

# ROBUST DIGITAL FINANCIAL INFRASTRUCTURE IS THE DRIVING FORCE FOR ECONOMIC DEVELOPMENT IN THE NEW NORMAL IN INDIA

Dr. Dhani Ram

Department of Commerce, Ramjas College, University of Delhi

## Abstract

*The significance of digital infrastructure has been repeatedly recognized due to the increased competitiveness as the result of globalization based on innovation and research using information technology and electronics communication. Information technology not only plays a crucial role in national economic growth but also strengthens the national security. It is capable of strengthening the sectors of the economy and has the potential to revitalize the structure in this era of global pandemic accelerated economic crisis. Even though pandemic exposed the vulnerabilities of the existing digital infrastructure, the Government of India and related institutions with its timely interventions is trying to strengthen the digital ecosystem by maximizing the capabilities of the information technology. This paper analyses the digital financial infrastructure along with the impact of it in economic development based on past studies.*

**Keywords:** Digital India, Crypto currency, Digital Financial Inclusion, Digital Financial Services, Artificial Intelligence.

## INTRODUCTION

The remarkable developments happening in an exponential rate in the field of digital revolution has significantly influenced the different categories of industries, including banking and financial services sectors. With the advent of technological innovation in these industries, transactions have become more efficient and easier. The major advancements such as credit cards and ATMs has contributed towards fundamental changes in the process of banking and finance. The digital economy through its revolution is expected to generate economic growth opportunities, employment and has the potential to emerge as one of the biggest business opportunity. A digital finance platform helps the unbanked masses to easily maintain and access their physical cash. Since 2010, the G-20 and the World Bank have led the initiative for increased financial inclusion in developing countries to help reduce poverty levels in developing and emerging economies (Peterson K Ozili, 2018).

Technological access facilitates a wide range of financial services in the form of internet banking, mobile banking etc. It provides various advantages to the customer such as convenience, ease of financial transactions etc. However, the potential threats of cyber-attacks, data privacy and protection also coincides with the evolution of the digital economy. Along with the comfort of cashless payments there exist certain negative perceptions like digital illiteracy, digital hesitancy and specifically the issues with network connectivity and large scale digital divide. Digital financial services are often more convenient and affordable when compared to traditional banking services and also it accelerates savings and borrowings of low-income and poor people in developing countries. The provision of digital finance involves the participation of different players such as banks/financial institutions, mobile network operators, financial technology providers, regulators, agents, chains of retailers and clients (Haider H, 2018). Digital financial services are held out as key money-related answers for enhancing monetary consideration (Agufa midika michelle, 2016). Financial inclusion helps to bridge the gap between cash and digital payments. When customers are connected to a digital payment system, it is easier for them to make instant cash transfers. (Radcliffe & Voorhies, 2012).

Digitalization efforts of the government of India was accelerated due to the global Coronavirus (Covid-19) pandemic. The pandemic acted as catalyst for the government to shift its priorities as supply chains and revenue streams were dwindled. The projected spending of government is expected to reach \$8.3 billion in 2022, which is an increase of 8.6 per cent from 2021 based on the latest forecast by the research firm Gartner. Key technologies that are prioritised by the government of India along with improved data privacy & data sharing tools includes the digital workplace and business continuity solutions, responsible Artificial intelligence and blockchain, business intelligence and data analytics.

The present study is based on secondary data and tries to analyze the digital financial infrastructure in India, and its robustness in economic development in the new normal. The main objectives of the study are to have a general idea about the digital financial infrastructure in India and to identify its impact and potential on the economic growth.

## BACKGROUND

There exists an absence of a single, concrete and commonly accepted definition for digital finance infrastructure. This can be generally interpreted as the underlying foundation which includes the financial institutions and intermediaries, information technologies and processes and the widely accepted rules, protocols and standards which enable financial activities in a financial system. There are certain widely accepted features of digital finance products and services.

Yan Shen and Yiping Huang (2016) interpreted that digital finance, which is also referred as “Internet finance” and “Fintech”. Further added that digital finance refers to that innovative business model which utilizes internet and information communication technologies to fulfill a wide range of financial activities, such as third-party payment, online lending, direct sales of funds, crowdfunding, online insurance, and banking. The internet has the capacity to significantly lower transaction costs and reduce information asymmetry, enhance the efficiency of risk-based pricing and risk management, and expand sets of feasible transactions.

