

Business in Digital Era

Vivek Tripathi, Suprita Raha

Abstract:- In today's era, it has become very crucial for businesses to stay on par with evolving technologies. The emergence of Digitalization has caused significant shifts in business operations. As a result, various industries have started reshaping their sectors at an astonishing rate, to keep up with the evolving digital transformations of this time. Advancements in Digital connectedness (e.g., through social media, networking by 4G, 5G networks, etc.) have enabled us to operate businesses on a large scale, clearly making way for the Digital era from the industrial age. The idea of digital transformation doesn't imply the substitution of old methodologies with the newly digitalized ones. Instead, it entails changes regarding both technology and thoughts about leveraging the technology. This study aims to explore the numerous digitalization in various business sectors as well as the impact of the digital era on businesses, and at last, navigate the areas of concern of the digital era.

I. INTRODUCTION

A. History

Although Digitalization currently is known widely in the business domains, the process of its transformation of this idea through various organizations dates back to the late 1990s and again in the mid-2000s. Over the span of some good 20 to 30 years, the implementation of digitalization can be seen through these organizations. (Auriga, 2016)

This shift took off with the expansion of the "internet" and with the gradually evolving "WEB 1.0". At this point, the business leaders were still unsure of their new marketing strategies. But as the number of computers increased, the digital channels, and websites increased, and thus a new connection was set up between the companies and the customers. This trend saw its first gradual surge in 2006 when combined traffic on the search engine was found to have grown massively to about 6.4 billion.

The advent of "WEB 2.0"(2004 - present), extensively allowed customers to reach out to other users and businesses. This age saw a drastic change in the increase of Smart devices and Social Media Networking Platforms, (Facebook, Youtube, Google, etc.) giving birth to a diverse variety of "E-businesses" or "Online Businesses". (Avantika Monakka, 2022)

B. Present and Emerging Technology

Almost all digital transformation innovations of today's world are being built on some technology platforms which include Smart devices such as Mobile phones, cloud computing, and social technologies. The current business leaders are now focussing on "Data-driven" technology. As Clive Humby quoted "Data is the new oil", businesses are advancing to the "Data first, Data Anywhere" Model. By combining the data with new digital transformative techniques, Organizations can build Secure, Scalable, Agile, and Flexible Models. (Dell, 2022). In India, this

initiative is further supported by the Government of India through the "Digital India" initiative which aims to provide services like the "Public Internet Access Programme", "e-Governance", etc. to improve overall infrastructure.

Also, the world saw an increment of digital transformation in businesses after the COVID-19 pandemic, which has not only accelerated this pace but also embraced a new makeshift of digital businesses, thus, presenting us with infinite growth potential (Kashyap Vyas, 2022).

According to a survey by *Research and markets*, Global digital transformation markets are expected to grow to USD 1247.5 billion, in 2026, from USD521.5 billion in 2021 (Research & Market, 2022), thus creating more opportunities than ever before.

II. TRANSFORMATION OF BUSINESS SECTORS IN THE DIGITAL ERA

Earlier Globalization was achievable for large multinational companies, but with digital platforms being accessible globally at ease, transactions, communications, and connectivity have become economical for small-scale businesses or entrepreneurs as well as consumers. As a result, new competitors worldwide are emerging rapidly, increasing the pressure and surging the competition levels for incumbent and emerging businesses. (Mckinsey global institute, 2016)

With fast developments in technology, it has become important for these emerging businesses to adopt a digitized way to ease their entry into the market and for incumbent entrepreneurs to transit their businesses to avail services for customers as well as work for employees digitally.

A. Banking, Financial Services, and Insurance (BFSI)

The finance industry went through major shifts and transformations since digital technologies had helped reshape payments, loans, transactions, insurance, crypto-assets, etc. Owing to the evolving demands for personalized services and products financial service companies are down to leverage Artificial intelligence. Usage of cloud, online platforms, automated service, etc helps organizations to provide a customized and personalized line of services to meet the demands of the consumers.

a) Fintech

Fintech, one of the sectors of the financial industry which depended most on human operators and person-to-person contact, has transformed massively. Fintech is a cluster of different parts or a variety of services that up until now used to be offered as one whole part under traditional banking activities. Therefore, fintech consists of various financial activities such as money transfers, investments, loans from finance corporations (apart from banks), crypto

apps, open banking, insurance, payment or wallet apps, consumer-oriented services, etc.

