2 Digital Transformation of Business Models in India

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Abstract

Digitization has emerged as a defining force that has transformed business models in economies. In India, digital reforms through policy convergence, high rates of internet and mobile penetration, growth of digital payments, and increased investor confidence have substantially transformed the ways businesses create, deliver and capture value. The chapter analyzes the digitalization of the business models in India based on empirical evidence available in the form of national data sources including Telecom Regulatory Authority of India (TRAI), National Payments Corporation of India (NPCI), Ministry of Statistics and Programme Implementation (MoSPI), Department for Promotion of Industry and Internal Trade (DPIIT) and India Brand Equity Foundation (IBEF). It examines the drivers, forms and sectorial patterns of digital transformation of business, and assesses its effect of digital transformation on productivity, market access and competitiveness.

Keywords: Digital Transformation, Business Models, Digital India, E-Commerce, Digital Payments, Industry 4.0.

Introduction

In the last ten years, the digital technologies have significantly transformed the organisation and operations of business across the globe. Digital transformation does not only mean the adoption of new technologies but a wholesome reorganization of business models, organizational processes, and the creation of values. In emerging economies like India, the digital transformation has taken a special significance because of structural limitations that have endured in the form of high transaction costs, restricted access to markets, expenses in regulation and information asymmetry.

The digital transition in India was observed to pick up pace upon the introduction of Digital India program, which intends to make India a digitally empowered economy. Other complementary programs like Make in India, Startup

India and Atmanirbhar Bharat enhanced the digital ecosystem by promoting innovation, entrepreneurship, and technology adoption. Consequently, Indian companies in manufacturing, services, finance, retail and MSMEs have been increasingly using digital platforms, online payment system, data analysis, and automation technology.

Business model transformation can be seen through the changes between asset-intensive, linear business models and platform-based, service-oriented and data-driven business models and customer-centric business models. Digitalization has made Indian businesses to grow at a fast rate, access new markets, cut costs of operations and become responsive in consumer demand. This chapter offers an empirical research on these changes, emphasizing on how digital infrastructure and policy refinements have enabled business model innovation in India.

Conceptual Framework of Digital Transformation

- **Business Models:**A business model explains the fundamental logic through which an enterprise creates value, delivers products or services to customers, and captures economic returns. From a policy and regulatory perspective in India, government institutions have increasingly recognized the importance of business models in determining firm strategy, sustainability, and competitiveness.

The Ministry of Corporate Affairs (MCA) defines a business model as the way in which a firm structures its operations, puts up its resources and how it shapes its relationships to produce value and bring about revenue. The MCA places a special focus on business models especially within business disclosures and corporate governance and strategic decision-making whereby any shift in the business model of a company has significant impacts on the stakeholders (Ministry of Corporate Affairs [MCA], 2020).

In a similar vein, the business model of the Reserve Bank of India (RBI) can be viewed as the model by which an entity performs its activities, takes and handles risks, and maintains financial sustainability. The RBI, in its regulatory and oversight conversations, particularly relating to banks, non-bank financial entities (NBFCs), and fintechs, makes it clear that the sustainability of any particular institution or bank would be determined by the soundness of their business model and capacity to adapt to emerging economic and technological dynamics (Reserve Bank of India, 2021).

NITI Aayog considers the business model as a mechanism by which the enterprise generates value to the users and captures economic benefit.

- **Digitization, Digitalization, and Digital Transformation:** To understand digital transformation clearly, it is necessary to distinguish among three related concepts.

Table 1

Aspect	Digitization	Digitalization	Digital Transformation
Nature	Technical	Process-oriented	Strategic
Focus	Data conversion	Process improvement	Business model change
Scope	Limited	Moderate	Organization-wide
Outcome	Efficiency	Optimization	Innovation & competitiveness

Digital transformation represents the highest stage of digital maturity, where technology becomes central to business strategy rather than a supporting tool.

Drivers of Digital Transformation of Business Models in India

- **Expansion of Digital Infrastructure:** The rapid expansion of digital infrastructure has been a key driver of business model transformation in India. Growth in internet and mobile connectivity has enabled businesses to reach customers through digital channels. Such infrastructure expansion enables digital platforms, e-commerce eco-systems to flourish across sectors.

Table 2: Digital Infrastructure in India: March 2014 vs. March 2024

Indicator	March 2014	March 2024
Internet Subscribers (Total)	251.6 Million	954.4 Million
Telephone Subscribers (Total)	933 Million	1198.7 Million
Broadband Subscribers	60.9 Million	924 Million
Overall Tele-density	75.23%	85.65%
Rural Tele-density (Telephone)	44.01%	59.03%
Urban Tele-density (Telephone)	145.46%	134.13%

Source: TRAI, DOT (Government of India)

- **Digital Payments Revolution:** Digital payments infrastructure has significantly reduced transaction costs and enabled new revenue models. The Unified Payments Interface (UPI) has become the backbone of India's digital economy.

