

A COMPREHENSIVE STUDY OF BUSINESS TRANSFORMATION IN THE ERA OF DIGITAL ECONOMY

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ABSTRACT

In the contemporary landscape, marked by an unprecedented surge in digitalization, the profound impact of the digital economy on business transformation has become increasingly evident. This comprehensive study delves into the multifaceted dimensions of business transformation in the era of the digital economy. The global shift toward digitization has been propelled by factors such as widespread Internet accessibility, the proliferation of smartphones, and the emergence of diverse digital applications and tools. Notably, India stands at the forefront of this digital revolution, boasting a staggering 75 crore smartphones, 133 crore Aadhaar cards, and over 80 crore internet users, with a swift transition towards 5G technology. The country's favourable conditions, including one of the lowest data rates globally, have accelerated its digital transformation. As of 2018, the global data sector was projected to experience a remarkable compound annual growth rate (CAGR) of 27 percent from 2018 to 2025. The pervasive nature of 4G networks, with 76 percent of the world's population having access to them, underscores the global reach of digital connectivity. Internet penetration has surged, with 3.5 billion people gaining access in 2016, tripling the levels observed in 2005. Businesses now leverage digital platforms to enhance communication and streamline operations with unprecedented efficiency. Social media, initially a tool for private individuals, has evolved into a pivotal marketing and consumer outreach tool for businesses. Recognizing the digital sector as the linchpin of the digital economy, this article explores the myriad opportunities arising from the widespread adoption of digital technologies across various business sectors.

Keywords: Digital Economy, Business Transformation, Digitization, Digitalization, Digital Transformation.

Introduction

The digitalization has become an omnipresent phenomenon, permeating virtually all industries as a strategic imperative for staying competitive and relevant. The past few decades have witnessed a profound shift towards a digital-centric world, propelled by widespread internet accessibility, the ubiquitous presence of smartphones, and the proliferation of diverse digital applications and tools. This digital revolution has inevitably ushered in a transformative era for businesses across diverse sectors, both within and beyond the digital economy, reshaping their approaches to development, production, and marketing. Industries such as financial services, retail marketing, e-commerce, and healthcare have experienced seismic shifts in their business models due to the pervasive influence of emerging digital technologies. While it is intuitively understood that the adoption of digital technologies holds immense economic value and potential opportunities for companies, establishing a consensus on measuring this value remains a complex task, particularly for technologies that are freely accessible.

Studies conducted in 2019 examining the consumer value of digital technology in the US economy yielded varying estimates, indicating an additional contribution to annual GDP growth ranging from 0.05 to 0.30 percentage points. These findings underscore the significant, albeit variable, impact of digital technologies on the economy. For businesses, digital technologies play a pivotal role in driving sales, with social media platforms serving as key facilitators in connecting companies with customers. The diverse landscape of social media platforms, including Flickr, LinkedIn, Pinterest, Twitter, Vimeo, YouTube, and various Facebook apps and technologies (Facebook, Instagram, Messenger, and

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WhatsApp), provides businesses with myriad opportunities for engagement. Leveraging these platforms offers advantages such as lowering marketing costs, creating channels for customer feedback to drive innovation, reducing perceived distances in markets, and enhancing recruitment processes. Notably, online recruitment, enabled by digital technologies, has proven to be faster and more cost-effective than traditional methods.

A survey conducted by Copenhagen Economics consultancy across 30 countries and regions revealed that businesses founded by women were more likely to emphasize the importance of Facebook apps and technologies as vital tools for entrepreneurship. Notably, 78 percent of businesses using Facebook apps and technologies employed them for purposes such as paid advertisements, free marketing, and client acquisition. Additionally, these tools often served as substitutes for traditional websites, mitigating the associated costs. The survey further highlighted that 83 percent of business users of Facebook apps and technologies considered them as one of several effective marketing channels, with 80 percent attributing increased sales to these tools in the period from 2018 to 2019.

Digital Economy

The digital economy encompasses a global network of economic activities, commercial transactions, and professional interactions facilitated by information and communications technologies (ICT). This dynamic economic landscape results from the daily interconnections among individuals, businesses, devices, data, and processes. Hyper connectivity serves as the backbone of the digital economy, fostering increased interconnectedness among people, organizations, and machines through the Internet, mobile technology, and the Internet of Things (IoT).

