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# Digital India: Role in development

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**Abstract**
Digital Technologies, which include Cloud Computing and Mobile Applications, have emerged as catalysts for quick economic growth and citizen empowerment across the globe. Digital technologies are being increasingly used by us in everyday lives, from retail stores to government offices. They help us connect with each other and also share information on issues and concerns faced by us. The 'Digital India' programme, an origination of honorable Prime Minister Mr. Narendra Modi, targets to make government services available to people digitally and enjoy the benefit of the newest information and technological innovations. It is a programme to prepare India for a knowledge future. The motive behind the concept is to connect rural areas with high speed internet network and improving digital literacy. Digital technologies which include cloud computing and mobile applications transpire as the catalysts for shaping our world. 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. Hence, an attempt has been made in this paper to understand Digital India – as in role of development in India, barriers and impact on all aspects of governance and improve the quality of life of citizens.

**Keywords:** Development, digital, technology, government, empowerment

## Introduction
The digital world that we live in today is that where every civilian has a bright prospect to transform the lives in many ways that were hard to envision just a couple of years ago. It is the outcome of several innovations and technology advances. Today, every nation wants to be fully digitalized that will empower society in a better manner. The 'Digital India' programme, an initiative of honourable Prime Minister Mr. Narendra Modi, will emerge new progressions in every sector and generates innovative. The motive behind the concept is to build participative, transparent and responsive system. All educational institutions and government services will soon be able to provide I-ways round the clock. Digital India will provide all services electronically and promote digital literacy. Digital Technologies which includes the concept of cloud computing and mobile applications have emerged as the catalysts for express economic growth and citizen empowerment. Companies all over the world desire to invest in Digital India- the 21st century India, as a growth opportunity. 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. Global investors like Sundar Pichai, Satya Nadella, Elon Musk have supported Modi's Digital India initiative.

Today, we can't imagine our life without technology. In the twenty-first century, one of the most important technologies is the power of the digitization. The system, which allows individuals to communicate globally. Digital India is a programme to transform India into a digitally empowered society and knowledge economy. It was launched on **2 July 2015** to ensure that government services are made available to citizens electronically by improving online infrastructure and by increasing internet connectivity or by making the country Digitally empowered in the field of technology.

Digital India is an umbrella programme which covers many departments. This initiative will ensure that are government services and information are available anywhere, anytime on any device that are user friendly and secured with Digital India project, the government is ready for the big programme by connecting every service with e-power.

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## Data collection

The secondary data has been collected. For this purpose, various magazines and journals have been used as it is a conceptual paper. Thus, the focus is to know more about the concept, its application and the impact on economy via other parameters. Therefore, qualitative and quantitative data have been used.

Digital India The programme contains tasks that target to make sure that govt. services are available to people digitally and people get advantage of the newest information and connections technological innovation. Gandhiji felt that 'India resides in its villages,' and technology will help the villages to grow and prosper. Digital libraries, online magazines, e-books can be made available for free which will further help in knowledge sharing. PM Modi rightly said in his speech in San Jose, "I see technology as a means to empower and as a tool that bridges the distance between hope and opportunity. Social media is reducing social barriers. It connects people on the strength of human values, not identities." Technology is a bridge indeed, a bridge that connects the hope that India's villages will be educated and aware to the opportunity of internet and access to information from across the world. 'Digital India' is not just an initiative but a need for this country, where majority of population still does not have access to the world of internet. The Digital India initiative seeks to lay emphasis on e-governance and transform India into a digitally empowered society. It is to ensure that government services are available to citizens electronically. Digital India also aims to transform ease of doing business in the country. The Department of Electronics and Information Technology anticipates that this program will have a huge impact on the Ministry of Communication and IT. The program is projected at Rs 1, 13,000 crore which will prepare the country for knowledge-based transformation. It will focus on providing high speed internet services to its citizens and make services available in real time for both online and mobile platform. Modi's government is focussing on providing broadband services in all villages of the country, tele-medicine and mobile healthcare services and making the governance more participative. 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 co-ordinated 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 fibre network in all 2.5 lakh gram 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 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 MultiService centres 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. Email will be made the primary mode of communication. Aadhar Enabled Biometric Attendance System will be deployed in all central government offices where recording of attendance will be made online.

## Impact

India's economy has witnessed a significant economic growth in the recent past by growing 7.3 per cent in 2015 as against 6.9 per cent in 2014. The steps taken by the government in recent times have shown positive results as India's gross domestic product (GDP) at factor cost at constant (2011-12) prices 2014-15 is Rs 106.4 trillion (US$ 1.596 trillion), as against Rs 99.21 trillion (US$ 1.488 trillion) in 2013-14, registering a growth rate of 7.3 per cent. This clearly shows that the Digital India initiative introduced by Indian government has contributed a lot to boost the economy of the country. The Digital India project itself will create employment opportunities for 17 million people directly or indirectly which will help in fighting against unemployment problems in India. Government has planned to give IT training to 100 million students in smaller towns and villages as employment opportunity in IT sector is very high in India. In the next 5 years, India will emerge to be a leader in using IT in sectors like health, defence, education, agriculture and banking. Also the service sectors will be digitally empowered. In the field of education, it also assures broadband connectivity in all panchayats, schools, libraries and other public places. Apart from Broadband connectivity, every village is provided with universal phone connectivity across the country. Mobile and internet banking can improve the financial inclusion in the country and can create 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. The digital inclusion among the country

