

Digital India Program: Challenges and Opportunities

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Introduction

Digital India is a campaign launched by the Government of India to ensure the government services made available to citizens by electronic online improved infrastructure and technology connectivity in the country or by the technology of the country's digital power. The initiative includes plans for connecting rural areas with high-speed internet networks. Digital India consists of three core components, (a) development of secure and stable digital infrastructure, (b) delivering government services digitally, and (c) universal digital literacy. Digital India was launched by Prime Minister of India Narendra Modi on 1 July 2015 with a purpose of connecting rural areas with high-speed Internet networks and improving digital literacy. The vision of Digital India program is inclusive growth in areas of electronic services, products, manufacturing and job opportunities and it is centered on three key areas - Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand and Digital Empowerment of Citizens. Digital India has thought about growth in electronic sector such as service, products, manufacturing and job opportunities etc. and also concentrates on three key areas that are Digital Infrastructure as a Utility to Every Citizen, Governance & Services on Demand and Digital Empowerment of Citizens. First object behind Digital India program is to provide all services electronically to citizen and spread digital literacy among people. This is a change in country and enhances the growth of economy. All over the world, many investors and companies are taking interest in Digital India project-21st century India Digitalization is beneficial for all private and government sectors of country "Economic resources of the country should be used for the well-being of the poor. The change will begin from this point"- Shri Narendra Modi, Honorable Prime Minister of India.

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The digital India initiative brings an image to convert India into a digital knowledge economy and empowered society which focuses on Digital India. The theme can be explained in this way - Indian Talent (IT) + Information Technology (IT) = India Tomorrow (IT).

Review of Literature

'Digital India' has been an area of interest of many researchers from various disciplines because of its great significance and influence on the economy as a whole and particularly the technological sector.

Sundar Pichai, Satya Nadella, Elon Musk researched about Digital India and its preparedness to create jobs in the information sector. He concluded that making new jobs should be continuing with more workers in higher productivity jobs in order to provide long term push to the technological sector in India.

Microsoft CEO, Satya Nadella intends to become India's partner in Digital India program. He said that his company will set up low cost broadband technology services to 5lakhs villages across the country.

Prof. Singh started the basic overview of what Digital India entails and led a discussion of conceptual structure of the program and examined the impact of "Digital India" for the technology sector of India. He concluded that this is the right to be successful in labor laws of India.

Arvind Gupta intends to say that Digital India movement will play an important role in effective delivery of services, monitoring performance, managing projects and improving governance. An Integrated Office of Innovation & Technology to achieve the same, for problem solving, sharing applications and knowledge management, fastest results for key, given that most departments have their own silos at work. Tracking and managing the projects has assumed significance because India has been busy spending money in buying technology that we have not used effectively or in some cases, even without implementation stage.

Gupta and Arora (2015) studied the impact of digital India. The study found that many schemes have been launched in digital India to boost agriculture sector and entrepreneurship development in rural areas. Digital India program has also set the standards for rural Indian women.

Rani (2016) concluded that the digital India project provides a great opportunity for the industry. It also pointed out that many projects may require some transformational process, reengineering, refinements to achieve the desired service level objectives.

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 require its failure. Though digital India program is facing the number of challenges

yet if properly implemented it can make the best future of every citizen. So we Indians should work together. According to Seema Dua the mission of digital India is facing serious challenges in implementation. She believes that Digital India campaign cannot be successful; there is huge digital literacy among the citizen, development of infrastructure in rural and remote areas, improved skills in cyber security and various departments of effective participation and demanding commitment and efforts.

Research Methodology

• Objectives

- To understand the concept of Digital India
- To examine the features of Digital India
- To evaluate the opportunities and challenges with special reference to Digital India

• Data Collection

The secondary data source has been used for this, Book, news papers, research papers, journals and websites has been used. It is conceptual types of paper so more concentration on concept, uses and its effect on life of people as well on economy, thus related quantitative and qualitative data have been used.

