DIGITALIZATION IN INDIA: OPPORTUNITIES AND CHALLENGES

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ABSTRACT

This paper highlights the importance, challenges and advantages of digitalization in India. Digitization is the representation of an object, image, sound, document or signal by generating a series of numbers that describe a discrete set of its points or samples. The digital economy is the new productivity platform that some experts regard as the third industrial revolution. India is an initiative of the Central Government of India "designed to transform India into a global digitized hub" by reviving a rundown digital sector of India with the help of improving digital connectivity and skill enhancement and various other incentives to make the country digitally empowered in the field of technology.

The 2016 Union budget of India announced 11 technology initiatives including the use data analytics to nab tax evaders, creating a substantial opportunity for IT companies to build out the systems that will be required. The initiative also lacks many crucial components including lack of legal framework, absence of privacy and data protection laws, civil liberties abuse possibilities, lack of parliamentary oversight for e-surveillance in India, lack of intelligence related reforms in India, insecure Indian cyberspace, etc. It is mandatory that economy have to push merits of Digitalization and check the problems arise from digitalization. In the era of Globalization, transactions are increasing. So that digitalization to be given priority for both quick and transparent transactions.

KEYWORDS

Digitalization, Challenges, Opportunities, Globalization, **e-Surveillance etc.**

INTRODUCTION

Digitization is the representation of an object, image, sound, document or signal by generating a series of numbers that describe a discrete set of its points or samples. The digital economy is the new productivity platform that some experts regard as the third industrial revolution. This is also known as 'The Internet Economy' or Internet of Everything (IOE) and expected to generate new market growth opportunities, jobs and become the biggest business opportunity of humankind in the next 30 to 40 years.

The momentum that 'Digital India' has given to our technological progress is noteworthy indeed. Digital India Program is a national campaign to transform India into a globally connected hub. It includes various proposals and incentives given to companies, the manufacturing companies both domestic and foreign to invest in India and make the country a digital destination. The emphasis of Digital India campaign is on creating jobs and skill enhancement in the Broadband Highways, e-Governance, and Electronic delivery of services, Universal access to Mobile Connectivity, Electronics Manufacturing, and Information for All etc.

The campaign's aim is to resolve the problems of connectivity and therefore help us to connect with each other and to share information on issues and concerns faced by us. In some cases, they also enable resolution of those issues in near real time. Digital India is an initiative of the Central Government of India "designed to transform India into a global digitized hub" by reviving a rundown digital sector of India with the help of improving digital connectivity and skill enhancement and various other incentives to make the country digitally empowered in the field of technology.

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DEFINITIONS

Integration of digital technologies into everyday life by the digitization of everything that can be digitized - **Business Dictionary**

Digitalization is the way in which many domains of social life are restructured around digital communication and media infrastructures. In the pages that follow, we discuss these distinct, yet interrelated, concepts - **Oxford Dictionary.**

Pillars of Digitalization

There are several pillars of opportunities that are going to be built to escalate public behavior and expectation in digital way:

> Broadband Highways,
> Digital Locker,
> Mobile Connectivity,
> e-Kranti,
> Jobs,
> Manufacturing,
> MyGov,
> Information for all,
> Scope with Foreign Universities.

ADVANTAGES

The advantages of Digitalization include Customer experience, Technology push, and Economic benefits along with the following advantages.

> Digital Empowerment of Native Indian People.
> Delivery of all Government Services electronically (E-Governance).
> A Digital Identification, which will verify the end user.
> A Mobile for worldwide access to all services.
> A Bank account for Immediate Benefit Transfers of subsidies and payments.
>   The program also aims to eliminate all electronics imports from foreign countries by 2020 and make India an electronics manufacturing super power.
> It will help in decreasing crime if applied on whole.
> It will help in getting things done easily.
> It will help in decreasing documentation.
>   Some of the services, which will be provided through this desire effort, are Digital Locker, e-education, e-health, e-sign and nationwide scholarship portal.
> It will ostensibly create many jobs.
> It will be a boost to industry; both large and small enterprises.

DISADVANTAGES

*The following are disadvantages of Digitalization***:**

> Government employment might reduce which in turn may lead to civil servants' unrest.
> People will use free wifi just for time pass, which is current scenario in metros.
> Illiteracy people may lose with digitalization, as they are not aware of it.
> Cybercrimes may increase.

It affects unemployment problem.

DIGITALIZATION IN INDIA

Digital India is a campaign launched by the Government of India 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. It was launched on 1 July 2015 by Prime Minister Narendra Modi. The initiative includes plans to connect rural areas with high-speed internet networks.

Digital India consists of three core components, they are

The creation of digital infrastructure.
Delivery of services digitally.
Digital literacy.