Fintech uses specialized software and algorithms, new technologies such as artificial intelligence interfaces, data-driven technologies, machine learning, predictive behavioral analytics, automated service technology, and chatbots. **(Saurabh Singh,2022)**

b) Cryptocurrency

Crypto assets are one of the modern technological innovations which have gained popularity and momentum recently. They are digital currency or virtual money values around 100 billion dollars. They are also recognized as a means of payment in many countries across the world. Virtual currencies are regulated and controlled by those who issue them as they form a decentralized network. As of yet, governments don't have control over the regulation of cryptocurrencies because of which traditional banking and payment systems will be affected by these digital currencies. **(Jake Frankenfield,2022)**

c) Banking

Digitization in the banking sector has made the banking process or services easier and more accessible to customers in the comfort of their homes. It has also made the process altogether cost-effective, less time-consuming, and less complex for the banks and the customers. Digitization helps store the documents or information regarding each customer digitally and that further makes the complex process of storing hard copies of files or documents simple.

The banking sector of India started its digitalization journey in the late 1980s when a committee was set up by the Reserve Bank of India to understand or work towards the computerization of Banks. ATMs marked the start of digitalization in the banking sector. Later developments such as telebanking, Electronic Funds Transfer system, MICR, RTGS, etc took place.

In 2014, after the demonetization, the government along with Central Bank took various measures and incentives to digitize and turn the Indian economy into a cashless economy. The introduction of USSD, NEFT, E-Wallets, UPI, internet banking, mobile banking, Micro ATMs, and other banking applications have made payments easier, with no time restrictions and at the comfort of the customer. **(Harshit Bhimrajka,2020)**

d) Insurance

With technological advancement, the insurance sector is not far behind in harnessing the power of digitization. Digitization has particularly changed the conventional model of "Agent-Service Provider" to a more customer-friendly digital platform, which is not

only viable but also more scalable and portable compared to the conventional methodologies. With the insurance companies going digital, it has cut down the time incision between insurance companies and their customers through various new services such as using *Artificial Intelligence Bots* (AI-bots) for various queries and improving better customer engagement, using *machine-learning algorithms* for predictive analysis, *automated claim settlements*, buying of insurances easily without any hassle and thus, saving tedious paperwork. Using IoT technologies like Drones, Wearable tech, etc. is yet another instance of several innovations used in the InsureTech Sector. **(T. Radhakrishna, 2021)**

B. Entrepreneurship

Entrepreneurship plays a crucial role in today's time. With more and more opportunities, it has become a hot topic among individuals. Governments across the globe have started bringing in policies to support blooming entrepreneurs and promote youth entrepreneurship. Youth entrepreneur competitions and seminars are being held with the motive to promote and provide opportunities to individuals with great ideas and mindsets.

Although, entrepreneurship is broadly classified into two types: product-based and service based. Digitalization has vastly changed the structure as well as impacted upcoming businesses or entrepreneurs. The pandemic has accelerated digital innovations and ideas. Due to lockdowns all over the world, businesses started operating from offline mode to online i.e., digitally. This gave birth to digital entrepreneurship, entrepreneurship ventures in digital form. Even the workplace for employees turned digital. The internet became a hotspot marketplace as services and products were now available digitally. Digital products and services created an ease of doing business for new entrepreneurs. Manufacturing, storing, and shipping in the digital form required less time, was free of manual dependency as well as fulfilled the requirement of flexibility in innovation. This gave entrepreneurs space to make radical or innovative changes without seriously disrupting the manufacturing or selling of their products or services. **(Alexandra Ungureanu,2021)**

In India, the number of start-ups recognized by the government has increased from 726 in 2016-17 to 65,861 in the 2021-22 fiscal year. The recognized start-ups were spread across 640 districts and 56 diversified sectors such as financial technology, artificial technology, nanotechnology, IT services, etc. All these sectors can be further termed as 'digital'. **(Press Trust of India,2022)**

India's got its first unicorn state-up in 2011. India's start-up ecosystem started rising in 2016 as a result of digitization making its way through the sectors of the Indian economy. Within 5 years, more than 50% of the start-ups received their unicorn status. In 2021, India added 44 unicorns and 14 in the first four months of 2022.

