



# Digitalization Of Indian Economy Empowering Indian Economy To Fastest Growing Economy And Leads Towards World Leadership

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**Abstract:** The digital putsch is very well underway in India, by this the country is apace establishing itself as a world leader in digital economy with the help of the IT sector and ICT sector at the forefront of enabling seamless digitalization. Digitalization brings innovation, ease of working, new job opportunities and growth in the economy. It also helps to bring transparency to the system and lead to substantial social benefits to societies and communities. Earlier Adam Smith proposed the theory of absolute advantage enjoyed by a country in producing good or service, policymakers have sought to build and maintain this advantage in key sectors of their economies. Digitization emerged as a new instrument to build and sustain such absolute advantages, and in some cases even to claim the “right to win” and beat the competition in certain sectors — a critical capability that underpins all other national economic efforts.

**Index Terms - Definition, Digital Economy, Different Players, Opportunities & Challenges, Economic Growth.**

## I. INTRODUCTION

Today, when whole world discuss about digitization growth and benefits than every country praises India's progress and attitude towards digitalization adaptation by which India become world leadership in digital economy. India's Digital India Flagship program has one of the remarkable implementations of transforming the Indian economy into a digital economy. This foundation program was amplified with the vision of transforming India into a digitally empowering county, and was launched by the Indian Government on July 1st, 2015. By the digitalization of the Indian economy India is emerging as a country leader in the global digital economy. India's digital economy has grown apace over the last few years. In the meantime COVID-19 pandemic has also effectuate substantial on digital economy incremental changes, due to many of elements consequences and effectuate management and policies, including the contributions of the Indian Prime Minister Narendra Modi, private players, India's technical golden age, digital initiatives of the Indian government, market changes, Make in India program, Digital India program and above this the main factor is the Indian population's avidness to adopt quickly. The mass adoptions of digitalization by consumers, enterprises and government have emerged in recent years as a key economic driver that accelerates growth and facilitates job creation. Digital India initiative's impact on India's economic growth is supposed to be long lasting. The digital economy is gaining prominence and impacting various aspects of economic activity globally. It emphasizes that the digital economy is no longer limited to specific sector but is permeating every sector of the economy. Now India's digital economy is registered 6 fold growth and will reach \$1 trillion by 2030 led by growing Indian citizens' eagerness and appetite for digital services and products. India is well on the path to becoming of the second largest economy in the world. By 2047 India will be a global powerhouse with the size of economy around \$35 trillion.

## II. REVIEW OF LITERATURE

There have been various research papers and articles on digitization of Indian economy and Digital India which have provided a detailed insight about the role of Digital India foundation programme in empowering the Indian economy and implication effects of this project in the fastest growing economy. Some of these researches retrieved through journals have been reviewed here.

Midha (2016) concluded that digital India is a great plan to develop India for knowledge future but its improper implementation due to inaccessibility and inflexibility to requisite can lead to its failure. Though digital India programme is facing number of challenges yet if properly implemented it can make the best future of every citizen. So we Indians should work together to shape the knowledge economy.

Shukla, Mansi & Bose, Shilpi (2017) "Impact of Digitalization in Economy and the effects of Demonetization." The digitalization is not simply regarding concerning the business dealing from face to face to on-line, however it's concerning transformation of several sides of the business interactions and dealings and fragmented up into innovations too. Growing technology advances, larger purchaser power and increased competition mean all industries face the threat of development. India stands on the sting of growth in web and e-commerce activity. The digital economy has modified the operating of business in today's world.

Sumathi and Savitha (2019) concluded that digitalization has a good impact on the Indian economy which is helpful to flourish the better economy. It also points out the Digital India concept is helping in different sectors like industry, business, trade, education, science, employment, banking and other different sectors to achieve their strength in providing better services to the society.