The vision of Digital India program is inclusive growth in areas of electronic services, products, manufacturing and job opportunities etc. 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. The Government of India entity Bharat Broadband Network Limited that executes the National Optical Fibre Network project will be the custodian of Digital India (DI) project. BBNL had ordered United Telecoms Limited to connect 250,000 villages through GPON to ensure FTTH based broadband. This will provide the first basic setup to achieve towards Digital India and is expected to be completed by 2017. The government is planning to create 28,000 seats of BPOs in various states and set up at least one Common Service Centre in each of the gram panchayats in the state.

The 2016 Union budget of India announced 11 technology initiatives including the use data analytics to nab tax evaders, creating a substantial opportunity for IT companies to build out the systems that will be required. Digital Literacy mission will cover six crore rural households. It is planned to connect 550 farmer markets in the country with technology. Out of 10% English speaking Indians, only 2% reside in rural areas. Rest everyone depends on their vernacular language for all living their lives. However, as of now, email addresses can only be created in English language. To connect rural India with the Digital India, the Government of India impelled email services provider giants including Gmail, office and rediff to provide email address in regional Languages. However, the email provider companies have shown positive sign and are working in the same process. An Indian based company, Data Xgen Technologies Pvt Ltd, has launched world's first free linguistic email address under the name 'DATAMAIL' which allows to create email ids in 8 Indian languages, English; and 3 foreign languages – Arabic, Russian and Chinese. Over the period, Data X Gen Technologies will offer the email service in 22 languages.

OPPORTUNITIES

A Digital India Year would make sure that each aspect of the program is pushed to show results on the ground and not go into hibernation after one week of enthusiasm. Considering that most of the nine pillars of the Digital India program face serious challenges in implementation, it is imperative that focused; persistent attention is given to each of its pillars so that the big programme does not end up in embarrassment and failure. Considering that, the Digital Empowerment Foundation has a footprint at more than 150 locations in India at the village level, and that too with the purpose of digitally enabling the poorest of the poor, let me highlight some of the major challenges of the Digital India program.

First and foremost is that the entire program is designed as a top-down model. There is no idea of how it would be implemented on the ground to be successful. For example, let us consider six of the nine pillars of the programme directly related to consumers and people at large: broadband highways, universal access to mobile connectivity, public Internet access program e-kranti or electronic delivery of services, information for all, and IT for jobs. Besides these Broadband highways, now called Bharat Net, is supposed to connect up to gram panchayat, but laying fiber optic cables is the least of the challenges here. The biggest challenge is ensuring that each panchayat point of broadband is fired up, functional, used and distributed. Our research work found that more than 67% of the NOFN

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points are non-functional, even at the pilot stage. Besides, if the broadband highways programme is not implemented well and soon, we may not be able to implement other pillars of the programme, such as the public Internet access programme, e-kranti, information for all, and even IT for jobs. All these are dependent on access infrastructure.

Out of the many initiatives launched during the Digital India week, one that could make a serious impact is BSNL's (Bharat Sanchar Nigam Ltd) mass deployment of Wi-Fi hotspots across the country. If the government pushes BSNL to ensure at least one hotspot per panchayat or per village, it can do wonders, and the government can show off this as a positive outcome. However, if the selection of the locations for the hotspots necessarily were those populated by mostly tribals, backward castes, and minorities and geographically difficult areas, then the impact would be something that would be a national story. A well-connected nation is a prerequisite to a well-served nation. Once the remotest of the Indian villagers are digitally connected through broadband and high speed Internet, then delivery of electronic government services to every citizen, targeted social benefits and financial inclusion can be achieved in reality. One of the key areas on which the vision of Digital India is centered is 'digital infrastructure as a utility to every citizen.

A key component under this vision is high speed Internet as a core utility to facilitate online delivery of various services. It is planned to set up enabling infrastructure for digital identity, financial inclusion and ensure easy availability of common services centres. It is also proposed to provide citizens with 'digital lockers' which would be sharable private spaces on a public cloud and where documents issued by government departments and agencies could be stored for easy online access. It is also planned to ensure that the cyberspace is made safe and secure. Over the years, various State Governments and Central Ministries to usher in an era of e-governance have undertaken a large number of initiatives. Sustained efforts have been made at multiple levels to improve the delivery of public services and simplify the process of accessing them. E-governance in India has steadily evolved from computerization of Government Departments to initiatives that encapsulate the finer points of Governance, such as citizen centricity, social responsibility, and service orientation transparency accountability.

The National e-Governance Plan (NeGP) was approved in 2006 to take a holistic view of e-governance initiatives across the country, integrating them into a collective vision. Around this idea, a massive countrywide infrastructure reaching down to the remotest of villages is being developed, and large-scale digitization of records is taking place to enable easy and reliable access over the Internet. The ultimate objective was to make all government services accessible to the common person in his locality, through common service delivery outlets, and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man.

