

# A Study on the Concept, Measurement, Dimensions, and Current Cachet of Digital Divide in India

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## ABSTRACT

*'Digital empowerment' perhaps a phrase which is highly used in the national agenda since the declaration of digital India movement, because the internet is the best change management tool and facilitates transparency, accountability, responsibility, equality, and many more. It will produce a world where the low-powered and also the powerful relish equal opportunities to be online and equal possibilities to access information. Deficiency in 'digital empowerment' is known as the digital divide. It is natural those who have ingress with the internet or digital sources are superior to those don't have. The Republic of India is one in all the countries where the digital divide is incredibly evident. The researcher conducted analysis studies on the premise of secondary sources of information by keeping in sight of the provisions of objectives and practicability. This paper is an attempt to study the concept, measurement, dimensions, and determinants of digital divide, and this paper also analyzed the current cachets of digital divide in India thoroughly through the prism of Teledensity divide, mobile divide and, internet divide. In a nutshell, the disparity of haves and have-not's of digital technology intimidate to provoke the cracks between the wealthy and poor, urban and rural. Though India has created encouraging efforts to bridge the gap by initiating a variety of projects and programs for rural and remote locations, loads a lot of needs to be done to bring the people into the knowledge society. All that's needed is robust determination among individuals, smart policymakers and political support to bridge the digital divide.*

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## 1. Introduction

Now a day's deep developments in Information Communication Technology (ICT) have a great potential to stimulate revolutionary changes in peace, prosperity, happiness and dignified life, for all individuals. Even among the poorest twenty percent of households, nearly seven out of ten have access to a mobile phone, but they don't have the right access to toilets, electricity, and pure drinking water. And over some three billion individuals currently, have access to the net. The fourth industrial revolution tools like ICTs have been using as the best change management tools by the United Nations for attaining the Sustainable Development Goals. The idea of adopting ICTs fruits in governments has taken midpoint at the summits of WEF (World Economic Forum), G-7 and G-20, etc. World Summit on Information Society (WSIS) was successfully held by the General Assembly of United Nations in the year 2003 & 2005 Geneva & Tunis respectively. Both summits chief focus was ICT adoption in government activities, but the internet stepped in India in 1995, long before those summits, as adopted as the best tool in administrative activities. The decision of the WSIS was pretty simple: to figure towards creating info society wherever everybody is a component of the connected world and the maximum energy concentrated for creating a digitally inclusive society. Around 60% of the global populace is under the digital divide. As per International Telecom Union data shows that 3.9 billion Internet users are prevailing by March 2019 from one billion in 2005 once the second WSIS was command in Tunis. Extensive use of digital

technology in modern societies is essential and unavoidable. In this regard, as rightly said by Dean (2002), Gordon (2000), and Fletcher (2000), it's additionally opened up for submissions from varied stakeholders, together with different international organizations, MNCs, civil societies, public, private organizations, and academician. Info and Communication Technologies alter interactive communication unhampered by distance, volume, medium or time and additionally cut back the price of services. 'Digital empowerment' perhaps a phrase which is highly used in the national agenda since the declaration of digital India movement, because the internet is the best change management tool and facilitates transparency, accountability, responsibility, equality, and many more. It will produce a world where the low-powered and also the powerful relish equal opportunities to be online and equal possibilities to access information (Osama Manzar: 2017). Deficiency in 'digital empowerment' is known as the digital divide. It is natural those who have ingress with the internet or digital sources are superior to those don't have. The Republic of India is one in all the countries where the digital divide is incredibly evident. India placed 3rd position after China and the U.S.A in internet users, though it's caught in the clutches of the digital disparities. For building a bridge between digital haves and digital have-nots, it is essential to understand the concept, measurements, determinants, and current cachet of the digital divide in India.

## 2. Objectives of the study

1. To explain the concept and measurement of digital divide.
2. To explain the dimensions of digital divide.
3. To analyze the current cachet of digital divide in India.
4. To understand the factors of determinants in India's digital divide.

## 3. Methodology and scope of the study

The researcher conducted analysis studies on the premise of secondary sources of information by keeping in sight of the provisions of objectives and practicability. It has been gathered from numerous books, Journals, research articles, etc. This study includes the theory, practices and writings of assorted thinkers as well as professional practitioners in the stream of academics and business. Thus, the author utilized all resources on the market and dole out complete studies for the current research paper. This paper prime scope is to spotlight the contemplations rather than sharply draw any conclusions.

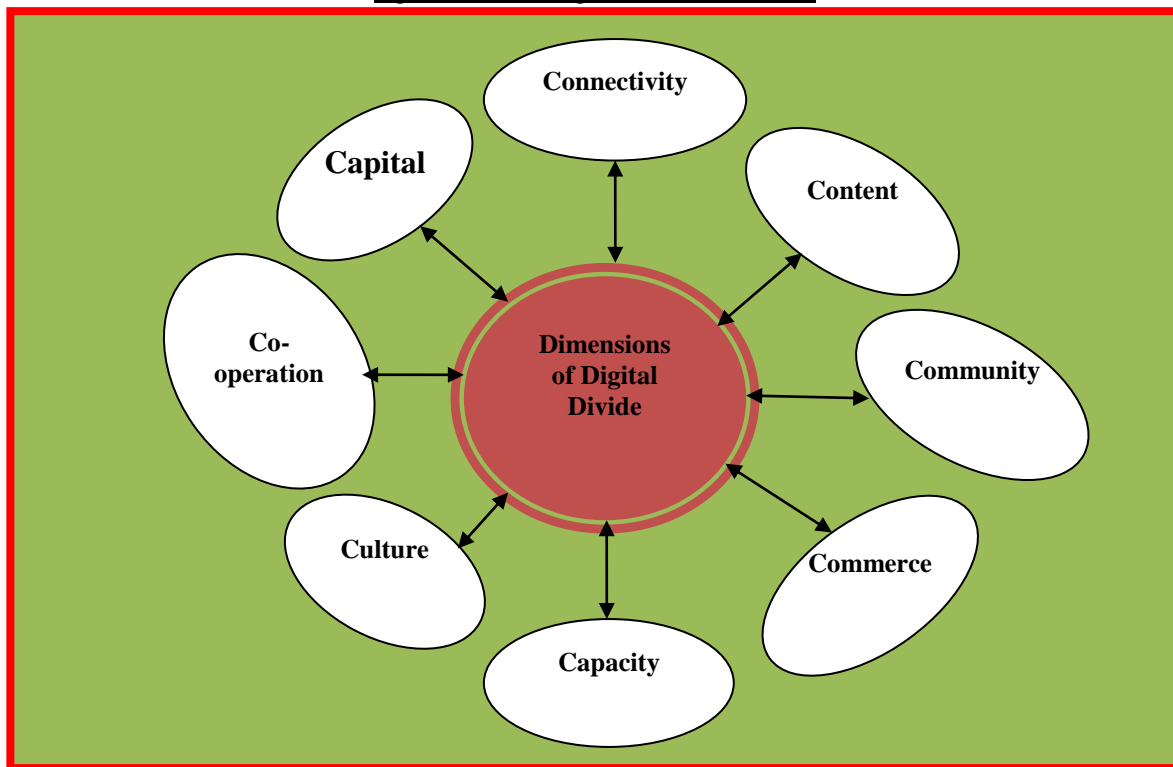
## 4. The Idea of 'Digital Divide'