Binod (2020) studied the impact of Digital India on Indian economy. The study found that the digitalization brings innovation, easy operating, new job opportunities and growth within the economy. It helps to bring transparency within the system and a lot of clear area unit the flow of funds within the economy less is that the downside of non-payment, parallel economy etc. however with of these advantages obtainable it additionally makes it necessary for the folks to own basic monetary information and a push towards the importance of the monetary attainment. Digital transactions make us follow a legal path which is helpful to flourish the economy. Use of plastic money gives freedom as well as security to citizens because it works on technical grounds. Since cash is the primary mode of transactions in money laundering and terrorism funding, a digital society would discourage such laundering and terrorism.

## III. OBJECTIVES

- To interpret the concept of digital economy and its different players, this plays significant role in digital economy growth.
- To trace out the significances of digital economy.
- To find out the digital economy opportunities and challenges.

## IV. METHODOLOGY

The method used in this paper is descriptive-evaluative method. The study is mainly review based. It is based on only secondary source of data, i.e. books, journals, papers and articles and internet.

## V. WHAT IS DIGITAL ECONOMY?

The digital economy is described as a system which is driven by digital technologies like internet and mobile devices. It encompasses functioning areas like e-Commerce, online advertisement, digital transactions, data analytics and Fintech companies which take a part in nation economy growth and innovations. The digital economy witnessed an industrial revolution in global business operations by rendering opportunities for progressive development and innovations. Rapid changes in the technologies provide technical advancements to the businesses. With the help of these companies reach the world wide audience effortlessly, transforming business models and the way we connect to the audience and use of technologies.

## VI. DIFFERENT PLAYERS

Digital economy influenced by different players which played a crucial role in growth and incremental changes, which are as follows:-

### Contribution of Indian Prime Minister Mr. Narendra Modi-

Indian Prime Minister Mr. Narendra Modi has only one vision, 'Atma Nirbhar Bharat'. He sees a transformative India which is based on economic growth, social welfare and technological innovation. Pm Modi always wanted to build India as a digital economy and a knowledge power. He envisions that our country will be among the developed countries by 2047 due to digital transformation in each and every sector and our country will be even more inclusive and innovative.

He has done a great job and has made a huge contribution towards driving India's digital transformation. In 2015, he introduced and set up a Digital India Program with the purpose of transforming India into a digitally empowered society and knowledge economy. The Indian government has launched many initiatives to promote digital infrastructure, digital literacy and digital services under the Digital India Program. Aadhaar Program is one of the most important key initiatives Program under Digital India aimed to provide a unique identification number to every citizen.

### Private Sector -

Private sector also played a great role in India's digital economy with many startups and unicorns which invested huge funds in this sector. Established private players support several startups for growing their initial stage and promote PM Modi startup India and standup India programmes. India's startup ecosystem becomes one of the fastest growing in the world leadership, with several successful established unicorns emerging in recent years. The successes of these companies such as Paytm, PhonePe, Ola, Uber, Swiggy, Zomato and Flipkart etc.get attention and have attracted huge funds and significant investment into the sector. This ecosystem is also helping to create jobs and boost the Indian economy.

### e-Commerce-

Digital economy is rising due to B2B and B2C e-Commerce; particularly online marketplaces such as Amazon, Flipkart have been significant players of the digital economy. The B2C e-Commerce market has revolutionized the retail industry. They have been providing customers with easy access to competitive prices and also offering to Merchant a vast customer base.

### IT Sector Infrastructure-

India's digital economy has also been driven by the IT sector Infrastructure. The significance of cybersecurity measures to ensure the protection of digital systems and data by using cloud computing. Cloud computing enables secure data storage and reduces operational costs associated with traditional IT infrastructure and improves collaboration.

### Different Digital Initiatives-

The Indian government has introduced several digital initiatives aimed at promoting the growth of the digital economy. One of the most pivotal initiatives is Bharat Net project which is aimed to connect all villages in India with high-speed broadband connectivity by 2023. National e-governance plan aimed at bringing all the Front-end government services online. The Indian government also launched a major digital initiative which significantly impacted the education system, The Digital Saksharta Abhiyan (DISHA) in 2016, aims to make at least one member of every household digitally literate.

