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**COMMUNICATION DRIVEN DIGITAL TRANSFORMATION IN COMMERCE: AN INFORMATION TECHNOLOGY PERSPECTIVE**

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megha.khedekar@sarafcollege.org**ABSTRACT**

*Digital transformation in commerce is increasingly driven by the integration of advanced information technology (IT) systems with strategic communication processes. Effective communication, enabled through digital platforms, data analytics, and information systems, has become a critical factor in enhancing operational efficiency, customer engagement, and competitive advantage. This paper examines how communication-driven digital transformation reshapes commercial activities through the application of information technology. It explores the role of IT-enabled communication tools in marketing, customer relationship management, internal coordination, and decision-making. The study adopts a conceptual and analytical approach, drawing insights from existing literature, industry practices, and contemporary digital commerce models. The findings highlight that seamless integration of IT and communication not only improves information flow but also fosters innovation, transparency, and trust in commercial ecosystems. The paper concludes by emphasizing the need for organizations to align technological infrastructure with communication strategies to achieve sustainable digital transformation in commerce.*

**Keywords:** Digital Transformation, Information Technology, Business Communication, E-Commerce, Commercial Innovation

**1. Introduction**

The rapid advancement of information technology has significantly transformed the nature of commerce. Traditional business models are increasingly being replaced by digitally enabled systems that rely on real-time communication, data exchange, and automation processes. In this evolving landscape, communication has emerged as a central driver of digital transformation, facilitating interactions between businesses, consumers, and stakeholders. Information technology acts as the backbone that supports these communication processes through digital platforms, enterprise systems, and networked infrastructures. Understanding the intersection of IT and communication is therefore essential for analyzing contemporary commercial practices.

**Digital Transformation : An Overview**

Digital transformation has revolutionized the way we live, do businesses, and make decisions as consumers. Spending on digital transformation technologies and services worldwide has exceeded \$2.16 trillion in 2023 and is expected to reach \$3.5 trillion in the near future, which shows the emphasis placed on its investment as a potential growth enhancer for organizations (Statista, 2023).

Although there is diverse literature on digital transformation, scholars do not necessarily agree on what digital transformation is and what it includes (e.g., Hanelt et al., 2020; Warner & Wager, 2019; Wessel et al., 2021). Despite the lack of clarity, the starting point is that as organizations immerse themselves with digital technologies (Bharadwaj et al., 2013), they need to adapt (Warner & Wager, 2019). Vial (2019) defines digital transformation as “a process that aims to improve an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies” (p. 121). This definition is consistent with “digitalization” that encompasses three aspects: (i) the individual, organizational, and broader contexts (Legner et al., 2017, p. 301) (ii) the outcome of digital transformation, that is, improvement (iii) the means of digital transformation, that is the information, computing, communication, connectivity technologies that evolve over time (Bharadwaj et al., 2013). Whereas the first and third aspects have been studied from diverse perspectives, the second referring to the outcome of digital transformation has been largely missing from the literature until recently. It is inextricably linked to organizational change, defined as “difference in form, quality, or state over time in an organizational entity” (Van de Ven & Poole, 1995, p. 512), and in our case change caused by the introduction of digital technologies and wider changes that this introduction brings, as it transforms the current operational models. This may also impact upon processes, and capabilities to enable a firm to achieve sustainable competitive advantage, as well as significant increases in performance and profits (Bharadwaj et al., 2013; Li, 2020). To achieve digital transformation, organizations also make significant investments, devising digital technology strategies to help them understand how they can better create and appropriate value (Correani et al., 2020). Thus, recent scholarship has attempted to reflect, review, and examine understandings and implications of digital transformation for strategy, organizational

change, and research (see Hanelt et al., 2020, Verhoef et al., 2021 and Vial, 2019 for recent examples). Verhoef et al. (2021) allude to the substantial pressure that digital transformation brings to companies and specific markets, as customer expectations and behaviors change. In particular, a multidisciplinary approach is taken that contextualizes digital transformation as occurring in three stages from digitization, “change in a firm's organizing logic by instilling new properties into product platforms” (Sandberg et al., 2020, p. 130), to digitalization and finally digital transformation.