Table 3

Year	UPI Transaction Volume (Billion)	UPI Transaction Value (Lakh Crore)
2018-19	5.35	8.77
2019-20	12.52	21.31
2020-21	22.33	41.03
2021-22	45.97	84.17
2022-23	83.75	139.20
2023-24	131.13	199.95
2024-25	185.86	261.00

Source: NPCI

The scale of digital payments has facilitated subscription models, platform-based commerce, and embedded financial services.

- **Policy and Regulatory Reforms:** Policy and regulatory reforms have significantly accelerated the digital transformation of business models in India by reducing compliance costs, procedural delays, and regulatory uncertainty. Over the past decade, the Government of India has been working towards digitalization of key business-facing regulatory systems such as GST registration and filing of returns, e-invoicing, customs clearance via ICEGATE and corporate compliance via the Ministry of Corporate Affairs portal. According to the World Bank, the digitization of tax administration and regulatory processes reduced the time required to comply with tax obligations in India from about 250 hours per year in 2014 to around 156 hours by 2020, reflecting substantial efficiency gains arising from digital reforms.

Digital compliance and transparency has also been enhanced by the adoption of GST e-invoicing. The GSTN had reported a monthly output of more than 10 crore e-invoices as of the 2023-24 period, which makes it possible to minimizes tax evasion and allows seamless integration of the accounting systems of firms and the tax administration, as over 99 per cent of company and LLP filings are submitted online and as a result the physical interface is reduced and time is saved.

Digital reforms in the customs administration also have led to better business efficiency. Faceless assessment and electronic clearance with ICEGATE resulted in a fall in the average cargo clearance time in large ports and airports, and the official estimates indicate a reduction in the time of import clearance by over 30 per cent between 2016 and 2022. These regulatory improvements have reduced the costs of logistics, increased the efficiency of supply chains, and favored export-based business models and digitally integrated models. All these data-driven regulatory reforms have made business formalization stronger, regulatory predictability better and investor confidence increased hence providing a more favorable environment to embrace digital business models in India.

Types of Digital Business Models in India: Digital transformation has resulted in the emergence of diverse business model typologies.

- **Platform Based Model:** This model is a digital mediator that connects the interaction or transaction between two or more autonomous groups (usually between buyers and sellers). The owner of the platform may not own the inventory but receives commission or listing fee or advertisement money.
- **Subscription Based Model:** This model moves the emphasis on a single transaction to an ongoing relation, where customers will pay a fee periodically in order to have an everlasting access to a product or a service. It gives companies an uninterrupted consistent flow of revenue and the ability to update the software or content they use all the time without necessarily having to buy it.

- **Data-Driven Model:** The main strategic resource in this model is data, which is used to generate revenue, usually by targeting advertising, credit rating, or behavior selling. The data that these companies process via advanced AI and machine learning is analyzed with big datasets, and the algorithm is the heart of the competitive advantage.
- **Omni-Channel Model:** Omni-channel model refers to the strategy when a business integrates its physical stores, mobile application, and the website to integrate them into one team. These sections of a business usually were like strangers in the past; however, this model aligns them to ensure they provide the same information in real-time. This will allow a customer to begin his or her shopping on a phone and complete it in a shop without any confusion or having to restart the process. An excellent instance is that of being in a position to make an online purchase and collect it within a few minutes at a local shop. The intermingling of the digital and physical world by businesses makes life much easier to the customer. This creates a great deal of trust and people desire to go back to the brand since the experience is quick and uniform.
- **Sharing Economy:** Instead of making a permanent purchase, this model enables consumers to pay for the "use" of a product. Owners can use digital apps to rent out their underutilized assets—such as a car, a spare room, or even tools—to people who temporarily require them. This "access-over-ownership" strategy helps the owner make additional money while being far less expensive for the customer. This approach guarantees that resources are used more effectively rather than being idle by utilizing technology to foster trust between strangers.

Table 4: Types of Business Models

Model Type	Key Features of Model	Examples
Platform based	Multi-sided markets, network effects	E-commerce platforms: Amozon, Meesho, eBay
Subscription based	Recurring revenue	Software & Media:Netflix, Zoho, Freshworks
Data Driven	Analytics- based decision making	FinTech,&Adtech: Google Meta, PolicyBazar
Omni-Channel	Integration of online & offline	Retail chains- Nike, Titan, Tanishq
Sharing economy	Asset-light utilization	Aggregator service-Airbnb, Ola,Uber

When compared to conventional business models, these models prioritise customer engagement, data utilisation, and flexibility.