The thought of digital divide born in the early 1990s, because of some people and institutions were not able to surf or weren't going onto broadband. The conception of a "digital divide" between technological "haves" and "have-nots" has been a useful gizmo in efforts to bring larger, a lot of equal access to high-speed internet like digital technologies. The denomination of 'Digital Divide' is employed to explain things during which there's a market gap in access to the utilization of ICT devices measured by, for instance, the quantity of net subscribers, fixed telephone lines, and mobile –cellular users per population /inhabitants. Digital divide studies the disparities between the people who have regular and effective access to info technology and digital, and those who have not this ingress. It encompasses both physical access to technology hardware and, a lot of generally, skills and resources which permit for its use. Teams typically mentioned in the ambience of a digital divide embrace socioeconomic (rich/poor), racial (white/minority), or geographical (urban/rural). The word international digital divide assign to disparities in technology ingress between nation-states, and the unequal of number of personal computers among the societies (Bickner: 2001). The digital divide because the variations due to geography, race, economic standing, gender and ability in access to data through the net, and alternative info technologies and services; and in the skills, knowledge, and talents to use data, the net and alternative technologies (Lor, Peter Johan: 2003).

The word digital divide also ascribe to the divergence between nation-states and societies. It also indicates to the uneven and unequal pace of growth in societies while possessing the connections to digitalized technologies and services. (Paul, J: 2002). The disparity among the practitioners, thinkers, households, business people, and various social, economic, geographical levels with innuendo to their chances to ingress and using digital technologies. (OECD: 2001). This definition is solely centered on the national and international level. Even though, the digital divide appears extremely in different stages: communities, individual levels, and sectors. For instance, several communities inside nation-states are so much aloof from the quietude of the nation with reference to info and communication technologies access and use. Such communities reshape ICT to their culture and norms (Barziliani and Barziliani: 2005). Further, the digital divide is additionally mentioned as "the tortile of unequal and uneven ingress and usage of digital technology, and also the strong socio-economic reasons that have precipitated the advent of ICT inequalities throughout the globe, between the countries and communities. (Hanimann and Ruedin: 2007). Digital divide indicates to a reasonable equilibrium amongst the people/habitats within the distribution, active, and adequate utilization of ICT assets. The globe we tend to board has been ever-changing speedily with the emanation of the ubiquitous Society transferrable forward extraordinary edges and opportunities at the side of new challenges. The flexibility to make and utilize info plays a big role in each socio-economic structure of our lives. ON the other hand, the digital revolution has been playing an intensive drawback role between developed and developing nations. The digital divide covers deficient financing, lack of adequate personal computers and skills (like the English language proficiency) that cripples the growth and usage of ICT resources. (Dubey, P: 2010). Factors influencing digital divide vary from region to region the digital divide is relying upon and also the variations in the handling of communication resources among nations and societies condensing.

## 5. Dimensions of Digital Divide

The term "divide" advocates a major barrier. The digital divide is stressed a lot of on digital divide problems with diligence, technical infrastructure and connectivity loom massive however these don't seem to be the sole aspect of digital disparities. We need to clarify the dimensions of the idea of "digital divide" for better understanding. The "eight C's of success in the web economy" formulated by Rao (2000), give a classification that's powerfully align to economical and technical dimensions of digital divide. They are:

**Figure-1: 8 C's of digital divide dimensions.**

**Source:** authors own compilation based on Rao, M. (2000). 'Struggling with the digital divide: Internet Infrastructure, content and culture'.

- i. **Connectivity:** accessible to mobile and cellular phones, website connections, and Personal computers.
- ii. **Content:** The total figure of net sites operating within the country, local need and relevance of the content, dialect, expression, accent of the language, etc.
- iii. **Community:** Comprehensiveness in respect to various sections of the community.
- iv. **Commerce;** for instance augmentation of infrastructure for e-business.
- v. **Capacity:** capability of man force, the capability to harness the websites, development of cyber law.
- vi. **Culture:** Government perspective towards telecommunications, Bureaucrats and decision-makers web understanding awareness, entrepreneurial and business culture.
- vii. **Cooperation:** Cooperation between national level and regional level, civil and academia and public and private, etc.
- viii. **Capital:** Financing atmosphere congenial to economically competent internet enterprises.

## 6. Measurement of digital divide

As one will presuppose, the idea of digital disparities has modified over time. In the beginning, it was primarily mentioned only connectivity related issues like gaps in accessing the application of ICTs. Later, it started to suggest the significance of capabilities and skills needed for the application of ICTs. (capacity-building and education), and eventually, there's conjointly regard to the utilization of integrated resources within the technology. Thus, the idea digital demarcation/divide primarily focuses on 3 areas: Infrastructure, capability building and concentrate on resource usage. Ricci (2000) was the first thinker who tried to rationalize

the methods for measurement of the digital divides which illustrated and explained the development means of European countries by building an adoption scale for digital technologies that result from the aggregation of fundamental indicators. ICTs hold nice promise in deriving for development and impoverishment attrition of developing countries. In several instances, the poor public has gained advantages in the sort of enhanced income: higher health care: better education and training: access to employment opportunities (Sumanjeet: 2008& Motohashi: 2001). Obligations with government services; communications with friends and family members: ease of doing business: enhanced agricultural productivity, etc. (Hooker et. al; 2001). The problem of transparency is easy to handle with the using of ICTs that led to monetary benefits in the form of savings conjointly confidence of the stakeholders in the development process and system (Jesus: 2003).

Three peculiar divides identified as basics divisions of the digital demarcation (Hanemann and Ruedin: 2007):

- Geo-digital divide covers divisions between nations, regions, and local,
- Socio-digital divide covers divisions between classes, races, and casts, etc. and,
- Upgraded digital divide, covers gaps of humans and technology.

Some other scholars like Mark (2003), Branko (2005), and Norris (2001) suggested that three more major digital divide segments, they are,

- Global-digital divide covers divisions between developing, developed, and undeveloped nations i.e. the first world, second world, and third world regions.
- Social-digital divide covers divisions between data rich people and data poor people. And,

➤ Democratic-digital divide covers between people who do able and those who don't able to use new technologies in political participation.

From the above discussions, we can come into the conclusion that the digital divide is circumscribed as economic, social, or cultural destitution generated by lacking ICT access and adroitness. This definition goes on the far side conventional definitions and it's a variety of practically vital characteristics.

**First**, it expressly spells out the 3 completely different dimensions wherever digital divides are necessary and where ICTs create a difference. In modern knowledge- and therefore the info-based world, financial fortuity, like employability, depend on ICT access and adroitness. ICTs, however, conjointly play progressively necessary role altogether social relationships, starting from political participation to connecting native communities, friends and the family.

**Second**, our globe is flourishing with various cultures; ICTs are able to play a progressive role and necessary access for cultural resources and expressions.

**Third**, the definition conjointly replaces traditional technology-focused characterizations of the digital detach like

lack of technology, by its very nature isn't continuously a problem, because technology is not a static component, technology is an ever-changing phenomenon. Its halcyon that without using ICTs capabilities and once they are embedded in social without necessary human skills and competencies is a dubious thing.

Technologies become true once they are mingled with practices. ICTs have radically modified the means of doing business. Net and its enabled business technologies like e-commerce have displayed large business avenues and reworked the total business world into a global village.

