DIGITAL INDIA PROGRAMME AND IMPACT OF DIGITALIZATION IN IMPROVING QUALITY OF LIFE OF CITIZENS

Manikanta K. Asst. Prof. MCA Dept. Al-Ameen Institute of Information Sciences, Bengaluru

ABSTRACT

It is a well-known fact that digital India is the outcome of many innovations and technological advancements. These transform the lives of people in many ways and will empower the society in a better manner. The 'Digital India' programme, an initiative of honorable Prime Minister Mr. Narendra Modi, will emerge new progressions in every sector and generates innovative endeavors for GeNext. The motive behind the concept is to build participative, transparent and responsive system. The Digital India drive is a dream project of the Indian Government to remodel India into a knowledgeable economy and digitally empowered society, with good governance for citizens by bringing synchronization and coordination in public accountability, digitally connecting and delivering the government programs and services to mobilize the capability of information technology across government departments. Today, every nation wants to be fully digitalized and this programme strives to provide equal benefit to the user and service provider. Hence, an attempt has been made in this paper to understand Digital India – as a campaign where technologies and connectivity will come together to make an impact on all aspects of governance and improve the quality of life of citizens.

Key Words: Digital India, Digital Technology, e-Kranti, e-Governance

INTRODUCTION

Digital India programmeis one of the foundation programmes of Indian Government, and was launched by the Government of India on July 1st, 2015. This campaign focuses on digital development of the country by providing the citizens with such facilities and services so that they are all connected to each other virtually and electronically. The aim is to provide the citizens with such digitally and electronically advanced means so that the rural areas are connected to the urban areas through network devices and services. The programme is designed to ensure that the government services are accessible even to the poor and downtrodden people, through electronic means, thereby, fastening the rendering of services and improving the quality of life of even the lowest stratum of society. To accomplish the vision, steps are being taken to improve the digital infrastructure in the country and to increase the access to network devices through increased band width and advanced digital technologies. Initiatives are also being taken to increase the digital literacy of the population so that the majority of citizens become capable of operating digital gadgets and equipment. 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 the technological field so that the country moves towards being a digitally empowered economy. Indianeconomy is growing at a fast pace. It is ranked among the top fast-developing economies in the world. The Indian economy takes 7th place among the largest economies when measured through nominal GDP and 3rd place when measured on the basis of PPP (Purchasing Power Parity). Due to the growing industrialization in the country, it is considered one among the major G-20 economies. The average growth rate of the economy has been around 7% for the last two decades.

In The Indian economy has piqued the interest of the world because of the increased rate of development due to industrialization& automation, increasing customer base due to population explosion and increase in ease of trade due to a reduction in regulation & entry barriers. The Indian economy has been divided into 3 major parts, namely, agriculture sector, industry sector and service sector. The Digital India programme is designed in a three components structure [2]. These are:

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

The Digital India Programme aims at overall and all-inclusive growth of the Indian Economy, be it agriculture,

industry (manufacturing) or services. This programme will help in creating employment opportunities in the country so that the GDP and per capita income increases, and the lifestyle of people can be improved. It circulates around three key areas. These are- Developing digital infrastructure, e-governance and digitally empowering the citizens. Some of the facilities provided under this programme are, digital locker, e-mandi, e-education, e-hospitals, e-banking, e-government, e-sign, etc.

Major Projects Under The Initiative

Digital India comprises of various initiatives under the single programme each targeted to prepare India for becoming a knowledge economy and for bringing good governance to citizens through synchronized and coordinated engagement of the entire Government. Nine projects have been undertaken. These are as follows:

- 1. **Highways to have broadband services:** Government aims to lay national optical fiber network in all 2.5 lakh panchayats. Broadband for the rural will be laid by December 2016 and broadband for all urban will mandate communication infrastructure in new urban development and buildings. By March 2017, the government aims to provide nationwide information infrastructure.
- 2. Easy access to mobile connectivity: The government is taking steps to ensure that by 2018 all villages are covered through mobile connectivity. The aim is to increase network penetration and cover gaps in all 44,000 villages.
- 3. **IT Training for Jobs:** This initiative seeks to train 10 million people in towns and villages for IT sector jobs in five years. It also aims to train 0.3 million agents to run viable businesses delivering IT services. Additionally, the project involves training of 0.5 million rural IT workforce in five years and setting up of BPOs in each North-eastern state.
- 4. **Manufacturing of electronics:** The government is focusing on zero imports of electronics. In order to achieve this, the government aims to put up smart energy meters, micro ATMs, mobile, consumer and medical electronics.
- 5. **Provide public access to the internet:** The government aims to provide internet services to 2.5 lakh villages which comprises of one in every panchayat by March 2017 and 1.5 lakh post offices in the next two years. These post offices will become Multi-Service centers for the people.
- 6. **E-Governance:** The government aims to improve processes and delivery of services through e-Governance with UIDAI, payment gateway, EDI and mobile platforms. School certificates, voter ID cards will be provided online. This aims for a faster examination of data.
- 7. **E-Kranti:** This service aims to deliver electronic services to people which deals with health, education, farmers, justice, security and financial inclusion.
- 8. **Global Information:** Hosting data online and engaging social media platforms for governance is the aim of the government. Information is also easily available for the citizens.
- 9. **MyGov.in** is a website launched by the government for a 2-way communication between citizens and the government. People can send in their suggestions and comment on various issues raised by the government, like net neutrality.
- 10. Early harvest programs: Government plans to set up Wi-Fi facilities in all universities across the country. An Email will be made the primary mode of communication. Aadhar Enabled Biometric Attendance System will be deployed in all central government offices where the recording of attendance will be made online.

