

# Digitalization In India: An Innovative Concept

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**Abstract - Today, we can't dream our life without technology. In the twenty-first century, one of the most essential technologies is the influence of digitization. It allows every person to communicate anytime anywhere. Digital India is a programme which was started to change India into a digitally empowered society. It was launched on 2 July 2015 to ensure that government services are made available to people electronically by improving online infrastructure and by growing internet connectivity or by building our country Digitally empowered in the field of technology. The present study focused on different aspects of digitalization:- its impact on economy, society and environment, nine pillars of digital India. Benefits of digitalization and different challenges which brings hurdle in the successful implementation of this programme are also discussed.**

**Index Terms - Digitalization, Indian economy, pillars, challenges**

## INTRODUCTION

Digital India programme is a campaign launched by the Government of India on July 2, 2015 with "Power to Empower" motto. The vision of this programme is inclusive growth in the area of electronic services. This programme focused on digital development of the country by providing people all facilities and services so that they are all connected to each other virtually and electronically. The aim is to provide the people with such digitally and electronically advanced technologies so that the rural areas are connected to the urban areas through network devices and services. This will boost the generation and growth of employment opportunities in the country. To connect the whole country virtually, major innovations and advancements need to be done in technological field so that the country moves towards being a digitally empowered economy. The Digital India programme is centred by three components which were:-

- Creation of digital infrastructure
- Digital delivery of government services.
- Increasing Digital literacy

India is the fastest growing economy in the world. The Indian economy is the seventh largest economy in the world measured by GDP and third largest by purchasing power parity (PPP) after US and China. According to the latest Economic Survey 2015-16, the Indian economy will continue to grow more than 7 per cent in 2016-17. Our government has emphasised ongoing cashless as it will make transactions smoother and transparent and eliminates the existence of parallel economy which poses threat to the peace in our country. Digitalization is a boon and needs to be utilised properly. During demonetization from Nov. 8 2016 to Dec. 31 2016 when the country faced cash crunch, when Rs. 500 and Rs. 1000 notes were scraped and new currency was circulated in replacement of old notes digitalization helped people. Demonetization not only affected tax evaders but also pushed India to become more digitally sound country and highlighted the benefits and need to go cashless ( or have a less cash based economy). Demonetization has also increased the transactions from mobile wallet and digital payment channels.

## LITERATURE REVIEW

A review of literature is made relating to the identified research problem to know what has been found so far. Reading on work done by other researchers in the area relevant to this research topic has helped to formulate the research objective and methodology. In present study an attempt is made to review the related literature in the area of holistic thinking of consumers and their concern towards environment conservation. To obtain the in-depth knowledge, which forms the sound base of investigating into the research problem, the related literature is reviewed under the following heads:-

**Olalere et al. (2013)** studied the concept of digitalization, its significance, features and challenges for the broadcast media in Nigeria. The study also analyzed literatures on digitization and the extent to which it has impacted on the operations of broadcast media in Nigeria. The study was based on both primary and secondary sources. The primary source includes interviews with media experts and stakeholders while the secondary is sourced from libraries, archives, News papers, Magazines and other desk study.

**Gupta and Arora (2015)** studied the positive impact that Digitization of Indian economy will have on the growth and development of Rural Indian Sector. The study also discussed nine pillars of Digital India.

**Khan et. al (2015)** studied the concept of digitization along with the social economic and ecological benefits of digitization of knowledge and information. Digitization is the social transformation started by the massive adoption of digital technologies to share and manage digital information.

**Midha (2016)** focused on barriers and remedies to prevent the challenges faced by the Indian people. Vision, scope and pillars were also included. The study also discussed how the government services can be available to every citizen electronically and improve the quality of life of every citizen.

**Priyadarsini and Vijayaratnam (2016)** discussed about components of Digital India and its nine pillars, adaption of 'look at Villages' policy and the smart villages driving towards smart India and the prerequisites of a smart villages cluster. Indian villages need to be more focused on basic things such as health care, sanity and education.

**Gulati (2016)** studied and domestic challenges that hamper the successful implementation of the program and suggest some feasible remedies to deal with it. The study also highlighted the opportunities that pave the way for achieving the program's aim of making India the preferred choice for digital activities by both global and domestic investors and also how far the "Digital India" model can prove to be an attraction for the investors to invest in the sectors which are yet to achieve their full potential in India.