Overview of Digital India

Now days we are in the midst of a third industrial revolution driven by digitization, the previous two were driven by electricity and steam engine. Traditionally, Indian organization felt uncomfortable to adopt technology but current industries across sectors are taking interest in going digital. This trend has been encouraged by the Digital India program. Digital India program combines various initiatives under the program. Nine projects have been started under Digital India program, these are explained below-

Table 1: Initiative of Digital India Program

S. No.	Initiative	Aim
1	Universal Access to Mobile Connectivity	Ensure mobile connectivity in all parts of the country by 2018. The main purpose is to provide every citizen with access to mobile networks and associated services
2	Public Internet Access Program	To improve the connectivity within the country Building Common Service Centers (CSCs) in each gram panchayat and also converting post offices into multi-service centers.
3	Broadband Highways	To provide this basic internet connectivity to all citizens in all areas within the country.
4	e-Kranti	The most crucial initiatives of Digital India, involving provisioning services like e-health care, e-justice, e-education, farmers, security and financial services.

5	E-Education	Developing Massive Open Online Courses (MOOCs) which is beneficial for education and providing citizens access to huge amounts of knowledge along with a forum for students and teachers to discuss, discuss and form meaningful conversations, e-scholarship scheme etc.
6	E-Governance	E-Governance (disposal of government services in electronic form) making the best use of growing technology to provide services like banking, civil services, postal services, etc. to every citizen.
7	Information for All	Aimed to curb documents invincible, pervasive, and immune to theft and loss. At the same time, the authenticity of the document could be verified
8	Early Harvest Programs	Contains multiple services like the national portal for lost and found children (KhoyaPaya), biometric scanners in all government offices, mass messaging app for government employees, etc
9	Manufacturing of electronic items (make in India)	This initiative aims at decreasing imports and also plans to provide jobs by promoting the establishment of electronics, manufacturing plants within the country. Its final goal is to have net zero import of electronics by 2020.

It is clear that all of these initiatives will produce process and stores data for the services. Some of the initiatives are more intense and will need advanced technology platforms to meet the growing needs of the users. VLDB (very large data base) is the solution few key benefits of VLDB in Digital India are as under:

- National Information Infrastructure (NII) will require a huge database to hold the necessary data; NII will also make use of data warehousing to get required data from other databases.
- Store Data under E-Kranti initiative (e-healthcare, e-justice, e-education etc.), Digi Locker service and biometric scanner data.
- Very Large Database (VLDB) to host the content shared / exchanged on various apps such as Mass Messaging App for government employees and representatives.

Overall Cost for Digital India Program

After making proper plan we get the following present and future expected expenditure for implementing the Digital India program-

- Rs. 100,000 Cr in ongoing schemes
- Rs. 13,000 Cr for new schemes & activities

So it is very clear that for complete set up and implementation of 9 initiatives, much of amount is required.

Impact of Digital India Initiative

After announcement of program many organizations came in front to lend their support for achieving India a digitally prepared country. Telecommunication organization like Reliance and BSNL is coming to the frontage to spread digitalization in villages and by 2018 over 42000 villages will be having seamless mobile connectivity all over the country. Mahatma Gandhi believed that India resides in its villages and technology plays important role in its growth and prosperity so now Mr. Narendra Modi also claims that "we have attacked poverty by using the power of networks and mobile phones to launch a new era of empowerment and inclusion." Simply by increasing mobile connectivity last year, agricultural earnings grew 1.1 percent. The action taken by the Indian government in present times has shown very positive or beneficial consequences that the 2011-2013 from the last 2 years of Indian economy of GDP is constant compared to 99.21 trillion (US \$ 1.488 trillion) in comparison to 2014-15 is Rs 106.4 trillion (US \$ 1.596 trillion), recorded a growth rate of 7.3 percent more. This remarkable record shows that the Digital India program was adopted by the government in its economic growth of country. In coming 5 years huge opportunities and employment also available in IT sector of India. By 2019 following effect of the program will be visualize:

- Broadband facility in 2.5 lakh villages, widespread phone connectivity
- Net Zero Imports of electronics items by 2020 Public Internet Access Points approx 400,000
- Wi-Fi in 2.5 lakh schools and all universities, Wi-Fi hotspots for citizens
- 1.7 Cr person trained for IT, Telecom and Electronics Jobs
- Employment: Direct 1.7 Cr. and Indirect at least 8.5 Cr.
- For government department: E-Governance & E-Services
- India to be leader in IT use in services -health, education, banking etc.
- Digitally empowered citizens -public cloud, internet access

A strong statement given by McKinsey (world's leading firm in research area) that the recent technology and innovative ideas adopted by the Digital India program will help to boost India's GDP by \$ 550 billion to \$ 1 trillion by 2025.