In its nascent stages, the digital economy was often referred to as the Internet economy, web economy, or new economy, owing to its reliance on internet connectivity. However, economists and business leaders assert that the digital economy is more advanced and intricate than the Internet economy, emphasizing the broader economic value derived from digital technologies. Recent observations by TechCrunch highlight intriguing shifts in the digital economy, where major players like Uber, Facebook (FB), Alibaba, and Airbnb operate without traditional assets like vehicles, content creation, stock, or real estate. This transformation is reshaping conventional notions of business structures, consumer acquisition of goods and services, and the regulatory challenges faced by states. The digital economy wields significant potential to shape economic interactions among states, businesses, and individuals.

The World Economic Forum's (WEF) digital observatory predicts that 70 percent of the global economy will be driven by digital technologies in the next decade, accelerated by the COVID-19 pandemic and the growing trend toward online platforms. The future of work, especially influenced by the pandemic, has led to an increasing number of individuals working online. Moreover, the expanding online activities contribute substantially to the profitability of companies supporting internet systems in the global economy.

Business Transformation

Business transformation constitutes extensive modifications in the core elements of how a business or organization operates. It entails a restructuring across personnel, processes, culture, and organization, seamlessly integrating digital or technological advancements. The primary motivation behind these transformations is to elevate an organization's competitiveness, efficiency, and overall effectiveness, often necessitating significant strategic shifts. Characterized by their bold and seismic nature, business transformations transcend incremental progress, seeking to accelerate change and cultivate growth.

The scope of these transformations is both expansive and strategic, potentially encompassing the adoption of new business models or operational approaches. The overarching goal is to create additional value for the organization. This can be achieved by unlocking the full potential of employees, repurposing intellectual property and proprietary technology, or enhancing overall efficiency to augment the company's capabilities. In essence, business transformation is a dynamic and forward-looking process, propelling organizations towards adaptability and success in an ever-evolving business landscape.

Evolution from Digitization to Digital Transformation: A Shifting Landscape

Distinguishing between digitization, digitalization, and digital transformation is crucial, as these terms are often used interchangeably with inconsistent applications. Establishing clarity in the terminology becomes essential to comprehend the expanding role of digital technologies and to define

appropriate policy interventions for their impact on households and businesses. In the context of business transformation through digital means, research has identified three distinct stages, each reflecting the extent to which digital tools influence a firm's business model:

- **Digitization:** Digitization involves the conversion of analogue information (e.g., text or film reel) into a digital format processable by computers (e.g., PDF or MP4). At a business level, digitization is typically limited to internal and external documentation processes without fundamentally altering value creation activities. Examples include the adoption of digital forms in ordering processes or the use of digital applications for internal financial documents.
- **Digitalization:** Digitalization encompasses a broader scope, referring to "the use of digital technologies, data, and interconnections resulting in new activities or changes to existing ones." Advances in computing power, data storage capacity, and communication speed have given rise to a diverse ecosystem of technologies, some in use for over a decade (e.g., front and back-office management software, social media), while others are still in early stages of diffusion (e.g., artificial intelligence, block chain, internet of things). In the business sector, digitalization entails adopting digital technologies to modify existing business processes, such as creating new communication channels for customer interaction, like customer reviews.
- **Digital Transformation:** Going a step further, digital transformation pertains to the economic and societal consequences of digitization and digitalization. Digital technologies have the potential to reshape how citizens communicate, work, and organize their lives, as well as how firms produce and sell goods and services, and how governments design and deliver public services. This widespread use of digital technologies offers opportunities to reimagine various aspects of societies, from health and education to finance and trade, resulting in the digital transformation of public and private lives. In the business sector, digital transformation carries profound organizational implications, necessitating changes to core business models and value creation processes. Firms can leverage technology to capitalize on new business opportunities, such as entering new markets, enhancing customer experience, or optimizing production efficiency with digital tools like robotics or data analysis for inventory management.

Review of Literature

According to Neha Gupta, Senior Research Manager, IDC India, "Digital transformation has been a buzzword for the past few years across industries and organizations of all sizes. The purpose or reason of digital transformation is to stay relevant and sustainable in the long run by creating flexibility and adaptability in the organization. DX means acquiring the right technology, incorporating people, processes and operations that give organizations the ability to evolve and respond in the best possible way to unpredictable and dynamic market conditions."

According to the European Commission, "The pace of digitization in India was the fastest among major economies between 2011 and 2019. India's digital growth is now gaining momentum and will become a key factor in sustaining India's long-term growth story."

Professor Walter Brenner of the University of St. Gallen in Switzerland states, "The aggressive use of data or technology is transforming business models, facilitating new products and services, creating new processes, creating greater utility, and ushering in a new culture of management."