### Social Media Platforms-

Social media platforms have become an integral portion of the e-Marketing and digital economy. Their effective marketing tools allow all sizes of companies to reach their targeted customers through targeted ads and influencer partnerships. Companies marketing research also done by online surveys on social media platforms.

### Mobile Technology Influence Market Changes-

The Indian market witnessed significant changes in recent years due to a mass adoption of mobile technology. The proliferation of Smartphone uses, affordable data packs and increasing usages internet penetration has enabled large numbers of customers to access digital services. Advent of mobile technology revolutionizing communication channels, access to information and business transactions globally. This has

created a huge marketplace for digital services including E-Commerce, digital payments, online marketing and online entertainment. The Indian government has set a target to provide 4G networks to all uncovered villagers by 2024.

### **Data-Driven Decision-Making-**

Data-driven decision making has also played a pivotal role in the rise of the digital economy. Big-Data analytics are effectuated business management policies and strategies by providing them insights into consumer behavior market dynamics like improving products and optimizing supply chain management.

### **Technical Golden Age in India-**

Currently India is going through a technical golden age with the help of an increasing number of skilled technical professionals for new technologies innovations and a supportive government policy framework are significant factors. The Indian government has launched digital literacy initiatives and the skill India programme aimed at developing digital skills. Digital literacy initiatives programs are being designed for various target groups to skill, upskill and re-skill professionals through training, internship and apprenticeship programs. Skill India programme aimed to train 40 crores people in various skills. The government is also working on rising cyber crimes and financial frauds by raising awareness and building technical security, for this government recently launched Sanchar Saathi Initiative on 16 May, 2023.

### **Largest Start-up Ecosystem in the World-**

Today India has emerged as the Third largest startup ecosystem in the world-wide with over 99,000 DPIIT-recognized startups across 670 districts of the country and 108 unicorns with a total valuation of \$340.80 Billion. India has recognized startups in 56 diverse industrial sectors with 13% from IT services, 9% healthcare and life sciences, 7% education, 5% agriculture and 5% food & beverages. India ranks second in innovation quality with top positions in the quality of scientific publications and the quality of its universities among middle-income economies. The innovation in India is not just limited to certain sectors. Now some unicorns are transforming into decacorns with a valuation of more than \$10 billion. India has four startups which are added in the Decacorn cohort namely Flipkart, BYJU's, Nykaa and Swiggy.

## **VII. IMPACT OF THE DIGITAL ECONOMY ON INDIAN ECONOMY AND SOCIETY**

Digital economy has a significant, progressive and supportive impact on the Indian economy and society. The digital economy has brought a new ray to India with a wide array of benefits that have changed the way of life, work, and interaction with one another. It has also led to the emergence of new business models and new tech industries, like e-commerce, digital payments, and online education, online entertainment, online marketing, fintech etc.

### **Demographic Advantage-**

The demographic diversification is a pivotal element in experiencing the potential of the digital economy in full swing. In India technical-savvy has facilitated the adoption of digital systems such as Unified Payment Interface (UPI) and Direct Benefit Transfer (DBT) which have led to positive impact on the economy due to providing digital content and services in vernacular languages. It can enhance accessibility and inclusivity which enables a large population to benefit from the digital economy.

### **Ability to Connecting People and enhanced customer engagement-**

An advantage of the digital economy is the ability of connecting people from different parts of the world in the real-time manner and leading to better communication channels and collaboration. It also facilitates direct and instant communication between businesses and customers through social media, websites, and mobile apps. This enables personalized interactions, feedback collection, and tailored marketing campaigns, fostering stronger customer relationships and loyalty.