For example if we take Communications and IT development, Today, Sanchar Bhawan is free from middlemen, there is no scam or scandal, and decisions are taken in a free and fair manner. We had the highest spectrum auction ever of 1.10 lakh crore (last year). All the policy initiatives pending for the past 710 years - defense band identification, spectrum-trading sharing, harmonization, liberalization, cloud policies, open source in IT and creating an ecosystem of sound investment - are in place. As a result, IT and IT enabled exports today are worth $108 billion, the highest ever in the history of India. India has received $4,091 million (over ₹26,000 crore) foreign direct investment in telecom. Mobile telephony has shown growth. The postal sector had tremendous growth of ₹122.66 million between April 2014 and February 2016. India crossed one billion mobile phones under our government, one billion plus Aadhaar cards and 400 million plus Internet users. On a lighter note, I can say that net addition in total telephony (mobile plus landline) from April 2014 to February 2016 is equivalent to the population of France and Italy put together. The growth rate of total telephony, which was 3.90 per cent in 201314, posted 6.76 per cent in 201415, and 5.65 per cent until February this year, and I am sure the rate must have crossed 6.50 per cent in March. This is the position - a clear growth - and what is important is the rural growth is more than the urban. Rural tele density has increased 6.62 per cent between February 2014 and February 2016. Therefore, the telecom sector is rising and with 'Digital India', it is going to rise further. My biggest personal satisfaction is the recovery of the postal department. Postal services have become the biggest deliverer of ecommerce items - there are more than 57 centres in the country, fully automated and computerized. The ecommerce parcel revenue, which was down 2 per cent in 201314, rose 45 per cent in 201415 and 80 per cent in 201516, and by February, it has reached 100 per cent.

CHALLENGES

The challenges of digitalization in India are as follows:

The initiative also lacks many crucial components including lack of legal framework, absence of privacy and data protection laws, civil liberties abuse possibilities, lack of parliamentary oversight for e-surveillance in India, lack of intelligence related reforms in India, insecure Indian cyberspace, etc. Some other challenges are:

Implementation: The entire program is designed as a top-level model on the technological front. There is hardly any guidance on how to implement the same on the ground level to make it successful. To be precise, most of the nine pillars of the program are directly related to high-end consumers in urban areas and not for 70% of the rural population in India.

Deploy W-Fi Centers & Hotspot: BSNL's (Bharat Sanchar Nigam Ltd) mass deployment of Wi-Fi hotspots across the country. If the government pushes BSNL to ensure at least one hotspot per village, it can do wonders and experience the positive outcome. However, if the selection of the hotspot locations were those populated by mostly tribal backward castes, minorities and geographically difficult areas, then the impact can bring a new era in the life styles and other culture of the people in our country significantly and also impact in other countries.

Improve IT Literacy: Improving IT literacy is very important because the entire mass who is using internet should know how to secure his/her online data. Providing proper usability guidance of Anti-Virus software and its role in securing the records should happen simultaneously to avoid illegal things in all the economic and other money transactions.

Data Vulnerability: Each citizen of India would have all the personal details online including bank details, Income tax details, PAN details that might be vulnerable if not secured properly. In case this is breached, then any individual would lose the privacy of the data and would be compromised. This leads to lose of personal money in the form digital transactions.

Excessive Server Hits: If majority of the population start using online, then definitely the Government portal sever will start getting more number of hits day by day. This is limitless and the IT team needs to be prepared to tackle the situation where the possibility of crash would minimize.

Man-In-The-Middle Attack: It is a type of cyber-attack where a malicious actor intrudes him/ herself into a conversation between two parties, imitates both parties and gains access to information that the two parties were trying to send to each other. A man-in-the-middle attack allows such intercepts of the data meant for someone else, without knowledge of either of the party until it is too late.

IMPACT OF DIGITALIZATION BY 2019

Broadband in 2.5 lakh villages, universal phone connectivity.
Net Zero Imports by 2020.
400,000 Public Internet Access Points.
Wi-Fi in 2.5 lakh schools, all universities; Public Wi-Fi hotspots for citizens.
Digital Inclusion: 1.7 Cr trained for IT, Telecom and Electronics Jobs.
Job creation: Direct 1.7 Cr. and Indirect at least 8.5 Cr.
e-Governance & eServices: Across government.
 India to be leader in IT use in services – health, education, banking digitally empowered citizens – public cloud, internet access.

CONCLUSION

Since Technology advances as time passes every economy and individual has to adopt upcoming technology for digitalization. It is mandatory that economy have to push merits of Digitalization and check the problems arise from digitalization. In the era of Globalization, transactions are increasing. So that digitalization to be given priority for both quick and transparent transactions.

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