Is India Digitally Ready

There is no doubt in it. India is ready for this. Immediately with the introduction of this campaign, many organizations came forward to lend their hands to achieving India a digitally equipped country. Organizations like BSNL, Reliance Ltd. are coming forward to spread digitalization among rural areas. And over 42000 villages all over India will be having seamless mobile connectivity by 2018. The Internet Saathi initiative aims to cover 4,500 villages over the next 18 months, starting with Gujarat, Rajasthan and Jharkhand. India is aiming to achieve universal digital literacy across the country. The prime importance is to make sure every individual can be able to leverage the potential of Digital India. The focus is at least one person in a household should transform into an e-literate. This can be achieved by BBNL which is planning to connect 2, 50,000 panchayats under the scheme. This will ensure the digitization and connectivity of local institutions like panchayats offices, schools, other government offices and libraries etc. India is reforming its government through technology in the name of E-Governance with the advancement of technology and digitalization. Under the e-governance programme, out of 252 schemes planned, 222 services have been provided in short span of time. The nine pillars of Digital India programme clearly confirms that India as a nation is at its nascent stage. One can easily assure that India will be digitally ready in the next three years.

How Digitalization Paves the Way for Overall Growth of Indian Economy

India is chalking out its own growth strategy driven by digitalization, connectivity, cash -less/paper-less economy, and start-up innovation ecosystem. Indian economic growth will be driven by the rising tech adoption [3].

Smartphones penetration is rising in the country with 700 million users expected by 2020; we will have 331 million internet users by 2020. With Aadhaar UID, 1 billion users can authenticate 100 transactions per day in real time. India Stack is a complete set of APIs for developers which include Aadhaar for authentication, e-KYC, and e-sign amongst others. All these will propel technological disruption, digital connectivity, the growth of tech start-ups in order to achieve the said vision of **Digital India**.

Technology will allow businesses to transact easily and efficiently, and thus contribute faster to economic growth. The launch of new devices that feature iris scanner that is Aadhaar and STQC certified, will enable cashless and paperless services for banking, passport, taxation, etc. All these, along with Immediate Payment Service, Unified Payments Interface, micro ATMs, m-POS and financial inclusion programs by the Government (such as Pradhan Mantri Jan-Dhan Yojana), will aggressively pave the way for digital payments in India.

After demonetization on November 8, we have seen an adoption of payment solutions like e-wallets, cash cards, bit coins, online platforms and POS (point-of- sale) services. Coming back to India Stack, and how it will revolutionize the space for business, fuel innovation, India stack comprises of four key layers- presence-lesses, paperless, cashless and consent. This means for tech start-ups and app developers is that they can readily create novel business apps using the infrastructure provided by the stack.

To conclude we cannot emulate other economics. Technology and digitalization will propel growth in India. Digital Bharat is the goal, which will create opportunities for stakeholders and industries alike. The cashless and paperless economy is catapulting small and medium businesses, making it easier to transact. So much data and transactions are creating huge demands for cybersecurity, storage, web performance and faster computing.

A digitally-advanced India will create more job opportunities. Homes, businesses and industries will become smart, cities will be run on the click of a button, transactions will be done without cash hassles and the overall economy will become stronger.

Highlights Of The Progress In Digital India

- More than 12,000 rural post office branches have been linked digitally and soon payment banking would also become a reality for them.
- The government also plans to make 'digital village' across the country, by linking all schemes with technology. The 'digital village' would be powered by LED lighting, solar energy, skill development centers and e-services like e-education and e-health.
- Electronic transactions related to e-governance projects in the country have almost doubled in 2015, owing to the Digital India Programme. According to government website electronic transaction aggregation and analysis layer (eTaal), 3.53 billion transactions took place in 2014, which almost doubled in 2015 to 6.95 billion [5]. In a year that will be remembered for "*note bandi*" a colloquial term for the withdrawal of 86 percent of the value of India's currency in circulation on 8 November cashless payments in October 2016 increased 22 percent, when compared to October 2015, indicating that Indians have been steadily more accepting of various digital payments modes since last year[4].
- The progressive policies and aggressive focus on 'Make in India' have played a significant role in the resurgence of the electronics manufacturing sector.