Therefore, in more recent definitions and conceptualizations, an acknowledgment is given both to exterior influences, such as the competitive environment, as well as planned essential components, including adequate staff resource and an appropriate organizational infrastructure. Other studies on digital transformation have focused on how the transition from a current to a desired future state is managed, by evaluating and readjusting the organization's vision and strategy using digital technologies (Li, 2020), or on challenges that organizations face when transitioning to a new state that may hinder digital transformation (Hanelt et al., 2020; Hess et al., 2016; Vial, 2019). Other scholars have investigated the alignment between business strategy and IT (Bharadwaj et al., 2013; Chaniyas et al., 2019; Hess et al., 2016). In a recent study, Li et al. (2022) looked at how organizations build through digital technology the appropriate capabilities to facilitate digital strategy (Bharadwaj et al., 2013; Ross et al., 2017) whereas other scholars have explained how organizations digitally transformed their operations to deal with the repercussions of COVID-19 and moved from on- and off- line operations to omnichannel (Sharma et al., 2020; Ivanov & Dolgui, 2020), or on how they balanced their everyday operations with managing the transition to digital (Li, 2020). Vial (2019) argues that digital transformation transforms the value creation process in the following ways (i) value proposition: firms use digital technologies to propose and develop new products and services based on customer preferences; (ii) value network: firms redefine their value networks through the use of digital technologies, as customers are incentivized for engagement and participation in the value co-creation process (Lusch et al., 2010); (iii) digital channels: firms use digital technologies to change their distribution and sales channels and introduce customer-facing channels (Verhoef et al., 2021); (iv) agility and adaptability: organizations use digital technologies to adapt to the environmental conditions, or to create those capabilities that allow them to exploit and explore at the same time to create value (e.g., Andriopoulos & Lewis, 2010; Park & Mithas, 2020). To benefit from digital transformation, organizations could use different steps, that is, analyze current digital technology trends to understand the impact of digital transformation especially vis-à-vis the current positioning in terms of digitization, digitalization, and digital transformation; then organizations would need to seek clarification on how they will bridge the possible gap between the current state and the digital transformation state, followed by implementation of the plan with technical and managerial support (Parviainen et al., 2017). However, numerous challenges persist in terms of access, usability, trust, and governance, as digital transformation is embraced more widely by energy corporations, healthcare institutions, and within an increasing number of marketing and consumer contexts, among others. One of the more up-to-date Lloyds Bank UK Consumer Digital Index reports has estimated that 21% of the population lacks at least one basic digital skill. This is equal to 11.3 million adults not being digitally included. Although this figure has declined since 2015 (from 12.6 million), the digitally excluded part of society is still significant (Dafoulas et al., 2022, Ueno et al., 2023). Additional estimations suggest that 6.9 million people will be classed as digitally excluded by 2028 (Milner, 2018).

Thus, access and utilization of digital technologies remain illusive and inaccessible to many, despite considerable organizational and infrastructure investment globally. Researchers have also discussed areas of concern including the ethical, fair, and protective use of data and technology (Wirtz et al., 2023). As a result, there is more emphasis within emerging literature on the prevention of privacy risks and security issues for customers that emerge when companies invest in digital transformation (Dörr, 2020; Elliott et al., 2021). Practitioners and researchers alike continue to be fascinated as much by the failure of digital transformations as by their success. For example, a recent book focusing on “why digital transformations fail” includes a foreword by the retired chairman and CEO of Procter and Gamble (Saldanha, 2019). Failure as the result of technological disruption can be attributed to the need for reorganization, synchronization, agility, and managing risk.