**Shamim (2016)** studied about the concept of Digital India, initiatives taken by government to promote it, pillars of Digital India which are helpful in smart governance. The study also focused on social and government impact of digitalization. And finally challenges faced by digitalization are discussed.

**Kaul and Mathur (2017)** analysed the importance of financial literacy. The finding of the study identified the obstacles in the implementation of various programmes to make India financial literate and strategies to implement these policies effectively and efficiently. Impact of digitalization on a country can be accessed on the basis of its impact on the government, on the economy and the society. The digitalization has created new job opportunities, have led to innovation in very sector and also led to the growth of the economy. The government emphasised on the digitalization as it brings transparency, better control and better job opportunities.

**Maiti and Kayal (2017)** studied the impact of digitization on India's services and MSME sectors' development and growth. The performance of the services sector improved extensively since 2000 onwards. The study concluded that India's service sector and MSME segment have the high potential for future growth with digitization. The inclusive growth of both India's services sector and MSME segment give a boost to the volume of trade and India's share with the help of digitization.

**Sheokand and Gupta (2017)** introduced the Digital India campaign and Indian economy. The study also discussed pillars and various challenges faced in the implementation of the programme. Findings suggested that a digitally knowledgeable and empowered population can transform the economy. Digitalisation will lead to cost savings, increased output, better employment, enhanced productivity and literacy.

#### **OBJECTIVES OF STUDY**

- 1) To study nine pillars of Digital India.
- 2) To study the impact of digitalization on economy, society and environment.
- 3) To understand the challenges in the path of digitalization and the economic growth.

#### **RESEARCH METHODS**

The information was collected from secondary sources like as research papers, newspaper, reports, journals etc.

#### **NINE PILLARS OF DIGITAL INDIA:- THE ROAD TO SMART GOVERNANCE**

Digitalization evolution through Digital India Programme aims to provide the nine pillars of growth areas which includes Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e- Kranti - Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes. Every pillar has its own significance, complexities in execution and is a push towards overall growth of the country.

**1. Broadband Highways:** It covers three components broadband for all rural, broadband for all urban and National information infrastructures.

**2. Universal Access to Mobile Connectivity:** In the upcoming years, network technologies like 3G, 4G and upcoming 5G will storm the speed. Government is specially preparing to connect unconnected areas and speedy use of these technologies. General public will access the online government services with the help of handheld devices. Nation is ready to be well-connected, efficient, and more productive in every aspect.

**3. Public Internet Access Programme:** To provide Common Services Centres (CSCs) and Post Offices as multi-service centres.

**4. e-Governance:** This governance will transform every manual work into fully automation system. It will revolutionize the system in the following ways:-

- Online access to applications i.e. availability of all databases and information in electronic format.
- Effortlessly tracking of assignments.