All over the India the initiative taken by various states to participate in Digital India Program is listed below:

S.No.	Name of the State	Programme
1	Gujarat, Rajasthan and Jharkhand	Internet Saathi yojana (Covers 4,500 villages over the next 18 months)
2	Kerala(IT Park)	ABB India deliver a 110 KV digital substation to techno-park
3	Pune	Master-card
4	Lakshadweep	100 cashless society

5	Chandigarh	Setting up a 'Digital Haryana Cell' in his office for effective implementation of various e-governance
6	Akodara (Village in Gujarat)	Taken by ICICI Bank under 'Digital village' pilot project and doing all transaction digitally. No effect of demonetization.
7	Sri City, Andhra Pradesh	For Redmi new mobile phone assembly Plant
8	Maharashtra	US\$ 5 billion investment from electronics manufacturing giant Foxconn

Opportunities of Digital India

The Digital India initiative will be create approx \$1-trillion business opportunities related to communications, IT and IT-enabled services, telecom and manufacturing of electronics. Digital India program brings or opens up a excess of opportunities for technology companies such as broadband infrastructure building; generate identity solutions, system of payment, online delivery system etc. Digital India program provides business opportunities initially in the following sectors:

- **Electronic Manufacturing:** Providing skill development opportunities for private sector through telecom and electronics, Investment in infrastructure of testing laboratories under the required standard.
- **Information and Communication Technology:** Required IT trainer to train people in villages and small town, training for service delivery agent, Jobs for IT experts, software developer and network experts.
- **National e-Governance Department:** With its establishment, requirement of senior Consultant and IT consultant generated.
- **Healthcare:** Telemedicine and remote health plan will create huge opportunity for universal accessibility to quality healthcare.
- **Cyber Security:** Cyber security is important area of focus where abundant opportunities are available. It is necessary that all type and size of organizations should invest significantly in securing their products and services.
- **Telecom:** Provide training to rural workforce on telecom and telecom related services (TSPs).
- **Infrastructure:** To establish broadband and integrate the network and cloud infrastructure for better connectivity creates many opportunity for networking experts and related organizations.
- **Agriculture:** Agriculture sector in India contributes 16% in India GDP while almost 51% in employment It will help our farmers activities like crop choice, seed variety weather, plant protection and market rate information The opportunity will increase if government makes a framework for private sector to

compete and offer best services to farmers Setup of virtual market, crop insurance, soil health card scheme etc.

- **Economy:** Digital economy has great power to change the lives of millions of Indian people. It is a tool which would provide the opportunity for country to expand its role.
- **Marketing:** Numerous opportunities related to the marketing such as Digital Process of advertisement, e –business, online shopping etc.
- **Finance:** Finding new way from online banking to digital wallet, crowd funding, low cost commercial transaction.

Challenges for Digital India Program

The Digital India program is a very large scale project of the Indian government. Thus, Indian Government facing many challenges for completes the project. The major challenges are as follows:

- Less co-ordination among various departments: As we know it is a very large project that consists of many departments. So, timely and strong support of departments is very important for properly and timely completion of the projects.
- Implementation Cost is very high: As shown above still very high amount is required to implement the Digital India plan.
- Infrastructure: Robust and large data centre (used to store large data of entire country) are other supportive infrastructure require for National Optic Fibre Network (NOFN) project. It is planned to build for high speed broadband highway.
- Excess time: Project like NOFN has been delayed several times and taken almost 2 year so it has also delayed other related projects. The project will be successful when it completed on time.
- Contribution of Private Players: Many regulations as well as very long and delayed projects are inhibiting the entry of private organization in Digital India program. Private organization will play a necessary role in its success.

Conclusion

The Digital India initiative is the beginning of a digital revolution, once properly implemented; It will create numerous new opportunities for the citizens However, the Digital India program success will be associated with the regulatory framework. The Government fully decides that these regulations create such an environment in which private organizations come in, work together and create efficient ecosystems. The government role should be line with administration that is the maximum role of governance and minimum role of government, with these efforts India will be digitally ready within three years.

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