



## Digital divide: A challenge to E-Governance in India

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### Abstract

Use of Internet and digital devices has increased exponentially during past decade. Every government and public sector is becoming digitized with increased use of computers. With India's vast population and geographic dispersion, one of the major challenges of government is to reach every citizen and provide them access to different government services. National E-Governance Plan and Digital India campaign are focused for such an empowering change in our country. The main objective of these government initiatives is to provide transparent government services to citizens through electronic media. Being a developing country, India also faces some political, economic, technological and social challenges in implementing E-Governance. The fact is that some parts of country are still striving of these changes. All the efforts that government is making may not reach each and every person. This situation gave birth to a challenging scenario called Digital Divide. It is a bitter truth of society. A large portion of country population is living in rural, backward area. The people of such area are completely disconnected from the bright world of technology. At one side we talk about high speed internet and the other side people are more worried about their daily needs like food and shelter. This paper presents the situation in detail that how Digital Divide is a challenge to E-Governance in India.

**Keywords:** digital divide, E-Governance, digital separation, digital inequality

### 1. Introduction

ICT (Information and Communication Technology) has empowered the world by making communication very fast and cheap. The rapid development of ICTs has fundamentally altered many aspects of life and societies all around the world [12]. It has affected almost every field from healthcare to education. Countries are connected to each other and it takes only few seconds to communicate. A number of high speed smart devices are used by people which bring the whole world into pocket. Today ICT is considered as one of the fundamental building blocks of modern societies and digital Economies. ICT can impact the development of a country broadly in two ways: direct and indirect. Directly, it may include growth of IT related industries and services and their effect on employment, income etc. Indirectly, it may induce development thereby increasing productivity, economic growth and human welfare.

This era of digitization has also changed the way of providing government services to public and gave birth to the term E-Governance. Most of the developed and developing countries have prepared their national e-government and e-health etc. platforms. Electronic Governance (E-Governance) is a phrase that defines the use of Information and Communication Technologies (ICT) for the planning, implementation, and monitoring of government services. E-Governance is expected to help in delivering transparent, cost-effective and easy-to-access citizen services.

E-Governance has been embraced by almost all the countries which aim at modernizing public administration by trying to improve information and service delivery, and making government more accountable, transparent, responsive and effective. The global rapid change in technology forces and

challenges the government to develop efficient and effective systems that address both global and local needs.

In recent years there has been an explosion of E-Governance projects in India. Over the years, a large number of initiatives have been undertaken by various State Governments and Central Ministries towards digitization of government services. The major initiative was taken in 2006 in the form of national E-Governance plan (NEGP) formulated by the Department of Electronics and Information Technology (DEITY). NEGP comprises mission mode project (MMP) which are individual projects that focus on different aspects of electronic governance, such as banking, land records, taxes etc. Various MMPs have been proved to be successful in achieving their objectives but they are still not utilized to their full potential. To fuel NEGP, next major step taken by Indian Government was in the form of Digital India Campaign in 2015. It was started to boost up the concept of E-governance in India. It is set around nine pillars such as e-Kranti, Broadband highways, information to all etc. Besides so many efforts, the efficiency of these projects is low in India. Being a developing country, India also faces some political, economic, technological and social challenges in implementing e-Governance. All the efforts that government is making may not reach each and every person. This situation gave birth to a challenging scenario called Digital Divide. Digital divide concerns the unequal access to and usage of new technologies. Digital divide has become a main challenge in implementation of E-Governance.

This paper presents the situation of digital divide in various dimensions and how digital divide affect the E-Governance concept. Rest of the paper is organized as follows: Section II summarizes role of digitization in E-Governance. In Section

III, digital divide is discussed followed by factors behind it in Section IV. Finally, a summary on impact of digital divide on E-Governance is presented in Section V.