Theorists (Schwab, 2017) of long-term technological change argue that, "the current wave of digital transformation is heralding the transition from the 3rd industrial revolution to the fourth. Industrial revolutions are driven by "general purpose technologies", which have a wide scope of application across sectors, can generate long-term productivity increases and become a core part of the technological basis for the economy's structure. The dramatic increases in computing power and a simultaneous decline in related costs since the middle of the last century have enabled the emergence of a new set of digital solutions that are driving the rate and direction of technological change."

Objectives of the Study

- To study the scale of the digital economy in India.
- To study the initiatives under Digital India.
- To study the digital business transformation in the context of the 4th industrial revolution.
- To analyse the influence of digitalization on the real estate industry.
- To explore the advantages of digitalization in business operations.

- To study the challenges associated with digital security.
- To study the market conditions and regulations for digitalization.

Research Methodology

This study employs a secondary data methodology to comprehensively examine business transformation in the digital economy era. Utilizing existing scholarly articles, reports, and industry publications, the research focuses on key aspects such as the impact of digital technologies, business models in the digital era, and transformative strategies. By synthesizing information from diverse sources, this approach aims to provide a thorough understanding of the dynamic landscape of business transformation amid the digital economy.

Size of Digital Economy in India

As per the RBI, India's core digital economy's contribution to Gross Value Added (GVA) has risen from 5.4 percent in 2014 to 8.5 percent in 2019. In terms of US dollars, the digital economy in India exhibited a growth of 15.6% between 2014 and 2019, surpassing the overall economic growth by 2.4 times. The digitally dependent sector constituted an estimated 22.4 percent in 2019. According to the International Data Corporation (IDC), over 95% of Indian companies plan to increase or maintain spending on Digital Transformation (DX). The total projected DX spending in India is expected to reach \$85 billion by 2026, maintaining the same level as in 2023. Key industries driving DX spending in India include research, manufacturing, banking, professional services, government, retail, and telecom.

The Digital India Initiative

The Digital India Framework has been instrumental in guiding digital transformation across diverse industries such as manufacturing, logistics, retail, healthcare, BFSI, education, and agriculture. With over 27,000 technology-driven startups registered at DPIIT, and 1,300 new additions annually, policy changes are vital to bolster initiatives like Start-up India and Skill India. The Union Budget 2023, emphasizing 5G labs, AI centers of excellence, and relevant skill development, signals a positive move in recognizing the digital economy's importance. India's IT evolution, coupled with government intervention, has positioned it as a global outsourcing leader, contributing over 51% of total revenue. To further catalyse growth, the focus should shift towards becoming the 'Concept to Market-Hub of the World,' aiming to build a robust ecosystem and unlock socio-economic potential. The IT sector, a key economic contributor, can propel India towards a trillion-dollar digital economy, fostering growth through strategic fiscal policies, skill development, and R&D infrastructure. The ongoing efforts, supported by industry stakeholders, align with this vision. The Economic Survey underscores the pivotal role of Global Capability Centers (GCCs) in India, engaging in advanced R&D functions and contributing to the Digital India vision. Encouraging more global companies to establish centers of competence in India will fortify R&D innovation and further advance the nation's digital aspirations.

The Business Sector's Evolution in the Era of Digital Transformation and the 4th Industrial Revolution

Digital transformation is a multifaceted process that extends beyond technological advancements, incorporating cultural and societal dimensions. Leveraging technical progress, it reshapes interaction modes, organizational structures, trust-building mechanisms, information storage, value creation, and transaction processes. This holistic approach provides avenues for innovation across individuals, businesses, and governments. The inherently multidisciplinary nature of digital transformation defies reduction to specific components or applications. Successful transformations demand more than a mere technological upgrade; they necessitate a strategic vision for reimagining business models, managerial competence for practical implementation, and a digitally skilled workforce embracing the required mindset. In the business sector, technological evolution goes beyond adopting digital tools for operational improvement, fostering innovation in creating new digital products, evolving value chains, and fundamentally transforming business models towards comprehensive digital integration.

The Influence of Digitization on the Real Estate Sector

The real estate sector, particularly in countries like India, has undergone a profound transformation owing to digitalization. Technological advancements have reshaped the dynamics of property transactions, introducing online listings, virtual tours, and digital transactions. This shift has disrupted traditional real estate practices, giving rise to innovative models that cater to evolving consumer needs.

Digitalization has revolutionized the industry, providing numerous advantages, including the convenience of online property searches. Unlike conventional methods reliant on printed listings or physical exploration, real estate websites and apps now empower buyers to search based on various criteria such as location and price, facilitating a streamlined process to find the ideal property. This not only saves time and money but also enables international clients to view properties without the need for physical travel.