ensures the manufacturing sector to revive the electronics manufacturing. With the Make in India campaign and Digital India, the nation is planning to achieve net zero imports by 2020. This ensures the exports will be equal to the imports and this helps in the economic development of the nation. With the introduction of mobile connectivity in all villages, unique single portal can be maintained for all government related services. This ensures that all databases and information should be in electronic form and not manual. Next to crude oil, Electronics hardware comprises major parts of imports in India. Since India is a service based country and till now we have focused only on software development, with the advent of Digital India, with its stress on making India a manufacturing hub will change the trend. India's Import of Software and Hardware In Million USD World's leading research firm McKinsey has commented that the adoption of new technologies and innovative ideas across sectors by the Digital India programme will help India boost its GDP by $550 billion to $1 trillion by 2025. Thus, 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 WiFi hotspots. The programme will generate huge number of IT, Telecom and Electronics jobs, both directly and indirectly. Success of this programme will make India Digitally empowered and the leader in usage of IT in delivery of services related to various domains such as health, education, agriculture, banking, etc. The Digital India program is just the beginning of a digital revolution, once implemented properly it will open various new opportunities for the citizens.

**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 Information and Communications Technology (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. 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 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 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).

**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 (Information and Communications Technology) 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.

**Benefits of Digital India Programme**
1. It makes possible the implementation of digital locker system which in turn reduces paper work by minimizing the usage of physical documents as well as enabling e-sharing through registered repositories.
2. It ensures the achievement of various online goals set by the government.
3. It makes possible for people to submit their documents and certificates online anywhere which reduces physical work.
4. Citizens may digitally sign their documents online through e-Sign framework
5. It will ease the important health care services through e-Hospital system such as online registration, taking doctor appointments, fee payment, online diagnostic tests, blood check-up, etc.
6. It provides benefits to the beneficiaries through National Scholarship Portal by allowing submission of application, verification process, sanction and then disbursal.
7. It is a huge platform which facilitates an efficient delivery of government or private services all over the country to its citizens.
8. Bharat Net programe (a high-speed digital highway) will connect almost 250,000 gram panchayats of country.
9. There is a plan of outsourcing policy also to help in the digital India initiative. For better management of online services on mobile such as voice, data, multimedia, etc, BSNL's Next Generation Network will replace 30-year old telephone exchange.

**Digital India Programme and Indian Rural Sector**
The vision of Digital India National programme is path breaking and has the potential for transformational changes and upliftment of rural sector of India. The plan to provide universal phone connectivity and access to broadband in 2.5 lakh villages by 2019 is going to give a boost to the rural market. Setting up manufacturing facility in India to produce large scale low cost devices, the proposal of shared use of mobile devices by families in rural markets, sharing of

infrastructure cost by mobile service providers and government offering to subsidise the roll out cost of mobile services are examples of increasing the speed of providing such services within the reach of villages. Several apps have been launched to enable farmers get accurate and timely information related to crops, market prices and analytics to enhance productivity and profitability of farmers. The digital platform will open a new era for rural citizens through a variety of services like improved governance, land records, jobs, health, education and agriculture and digitization of personal and public records for safekeeping.

**Digital India and Empowerment of Rural Indian Women**
Empowerment of women of a nation leads to the successful growth and development of a nation. Digital India Programme has set the stage for empowering the Rural Indian Women. Following are some of the steps taken by Indian Government under Digital India programme for empowering rural women:
Arogya Sakhi helps rural women developing their own personality in order to providing health care to the rural area. It's a mobile application that helps rural women entrepreneurs deliver preventive health care at rural doorsteps. Women armed with tablets and mobile healthcare devices like glucometers, blood pressure checking machine visit homes and collect data from the village women. This data can be accessed by doctors at any location who could provide treatment to the patients remotely.
Internet Saathi aims to go deep with the internet usage among rural women in India. Ratan Tata has joined hands with Google and Intel to help women in rural India to access the internet in large number. The three-way project Internet Saathi will deploy 1000 specially designed bicycles with connected devices to give villagers an altogether new internet experience.
The Amakomaya Project (Nepal) aims at of providing Nepali rural women with lifesaving digital content in their own local language via the Internet. It serves a social cause which is to providing pregnant women during and after pregnancy advices. By this way, it helps reducing population and diseases in new born children. With the high mobile tapping, the program has expanded with a mobile platform, and it also connects rural health workers with urban based hospital doctors.
Women for Empowerment and Entrepreneurship (India), is helping rural women with digital tools, e-learning, internet connection. Women tend to use the Internet for their own projects in fields like sustainable agriculture and rural health. Some are setting up their own kiosks and shops to provide online services to the local community, while others have taken up work as digital literacy trainers in their own local communities.

**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. With the adoption of Digital India Project, India will have a powerful digital infrastructure. All educational institutions and government services will soon be able to provide digital services round the clock. More employment prospects will open for the youth that will boost the nation's economy. Tech giants from all over the world are willing to actively participate in this campaign. The outcome of Digital India is to produce Wi-Fi locations for people, creating job, universal phone connection,

High speed internet, Digital Inclusion, e-Services, e-Governance, Digitally motivated people, National Scholarships Portal, Digital Lockers System, e-education and e-health making India to be pioneer in IT use solution. However, it is important to note that ICT (Information and Communications Technology) 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. The Digital India program is just the beginning of a digital revolution, once implemented properly it will open various new opportunities for the citizens.

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