A recent issue of the Harvard Business Review focused on digital transformation failures, entitled “Why so many high-profile digital transformations fail” (Davenport & Westerman, 2018). As part of this review, global brands including Burberry, General Electric, Procter and Gamble, and Lego are discussed, in relation to their specific digital transformation project failures. These primarily relate to a lack of financial and strategic planning and lower than expected quality outcomes in the digital transformation system(s). It is noted that numerous core examples of failure manifest themselves when large obligations to digital competence expansion meet basic finance-orientated performance problems. This can be attributed in most instances to failures in other aspects of the business that cannot be rectified by digital transformation. Therefore, no senior leaders should

perceive digital, or any other significant technological innovation as the inevitable route to success (Davenport & Westerman, 2018), but part of a process of change innovation to facilitate potential growth. Researchers examining digital transformation in high-reliability organizations including a European utility company, also identified tensions between the organizations' identity and key characteristics of digital transformation which resulted in self-protecting behaviors by the IT workforce, that could ultimately disrupt the transformative process (Poláková-Kersten et al., 2023). Thus, the importance of bottom-up processes and organizational-wide plans for digital transformation implementation remain key to integration achievement.

By examining multiple perspectives on the integration and adoption of digital transformation, this article aims to provide insights into its influence, importance, and application within marketing and social media innovation, mobile apps, artificial intelligence including ChatGPT, augmented, and virtual reality, the metaverse, as well as via an examination of the role of corporate digital responsibility (CDR), from the customer's perspective. The evolving nature of digital transformation is likely to impact numerous business sectors and permeate across various communities and global societies. In this sense, the article provides valuable understandings of considerations for integration, as well as relevant advice and recommendations for implementation, for academics considering new areas of research and practice-based communities reviewing new ideas for innovation.

## 2. LITERATURE REVIEW

A growing body of research highlights the transformative role of information technology (IT) in reshaping modern commerce. Prior studies indicate that IT adoption enhances operational efficiency, enables data-driven decision-making, and improves customer responsiveness (Bharadwaj et al., 2013; Laudon & Laudon, 2020). Digital platforms such as cloud computing, enterprise systems, and analytics tools have been found to significantly improve organizational competitiveness in both developed and emerging economies (Porter & Heppelmann, 2015; Verhoef et al., 2021).

Scholars have also emphasized the critical role of communication in digital environments. Effective internal and external communication facilitates technology acceptance, reduces employee resistance to change, and strengthens stakeholder coordination during digital initiatives (Rogers, 2016; Tiago & Veríssimo, 2014). Marketing and customer communication through digital channels such as social media, mobile applications, and e-commerce platforms has become central to enhancing customer engagement and brand value (Nesterenko et al., 2023).

Empirical studies further reveal a positive relationship between digital transformation and business performance. Digital transformation has been associated with improvements in productivity, market reach, customer satisfaction, and organizational agility (Vial, 2019; Wirtz, 2024). However, much of the existing literature conceptualizes digital transformation primarily as a technological phenomenon, with limited focus on the socio-organizational mechanisms that enable its success (Hanelt et al., 2020).

While some studies acknowledge the importance of communication technologies, limited research explicitly examines the **integration of IT infrastructure and communication effectiveness** as a unified driver of digital transformation in commerce (Cosa, 2024). Moreover, existing studies are largely conceptual or focused on developed economies, leaving a significant gap in empirical evidence from emerging markets such as India, where digital commerce ecosystems are rapidly evolving (Díaz-Arancibia et al., 2024).

### 2.1. Theoretical framework

#### Digital Transformation and Communication

Digital transformation refers to the adoption of digital technologies to fundamentally change business operations and value delivery. Communication-driven digital transformation emphasizes the role of information flow, connectivity, and interaction in enabling these changes. IT tools such as cloud computing, enterprise resource planning (ERP) systems, customer relationship management (CRM) platforms, and social media technologies facilitate seamless communication across organizational and market boundaries. These tools enhance coordination, reduce information asymmetry, and support faster decision-making in commerce.

#### Role of Information Technology in Commercial Communication

Information technology enhances commercial communication by enabling seamless, real-time, and interactive information exchange among stakeholders. Digital platforms such as enterprise systems, customer relationship management tools, social media channels, and e-commerce interfaces facilitate efficient coordination between organizations and consumers. IT-enabled communication improves transparency, personalization, and responsiveness, thereby strengthening customer engagement and operational efficiency.