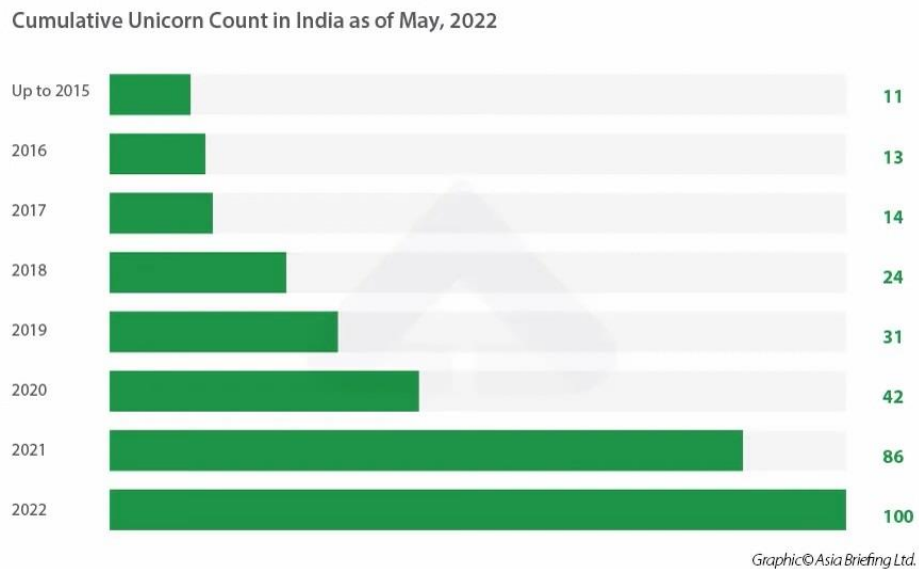


Fig. 1: Cumulative Unicorn Count In India as of May, 2022

(Source: Asia Briefing Ltd.)

The sector-wise breakup of India’s unicorn start-ups shows the e-commerce sector has 23 unicorn start-ups while the fintech sector follows closely with 21 unicorns. Reports suggest the fintech sector will pick up and bypass the e-commerce sector with a maximum number of unicorn start-ups in India.

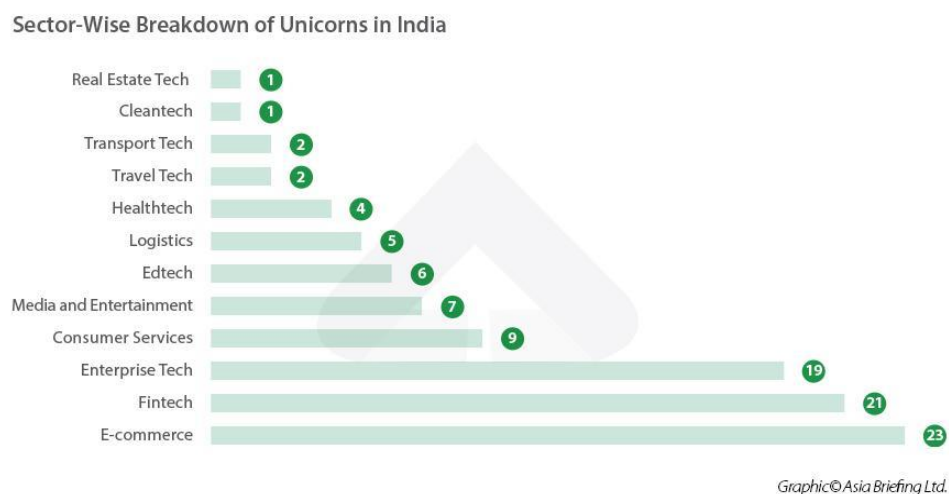


Fig. 2: Sector-wise Breakdown of Unicorns in India

(Source: Asia Briefing Ltd.)