In addition, it's expected that ICTs can play a key role in the development process of socio-economic front. And alter the pattern of peoples' financial status and lifestyles. But, the potential to usher the leverage of digital technologies mostly depends on the access and adoption of those ICTs. Indeed, the standing of digital technology adoption of an economy is a barometer of its potential to utilizing the financial fortitudes afforded by the modern ICTs, and they lead to transform the traditional economy into the modern economy. But, the adoptions of digital technologies across the world are varied from the region to region and nation to nation. We can observe those disparities from the following table.

**Table-1: Status of digital technology adoption among different regions of the world. (Per 100 inhabitants).**

Region	Mobile-Cellular Subscriptions	Fixed Telephone Subscribers	Internet Users	Fixed Internet Broad band Subscribers	Fixed Internet Broad band Subscribers by speed
East and North-east Asia	106.8	17.9	57.7	28.7	0.1
South- East Asia	141.1	5.2	44.2	5.2	0.5
South and South-West Asia	88.2	3.7	32.9	2.6	0.4
North and Central Asia	140.0	18.8	68.1	17.3	2.2
ESCAP Aggregates	105.3	10.0	45.6	13.3	0.4
LDC	92.0	1.1	20.9	2.6	0.6
LLDC	100.3	8.3	37.1	5.7	1.9
CSN	95.0	3.7	27.9	4.2	1.2
ASEAN	141.2	5.2	44.2	5.2	0.5
SAARC	86.9	1.7	30.2	1.6	0.2
ECO	88.6	11.8	37.826.2	6.7	1.5
AFRICA	77.9	2.1	26.2	1.3	0.4
EUROPE	123.8	38.8	78.8	32.5	0.2
LATIN AMERICA and Carib.	107.4	16.4	62.1	11.9	1.8
NORTH AMERICA	117.2	37.2	77	34.3	0.3
<b>INDIA</b>	<b>87.3</b>	<b>1.7</b>	<b>34.5</b>	<b>1.3</b>	<b>0.1</b>
<b>WORLD</b>	<b>103.0</b>	<b>13.0</b>	<b>48.4</b>	<b>13.6</b>	<b>0.5</b>

"Source: Statistical Yearbook for Asia and pacific, 2018".

Note-1; "ESCAP (2019) Online Statistical Database based on data from the ITU Compiled by authors own, 20 July 2018. Last updated on 11<sup>th</sup> March 2019, Available from [http://data.unescap.org/escap\\_stat/](http://data.unescap.org/escap_stat/) (accessed 26<sup>th</sup> April 2019)"

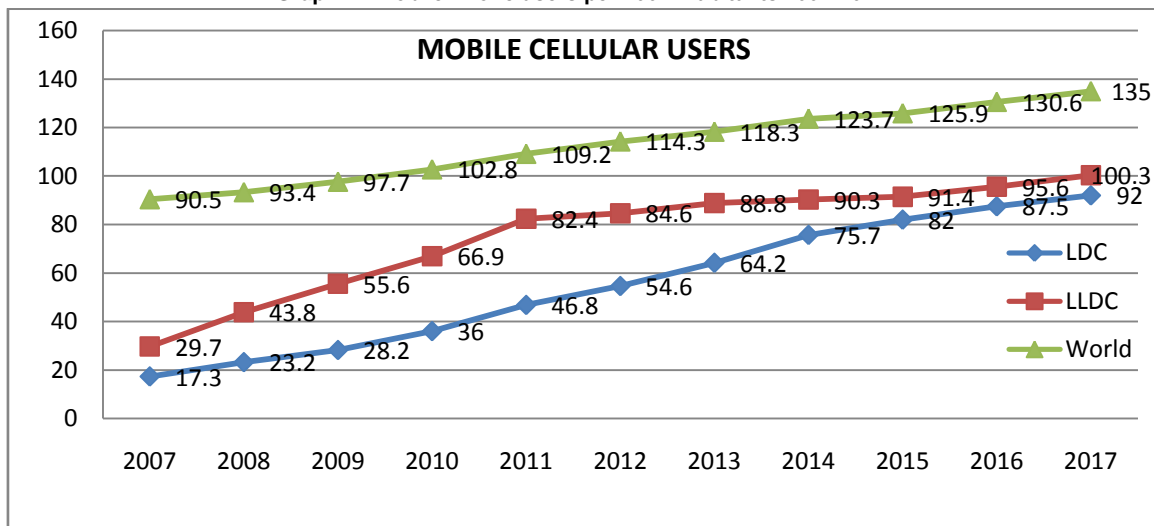
Note-2: "One of the territorial development arms of the UN for the region of Asia-Pacific named as the Economic and social Commission for Asia and Pacific (ESCAP). It is the most comprehensive regional commission of UN five regional commissions with 62 governments as members".

Note-3: "LLDC- Least developed countries, LDC- Least developing countries".

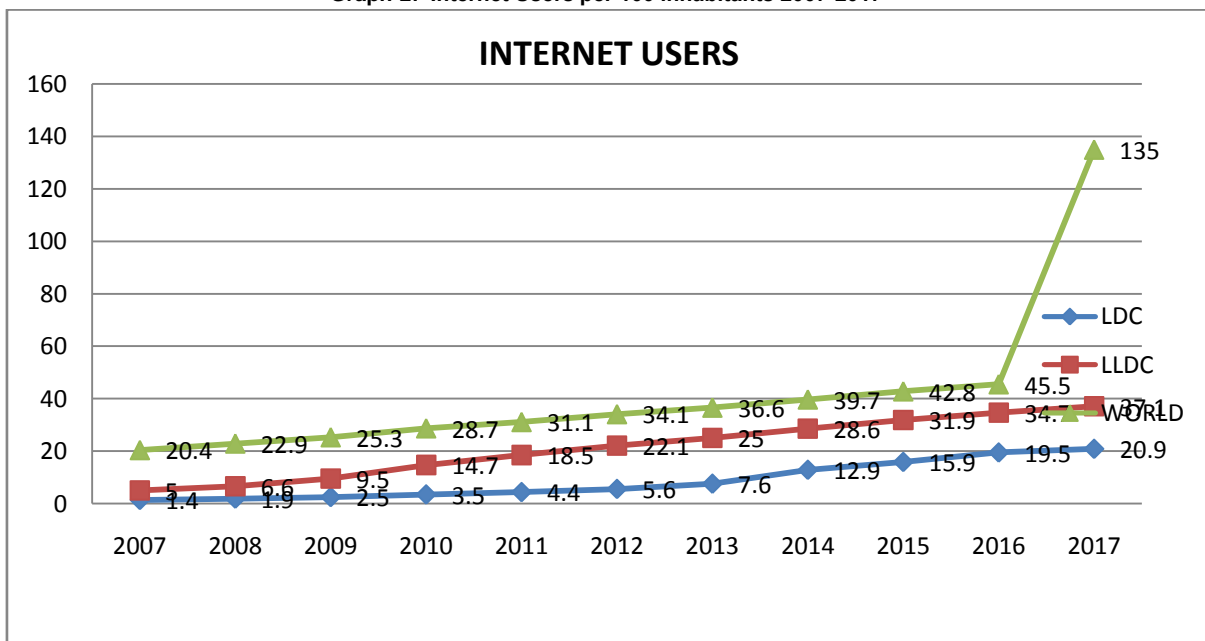
Up to the 11th March 2019, the SAARC member nation's mobiles and fixed telephone users per 100 individuals were 86.9 and 1.7 respectively, but world aggregate mobiles and phones per 100 individuals were 103.0 and 13.0 respectively. Even in the least Developing Countries mobiles and telephones users per 100 individuals were 92.0 and 1.1 respectively, whereas in the least Developed Countries mobiles and telephones 100.3 and 8.3 respectively. Among these world grouping of countries, India stands in mobile and phone users per 100 individuals 87.3 and 1.7 respectively shows better than SAARC countries and far below the World aggregates, and will reach the proper implementation of right strategies will easily

