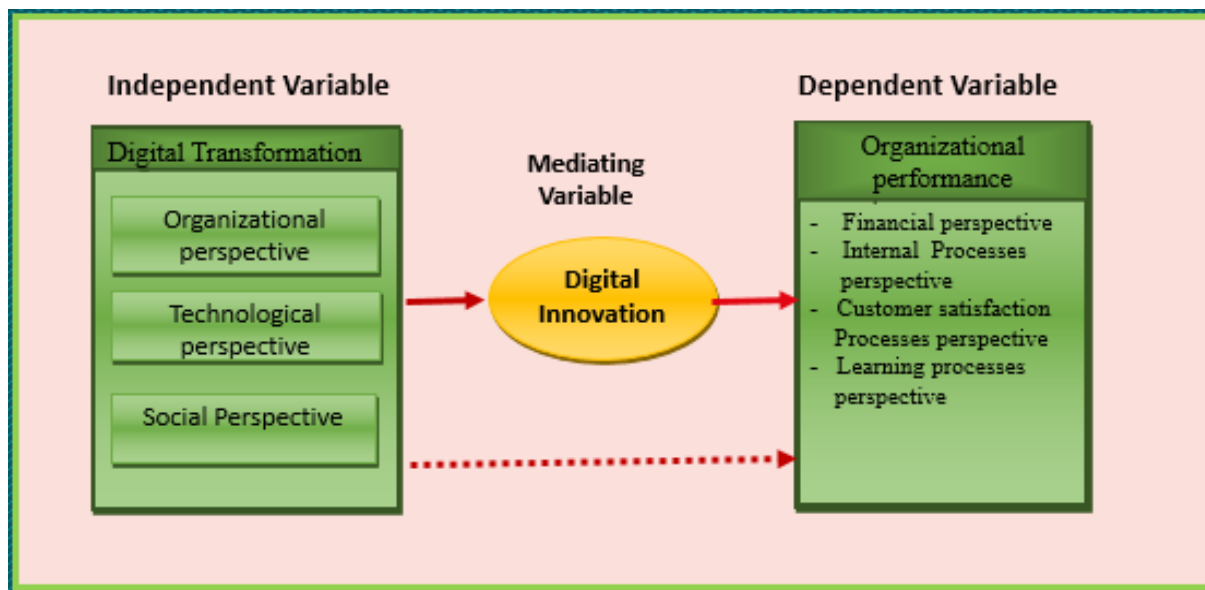


Figure. 2. This is an illustration of the research model.

7. Hypothesis Development

Based on the review of existing literature, this paper proposes the following hypotheses:

H1: Using digital technologies from an innovation perspective has a direct relationship with the use of digital technologies.

H2: The use of a digital organizational perspective is directly related to digital innovation.

H3: There is a direct relationship between using a digital social perspective and digital innovation.

H4: There is a direct relationship between using digital innovation and a financial perspective.

H5: Implementing digital innovation and assessing internal processes are related.

H6: A direct correlation exists between digital innovation and customer satisfaction.

H7: From a learning processes perspective, digital innovation is intrinsically connected to learning.

Despite the conflicting perspectives on the impact of innovation on organizational performance, as evidenced by various studies conducted by HDFC (2017), ICICI (2012), and Axis Bank (2011), there is consensus that innovation holds positive sway over organizational success. However, noteworthy findings suggest a potential downside to innovation's influence on organizational performance. Notably, Axis Bank recent study in 2020 delved into the nuanced relationship between innovation, specifically in the digital realm, and organizational outcomes, shedding light on the intermediary role played by digital innovation in driving digital transformation and enhancing overall performance. This underscores the pivotal role of digital innovation as a mediating factor in translating digital orientation and capability into improved organizational performance across multiple dimensions, warranting further exploration into its mediating effects for comprehensive insight into organizational success in the digital age.

7.1. Hence, we hypothesize as follows:

H8a: Through digital innovation, there is an indirect relationship between using digital technologies from a business perspective and a financial perspective.

H8b: There is an indirect relationship between using digital technologies perspective and internal processes perspective which is mediated by digital innovation.

H8c: A digital innovation is a medium through which an indirect relationship exists between digital technologies and customer satisfaction.

H8d: There is an indirect relationship between using digital technologies from a perspective and learning processes perspective. This is mediated by digital innovation.