Peterson K Ozili (2018) observed that the features of digital finance include the usage of the internet, online access of financial services and products without the physical visit of customers to the financial institutions. Hence the concept of digital finance comprises all financial products, services, technology, and infrastructure that facilitate access to all those payments, savings, credit, remittance and other associated financial transactions through online platforms. It avoids direct dealings with banks and other financial institutions. He also added that digital finance has positive effects on financial inclusion in emerging economies, and it has the potential to provide valuable services at higher cost than those obtained from conventional system.

Digital financial infrastructure plays a crucial role in the societal and economic development of any country. A robust digital financial infrastructure played a pivotal role in successfully making direct transfers to targeted groups in a timely manner and making vital financial to the vulnerable during the pandemic. Gupta and Arora (2015) highlighted that there is a positive correlation between digitization of Indian economy and the growth and development of Rural Indian Sector.

Huma Haider (2018) observed that innovative financial technologies have the capacity to support livelihoods and economic outcomes. Enhanced access to digital technologies, particularly through mobile phones, internet connectivity and biometric authentication, for a wider range of financial services, such as online banking, mobile phone banking, and digital credit for the unbanked. Digital financial services are more convenient and affordable than conventional banking services, which helps in enabling low-income and poor people in developing countries to save and borrow in the formal financial system, earn a financial return and smooth their consumption.

Mukherjee (2011) discussed the role played by Information and Communication Technology (ICT) in enabling rural development. Since the rural economies strive for growth and development, it can pivotal role by linking with the financial services, receiving government benefits etc..

Gupta et al (2013) described the ICT enabled payment system in the Indian banking sector helps in making the process simpler and cost effective. Gurpreet Kaur (2015) while studying the effect of digital India emphasized that it can easily connect the different groups of society.

## MAIN FOCUS OF THE ARTICLE

The digital ecosystem is based on info- communications, which gradually combines information technologies, mass media and electronic communications. There is a forecasted increase in expenditure by the government organizations as well as an expected growth of 24.7 percent in 2022 due to the adoption of citizen service delivery applications in India by the use of artificial intelligence and machine learning. As India moves towards 5G rollout, it can make significant impacts on innovation and quality of services as well as pricing. It is expected that increased vaccination rates and public health; the government can focus on furthering the digitalization efforts. Key initiatives, which includes digital licensing, online judicial proceedings and digital taxation, which were initiated as an immediate reaction to the Covid-19 pandemic is playing a vital role in moving towards achieving digital inclusion. After the detection of COVID-19 in a nationwide lockdown and curfew was introduced in India which restricted the mobility of Indians acted as a catalyst in pushing the limits of India’s e-governance infrastructure and also accelerated the Indian population’s dependence on the digital infrastructure, mobile networks and ‘smart’ devices.

## THE POTENTIALS OF DIGITALIZATION IN THE DEVELOPMENT OF A COUNTRY:

Digitalization has the potential in transforming the economy and has enormous potential in addressing the socio-economic challenges and making the society into a more equitable one. With the advent of brand new technologies like internet of things, block chain technology, artificial intelligence and cloud computing can contribute towards economic development.

- The technological empowerment has the potential in bridging the gap between have’s and have nots through upskilling and education.

- The core concept of “Sarvodaya” as put forward by Mahatma Gandhi can be attained with the help of digitalization by integrating and proper disposal of public services the weaker and marginalized sections of the society.
- Healthy public private partnership models have the potential in creating micro entrepreneurs which can result in employment generation and providing sustainable livelihoods in India.
- Digital revolution can bring greater amount of transparency, accountability and efficiency in government services.
- It acts as an important driver of productivity growth and economic structural optimisation.
- The core government services such as education and healthcare can be ensured to the needy through digitization with minimum cost and appropriate quality.
- Reduced paper work can bring in more efficiency on citizen based services.
- Integrated and comprehensive data storage platforms can help in easy retrieval and processing of data.
- The large scale expansion of small scale business can be made easier through online platforms.