reach the levels of LDC and LLDC nations. The high-income economies have high subscriptions of mobiles, telephones internet and broadband with high speed to compare with least developing and least developed countries. Overall users per 100 individuals in world parameters in mobile, telephone, and internet, broadband and broadband by speed are 103.0, 13.0, 48.4, 13.6 & 0.5 respectively. Whereas in India total users per 100 individuals in world parameters in mobile, telephone, and internet, broadband and broadband by speed 87.3, 1.7, 34.5, 1.3, & 0.1 respectively. It clearly shows that there is a huge gap is prevailing in digital technology adoption.

Graph-1: 'Mobile Phone users per 100 inhabitants 2007-2017'



Graph-2: 'Internet Users per 100 inhabitants 2007-2017'



Graph.1&2, Source: ESCAP Online Statistical Database based on data from the ITU; Compiled by authors own, last updated data on 11 March 2019. Available from [http://data.unescap.org/escap\\_stat/](http://data.unescap.org/escap_stat/) (accessed 30<sup>th</sup> April 2019).

Above graph.1 &2 clearly indicates that the digital divergence in adopting ICTs or digital technologies prevails. From the above data, we can conclude that the adoption of digital revolution technologies is more in developed nations to compare with the developing nations. In developed nations

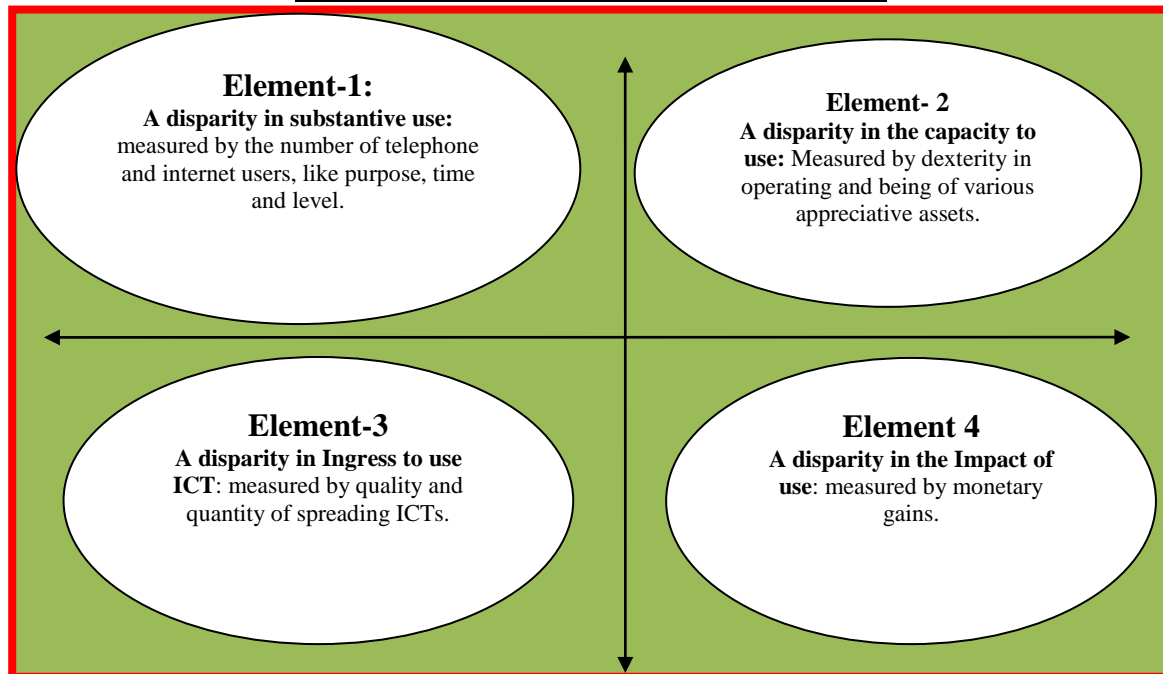
people have more access mobile-cellular and internet technologies than to the developing nations, and developed nations adjusting themselves according to the changing pace of technologies at a faster rate. Coming to the Asian nations, data showed that the recent years the adoption of ICTs is

recorded high positive note, internet adoption rate is also getting momentous speed among developing nations, but far behind to compare with the developed nations like European, and American nations.

From the above investigation, it is very clear that the lakh of people in this globe living without accessing modern ICTs like cell phone and internet services. This led to serious dissidence of the technology detach among the people who are

and who are not to engage in the digital revolution (United Nations, 2006). Due to its serious social, economic and political implications the study of the technology detach has been attracting many practitioners of policymakers and thinkers of academicians. With this backdrop for a better understanding of the technology detach, it is essential to know the clarity on its measurement of gap elements. We can understand those elements through the below figure.

**Figure-2: Measurements of gap elements for digital divide.**



Source: Authors own

Many numbers of national and international organizations have been defining progressive policies of curtailing digital divide on the foundations on top of the 4 elements. However, though the progression of the concept, these elements chiefly stressed for the augmenting of the

Digital infrastructure framework. National and international expenditure and strategies for the curtailment of the technology detach continue to its chief objective is network development.

## 7. Digital Divide In India

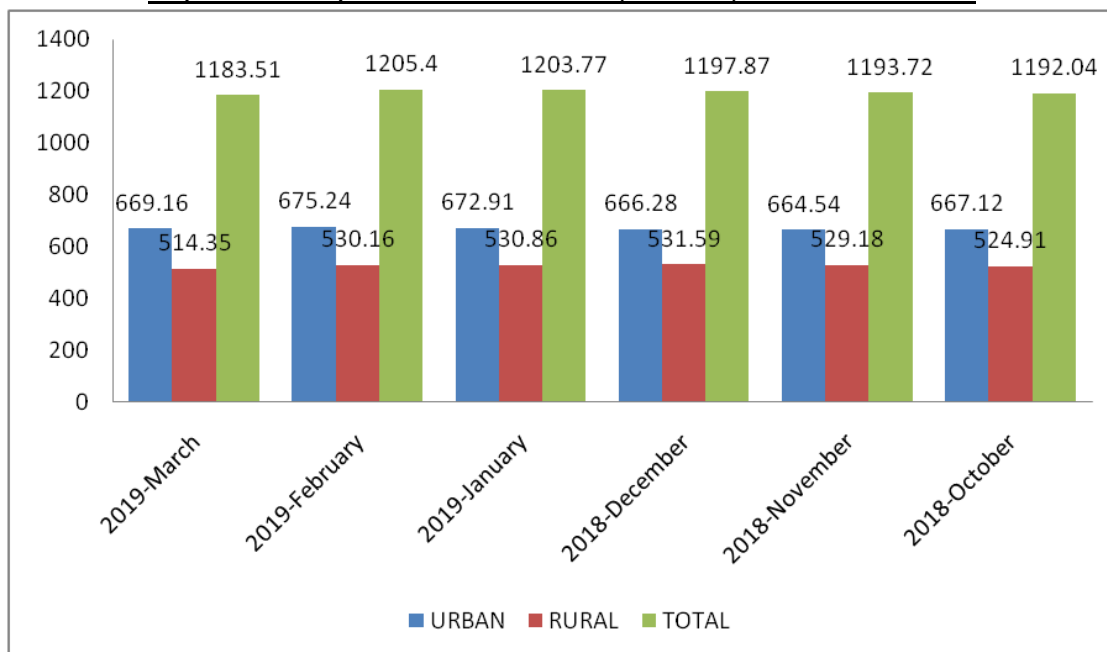
Digital infrastructure is a determining factor for modern society, regardless of the technological progression and easiness of using multiple ICT tools, the lucrative adoption and utilization of ICTs depend on the components like individual motivators, the human capital of the particular society, and government attitude towards of ICTs adoption and usage. (Naranjo-Zolotov. M. et.al: 2019). Various studies (Massimo Ragnedda: 2018, Quiyan Fan: 2018, Krishna Prasada Rao. MSR: 2018) revealed that Good governance is possible through ICT only. It is important to deliver government services to citizens at their nearer locations 24by 7 and 360 days, and also using of ICTs in governance will bring to the society efficiency, economy, effectiveness, transparency, and smartness. That is why governments around the globe are