Proposed Impact Of Digital India

The estimated impact of Digital India by 2019 would be cross cutting, ranging from broadband connectivity in all Panchayats, Wi-Fi in schools and universities and Public Wi-Fihotspots. The programme will generate a huge number of IT, Telecom and Electronics jobs, both directly and indirectly. The success of this programme will make India Digitally empowered and the leader in usage of IT in the delivery of services related to various domains such as health, education, agriculture, banking, etc.Digital empowerment of citizens will pay emphasis on universal digital literacy and availability of digital resources/services in Indian languages. The programme will be implemented in phases from 2014 till 2018. The source of funding for most of the e-Governance projects at present is through budgetary provisions of respective ministries/departments in the central or state governments. Requirements of funds for the individual project(s) for Digital Indiawill be worked out by respective nodal ministries/departments

but according to government estimate it will cost Rs 113,000 crore. To implement this government is planning to strengthen National Informatics Center (NIC) by restructuring it to support all central government departments and state governments [9].

A. 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, labor productivity, growth in a 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 teledensity in rural India is only 45% where more than 65% of the population lives. Future growth of telecommunication industry in terms of a number of subscribers is expected to come from rural areas as urban areas are saturated with a tele-density of more than 160%.

B. Social impact:

Social sectors such as education, healthcare, and banking are unable to reach out to the citizens 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 the creation of entirely new services which may have an enormous impact on the quality of life of the users and lead to social modernization.

The poor literacy rate in India is due to unavailability of physical infrastructure in rural and remote areas. This is where m-Education services can play an important role by reaching remote masses. According to estimates, the digital literacy in India is just 6.5% and the internet penetration is 20.83 out of 100 populations. The Digital India project will be helpful in providing real-time education and partly address the challenge of lack of teachers in the education system through smart and virtual classrooms. Education to farmers, fisher men can be provided through mobile devices. The high speed network can provide the adequate infrastructure for online education platforms like massive open online courses (MOOCs).

Mobile and internet banking can improve the financial inclusion in the country and can create a win-win situation for all parties in the value-chain by creating an interoperable ecosystem and revenue sharing business models. Telecom operators get additional revenue streams while the banks can reach new customer groups incurring lowest possible costs.

Factors such as a burgeoning population, poor doctor-patient ratio (1:870), high infant mortality rate, increasing life expectancy, fewer quality physicians and a majority of the population living in remote villages, support and justify the need for tele-medicine in the country. M-health can promote innovation and enhance the reach of healthcare services.

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 space will not only brought changes to the economic system but will also contribute 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. The energy consumption can be decreased from 201.8 terawatt hour (TWh) in 2010 to 139.8 TWh in 2020 by higher adoption of cloud data centers causing a 28% reduction in carbon footprint from 2010 levels.

Digital India Programme and Impact of Digitalization in Improving Quality of Life of Citizens

Challenges For Digital India

Few of the challenges faced in the successful implementation of Digital India Programme are[6], [8].

- 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 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 somehow lacks in that area. It requires financial assistance from other sources. Technical issues like appropriate bandwidth, 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 coordination 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 heed too. Also, most of people still have lack of confidence on machines and prefer hand done things. Inept cyber services are also one of the reasons for this.
- 6. High costs The electronic devices and internet services are still by and large 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 calibers and interest into one common discipline. Most of the population lack the basic technical qualification required for the job

CONCLUSION

A digitally connected India can help in improving social and economic condition of people through development of non-agricultural economic activities apart from providing access to education, health and financial services. However, it is important to note that ICT alone cannot directly lead to overall development of the nation. The overall growth and development can be realized through supporting and enhancing elements such as literacy, basic infrastructure, overall business environment, regulatory environment, etc.

REFERENCES

- [1]. Economy of India. https://en.wikipedia.org/wiki/Economy_of_India. Date accessed: 0/03/2017.
- [2]. Digital India. https://en.wikipedia.org/wiki/Digital_India. Date Accessed: 01/03/2017.
- [3]. http://www.investors-clinic.com/blog/how-digitalization-paves-the-way-for-overall-growth-of-indian-economy/#more-5347
- [4]. https://www.thequint.com/news/india/digital-payments-gone-down-in-november-compared-to-previous-months-since-note-ban-modis-demonetisation-cashless-push
- [5]. http://iasscore.in/national-issues/digital-india-programme-importance-and-impact.
- [6]. Osama Manzar."Digital India: challenges and opportunities". http://www.livemint.com/Opinion/db7YgCwzQh8hJU5PVL8p3O/Digital-India-Challenges-and-opportunities.html..
- [7]. Saima Khan, Shaziz Khan, Mohsina Aftab."Digitization and its Impact on Economy. International Journal of Digital Library Services". June, 2015;5(2), 138-149
- [8]. Pathik, "9 challenges in implementing Digital India". http://www.icytales.com/7-challenges-implementing-digitalindia.
- [9]. SHAIK SHAFIULLAH & TVV GOPALA KRISHNA-"DIGITAL INDIATHE FUTURE OF INDIA". International Research Journal of Computer Science (IRJCS)ISSN: 2393-9842Issue 12, Volume 3 (December2016)