C. Supply Chain Management

Traditionally supply chains had a linear structure consisting of a typical flow of goods starting from suppliers, bypassing manufacturers, and distributors, and finally reaching the consumers. Today as digitization has hit the sectors, traditional methods of the supply chain have been replaced with more cost-effective ideas and modern strategies.

With e-commerce and omnichannel in the picture, the traditional structure is no longer sufficient to meet the needs of consumers as the old way is simply time taking, costly, and inefficient while a faster, more flexible, and more efficient way is the need for the hour. E-commerce logistics

solely rely on pallets or truckloads to provide deliveries in the minimum amount of time possible.(Knut Alick, Andreas Seyfert, Jürgen Racher, 2016)

Planning, manufacturing, logistics, warehousing, transportation, and customer services traditionally functioned separately and manually which often resulted in communication gaps. To fill the gaps and increase efficiency, companies started transforming their supply chains, which ultimately gave birth to digital supply chain management. The digital supply chain is a concept that integrates all business processes starting from product design and planning to customer service.

The digital supply chain provides improved forecasting accuracy by analyzing orders and sale data, predictive algorithms as well as machine learning. Improved forecasting further creates a flexible environment for businesses to keep up with changing demand and supply making planning a continuous process. This enables most e-commerce businesses to avail their customers an option to change the delivery address as per their convenience. It also removes the burden on manual work and lessens the number of errors or mistakes. **(Hans Thalbauer,2018)**

Since evolving technologies have shaped the supply chain area of businesses by making it easy and digital, new business models are emerging which provide supply chain services or logistics services. Small businesses don't have much means or capital to invest in a logistics department of their own. That's where these separate logistics companies play their role by providing logistics services to small businesses.

Migrating from traditional to digital businesses now are required to adopt smarter automated systems. Automated systems don't require any human operators as they are programmed to work automatically. New technologies such as artificial intelligence, machine learning, robotics, 3d printing along with next generation user interfaces, etc are arising from digitization as well.

D. Marketing

Since the inception of digitalization in the marketing sector, it has replaced the old traditional way of marketing, branding, and advertising. For example, with the conventional way of marketing (i.e mass marketing), the organizations are also inclined more toward "Customized Marketing", i.e using special analytical methodologies and tools to boost their products' sales, and hence the marketers are now leveraging the use of tools and focussing more on digital professionals and experts instead of traditional salesmen. **(Gouranga Patra,2022)**

In recent years, the advancement of digital marketing via social networking platforms has not only expanded but also evolved as a major technology that establishes communication between buyer and seller almost instantly. Undoubtedly, Several benefits of digital marketing, which include potentially a high return on investment (ROI) have made this subsystem the most prominent and favorable among consumers. In every aspect of digital businesses, the emergence of new tools and technologies has created a major shift in the paradigm in the area of branding and marketing, and thus, promoted a host variety of innovations and research in this field. **(Tat-Huei Cham, Jun-Hwa Cheah, Mumtaz Ali Memon, Kim-Shyan Fam & Józsa László,2022)**

Some of the most popularly used strategies for Digital Marketing are *Online Marketing, Search Engine Marketing (SEM), Search Engine Optimization (SEO), Search Media Marketing (SMM), Display Advertising, E-mail Marketing, In Application Marketing* (for eg, in-app ads, pop-up ads, full-page ads, QR codes, Mobile Search and Images Ads, etc.)