### **Extension of Various Digital Services-**

An opportunity of re-evaluation of the services sector and open up the service sector both at the internal level and global level provided by the digital economy. Several developed countries including G20 members have been very cautious about liberalizing the services sector. For the extension of various digital services, the Indian government launched Unified Mobile Application for New-age Governance (UMANG) mobile app in November 2017 which is developed by the Ministry of Electronic and Information

Technology (MeitY) and National e-Governance Division (NeGD) to drive mobile governance in India. UMANG mobile app specially designed to provide a single platform for all Indian citizens to access pan India e- Government services central to local government bodies. Besides this, the digital economy can enable the extension of services such as medical services, educational services and banking services which are available on one finger tips.

### **Job Creation-**

The adoption of digital services by consumers, enterprises and government has emerged as a key digital economy driver to accelerate the growth and facilitate job creation in recent years. Digitalization of the economy positively affects productivity in every sector and its impact on employment and job creation evenly. Startup India and Standup India have created directly and indirectly lakhs of job opportunities in each and every sector. With the rise of e-Commerce markets like Amazon, flipkart, eBay etc can yield significant economic benefits and lead to create new jobs due to the potential of digitization to boost productivity because small businesses are now able to participate in international trade at economically low cost.

### **Higher Productivity Rates and cost saving across Many Industries-**

Advancements in technology have led to higher productivity rates and eliminated the need for physical infrastructure across many industries such as manufacturing and healthcare, resulting in cost savings and reduced overhead costs associated with traditional business models for individuals and organizations. Companies can save on expenses such as rent, utilities, and inventory management, resulting in higher profit margins and potential cost reductions for consumers.

### **Cross-Border collaboration and provision of services-**

The digital economy has transformative potential in facilitating cross-border service provision. By leveraging digital platforms and technologies, qualified professionals can offer their services globally, overcoming geographical barriers. This has the potential to reshape the services sector and bring about significant benefits for both service providers and recipients. Digital platforms also facilitate global collaboration by enabling businesses to collaborate with partners, suppliers, and customers globally. This fosters innovation, knowledge exchange, and cross-cultural understanding, driving economic cooperation and international trade.

### **Innovation and Entrepreneurship helps in Reach out to a Larger Audience-**

Digital platforms provide a fertile ground for innovation and entrepreneurship. With lower entry barriers and reduced upfront costs, individuals and startups can introduce new products, services, and business models, fueling creativity, competition, and economic growth. In addition, businesses can now reach out to a larger audience through social media platforms such as Facebook, Instagram, and Twitter. This means companies can find new customers more easily than ever before while also maintaining customer relationships by providing excellent customer service online.

### **Environmental Sustainability and Economic Resilience-**

Digital technologies offer opportunities for eco-friendly practices. Remote work, digital documentation, online transactions, and virtual meetings contribute to reduced carbon emissions, resource conservation, and a greener approach to business operations. The digital economy provides flexibility and adaptability during challenging times, such as economic downturns or crises. Businesses can pivot their strategies, explore new markets, and leverage digital channels to sustain operations and mitigate risks.

## **VIII. OPPORTUNITIES OF DIGITAL ECONOMY**

- Digital economy has the potential to change millions of people's lives by bringing a greater variety of goods and digital services often at lower prices, availability of improved data collection, channels, and social networks in the country.
- India will become the highest mobile market in the world in upcoming years by 2025 adding 300 millions new mobile subscribers.
- Online personal services are about to take a high jump with the help of rapidly growing middle class and young tech-savvy citizens.

- International companies are also taking interest and looking to increase their investment in the digital economy of India.
- Digital economy has the power to generate mass new employment opportunities.
- Digital skills also have a huge potential because India has a large talent and knowledge pool that can be used to meet global demand.
- It is stated that even traditional manufacturing sectors are also being influenced and transformed by the digital economy. This implies that the integration of digital technologies and processes are enhancing and modifying manufacturing activities.
- The digital economy moves the center of gravity of the investments in fixed assets to investments in human capital. Individual initiative, solidarity, cooperation and mutual trust in the workplace are key factors for success in the informational society. The Internet has indeed become a multi-billion dollar industry which is vital for infrastructure for a global economy.