H9a: The use of a digital organizational perspective and a financial perspective are indirectly related, as digital innovation mediates this relationship.

H9b: There is an indirect relationship between using a digital organizational perspective and the internal processes perspective which is mediated by digital innovation.

H9c: There is an indirect relationship between using a digital organizational perspective and the customer satisfaction perspective, which is mediated by digital innovation.

H9d: There is an indirect relationship between using a digital organizational perspective and the learning processes perspective, which is mediated by digital innovation.

H10a: There is an indirect relationship between using the digital social perspective and the financial perspective which is mediated by digital innovation.

H10b: There is an indirect relationship between using a digital social perspective and the internal processes perspective, which is mediated by digital innovation.

H10c: There is an indirect relationship between using a digital social perspective and a customer satisfaction perspective, which is mediated by digital innovation.

H10d: There is an indirect relationship between using a digital social perspective and the learning processes perspective which is mediated by digital innovation.

The variables used in this questionnaire were carefully selected based on extensive review and validation of existing literature. The researchers have thoroughly examined and confirmed the relevance of these indicators to the research model. Digital transformation variables were derived from studies by Kumar (2018) and the Center for Creative Leadership (2018), while digital innovation indicators were derived from the work of Gaurav and Raj (2020). Furthermore, the dimensions of the balanced scorecard were inspired by the research of Shekhar (2017). To ensure comprehensive measurement, all items in the questionnaire were rated on scales ranging from "strongly agree" to "strongly disagree." The arrangement of statements in the questionnaire, as presented in Table 1, was structured in a methodical and logical sequence to facilitate accurate data collection and analysis.

Table 1 Measurement items

Variable	Dimension	Indicators	References
Digital transformation	Organizational Perspective	<ul style="list-style-type: none"> - If the firm has Executed many digital initiatives that enhance their products and services. - Digital workflows are part of the firm's manifest workflow to help the firm release its business. - inspirational vision of how digital can establish a novel future with common value of the organization. 	(Center for Creative Leadership, 2019)
	Technological Perspective	<ul style="list-style-type: none"> - The organization's technology platforms are simple and easy to use and have enhanced employee involvement. - The organization's units are well connected to each other via digital 	(Center for Creative Leadership, 2020)
	Social perspective	<ul style="list-style-type: none"> - The leaders in the firm behave as role models by expediting the Transmutation of digital-centric institutions. - It uses digital technology to boost employee productivity and expand collaboration. - The organization has the needed expertise, proficiency, and skill staff to utilize digital successfully. - Digital technology fundamentally changes the firm's relationship with its customers. 	(Center for Creative Leadership, 2021)
Digital innovation		<ul style="list-style-type: none"> - The quality of the firm's digital resolutions is outstanding in comparison with its competitors'. - With regard to production platforms, the firm also offers a variety of digital solutions to its competitors. - From the moment the firm entered the market, some of its digital resolutions were novel. 	(Shekhar, 2021)
Firm performance	Financial perspective	<ul style="list-style-type: none"> - The firm uses Return on Investment (ROI) to measure financial movements. - The firm uses Working Capital per Day to measure the financial movements. - As a measure of financial performance, the firm uses Cash Flow on Investment. - Growth Rate in Tangible Assets is used by the firm to measure financial performance 	Anuj,2022)
	Internal processes perspective	<ul style="list-style-type: none"> - Unit Cost is important for the firm to assess the productiveness of the business operations. - The cycle time can be used by a firm to determine the efficiency of its business operations. - The firm should consider Distribution Reach when assessing the efficiency of its operations. - Ratio of Number of Skilled Employees to Total Employees is important for the firm to assess the productiveness of the business operations. 	(Griff,2022)
	Customer satisfaction perspective	<ul style="list-style-type: none"> - On Time Delivery is an important factor for the firm to measure customer Satisfaction. - Terms of Quality is an important factor for the firm to measure customer Satisfaction. 	(Sekhar,2022)

		<ul style="list-style-type: none"> - A firm should track how many complaints it receives from customers in order to measure customer satisfaction. - In order for the company to succeed, it must sell to new customers. 	
	Learning perspective	<ul style="list-style-type: none"> - The firm Communicate its strategy in addition to the advantages anticipated by innovation ventures, to every person in the firm. - There is a good track record for creating and implementing new ideas at the firm. - The firm has a framework to manage innovation projects. - Employees are encouraged to become more innovative at the company. 	(Center for Creative Leadership, 2020; Anuj, 2022)

7.2. A discussion and analysis of the study's results

The purpose of this paper is to examine the forecaster of organizational performance in the organization in question. The preferred method selected for this study is Partial Least Squares (PLS) because it effectively captures the mediating variable included in the model, thus enhancing our understanding and analysis of the relationship between the various factors influencing organizational performance.