E. Human Resource Management

In any organization, Human Resource Management(HRM) is perceived as the core part since it manages employee engagement, onboarding, recruitment, and various other tasks. The widespread use of Digital technologies has now changed the concepts of HRM. Digitization in Human Resources continues to show its holdings followed by its counterparts (that of Finance, marketing, IT services, and other functionings in an organization). This paradigm change has witnessed a remarkable surge in the last few years. Technology has influenced HR industries, as well as its practices, have also witnessed changes. That being said, Digital shift in HR does the purpose of restructuring the strategies, operations, and innovations, embracing digital leadership, and improving the overall customer experience through technologies. New Information technologies are used on the industrial level to reshape their work (i.e. virtual work, networking, etc.). Newly developed scalable and agile *Human resources information systems (HRIS)* help us to store, analyze, and deliver the processed information to most aspects of human resource functions. Artificial Intelligence and machine learning are now a part of the HRM ecosystem working on enhancing analytics, and paving way for *HR Analytics*.**(Alexandra-Paraskevi Chytiri, 2019)**

III. AREAS OF CONCERN

Digital transformation has made the way of business easier and more efficient. Adopting new software, technologies and processes has taken the burden off manual work. But is the transformation process in reality as easy as it is being portrayed?

A report from Digital Transformation Statistics stated that 70% of digital transformation programs failed as a result of resistance from employees and a lack of support from management. Only 16% of the employees reported improvement in their performance to be at par with their company's digital transformation efforts.

Most businesses have a rigid or structured management culture. In a dynamic business environment, an old-schooled mentality or cultural mindset may act as a hindrance. The transformation process can take a long time as the businesses are not ready to deliver a quick response, as a result of a lack of flexibility in the management strategy. Digital transformation is a long process and might take years of effort to accomplish. The continuous evolution of customer needs may hinder the efforts, therefore businesses should be prepared with a flexible management strategy to be prepared for the changes that may arise in the evolving environment.

One of the biggest challenges in digital transformation is the emergence of new technologies. Adaption of new processes and technologies can be challenging, especially for long-tenured employees who may face difficulty understanding a whole new process. Challenges could include a lack of proper IT skills in, cybersecurity, software integrations, data analytics, etc. In an enterprise study report, it was stated that more than 50% of organizations

were facing difficulty with the accomplishment of digital transformation because they lacked technically skilled employees.

Another challenge that organizations face is privacy and cybersecurity concerns. As digitalization has pushed organizations toward integration of all of the company's data and storing it in the cloud has brought up the threat of cyberattacks. These attacks target weak or vulnerable systems with poor setups with the malicious intent of stealing customer data and company secrets.

Digital transformation is a challenging as well as a costly process. An organization must be prepared to adopt strategies or plans to make its business transformation smooth and agile. (Levi Olmstead, 2021)

IV. CONCLUSION

Digitalization has become a necessity for the growth and development of businesses. It is a wide area with scope for numerous other changes. The digital era has impacted the social, economic, and political life of the world we live in. This has changed our day-to-day life dynamically.

Digitalization has potentially shifted the way of management more towards flexibility and ease of doing business. Although a series of challenges face the organization on its path of digital transformation, they need to plan and pave its way through it to stay at par with the evolving technologies.

We saw the transformation of various business sectors in this paper but that is not it. Digitalization is a vast area with wide scope for new changes. With the evolving technologies digitalization will also evolve. More phases of digitalization will emerge along with emerging technologies. Therefore, businesses must be agile, i.e., prepared to take advantage of opportunities when they arise.