## 2. Role of Digitization in E-Governance

Use of Internet and digital devices has increased exponentially during past decade. Every government and public sector is becoming digitized with increased use of computers. ICT and digitization has empowered various sectors and some of the advantages are given below:

- **Transparency:** Digitization has provided transparency to government services. All the information of the Government would be made available on the internet. The citizens can see the information whenever they want to see. But this is only possible when every piece of information of the Government is uploaded on the internet and is available for the public to peruse. Right to Information (RTI) also added to transparency. ICT helps make the information available online eliminating all the possibilities of concealing of information.
- **Accountability:** Transparency automatically imposes accountability. If everything is fairly distributed among citizens and they can get online information, then government is accountable for it. Otherwise, citizens have right to check their claims anytime through digital services. It increases further chances of fairness. The efficiency will automatically increase if government is accountable for its deeds.
- **Ease of access:** People are surrounded by digital devices and can use those devices very easily. This easy access put the whole world into the pocket of people. Thus digitization made it easy to access e-services. Citizens need not to go to government offices and wait for hours.
- **Speed:** Through technology, it is faster to access government services. Now the services are just one click away. Internet, Phones, Cell Phones have reduced the time taken in normal communication. LPG gas subsidy is

the best example to show the speed that we achieved due to E-Governance.

- **Easily Managed Documentation:** Digitization has significantly reduced the paper work. Online documents are easy to maintain on cloud storage. Moreover chances of manual error are minimal.

## 3. Digital Divide

The phrase “Digital divide” is defined as the division of society into two groups: one connected to digital services and the other who cannot access digital services at all. Digital divide is seen as gap between those who have access to technology and those who do not have access to technology (i.e. access to computers and the Internet). It can also be specified as an inequality in access, distribution and use of information and communication technologies between two or more populations. With India’s vast population and geographic dispersion, one of the major challenges for governments is to reach every citizen and provide them access to different government services. Major part of population lives in rural area which is deprived off the bright world of internet. Within India, the digital divide between rural and urban India is rather large. More than 60% of the population does not use Internet at all [2]. Bridging the digital gap requires considerable investments. India has a large number of rural villages that do not have telephone connectivity. With superior infrastructure (compared to that in rural areas), including Educational Institutions, Industries etc. it is taken for granted that all knowledge, wealth and power is concentrated in urban areas. Comparatively, the rural areas are just carrying on with agriculture and small-scale industries, waiting for the modernization and beneficial government policies because modern infrastructure is largely missing. The lack of such types of facilities is the main reason of digital divide in rural areas because digital divide itself presents lack of different skills related to the technology.

**Table 1:** Top 10 Countries with Highest Number of Internet Users (2016) [3]

#	Country or Region	Population, 2016 Est.	Internet Users 30 June 2016	Internet Penetration	Growth (*) 2000 - 2016
1	China	1,378,561,591	721,434,547	52.3 %	3,106.4 %
2	India	1,266,883,598	462,124,989	36.5 %	9,142.5 %
3	United States	323,995,528	286,942,362	88.6 %	200.9 %
4	Brazil	206,050,242	139,111,185	67.5 %	2,682.2 %
5	Japan	126,464,583	115,111,595	91.0 %	144.5 %
6	Russia	146,358,055	103,147,691	70.5 %	3,227.3 %
7	Nigeria	186,879,760	97,210,000	52.0 %	48,505.0 %
8	Indonesia	258,316,051	88,000,000	34.1 %	4,300.0 %
9	Germany	80,722,792	71,727,551	88.9 %	198.9 %
10	Mexico	123,166,749	69,000,000	56.0 %	2,443.9 %

The gap still exists and it is a challenge to implement E-Governance effectively. Table 2 shows the growth of internet users during last decade [2]. A regular growth is there and

internet users increase every year but India has approached only mid of the second quarter of the population to provide Internet services.

**Table 2: Internet Users Statistics (2006-2016)**

Year	Internet Users**	Penetration (% of Pop)	Total Population	Non-Users (Internetless)	1Y User Change	1Y User Change	Population Change
2016*	462,124,989	34.8 %	1,326,801,576	864,676,587	30.5 %	108,010,242	1.2 %
2015*	354,114,747	27 %	1,311,050,527	956,935,780	51.9 %	120,962,270	1.22 %
2014	233,152,478	18 %	1,295,291,543	1,062,139,065	20.7 %	39,948,148	1.23 %
2013	193,204,330	15.1 %	1,279,498,874	1,086,294,544	21.5 %	34,243,984	1.26 %
2012	158,960,346	12.6 %	1,263,589,639	1,104,629,293	26.5 %	33,342,533	1.29 %
2011	125,617,813	10.1 %	1,247,446,011	1,121,828,198	36.1 %	33,293,976	1.34 %
2010	92,323,838	7.5 %	1,230,984,504	1,138,660,666	48.5 %	30,157,710	1.38 %
2009	62,166,128	5.1 %	1,214,182,182	1,152,016,054	18.6 %	9,734,457	1.43 %
2008	52,431,671	4.4 %	1,197,070,109	1,144,638,438	12.5 %	5,834,088	1.47 %
2007	46,597,582	4 %	1,179,685,631	1,133,088,049	42.9 %	13,995,197	1.51 %
2006	32,602,386	2.8 %	1,162,088,305	1,129,485,919	19.3 %	5,275,016	1.55 %