In the commerce sector, such communication mechanisms are critical for supporting digital transactions, marketing strategies, and strategic decision-making.

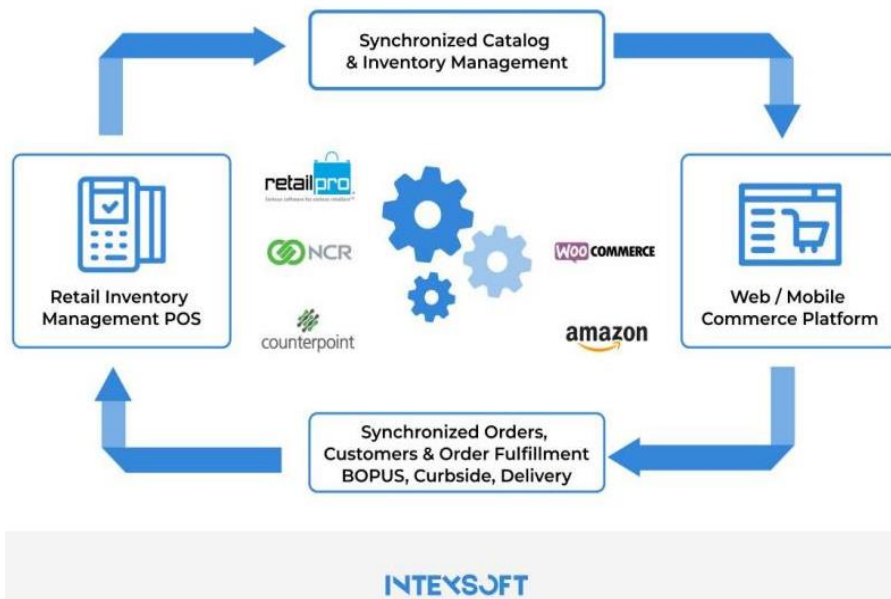


Figure 1. IT-Communication-Commerce Integration Model

This diagram illustrates the systemic interaction between information technology infrastructure, communication processes, and commercial outcomes. IT acts as an enabler, communication functions as a strategic mediator, and commerce performance represents the outcome variable.