Sector wise Digital Transformation of Business Models

- **Manufacturing Sector:** Under the Industry 4.0 framework, digital technologies are being adopted by Indian manufacturing companies at an increasing rate. Automation, IoT-enabled monitoring, and data analytics have enabled manufacturers to shift from product-centric to service-oriented business models. Manufacturing firms are shifting their focus toward service-oriented models, such as predictive maintenance, performance-linked agreements, and digital-first support.
- **Retail and E-Commerce:** Retail business models have been transformed by e-commerce platforms and Omni-channel strategies. India's e-commerce market is estimated at USD 125 billion in 2024 and is projected to grow significantly by 2030.

Table 5: India's E-Commerce Market Growth

Year	Market Size (USD Billion)
2017	38
2020	64
2024	125
2030 (Projected)	345

- **Banking and Financial Services:** Digital business models in banking emphasize mobile banking, digital lending, and embedded finance. FinTech platforms have leveraged data analytics to offer customized financial products, improving financial inclusion.
- **MSMEs and Start-ups:** Digital platforms have enabled MSMEs to overcome scale limitations. Online marketplaces, digital payments, and cloud-based tools have reduced entry barriers and expanded market access.
- **Impact of Digital Transformation on Business Outcomes:** Looking at the impact of digital transformation in the Indian economy, it's clear that it has made significant contributions to a rise in business productivity, cuts in transaction costs, wider access to markets, and financial inclusion. This is reflected in national statistics on manufacturing growth, digital payments, MSME formalization, and investment inflows.

The expansion of digital infrastructure and online platforms has significantly lowered operational and transaction costs for firms. The rapid growth of the Unified Payments Interface (UPI) has reduced cash-handling expenses, improved payment speed, and increased transparency in business transactions. NPCI data show that UPI transaction volumes increased from 5.35 billion in 2018–19 to over 185 billion in 2024–25, while transaction value rose from 8.77 lakh crore to about 261 lakh crore, indicating a massive shift toward digital transactions in commercial activity. This digital

payment infrastructure enables subscription models, instant settlements, and embedded finance, which were not feasible under traditional cash-based systems.

Digital transformation has also contributed to higher productivity in the manufacturing and service sectors. The manufacturing sector recorded a growth rate of 9.9 percent in 2023–24, one of the highest among all major sectors of the Indian economy (MoSPI, 2024). While multiple factors influence manufacturing performance, the adoption of digital technologies such as automation, enterprise resource planning (ERP), and supply-chain digitalization has played a critical role in improving operational efficiency and reducing production bottlenecks.

Market expansion is another key performance outcome of digital business models. India's e-commerce market expanded from USD 38 billion in 2017 to USD 125 billion in 2024, enabling firms of all sizes to access national and global markets through online platforms (IBEF, 2024). Digital platforms have been especially beneficial for MSMEs, allowing them to bypass traditional intermediaries and reach customers directly, thereby improving profit margins and revenue stability.

Financial inclusion and access to credit have also improved due to digital transformation. Fintech platforms and data-driven lending models use transaction histories, and digital payment data to assess creditworthiness, making it easier for small firms to access working capital. The Ministry of MSME (2024) and SIDBI (2025) both report that digital adoption has improved MSME formalization, loan accessibility, and participation in government support schemes.

At the macro level, digital transformation has strengthened India's investment climate. FDI inflows increased from USD 45.1 billion in 2014–15 to USD 81.9 billion in 2020–21, and have remained at high levels thereafter, reflecting improved business confidence supported by digital governance and transparency (DPIIT, 2025). Digital compliance systems, online approvals, and electronic reporting have reduced regulatory uncertainty and enhanced investor trust.

Challenges in Digital Transformation of Business Models: Despite progress, several challenges persist:

- Digital divide between urban and rural regions
- Limited digital skills among workforce
- High initial investment costs for advanced technologies
- Cybersecurity and data privacy risks
- Resistance to organizational change

These constraints particularly affect MSMEs and traditional firms.

Policy Implications and Strategic Recommendations: To ensure inclusive and sustainable digital transformation:

- Strengthen rural digital infrastructure
- Promote digital skill development and reskilling
- Provide financial incentives for MSME digitization
- Encourage Industry 4.0 adoption through public–private partnerships
- Strengthen cybersecurity and data governance frameworks

Conclusion

Digital transformation has fundamentally reshaped business models in India by enabling firms to leverage technology for value creation, delivery, and capture. Empirical evidence from digital infrastructure growth, digital payments expansion, e-commerce development, and investment trends demonstrates that India's digital ecosystem provides a strong foundation for business model innovation. While challenges remain, strategic policy support and organizational readiness can ensure that digital transformation contributes to inclusive economic growth and global competitiveness.

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