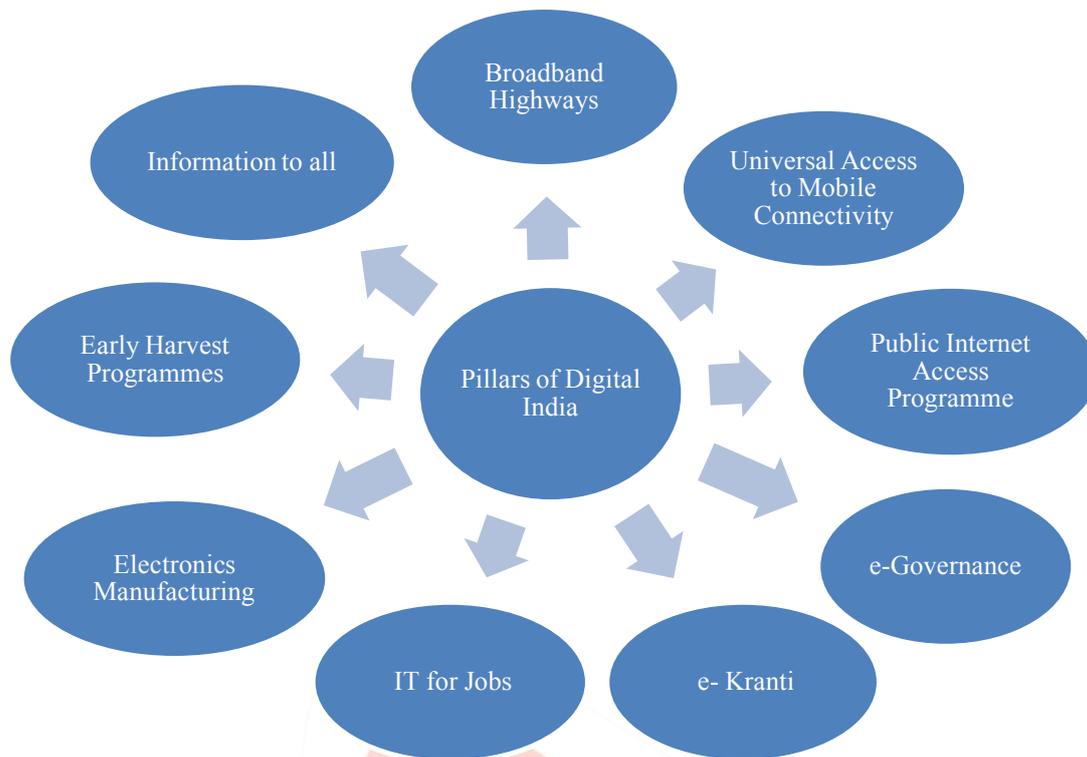


Fig. 1 Nine pillars of Digital India

- Interface between departments for superior production of work.
- Quickly respond, analyze and resolve persistent problems and many more.

**5. e-Kranti:** Electronic Delivery of Services: The Government approved the National e- Governance Plan (NeGP), comprising of 31 Mission Mode Projects (MMPs) and 8 components. e-Kranti is an essential pillar of the Digital India initiative and there are 44 Mission Mode Projects under e-Kranti, which are at various stages of implementation (includes Banking, Post office, Income tax, Land records, Agriculture, Gram Panchayats etc.).

**6. Information for All:** Online hosting of information & documents to facilitate open and easy access to information for citizens.

**7. Electronics Manufacturing:** It focuses on promoting electronics manufacturing in the country with the target of NET ZERO Imports by 2020 as a striking demonstration of intent.

**8. IT for Jobs:** It focuses on providing training to the youth in the skills required for availing employment opportunities in the IT/ITES sector.

**9. Early Harvest Programmes:** The govt. is planning to set up Aadhaar Allowed Fingerprint Presence Program in all central government workplaces situated at Delhi. A web based application software system will allow online documenting of attendance and its watching by the involved stakeholders.

### IMPACT OF DIGITALIZATION

The consequences of the developments in the technicalities of Information and Communication Technology introduce the concept of digitization. The transformation from print to digital media for communication of information to the larger community is resulted from the growth of the Internet and now enables the tremendous amount of information accessible to everyone. By the process of digitization, knowledge to an ever greater amount is being produced, processed, communicated and preserved digitally.

- ECONOMIC IMPACT:** According to analysts, the Digital India plan could boost GDP up to \$1 trillion by 2025. It can play a key role in macro-economic factors such as GDP growth, employment generation, labour productivity, growth in number of businesses and revenue leakages for the Government. As per the World Bank report, a 10% increase in mobile and broadband penetration increases the per capita GDP by 0.81% and 1.38% respectively in the developing countries. India is the 2nd largest telecom market in the world with 915 million wireless subscribers and world's 3rd largest Internet market with almost 259 million broadband users. There is still a huge economic opportunity in India as the tele-density in rural India is only 45% where more than 65% of the population lives. Future growth of telecommunication industry in terms of number of subscribers is expected to come from rural areas as urban areas are saturated with a tele-density of more than 160%.
- SOCIAL IMPACT:** Social sectors such as education, healthcare, and banking are unable to reach out to the people due to obstructions and limitations such as middleman, illiteracy, ignorance, poverty, lack of funds, information and investments. These challenges have led to an imbalanced growth in the rural and urban areas with marked differences

in the economic and social status of the people in these areas. Modern ICT makes it easier for people to obtain access to services and resources. The penetration of mobile devices may be highly useful as a complementary channel to public service delivery apart from creation of entirely new services which may have an enormous impact on the quality of life of the users and lead to social modernization. Digital platforms can help farmers in know-how (crop choice, seed variety), context (weather, plant protection, cultivation best practices) and market information (market prices, market demand, logistics).