### MAJOR FEATURES OF DIGITAL FINANCIAL INFRASTRUCTURE IN INDIA

- **Digital India:-** India’s prestigious flagship programme which envisions the transformation of the society into digitally empowered knowledge based one. It aims in delivering public services electronically by ensuring transparency and accountability. It can be identified as a single, comprehensive digital vision of India which is refocussed and restructured in a synchronised cost effective manner which integrates many existing schemes. It is integrated on three core areas of e-governance, digital infrastructure to everyone and digital empowerment of citizens.
- **Aadhar:** India’s digital governance revolution started with the introduction of “Aadhaar” were a 12-digit unique identity number was issued as a valid proof of identity and along with registered biometric data. A host of services are now available online by verifying Aadhaar numbers especially direct benefit transfers and a remittance system that transfers benefits ranging from pensions to short-term relief.
- **Pradhan Mantri Jan Dhan Yojana:-** The Pradhan Mantri Jan Dhan Yojana (PMJDY), the Aadhaar-based financial inclusion scheme which aims to incorporate the low-income households into the banking system. It acts as the frontrunner of new social security delivery system and is promoted as an instrument for social inclusion for the marginalized sections of the society along with disadvantaged. The scheme makes use of bank accounts which are verified using Aadhaar and are used for distributing direct benefit transfers and wages under the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) and other poverty alleviation and welfare schemes along with life and health insurance coverage. The JAM (Jan Dhan – Aadhaar-mobile) trinity provides for the foundation of digital financial infrastructure in India.
- **National payments council of India(NPCI):** The National Payments Corporation of India (NPCI) acts as the centre in digital payments ecosystem of our country. The unique system which is backed by Reserve Bank of India plays a pivotal role in providing a strong digital payments platform along with creativity in introducing and facilitating new payment platforms.
  - The Unified Payments Interface (UPI), was introduced by NPCI in April 2016, is a platform that provides low-cost, large scale payments which allows its users to make payments easily and directly from their bank accounts using a Virtual Payment Address (VPA) which is linked to their phone number and bank account.
  - IMPS was launched in 2010, for immediate bank-to-bank transfers.
  - BHIM, launched in 2016 was a simplified application for UPI transactions
  - Aadhaar-enabled Payment System (AEPS), was launched in 2017 for digital Point for Sale transactions
  - \*99# was launched in 2016 in order to allow digital banking transactions on basic mobile phones
  - Bharat Bill Payment System (BBPS) was launched in 2016 to facilitate digital payments.
  - e-RUPI is a cashless and contactless method which make uses Quick Response (QR) code or SMS string-based e-voucher, which is delivered to the mobile of the users.
- **Digi locker:-** Digi Locker is a flagship program of the Ministry of electronics and information technology, Government of India under Digital India. This is an initiative by the government where by electronic version of documents can be verified easily and stored in a printable format. It can be accessed with the help of individual phone number and it stores uniform resource identifier link of e-document issued by different departments.
- **India Stack:-** India stack is a technology version developed by integrating different digital platforms as public goods which will enable both public and private sector to have technological innovations also it incorporates data privacy and security and the concept is developed for transactions in the payment systems along with health and insurance
- **Account Aggregator:-** The Reserve Bank of India regulated intermediary platforms which helps individuals share and access digitally secured information from one financial institution with the other. The data is secured as the access and sharing requires prior consent of individuals.

- **Arogya setu app:-** The app was launched in April 2020 was designed for contact tracing, mapping the spread of infection, and health self-assessment. It works as an e-pass for travel and entry.
- **COWIN portal:-** The largest platform which helped in one of the world's largest vaccination drive.

### ISSUES AND CHALLENGES FACED IN INDIAN DIGITALIZATION EFFORTS

The government led business enabled or government enabled business led digitalization efforts in India has the potential to transform the economy drastically through empowering the unserved and underserved segments of the society through creating 1 trillion economic value and 60- 65 million employment generation provided if there exist right institutional mechanism. Pandemic served as the instrument to test the efficiency and capacity of the digital ecosystem in India and it exposed the vulnerabilities of the existing platform. The major challenges faced by the digitalization efforts in India are:

- **Absence of a robust regulatory mechanism:** India lacks a robust and dedicated data protection legislation. The digital legal infrastructure in India is scattered in number of laws including Information Technology Act 2000 and its revised rules of 2021, Consumer Protection Act 2019 etc. The laws are stringent and is out rightly criticised for its implications.
- **Lack of trust and awareness:** Often digitalization efforts fail to generate the required amount of trust in its users. The level of digital awareness in India is directly proportionate to the level of literacy.
- **Connectivity:** The reason for poor connectivity can be attributed to wide range of factors including absence of proper infrastructure and technology including the related software's, broad bandwidth, reliable Wi-Fi connections, quality and speed of connection etc. The average internet penetration rate is 40% in India as per the National Family Health Survey 2021. The Ookla's Speedtest Global Index June 2021 ranks India among 122<sup>nd</sup> out of 138 in terms of internet speed and connectivity.
- **Digital literacy and digital divide:** The Ministry of Electronics and Information Technology defines digital literacy as "the ability of individuals and communities to understand and use digital technologies for meaningful actions within life situations. Any individual who can operate computer/laptop/tablet/smartphone and use other IT related tools is being considered as digitally literate." The 75<sup>th</sup> round of National Sample Survey has found that only 38% of Indians are digitally literate where in urban areas its 65% compared to 25% in rural areas. This highlights the existence of digital divide among urban and rural.
- **Data sharing and privacy:** - In India there exists a difficulty in finding balance between legitimate monitoring and unwarranted surveillance. In May 2020, MiT Technology Review published an evaluation on Arogya setu app found out that it satisfied only two out of three guided by principles put forward by the American Civil Liberties Union and others, five questions were asked about the apps under evaluation: (1) whether the app was voluntary, (2) whether it was limited in terms of data use or sharing, (3) whether it featured automatic data destruction after a specific time period, (4) whether it minimized the type of data collected, and (5) whether it featured design transparency. The Aarogya Setu app was deemed excessively involuntary, collecting too many types of data, and insufficiently limited in terms of data use and sharing. The absence of a potential legal framework for regulating and protecting data privacy threatens the critical data stored and used.
- **Minimal private sector participation:** - The private sector participation in India is limited to the provision of internet connection.
- **Cyber security:** Absence of proper legal, financial and technical infrastructure in India makes it vulnerable towards threats arising due to cybercrime.
- **Diversity of languages:** - India being a land of diversity there are over 1200 local languages. The absence of information availability in local languages makes many of the communities excluded from the existing digital platforms.

### SUGGESTIONS

India has a wide range of programmes for the digitalization but the success rate is minimal. These efforts can be successful through the following ways:

- Proper digital literacy and mass awareness programmes through active citizen involvement.
- Address the issues of digital divide through strengthening the financial and technical infrastructure for digitalisation.
- Even though there exists a proposed data protection bill 2019, the faster implementation of an effective and efficient legal regime can help in addressing the threats related to data storage and sharing along with protecting the privacy of individuals.
- Integration of education and proper training along with collaboration with international bodies can solve the problems relating to cyber security.
- Data localisation and access of data in local languages can solve the issues of digital divide.



- Collaborated efforts with private sector can increase the reliability, quality and efficiency of digital efforts in India
- Availability of user friendly digital financial platforms are critical towards the success of digitalization.

## CONCLUSION

In post COVID era there exist a necessity for building resilient systems and encouraging integrated business models as the change makers for the future. The usual definition for finance and banking is undergoing a paradigm shift through widened scope of connected commerce through digitalization. However, despite of different efforts there remains certain gaps and critical elements which requires serious attention. As digital financial inclusion is critical towards the interoperability and solving socio economic issues in the new normal the associated challenges should be addressed for a strengthened economic prosperity.

## REFERENCES

- [1] Arvind, P. P., Vitthalrao, M. P., & Mukund, J. M. (2015). *Digi Locker (Digital Locker): Ambitious aspect of Digital India Programme*. GE- International Journal of Management Research, 3(6), 299-308.
- [2] Kedar, M. S. (2015) Research Journal of Multidisciplinary Studies, 1(4). *Digital India: New way of Innovating India Digitally*.
- [3] Gupta Neeru and Arora Kirandeep (2015). *Digital India: A Roadmap for the development of Rural India*. International Journal of Business Management ,vol(2)2,pp1333-1342. Retrieved from www.ijbm. Co .in .
- [4] Jani, J., & Tere, G. (2015). *Digital India: A need of Hours*. International Journal of Advanced Research in Computer Science and Software Engineering, 5(8), 317-319.
- [5] Midha, R. (2016). *Digital India: Barriers and Remedies*. International Conference on Recent Innovations in Sciences, Management, Education and Technology, 256-261.
- [6] Kadam Avinash (2015). *Why cyber security is important for digital India*. Retrieved from <http://www.firstpost.com/business/why-cyber-security-is-important-for-digital-india-2424380.html>
- [7] Sharma, S. K., Lama, V., & Goyal, N. (2015). *Digital India: A Vision towards Digitally Empowered \ Knowledge Economy*. Indian Journal of Applied Research, 5(10), 715-716.
- [8] Panda, I., Chhatar, D. C., & Mharana, B. (2013). *A Brief View to Digital Divide in Indian Scenario*. International Journal of Scientific and Research Publications, 3(12).