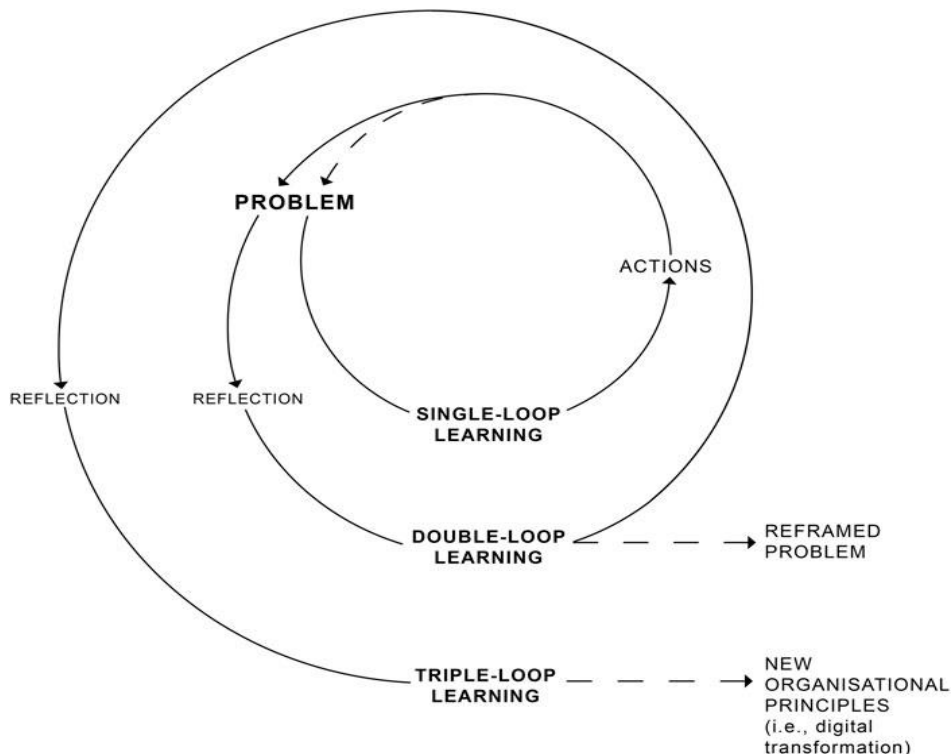


Figure 2. Role of Communication as a Mediator in Digital Transformation

The figure conceptualizes communication effectiveness as a bridging mechanism linking IT adoption and successful digital transformation. It highlights feedback loops and organizational learning processes.

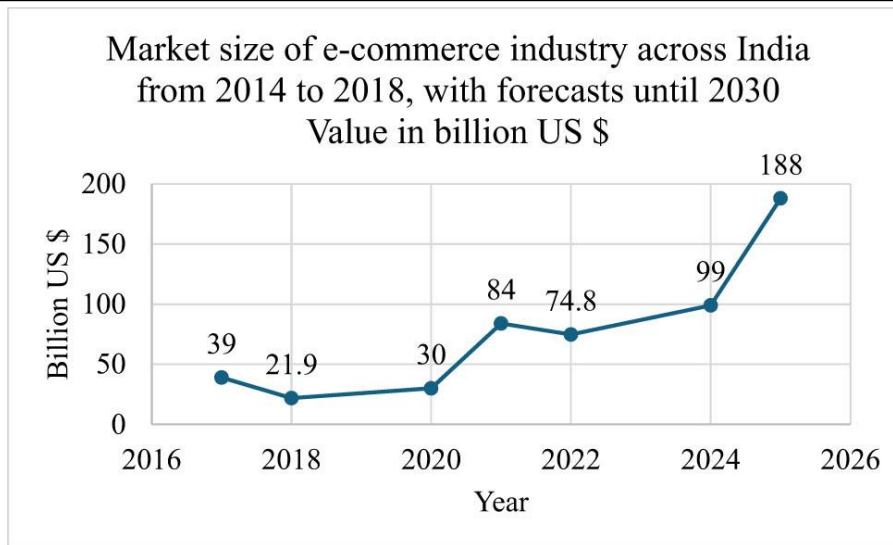


Figure 3. Growth of Digital Adoption in Commerce (India and Global)

Secondary data indicate a sharp rise in digital technology adoption across commercial organizations. Reports suggest that over 65% of Indian firms have accelerated digital initiatives post-2020, while global adoption rates exceed 70% in technology-enabled commerce sectors.

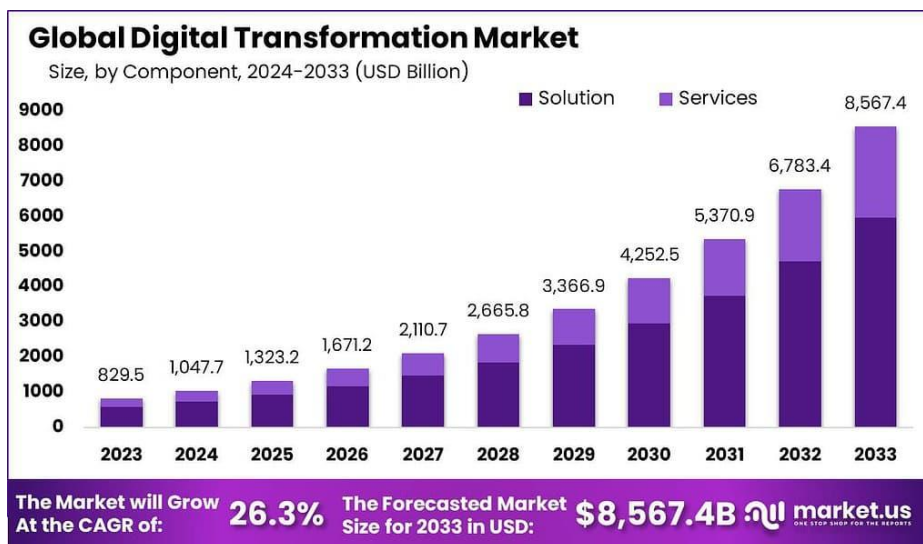


Figure 4. Impact of Digital Communication Technologies on Business Performance

Source: Forrester, Prophet, IFS, SWZD, MuleSoft

### 3. RESEARCH METHODOLOGY

#### 3.1 Research Design

The study adopts a **quantitative and descriptive research design** using an analytical approach. The research is descriptive and explanatory in nature, aiming to analyze the impact of IT-enabled communication on digital transformation in commercial organizations.