busy with developing infrastructure facilities of ICTs. From the past decade onwards in India telecommunications infrastructure development activities has been gaining rapid momentum with the efforts of government and non – government platforms. (Krishna Prasada Rao, MSR; 2018). India is basically not a country but a continent, so it has diverse cultures, languages, tribes, atmosphere, etc... The idea of serving all parts of India through modern telecommunications to make India technologically advanced state is a gigantic task. The issue of the technology detach can figure out through the mobile phone divide, Teledensity divide, and technology detachment between rural India and Urban India.

### Teledensity divide:

**Telephone density** or **Teledensity** is the number of telephone connections for every 100 population who are residing within an area. Within a country it is different from state to state, urban to rural, zonal to zonal, and community to community. It is also has a significant correlation to the per capita GDP of that particular area. (World Bank: 1996). It is also used as a beacon of the purchasing power of the middle class of a particular region or country. If this telephone density is measured as higher than hundred means there are more phones than people.

**Graph.3 “Total telephone Subscribers in India (In Millions) as on 31<sup>st</sup> march-2019”**

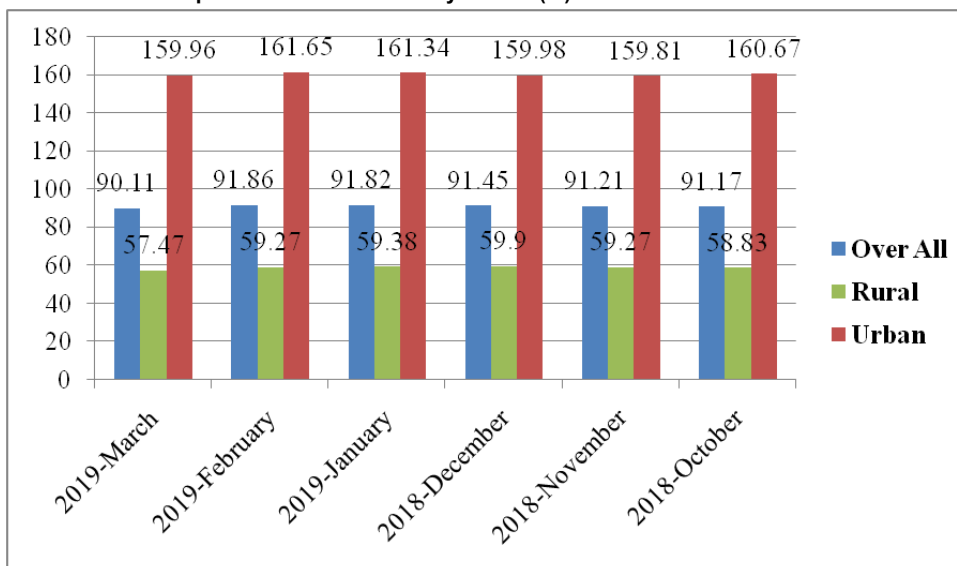


Source: Authors own compilation from “Telecom regulatory Authority of India”, Press Released data, New Delhi up to 21st May 2019, [www.trai.gov.in](http://www.trai.gov.in) (Retrieved on 25<sup>th</sup> May , 2019).

From the above bar graph clearly shows that total phone users in India from October 2018 to March 2019 are not a regular increasing phenomenon. Subscribers of Urban phone users in October, November, and December in 2018 are 667.12, 664.54, and 666.28 Million respectively, in the same months' rural users are 524.86, and 529.18, and 531.59 Million respectively. January, February, and March in 2019 are 672.91, 675.24, and 669.16 Million respectively; in the same

months in the same months' rural users are 530.86, 530.16, and 514.35 Million respectively. Above bar graph shows that rural telephone users are not increased rather than they are decreased, but various reasons urban users are continuously increasing. It clearly shows that urban using is high than the rural telephone using so that we can jump into the conclusion that there is a huge digital divide is prevailing in India.

**Graph.4 “Over all Teledensity in India(%) As On 31<sup>st</sup> March 2019”**

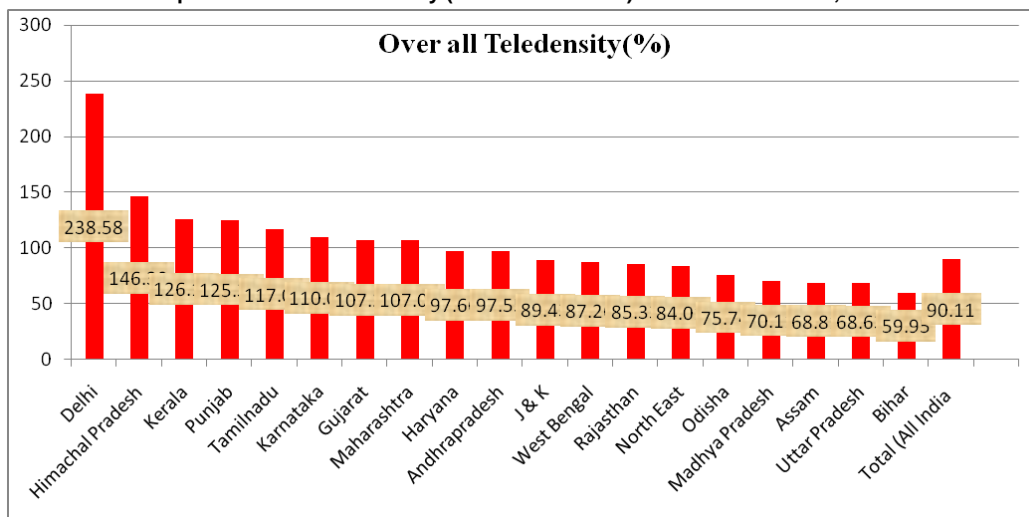


Source: Authors own compilation from “Telecom regulatory Authority of India”, Press Release data, New Delhi up to 21st May 2019, [www.trai.gov.in](http://www.trai.gov.in) (Retrieved on 25<sup>th</sup> May, 2019).