The Impact of Digital Transformation on Organizational Performance is further enhanced through the Mediating Role played by Digital Innovation, showcasing how advancements in technology can drive improvements in overall business effectiveness and efficiency.

Table 2 CFA of Factors

Factor	Item	Mean	Standard Deviation	Loading	Composite Reliability	Average Variance Extracted (AVE)
Digital transformation	DI1	3.81	1.266	0.876	0.914	0.779
	DI2	3.67	1.162	0.904		
	DI4	3.45	1.260	0.867		
Firm Perspective	DTO2	4.16	0.966	0.837	0.919	0.792
	DTO3	3.89	1.127	0.917		
Social perspective	DTS1	4.00	1.085	0.703	0.888	0.666
	DTS2	3.97	1.132	0.859		
	DTS3	3.92	1.117	0.85		
	DTS4	3.94	1.096	0.843		
Technological Perspective	DTT1	4.05	1.073	0.918	0.914	0.841
	DTT2	3.91	1.154	0.916		
Financial perspective	OPC1	4.38	0.920	0.892	0.915	0.73
	OPC2	4.32	0.949	0.87		
	OPC3	4.09	1.022	0.802		
	OPC4	4.09	0.981	0.852		
Learning perspective	OPF1	3.77	1.106	0.783	0.885	0.658
	OPF2	3.55	1.018	0.836		
	OPF3	3.68	1.065	0.822		
	OPF4	3.74	1.093	0.803		
Internal processes perspective	OPI1	4.14	0.978	0.799	0.903	0.699
	OPI2	3.93	0.980	0.84		
	OPI3	3.90	1.050	0.854		
	OPI4	3.84	1.072	0.85		
Firm Experience	OPL1	3.99	1.038	0.88	0.944	0.809
	OPL2	3.88	1.091	0.914		
	OPL3	3.85	1.106	0.921		
	OPL4	3.94	1.078	0.881		

In the framework utilized for this analysis, we carefully applied a specific loading criterion with a set threshold of ($\lambda < 0.7$). This criterion served as a key indicator to discern the items that failed to exhibit adequate loading levels, signifying a need for their exclusion from the study (Al Tit, 2020). A detailed examination uncovered that adjustments were essential, leading to the removal of certain items that did not meet the established loading threshold of ($\lambda < 0.7$). To provide a clearer picture, one item related to digital innovation (DI3) was identified and consequently eliminated due to insufficient loading. Additionally, within the realm of digital technological aspects, two items (DTO1, DTT3) failed to meet the required loading criteria, warranting their exclusion from the analysis. In the domain of digital organizational factors, one specific item did not align with the loading criterion established, prompting its removal from the dataset. These strategic decisions regarding

the elimination of items with inadequate loading levels were fundamental in ensuring the accuracy and reliability of the subsequent analyses performed within this model.

In the Partial Least Squares (PLS) method, it is crucial to ensure that the veritable discriminant validity is verified. This offers insight into whether each construct within the model is unique and different from the others. Specifically, it is important that the shared variance between a construct and other constructs remains below the average variance threshold. This information can be found in table 3 below, which demonstrates this condition for all eight constructs in the model.

Table 3 Discriminant validity of constructs.