## **IX. CHALLENGES OF DIGITAL ECONOMY**

The digital economy revolutionized every sector's business models and its operating activities through facilitating new opportunities for growth and innovation. However, it comes with a set of lots of challenges and concerns.

### **Digital Divide Inequality-**

One of the key challenges is technological backwardness. It includes two factors namely, digital divide and inequality. The digital economy exacerbates the digital divide, with many people in rural areas still lacking access to digital services and creating a gap between those who have access to technology and those who don't. This can lead to new forms of inequalities, with some people benefiting other than others in education, employment opportunities, and access to essential services.

### **Cyber Security Risk and Privacy Concern-**

The growth of the digital economy has raised concerns about data privacy and cyber security risk including data breaches, hacking, and identity theft. These threats can result in financial losses, compromised privacy, and reputational damage. Because of which many people worry about the misuse of their personal information as the collection and utilization of personal data become more prevalent. Challenges persist particularly in the financial sector. The rapid speed at which transactions occur in the digital realm can be concerning. Correcting errors or addressing fraudulent activities can be extremely challenging due to the swift movement of money. Individuals may feel their privacy is compromised, leading to distrust and calls for stricter regulations.

### **Skilled Manpower Requirement-**

Neglecting the development of a skilled manpower in the digital decade can hinder the full potential of digital public infrastructure. Strengthening educational institutions to produce digitally literate workforce is crucial to fully leverage the advantages of digital infrastructure.

### **Regulatory and Legal Challenges-**

Ensuring fair competition, protecting consumer rights, and addressing issues like intellectual property infringement require adaptive and comprehensive regulations in the fast-paced nature of the digital economy.

### **Infrastructure Barriers-**

Access to reliable and high-speed internet infrastructure is crucial for participation in the digital economy. However, infrastructure limitations, particularly in rural or remote areas, can hinder equal opportunities for individuals and businesses.

## X. INDIA'S DIGITAL TRANSFORMATION EMPOWERING INDIAN ECONOMY AND FACILITATES SUSTAINABLE ECONOMIC GROWTH

In the digitized decade India is one of the fastest growing economies in the world economy due to the digital economy because it played a significant role in boosting India's economic growth and leading towards world leadership. Digitalization is expected to serve as a critical and distinguishing feature in unfolding India's growth story in the 21st century. Digital technology has transformed service sectors like education, healthcare, transportation, investing, lending, banking, traveling, marketing and more. The Indian government emphasized that India's embrace of technology encompasses the delivery of tangible solutions that have significantly transformed various aspects of people's lives, governance, and democratic processes in recent years. The share of the digital economy in India's GDP has increased from 4-4.5% in 2014 to 11% today and will cross the 20% mark by 2026. By 2030, the internet economy's contribution to India's technology sector will grow to 62% from 48% in 2022. The Reserve Bank of India (RBI) in August projected a growth rate of 6.5% for 2023-24 with quarterly growth numbers being 8% in Q1, 6.5% in Q2, 6% in Q3 and 5.7% in Q4. It attributed the surge growth of the digital economy by rising digital technology uses in tier 2+ cities, digitalization of traditional business models and the achievement of India stack. Sustainable growth in the digital economy will also make India the most attractive investment country for fund investors in upcoming years and this growth will be driven by doubling of household incomes from approx \$2500 to \$5000.

The phenomenal rise of online usage for day-to-day life has put India ahead of the world's largest digital economies.

In upcoming years as India undergoes a dramatic boom that will see household consumption doubling by 2030, digital commerce will invariably become even more entrenched in citizens' everyday experience.

India's Gen Z spends an average of 8 hours per day online. The next wave of Smartphone adoption is happening in rural India and it is possible by the government's initiatives Bharat Net Project aimed to increase internet connectivity across rural areas through Digital India campaign. It is now expected that India would have the second largest universe of online shoppers by 2030, estimated at 500m to 600m.

B2C and B2B e-Commerce marketplaces have been exploding across all sectors of the economy. Reflecting the behavioral change, it is but logical that these metrics will continue to explode. The size of the e-commerce market is expected to grow to US\$350b by 2030.