From the above graph, we can draw a conclusion that not only telephone users but also overall Teledensity in India Rural-urban divide clearly existing. For instance, 2018 October rural Teledensity in India is 58.83, urban density is 91.17 and

overall density is 160.67, whereas in 2019 March the data shows that 57.47, 90.11, and 159.96 rural, Urban, and overall Teledensity respectively. It clearly shows that huge user-gap is prevails in India.

Graph.5 “Overall Tele-density (Circle/State Wise) – As on 31st March, 2019”



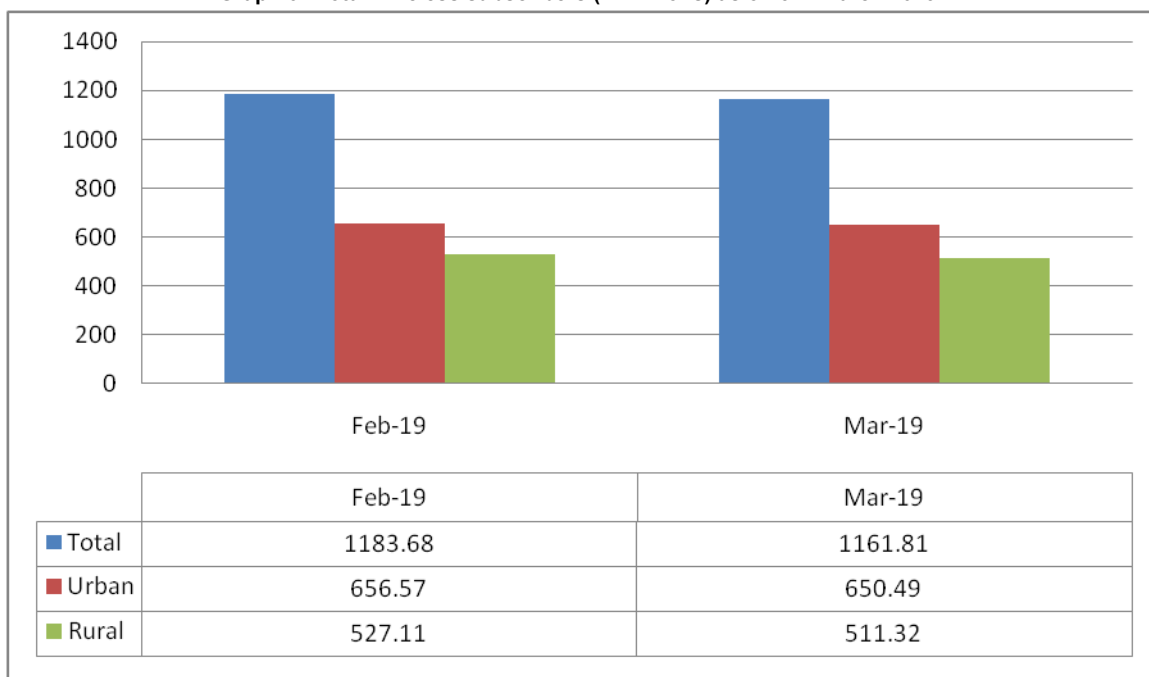
Source: Authors own compilation from “Telecom regulatory Authority of India”, Press Release data, New Delhi up to 21st May 2019, www.trai.gov.in (Retrieved on 15<sup>th</sup> June, 2019).

From the above graph shows that overall Teledensity in India is 90.11 as of 31<sup>st</sup> March 2019. Bihar, Uttar Pradesh, Assam is the least density states whereas Delhi, Himachal Pradesh, and Kerala are the highest density states. The negative growth also registered by the telephone benefactors, and it is declined from 1,250.40 Million in Feb-2019 to 1,183.51 Million at the nib of Mar-2019. Both the users from Urban and rural witnessed this declined trend (0.90% and 2.98% respectively). The total Tele-density also registered declined trend i.e. from 91.86 to 90.11. It clearly shows that India needs to focus to bring the highest concentration to increase ICT infrastructure in these backlog states to build the bridge between digital haves and have not.

**Mobile divide:**

Far from being a way of life product, Mobiles have currently become a necessity. The Republic of India has seen a large spur in mobiles within the past five years and its penetrated even to the nook and corner of India to a decent extent. India’s mobile subscriber base – together with active and in-active customers — rose 0.04 % to 1,162.30 million in April 2019 from 1,161.81 million in March, per TRAI information. Airtel and Vodafone-Idea have 321.89 and 393.25 Million subscribers on their networks of 2G, 3G, and 4G. Reliance Jio has 314.80 million subscribers on its 4G network. BSNL has 115.89 million subscribers on 2G and 3G networks. India has 999.68 million active wireless subscribers in Apr 2019. Airtel has the utmost proportion with 100.69 % of its active wireless subscribers (Telecomlead: 2019)

Graph.6 “Total Wireless subscribers (in Millions) as on 31<sup>st</sup> March 2019”

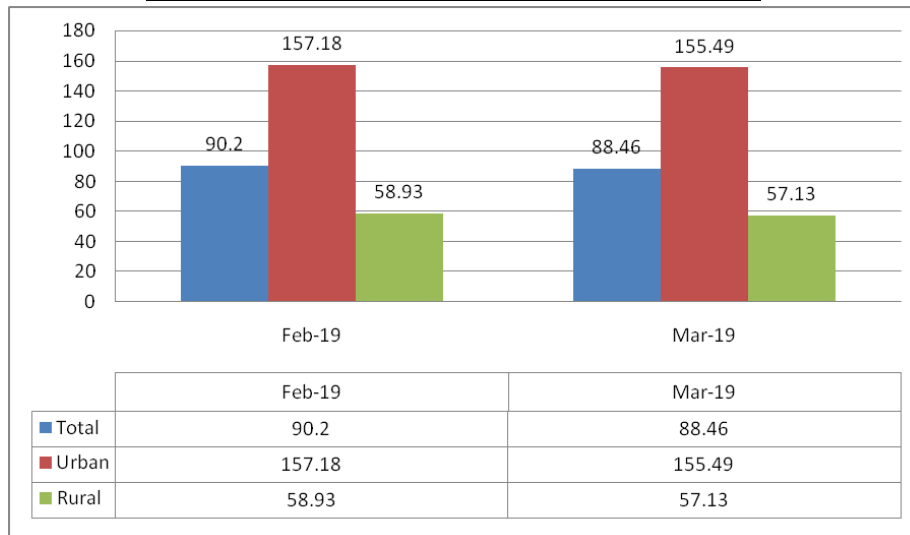


Source: Authors own compilation from “Telecom regulatory Authority of India”, Press Release data, New Delhi up to 21st May 2019, www.trai.gov.in (Retrieved on 15<sup>th</sup> June, 2019).

At the nib of Feb- 2019 overall wireless subscribers (CDMA, GSM, and LTE) are 1,183.68 Million, but at the nib of Mar- 2019 showed decline trend and recorded overall subscribers are 1,161.81 Million only, with that 1.85% monthly

decline rate registered. As well as, urban and rural subscribers also declined from 656.57 to 650.49 Million and 527.11 to 511.32 Million respectively. The rate of monthly urban and rural wireless subscription is 0.93% and 2.99% respectively.