Customer satisfaction perspective	Digital innovation	Financial perspective	Internal processes perspective	Learning perspective	Organizational Perspective	Social perspective	Technological Perspective
Customer satisfaction perspective	0.899						
Digital transformation	0.716	0.883					
Financial perspective	0.486	0.559	0.854				
Internal processes perspective	0.535	0.546	0.622	0.836			
Learning perspective	0.509	0.438	0.413	0.529	0.811		
Firm Perspective	0.653	0.692	0.56	0.579	0.435	0.89	
Social perspective	0.685	0.754	0.594	0.566	0.402	0.757	0.816
Technological Perspective	0.647	0.724	0.507	0.482	0.387	0.695	0.717, 0.917

In essence, the hypotheses test in this research is conducted by evaluating the significance value of the path coefficients, denoted as Beta, which are estimated using Partial Least Squares (PLS) analysis. It is vital to note that the variables incorporated into the second model contribute significantly to explaining the variance observed in organizational performance, underscoring the link between these factors and the overall efficiency and effectiveness of the organization. (Table 2)

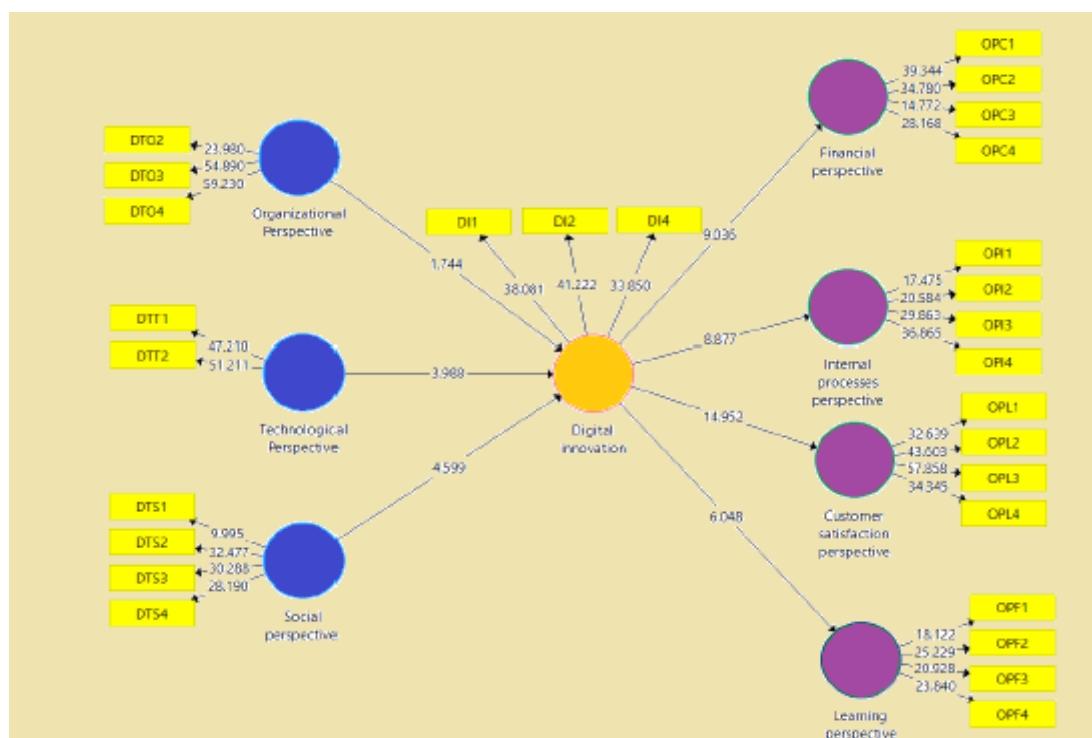


Fig. 4. This figure represents only significant paths in the research model

Furthermore, table 4 and figure 2 show the result of hypothesis testing.

Table 4 summary of hypothesis testing.

Direct Hypothesis	Indirect Hypothesis	Hypothesis testing	Beta	T Statistics (O/STDEV)	P Values	Result
H1		Firm Perspective -> Digital transformation	0.169	1.744	0.082	Rejected
H2		Technological Perspective -> customer service experience	0.325	3.988	0	Accepted
H3		Social perspective -> Digital innovation	0.393	4.599	0	Accepted
H4		Digital innovation -> Financial perspective	0.559	9.036	0	Accepted
H5		Digital innovation -> Internal processes perspective	0.546	8.877	0	Accepted
H6		Digital transformation -> Customer firm perspective	0.716	14.952	0	Accepted
H7		Digital transformation -> Learning perspective	0.438	6.048	0	Accepted
	H8a	Organizational Perspective -> Financial perspective	0.094	1.687	0.092	Rejected
	H8b	Organizational Perspective -> Internal processes perspective	0.092	1.615	0.107	Rejected
	H8c	Organizational Perspective -> Customer satisfaction perspective	0.121	1.674	0.095	Rejected
	H8d	Organizational Perspective -> Learning perspective	0.074	1.559	0.12	Rejected
	H9a	Technological Perspective -> Financial perspective	0.182	3.834	0	Accepted
	H9b	Technological Perspective -> Internal processes perspective	0.178	3.7	0	Accepted
	H9c	Technological Perspective -> Customer satisfaction	0.233	4.098	0	Accepted
	H9d	Technological Perspective -> Learning perspective	0.142	3.188	0.002	Accepted
	H10a	Social perspective -> Financial perspective	0.22	3.949	0	Accepted
	H10b	Social perspective -> Internal processes perspective	0.215	4.095	0	Accepted
	H10c	Social perspective -> Customer satisfaction perspective	0.282	4.401	0	Accepted
	H10D	Social perspective -> Learning perspective	0.172	3.978	0	Accepted