REFERENCES

- [1.] Auriga, 2016. A Short History of Digital Transformation, <https://auriga.com/blog/2016/digital-transformation-history-present-and-future-trends/>
- [2.] Avantika Monnappa, 2022. The History and Evolution of Digital Marketing. <https://www.simplilearn.com/history-and-evolution-of-digital-marketing-article>
- [3.] Dell, 2022. Seamlessly transforming your business from the physical to the digital. <https://www.dell.com/en-in/dt/what-we-do/emerging-technology.htm>
- [4.] Kashyap Vyas, 2022. Emerging Technologies are Exciting Digital Transformation Push. <https://www.itbusinessedge.com/development/emerging-technologies-are-exciting-digital-transformation-push/>
- [5.] Research and markets, 2022. Digital Transformation Market by Component, Technology (Cloud Computing, Big Data & Analytics, Mobility & Social Media Management, Cybersecurity, AI), Deployment Mode, Organization Size, Business Function, Vertical, and Region - Global Forecast to 2027. https://www.researchandmarkets.com/reports/5136097/digital-transformation-market-by-component?utm_source=GNOM&utm_medium=Press+Release&utm_code=j2bzdn&utm_campaign=1426023+-+The+World%27s+Digital+Transformation+Industry+2020-2025%3a+Trends%2c+Opportunities+and+Competitive+Landscape&utm_exec=joca220prd
- [6.] Mckinsey global institute, 2016. MGI DIGITAL GLOBALIZATION: THE NEW ERA OF GLOBAL FLOWS 2016: <https://www.mckinsey.com/~media/mckinsey/business%20functions/mckinsey%20digital/our%20insights/digital%20globalization%20the%20new%20era%20of%20global%20flows/mgi%20digital%20globalization%20executive%20summary.ashx>
- [7.] Saurabh Singh, 2022. How is digital transformation accelerating change in fintech? <https://appinventiv.com/blog/change-in-fintech-using-digital-transformation/>
- [8.] Jake Frankenfield, 2022. What Is Cryptocurrency? <https://www.investopedia.com/terms/c/cryptocurrency.asp>
- [9.] Harshit Bhimrajka, 2020. The digitalization of the banking sector <https://blog.ipleaders.in/digitalization-banking-sector-hits-misses/>
- [10.] T. Radhakrishna, 2021. How digitization propelled India's insurance sector during the pandemic. <https://bfsi.economictimes.indiatimes.com/news/insurance/how-digitisation-propelled-indias-insurance-sector-during-pandemic/84009277>
- [11.] Alexandra Ungureanu, 2021. The Digitalization Impact on the Entrepreneurial Leadership in the 21st Century https://www.researchgate.net/publication/348447997_The_Digitalization_Impact_on_the_Entrepreneurial_Leadership_in_the_21st_Century#:~:text=The%20digitalization%20of%20the%20entrepreneurial, strategic%20planning%20to%20achieve%20development.
- [12.] Press Trust of India, 2022. The number of recognized startups in India rises to 65,861 says govt. https://www.business-standard.com/article/current-affairs/number-of-recognised-startups-in-india-rises-to-65-861-says-govt-122032500790_1.html
- [13.] Hans Thalbauer, 2018. The Digital Era Has Arrived, and Supply Chains Must Adjust, <https://www.supplychainbrain.com/blogs/1-think-tank/post/29126-the-digital-era-has-arrived-and-supply-chains-must-adjust>
- [14.] Knut Alicke, Andreas Seyfert and Jürgen Racher, 2016. Supply Chain 4.0 – the next-generation digital supply chain <https://www.mckinsey.com/business-functions/operations/our-insights/supply-chain-4.0--the-next-generation-digital-supply-chain>
- [15.] Gouranga Patra, 2022. DIGITALIZATION IN MARKETING PROCESS-A NEW SKILL IN MARKETING SPECIALIZATION <https://adamasuniversity.ac.in/digi>

talization-in-marketing-process-a-new-skill-in-marketing-specialization/

- [16.] Tat-Huei Cham, Jun-Hwa Cheah, Mumtaz Ali Memon, Kim-Shyan Fam & Józsa László, 2022. Digitalization and its impact on contemporary marketing strategies and practices. <https://link.springer.com/article/10.1057/s41270-022-00167-6>
- [17.] Alexandra-Paraskevi Chytiri, 2019. Human Resource Managers' Role in the Digital Era. https://econpapers.repec.org/article/spdjournl/v_3a69_3ay_3a2019_3ai_3a1-2_3ap_3a62-72.htm
- [18.] Levi Olmstead, 2021. Digital Transformation Challenges to Overcome. <https://whatfix.com/blog/digital-transformation-challenges/>