**Graph.7 “Wireless Teledensity (in %) as on 31<sup>st</sup> March 2019”.**



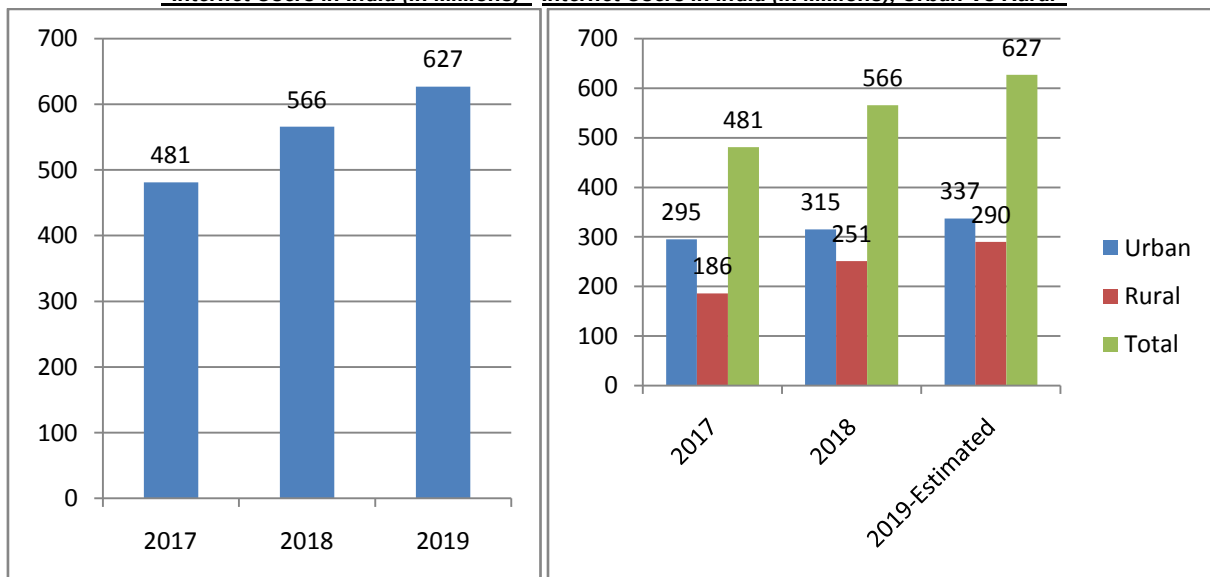
Source: Authors own compilation from “Telecom regulatory Authority of India”, Press Release data, New Delhi up to 21st May 2019, [www.trai.gov.in](http://www.trai.gov.in) (Retrieved on 05<sup>th</sup> July, 2019).

The Wireless Tele-density in Bharat declined from 90.20% at the nib of February-2019 to 88.46% at the nib of March-2019. The Urban Wireless Tele-density declined from 157.18% at the nib of Feb-19 to 155.49% at the tip of Mar-19, and Rural Wireless Tele-density conjointly declined from 58.93% to 57.13% throughout the same period. At the nib of March 2019, the stake of rural and urban wireless subscribers from overall wireless subscribers was 44.01% and 55.99% respectively. From the above bar graphs, information clearly shows that although there are enormous subscribers and rapid growth in accessing mobile market digital gap is existing truth in India.

**Internet Divide:**

From the early 1990’s India witnessed the entry if internet. “Videsh Sanchar Nigam Limited (VSNL)” introduces Internet in India via dial-up within the half-dozen cities on August fourteen, 1995. At that point, there was restricted net access solely in an exceedingly few major cities, all in the hands of the govt. VSNL, the agency liable for net activities, and therefore the Department of Telecommunications provided excruciatingly erratic connectivity, with mingy bandwidth and that is also very limited telephone lines. (Singh Sumanjeet: 2010).

**“Internet Users in India (in Millions)” “Internet Users in India (in Millions), Urban Vs Rural”**



Source: ICUBE Report: 21<sup>st</sup> Edition, Digital Adoption and Usage Trends.

In 2019, India's internet subscribers forecasted to register around 627 million, caused by speedy internet expansion in rural zones afore said by "Kantar IMRB" agency.(ICUBE :2018). Internet usage in India has outpaced 0.5 a billion folks for 1st time, pegged at 566 million. In its ICUBE 2018 report that tracks digital adoption and usage trends in the Republic of India, it noted that the quantity of net users in Bharat has registered an annual growth of eighteen percent and is calculable at 566 million as of Dec 2018, a forty percent overall net penetration, it discovered. It is also estimated that the end of the 2019, subscriber's base may reach to 627 million. Of the overall user base, 87% or 493 million are outlined as everyday formal subscribers, having contacted net within the last thirty days. Nearly 293 million active net users reside in urban Bharat, whereas there are two hundred million active users in rural Bharat, it said. The report found that ninety-seven percent of users use the mobile joined of the gadgets to connect the internet. Whereas net users grew by seven percent in urban Bharat, reaching 315 million users in 2018 and digital adoption is currently being propelled by rural India, registering a thirty-five percent growth in net users over the past year.

It is currently calculable that there are 251 million net users in rural Bharat, and this can be expected to succeed in 290 million by the nib of 2019, urban penetration is sixty-six and rural penetration is twenty-fifth. The report aforesaid."Increased convenience of bandwidth, low-cost data plans and accumulated awareness driven by government programs appear to possess quickly bridged the digital gap between India's rural and urban parts. Consequently, the penetration in rural Bharat has enhanced from nine percent in 2015 to twenty-five percent in 2018," it added. Bihar registered the very best growth in net users across each urban and rural area, registering a growth of thirty-five percent over last year. The report additionally noted that net usage is a lot of gender-balanced than ever before with girls comprising forty-two percent of total net users.

It is enchanting to notice that the technology revolution currently sweeping tiny cities and villages may be driven by enhanced accessibility at cheap data prices. The rises within the handling of digital technology of the rural Bharat, wherever over two-thirds of active net subscribers are currently pervading the daily net to meet their amusement and information requisites.

## 8. Conclusion

The explosive development of ICT, its applications, and also the emergence of a world info society are ever-changing

the means people live, learn, work and act. Increased access to data is quickly changing into a potent tool for empowering the folks and communities in their pursuit of new opportunities, dignity, and higher life. The disparity of haves and have-not's of digital technology intimidate to provoke the cracks between the wealthy and poor, among and among countries. Sadly, in India, all individuals have access to the web and ICT, associated a surprisingly sizable amount of individuals particularly from the rural areas doesn't have skills of ICTs in an exceedingly correct means and, thus cannot draw the benefits from its usage.

The concerns of the technology detach are really a gigantic task for the govt of India to fruitage the highest advantages to the people. However, some IT specialists believe that the digital divide could be a vanishing story from Bharat. But, this paper clearly highlights the issues of the technology detach in rural India. Accessorial to the present, the paper disclosed that the issues of the technology detach conjointly exist among and among the varied States of Bharat. The shortage of sound ICT ways and policies in India is that the main explanation for these troubles. Accessorial to the present, Inadequate web and phone connectivity to India's rural areas, wherever over seventy percent of India's population lives, could be a key challenge for a variety of state agencies, NGOs (non-government organizations), and quadripartite aid agencies. Therefore, obstacles like lake of education and proper skills, and infrastructures in rural areas should be tackled if Bharat is to diminish the gap of the technology detachment. There's conjointly a necessity to strengthen the capabilities of native communities and organizations to form, communicate and exchange their information, through the utilization of it. As so much because the way forward for the digital divide cares in India, it's extremely terribly tough to predict it. But, it's true that this scenario in Bharat isn't fearsome (if not extremely satisfactory). The gap of the digital divide is obtaining narrower. It's expected the govt policies and public-private partnership can facilitate in traverse the technology detachment. But, it's impracticable to fully bridge the gap of the technology detach in India, as gender, age; culture, language, sex, etc. are all basic parts that usually have an effect on regular daily life and together with the virtual world. Though Bharat has created encouraging efforts to bridge the gap by initiating a variety of projects and programs for rural and remote locations, loads a lot of needs to be done to bring the folks into the knowledge society. All that's needed is robust determination among individuals, smart policymakers and political support to bridge the digital divide.