Research by Forbes indicates that 95% of homebuyers initiate their home-buying journey through online platforms, with 51% eventually making property purchases online. Moreover, digitalization has facilitated online transactions through technologies like electronic signatures, allowing parties to sign documents remotely and simplifying real estate transactions from any location worldwide.

Benefits of Digitalisation in Business

Businesses opt to invest in digital tools and practices for various reasons, including innovation, response to competitive pressures, and expansion into new markets. The adoption of technology in the digital transformation process should yield tangible benefits for the firm. While productivity serves as a key performance indicator, other specific dimensions can be considered to evaluate the impact of digital technologies on diverse aspects of a company's operations. Important business outcomes organizations aim to achieve through digital transformation spending include:

- Revenue growth
- Increased share of sales from online channels
- Reduction in operating costs or enhanced efficiency
- Decrease in time/cost spent on administrative functions
- Expansion of customer base (domestic/international)
- Lowering customer acquisition costs
- Introduction of new products/services
- Decrease in time to market
- Enhancement of security/risk capabilities
- Improvement in the employee experience
- Quicker response to regulatory compliance
- Elevated levels of customer satisfaction

Challenges of Digital Security

While a burgeoning digital economy brings forth significant advantages in terms of efficiency, innovation, and new business opportunities, the escalating shift of operations online exposes citizens, governments, and businesses to ever-growing digital security threats. Such incidents can result in substantial economic and social losses, disrupting operations, tarnishing reputation and competitiveness, causing financial losses, and eroding users' trust. The prominent challenges in the realm of digital security include:

- **Phishing:** Involves disguised attackers obtaining sensitive information through deceptive communication, ranging from untargeted mass campaigns to sophisticated spear-phishing emails or CEO fraud against companies.
- **Malware:** Encompassing malicious codes such as viruses, Trojans, spyware/adware, and worms, with increasing technological sophistication, making detection challenging for anti-malware software.
- **Ransomware:** Encrypts victims' access to data or IT systems, demanding a ransom for unlocking, with incidents like Wannacry and NotPetya causing billions of dollars in damages in 2017.
- **Distributed Denial of Service:** Seeks to disrupt online service availability by overwhelming servers with excessive traffic, commonly used for extortion.
- **Cybersquatting:** A growing threat to e-commerce, involving registering or using a domain name similar to an existing business to profit from the trademark, followed by offering to sell the domain name to the trademark holder.

Market Conditions and Regulations for Digitalisation

Establishing a robust and competitive digital transformation requires a foundation of clear regulations and market conditions. Essential for safeguarding consumers and digital infrastructures, well-defined rules and principles are crucial in the digital environment. Simultaneously, dismantling unnecessary regulatory barriers is vital to prevent hindrances and delays in the broader scope of digitalization and innovation. A transparent regulatory framework not only protects but also acts as an incentive for businesses to embark on their digital transformation journeys.

The harmonization of digital market frameworks stands out as a fundamental stride toward eliminating obstacles to online services for citizens, public administrations, and businesses. This alignment results in enhanced quality, better pricing, and increased choices. National Regulation Authorities (NRAs) wield a pivotal role in the electronic communications sector. Their responsibilities include fostering competition, ensuring credible market entry, and enforcing regulations. NRAs contribute to maximizing user benefits in terms of choice, pricing, and quality, thereby facilitating the growth and development of the electronic communications market. The synergy between clear regulations and competitive market conditions is imperative for nurturing a flourishing digital landscape that caters to the diverse needs of users and businesses.

Conclusion

Following a comprehensive study, it is evident that the burgeoning digitalization of India's economy stands as a pivotal factor in sustaining robust long-term growth. India's commendable journey toward digital empowerment, orchestrated by both the government and private sector, has facilitated widespread access to essential services like healthcare, education, and finance, particularly benefiting underserved communities. The profound impact of technology on citizen empowerment is noteworthy, and as India continues to invest in technology, it is poised to yield even more substantial benefits. While India stands as one of the largest and fastest-growing markets for digital consumers globally, there exists uneven adoption among businesses. The country's advancement in digital capabilities, coupled with widespread connectivity, is anticipated to rapidly and comprehensively transform every sector of the Indian economy, altering the nature of work for millions. Digitization not only propels the nation towards progress but also addresses gaps in physical infrastructure. Alongside initiatives like Aatma Nirbhar Bharat and Aadhaar, the Government of India has been actively promoting its Digital India initiative, focusing on creating digital infrastructure, digital services, and enhancing digital literacy. The ongoing adoption of digital transformation is a prevailing trend that is expected to gain further momentum in the future. Consequently, digitalization emerges as a vital and distinctive feature in India's unfolding growth narrative in the 21st century.

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