#### 3.2 Research Objectives

The specific objectives of the study are:

1. To examine the role of information technology in enhancing business communication in commerce.
2. To analyze the impact of IT-enabled communication on digital transformation initiatives.
3. To assess the relationship between communication effectiveness and commercial performance.
4. To identify challenges associated with implementing IT-driven communication systems in commerce.

#### 3.3 Research Gap

Despite extensive research on information technology adoption and digital transformation, there is a **notable lack of empirical studies that position communication as a mediating mechanism between IT adoption**

**and digital transformation outcomes in the commerce sector.** Existing literature tends to examine IT systems and communication practices as separate constructs, resulting in a fragmented understanding of their combined impact on commercial performance.

Furthermore, limited empirical evidence is available from **emerging economies such as India**, where digital adoption is accelerating but organizational communication capabilities vary widely. This study addresses this gap by empirically examining how **IT-enabled communication systems influence digital transformation and commercial performance**, thereby contributing to a more integrated and context-sensitive understanding of communication-driven digital transformation in commerce.

### 3.4 Research Contribution

This study contributes to the existing body of knowledge by empirically examining the relationship between IT-enabled communication systems and digital transformation outcomes in the commerce sector. It offers a structured framework linking information technology, communication effectiveness, and commercial performance. The findings are expected to provide practical insights for business managers and policymakers while extending theoretical understanding by positioning communication as a strategic enabler of digital transformation in commerce.

## 4. CONCLUSION

Communication-driven digital transformation represents a critical paradigm in contemporary commerce. This study establishes that information technology, when effectively integrated with communication processes, significantly enhances digital transformation outcomes and commercial performance. The findings underscore the importance of aligning IT infrastructure with strategic communication practices. The study offers valuable insights for managers, policymakers, and researchers, while future research may extend the model through longitudinal or sector-specific empirical investigations.

### Recommendations

#### Findings and Discussion

The findings validate the central premise of this study that communication acts as a strategic driver of digital transformation in commerce. While prior studies largely emphasize technological infrastructure, this research empirically demonstrates that communication effectiveness serves as a critical mechanism through which IT investments translate into improved commercial performance. The results are particularly relevant for organizations operating in rapidly digitizing markets, where effective communication determines the success of digital initiatives.

**The analysis yields the following key findings:**

#### 1. IT and Communication Effectiveness

The results indicate a statistically significant positive relationship between information technology adoption and communication effectiveness. Organizations with higher levels of IT integration demonstrate more efficient information flow and coordination.

#### 2. Communication as a Driver of Digital Transformation

Communication effectiveness shows a strong influence on digital transformation initiatives. Clear, timely, and technology-enabled communication facilitates organizational readiness and adoption of digital processes.

#### 3. Impact of Digital Transformation on Commercial Performance

Digital transformation significantly enhances commercial performance, reflected in improved operational efficiency, customer engagement, and competitive positioning.

#### 4. Mediating Role of Communication

Findings confirm that communication effectiveness partially mediates the relationship between IT adoption and digital transformation, highlighting its strategic importance.

#### 5. Contextual Insights (India/Global)

The results are particularly relevant for Indian commercial organizations operating in digitally evolving markets, while also offering insights applicable to global emerging economies.

Overall, the findings support the proposed conceptual framework and reinforce the need to view digital transformation as a socio-technical process rather than a purely technological one. The inclusion of secondary statistical indicators further validates the practical relevance of the study in both Indian and global commercial environments.

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