India has driven its potential for internet economy growth through the growing interest of users from Tier 2+ towns and cities in digital products and services, rapid digitization transformation of large business and Micro, Small and Medium Enterprises (MSMEs), and the success of India's digital infrastructure. Many of various key digital sectors such as Business-to-Consumers (B2C) & Business-to-Business (B2B) e-Commerce, online travel, online food delivery, online media, ride-hailing, edtech, healthtech, adtech and Software-as-a-Service (SaaS) are outlined the opportunities, challenges and enabler for digital economic growth. Surging consumer and merchant acceptance of digital tools and solutions means digital financial services can also expect to see promising growth ranging from 8-13 per cent CAGR between 2022-2030 across payments, lending, investments and insurance subsectors. Be it the Unified Payments Interface (UPI) that transformed the fintech ecosystem or the launch of several AI-backed initiatives, the steps taken by the government has helped the country's tech ecosystem leapfrog. The country has also opened India Stack, a set of digital public goods, to other countries, enabling cross-border payments and more.

The G20 Digital Innovation Alliance initiative was launched under the MeitY Startup Hub as part of India's G20 Presidency. It aims to accelerate the growth of startups from all G20 countries and nine invited guest countries in six sectors – edtech, healthtech, agritech, fintech, secured digital infrastructure, and circular economy.

The Union Cabinet approved the expansion of the Digital India initiative and earmarked a total outlay of INR 14,903 Cr. A part of this will also be used to back 1,200 startups in the Tier-II and Tier-III cities.

## XI. WAY FORWARD

Digital revolution must include communities and regions that were previously not part of information and communication technology (ICT) advancement. By this each and every Sectors must be opened to new digital business models through reductions in regulatory restrictiveness. Artificial Intelligence (AI) and machine learning (ML) have significant potential for new business models looking to gain a competitive advantage. By leveraging these technologies, organizations can automate processes, increase efficiency, and improve decision-making capabilities. For countries to reap the digital dividend there must be space for new digital competition, experimentation and entrepreneurship and removing red tape that burdens digital entrepreneurs with unnecessary costs. Technological innovation is a boon for India, the only thing that matters is how much it is allowed to change the economy for this Indian Government must formulate new digital policy, software product policy and a framework for data security and protection and the focus needs to be on creating technology that is affordable, developmental and digitally inclusive. The idea of setting up special innovative zones for start-ups must be explored. Ensure simpler tax compliance regime in order to further India's Global ranking in ease of doing Business. At least and most important the need for internet and mobile application training aimed at less educated and the low-income groups.

## XII. CONCLUSION

The digital economy has brought a new era of economic growth and development. It has revolutionized the way businesses operate and has created opportunities for individuals to be self-employed. India is fast emerging as a leader in the global digital economy, thanks to a range of factors, including the contributions of PM Narendra Modi, private players, India's technical golden age, digital initiatives of the government, market changes, Make in India, and Digital India programs, and the Indian population's eagerness to adapt quickly. The benefits of the digital economy are numerous, from increased efficiency in operations to global market access. As we move forward into the future, it is important to take advantage of all that the digital economy has to offer while addressing its challenges at the same time. Governments around the world should continue investing in infrastructure and policies that support innovation and entrepreneurship within their borders. In India specifically, initiatives like Digital India have already started paving the way for an empowered nation through technology-driven solutions. The growth of the digital economy has had a significant impact on India's economy and society, creating jobs, boosting productivity, and enabling more people to access services and opportunities. However, the growth of the digital economy has also brought some challenges, including the digital divide, inequality, and concerns about data privacy and security. As India continues on its digital journey, it is important to consider the impact of the digital economy on all sections of society and to work towards creating an inclusive and sustainable digital ecosystem. The potential for growth is enormous if we adapt appropriately to technological changes that shape our lives today – only then can we build a better future for ourselves both economically and socially through digitization!

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