**4. Factors behind Digital Divide**

Digital divide can be identified by different ways. There are four main barriers to access technological services: 1) Lack of mental access that specifies lack of elementary digital experiences. 2) Lack of material access specifies lack of possession of computer and network connections. 3) Lack of skill access that is a lack of skill in digital area. 4) Lack of usage access specifies the lack of meaningful usage opportunities. The rural population has limited access to ICT. The expanding digital divide is making a new dimension of poverty i.e. information poverty. The divide between the ‘information poor’ and the ‘information rich’ is now one of India’s burning issues. Lack of ICT infrastructure, Education and lack of literacy are its main reasons. Various factors for digital divide are discussed below:

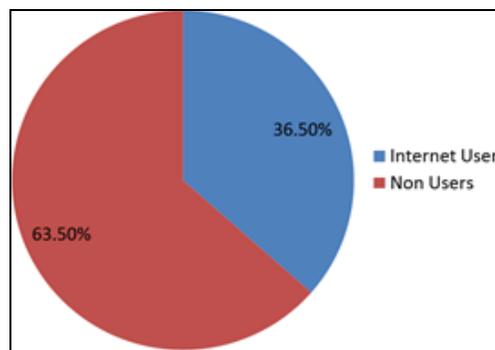
- **Lack of Infrastructure:** Being a densely populated country, India needs well established infrastructure to deliver e-services. But still there are some rural disconnected regions which are not connected to Internet.
- **Population:** It is a challenge for a developing country to serve a population of 1.30 billion uniformly. Every policy and project that is initiated should be implemented at a large scale keeping the future perspectives in mind.
- **Geographical Diversity:** Rural India is still deprived of the facilities of urban India because of its geographical location. It is poorly connected in terms of roads and infrastructural facilities.
- **Illiteracy & Poverty:** A large part of population is fighting for its daily basic needs. They do not bother about high speed devices and digitization. They are more worried about food and shelter. A large portion is illiterate and cannot operate digital devices. According to census 2011, literary rate in India is 74.04%. High level of education and income tend to use database, bookkeeping, and presentation application significantly rather than people with low levels of education and income who use technology just for consultation, games and other entertainment.
- **Gender Divide:** In India, there is huge discrimination among male and female. Only 65.46% of Indian women are literate and it is shocking that only 29 percent of Indian internet users are female. This creates a huge

gender divide.

- **Corruption:** Corruption is a termite for government. At each tier of government structure, politicians and stakeholders try to draw illegal benefits for themselves. Most of the budget that is decided at higher level cannot reach the general public and a large part of it is lost due to mediators.
- **Lack of Participation:** Unfortunately, it is observed that often the rural people are not very much attracted towards the web based E-Governance services for various reasons. Many-a-times they are afraid of the technologies and at times they are even ignorant about the availability of technologies which can help in dealing with their problems. Moreover, technology is changing so fast that they are not able to cope up with the technological developments [7]. People are technology phobic and resist the change. They hardly bother to learn these technologies.

**5. Impact of Digital Divide on E-Governance**

The aim of E-Governance is to provide transparent, easy to access government services at every nook and corner of the country. This is only possible when there is a uniform distribution of infrastructure and services are easily accessible. Figure-1 shows a divide between internet user and non-users in India. Only about 36.5% population has Internet access. Rest of the population still depends on slow pen and paper mode of services which is prone to manual errors.



**Fig 1: Internet users in India (2016)**

Thus E-Governance is only possible when this divide is bridged. Without bridging this gap, people cannot avail the facilities which are helpful in successful implementation of E-Governance.

## 6. Conclusion

The world is changing at a very fast pace with the evolution of Internet. India has second highest number of Internet users in the world but the shocking fact is that this constitutes only 36.5% of the Indian population. A digital divide exists within the country which is a real challenge to implement E-Governance. Government needs to bridge this gap to provide transparent and fast government services in various sectors. In this paper, the problem of digital divide is highlighted along with its factors and its effects on E-Governance.

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