The results of hypothesis testing presented in Table 4 indicated a significant predictive relationship between the technological perspective and social perspective with digital innovation (β 0.325, β 0.3893, $P < 0.05$), providing strong support for H2 and H3, while H1 was dismissed based on the findings. Additionally, the impact of digital innovation on the financial perspective was confirmed (β 0.559, $P < 0.05$), along with significant associations found for the Internal processes perspective (β 0.546, $P < 0.05$), customer satisfaction perspective (β 0.716, $P < 0.05$), and learning perspective (β 0.438, $P < 0.05$), validating the acceptance of H4 through H7. Furthermore, the data revealed that the technological perspective had a noteworthy indirect effect on financial perspective (β indirect 0.182, $P < 0.05$), internal processes perspective (β indirect 0.178, $P < 0.05$), customer satisfaction perspective (β indirect 0.233, $P < 0.05$), and learning perspective (β indirect 0.142, $P < 0.05$), which further supported the acceptance of H9a to H9d. Subsequently, the analysis reflected a similar pattern with the social perspective significantly impacting financial perspective (β indirect 0.22, $P < 0.05$), internal processes perspective (β indirect 0.215, $P < 0.05$), customer satisfaction perspective (β indirect 0.282, $P < 0.05$), and learning perspective (β indirect 0.172, $P < 0.05$), ensuring the support for H10a to H10d. Conversely, the evidence did not align with the hypotheses H8a to H8d, indicating that these were not upheld in the study.

This study thoroughly examined two primary questions outlined in the introduction section. The first question delved into determining the precise influence of digital transformation on organizational performance by analyzing the correlation between the independent and dependent variables. This analysis was conducted twice – once incorporating the direct effect of digital innovation and the second time without such inclusion. The study also explored the sub-variables of digital transformation: the technological perspective, social perspective, and organizational perspective. Significantly, the research findings indicated a positive relationship between the technological perspective and the achievement of digital innovation, consistent with the conclusions drawn from prior studies (Khalid, 2020). Moreover, the results highlighted a noteworthy

connection between digital social aspects and digital innovation outcomes. Notably, the mediating role of digital innovation emerged as a pivotal factor linking the indirect impact of digital transformation to organizational performance. Specifically, the study uncovered a favorable indirect influence of digital technology on organizational performance, as well as a notable indirect impact of digital social components on organizational effectiveness. Despite existing studies hinting at a positive correlation (Charles, 2021; Hinings et al., 2019; Anny, 2023), the study's results diverged by indicating that digital organizational aspects did not exert a significant influence on organizational performance.

8. Conclusion

This study examined the effects of digital transformation on organizational performance in HDFC, ICICI, and Axis Bank, with a focus on digital innovation as a mediating factor. Employees at large companies were asked to respond to a survey regarding their perceptions of their company's topic. As a final contribution to the new way of working applied by business, this research examines how digital innovation based in India facilitates the relationship between digital technology, digital organizations, and digital social, and organizational performance. An organizational performance research model was developed and examined in this study. This study therefore fills a gap between the theory and practice of digital transformation in large businesses, thus filling a need in the literature. As organizations navigate the complexities of digital transformation, they must recognize the necessity of embedding innovation within their strategies to fully harness the benefits of digital technologies. Future research should explore longitudinal studies to investigate the long-term effects of digital transformation and innovation on firm performance across diverse industries.

9. References

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