- c) **ENVIRONMENTAL IMPACT:** The major changes in the technology will not only bring changes in the economic system but also contributes to the environmental changes. The next generation technologies will help in lowering the carbon footprint by reducing fuel consumption, waste management, greener workplaces and thus leading to a greener ecosystem. The ICT sector helps in efficient management and usage of scarce and non-renewable resources. Cloud computing technology minimizes carbon emissions by improving mobility and flexibility.

### **CHALLENGES FOR DIGITAL INDIA**

There are different challenges faced in the successful implementation of Digital India Programme. Some of them are as follows:-

- 1. Lack of education** – Majority of population in the country is still not qualified enough to use digital devices and technology. Most of people are not capable of using a simple mobile phone.
- 2. Lack of infrastructure and required technology** – The Digital India campaign needs high quality infrastructure to be implemented efficiently. India still lacks the basic infrastructure required to move digitally ahead. The technological infrastructure and technology required for the campaign is still not available that easily in the country. The conditions are even more inadequate in the rural areas. Further, the servers are overloaded due to pressure of work.
- 3. Financial and technical issues** – India is still a developing country. For a plan like this, huge financial resources are required and the country lacks in this. It requires financial assistance from other sources. Technical issues like appropriate band width, firewalls, filters, anti-virus software's, protection from hackers, buffering are some of the technical issues the country has to face.
- 4. Attitude of citizens as well as government personnel** – For successful implementation of the programme, a wholesome effort is required of both the citizens and the government personnel. But the devil may care attitude is the hindrance in the path. Moreover, the older generation is set in their ways and find the traditional methods of doing things easy and convenient. Indian political power structure and lack of inter-departmental co-ordination add to the problem.
- 5. Cyber-crimes and Lack of confidence** – Cyber safety is still not given as much importance as it should be given. People find it risky to make transactions online due to safety issues. Cyber laws are not paid that much. Also, most of people still have lack of confidence on machines and prefer hand done things. Incompetent cyber services are also one of the reasons for this.
- 6. High costs** – The electronic devices and internet services are still very costly for an average Indian citizen. When a lot of people don't have enough money for the basic life's necessities, spending on electronic devices get out of the picture.
- 7. Training needs** – The personnel who are working on this campaign, to transform various government departments from man managed to machine managed, require proper training to do that effectively and efficiently. It's a tedious task to train so many people of different calibres and interest into one common discipline. Most of the population lack the basic technical qualification required for the job.

### **RECOMMENDATIONS**

1. The initiatives took by the government can only be successful if people get involved in the transformation. The Schools and Colleges can create awareness among the people of their locality about the initiatives and imparting knowledge to the people.
2. For doing so they also need to have the knowledge about the program and how to use the facilities provided by the government.
3. Community centres can be formed where people who are more literate about the issues can help the other people and experts can visit them to give the guidance from time to time.
4. People should be imparted with the knowledge of factors which affect their savings and how they can maximise their saving or the facilities available for them to help them to do so.
5. People should also be made aware about the security of their personal information regarding their accounts and online frauds
6. The banking system must also be made robust as people need to trust the system before they go with the technological advancement.

### **CONCLUSION**

The digitalization brings innovation, ease of working, new job opportunities and growth in the economy. It helps to bring transparency in the system and more transparent are the flow of funds in the economy less is the problem of tax evasion, parallel economy etc. By this we can reach on a conclusion that the new technology needs to be harnessed well and for this it is not only the availability but also the knowledge to use it and get benefits from it. It is a vision to transform India into a digitally empowered society and knowledge economy. It is a good effort to develop India. Although, digital India programme is facing some barriers, yet it has a great impact on India to make the best future of every citizen. We Indians and others should work together to shape the knowledge economy. Digital India campaign is a welcome step in shaping India of the 21st century powered by connectivity and the technological opportunity.

A digitally empowered economy develops much faster, effectively and efficiently due to better utilisation of its capital as well as human resources. And India being a country with such huge manpower resources, if utilised properly, can achieve unprecedented growth rate and put the country in top position along with the developed economies.

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