## References

- [1]. Barziliani, Nohan and Barziliani, G. (2005) "Cultured Technology: The Internet and Religious Fundamentalism", The Information Society, Vol. 21, No.1, pp 25-40.
- [2]. Bickner, Carrie. (2001). *Down by Law*. <http://www.alistapart.com/articles/downbylaw/> (Accessed on 25/04/2019).
- [3]. Branko Milanovic (2005) *Worlds Apart: Measuring International & Global Inequality* Princeton University Press: Princeton.
- [4]. Dean, Parham (2002) "Productivity Gains: Importance of ICTs", Agenda, Vol. 9, No. 3, pp 195-210.

- [5]. Dubey, P (2010). Studies to examine the Digital Divide factors: Jammu and Kashmir perspective, BVICAM's International journal of information technology, 2010, New Delhi.
- [6]. ESCAP (2019). Online Statistical Database based on data from the ITU, last updated on 11 March 2019. Available from [http://data.unescap.org/escap\\_stat/](http://data.unescap.org/escap_stat/) (Accessed 25 April 2019).
- [7]. Fletcher, Ameila; Simon, Gaysford and Adele (2000) "OFT Study on E-Commerce and Competition", <http://www.out-law.com/page-954> (Accessed on 24/04/2019).
- [8]. Gordon, R. (2002) "Does the 'New Economy' Measure up to the Great Inventions of the Past?" Journal of Economic Perspective, Vol. 14, No. 4, pp 49-74.
- [9]. Hanimann, Thomas and Ruedin, Etienne (2007) Digitale Gräben oder Digitale Brücken? Chancen und Risiken für Schwellenländer, <http://eprints.rclis.org/11455/> (Accessed on 25/04/2019).
- [10]. Hooker, N. H; J. Heilig and S. Ernst (2001). "What is Unique about E-Agribusiness?" IAMA World Food and Agribusiness, Symposium, Sydney: Australia, June.
- [11]. ICUBE. Kantar IMRB Report (2018): "Digital adoption and usage trends", 21st edition published on March 6<sup>th</sup> 2019. [https://imrbint.com/images/common/ICUBE%E2%84%A2\\_2019\\_Highlights.pdf](https://imrbint.com/images/common/ICUBE%E2%84%A2_2019_Highlights.pdf) (Accessed on 06/05/2019).
- [12]. Jeusus, M., Frias (2003). "The Importance of ICTs for Developing Countries", Interdisciplinary Science Review, Vol. 28, No. 1, pp 10-14.
- [13]. Krishna Prasada Rao.MSR (2018). "A Study on E-Governance in India: Problems and Prospectus", International Journal of Management, IT & Engineering Vol.8 Issue 6, June 2018, ISSN: 2249-0558, [http://www.ijmra.us/project%20doc/2018/IJMIE\\_JUNE2018/IJMRA-13958.pdf](http://www.ijmra.us/project%20doc/2018/IJMIE_JUNE2018/IJMRA-13958.pdf) (Accessed on 05/05/2019).
- [14]. Lor and Peter Johan (2003). National Libraries And The Digital Divide. <http://www.nla.gov.au/initiatives/meetings/cdnl/2003/09digdiv.pdf> (Accessed on 25/05/2019).
- [15]. Lor, p.j, (2002). National libraries and the digital divide Introduction to the panel discussion, p.3. [www.lianza.org.nz](http://www.lianza.org.nz) (Accessed on 25/05/2019).
- [16]. Mark Warschauer (2003) Excellent Technology and Social Inclusion: Rethinking the Digital Divide, MIT Press: Cambridge.
- [17]. Massimo Ragnedda (2018). "Conceptualizing Digital Capital", Telematics and Informatics 35(2018) 2366-2375, available at [www.elsevier.com/locate/tele](http://www.elsevier.com/locate/tele) , <https://doi.org/10.1016/j.tele.2018.10.006> (Accessed on 27/06/2019).
- [18]. Motohashi, K. (2001). *Economic Analysis of Information Network Use: Organizational and Productivity Impact on Japanese Firms*, Research and Statistics Department, METI Tokyo: Japan. 22-23
- [19]. Naranjo-Zolotov, M, Oliviera.T, Frederico Cruz-Zesus, NunuXavier (2019). "Examining Social Capital and individual motivators to explain the adoption of online citizen participation". Future Generation Computer Systems, 92 (2019) 302-311, available at [www.elsevier.com/locate/fgcs](http://www.elsevier.com/locate/fgcs) , <https://doi.org/10.1016/j.future.2018.09.044> (Accessed on 27/06/2019).
- [20]. Norris' (2001) The Digital Divide: Civic Engagement, Information Poverty & the Internet Worldwide: Cambridge Uni Press: Cambridge.
- [21]. OECD (2001) 'Understanding the Digital Divide', OECD, Paris.
- [22]. Osama Manzar (2017). 'A 15-year journey to bridge the digital divide' author is a founder and director of "Digital Empowerment Foundation", expressed his opinion on live Mint in Opinion section, first published on 16 Dec 2017: <https://www.livemint.com/Opinion/OvWHIB3AZmLx0k2ohkJA/CL/A-15year-journey-to-bridge-the-digital-divide.html> (Accessed on 01/07/2019).
- [23]. Paul, J. (2002). Narrowing the digital divide: initiatives undertaken by the Association of South-East Asian Nations (ASEAN). *Program: electronic library and information systems* 36(1): 13-22.
- [24]. Quiyan Fan (2018). A Longitudinal Evaluation of E-Government at the Local Level in Greater Western Sydney (GWS) Australia, International Journal of Public Administration, 41:1, 13-21, available at <https://doi.org/10.1080/01900692.2016.1242621> 9 (Accessed on 03/07/2019)
- [25]. Rao, M. (2000). 'Struggling with the digital divide: Internet Infrastructure, content and culture'. Is a progressive Internet environment enough to close the gap between north and south? E-OTI: On the Internet (October), available at: [www.isoc.org/oti/printversions/1000rao.html](http://www.isoc.org/oti/printversions/1000rao.html) (Accessed on 04/07/2019).
- [26]. Ricci, A. (2000) Measuring information society dynamics of European data on usage of information and communication technologies in Europe since 1995. *Telematics and Informatics*, 17, 141-67.
- [27]. Singh, Sumanjeet. (2010). Digital Divide in India: Measurement, Determinants and Policy for Addressing the Challenges in Bridging the Digital Divide.. IJIDE. . 1. 1-24. 10.4018/ijide.2010040101.
- [28]. Sumanjeet (2008). "Impact of E-Commerce on Economic Models: Little to Lose; More to Gain", International Journal of Trade and Global Markets, Vol. 1, No. 3, pp 319-337.
- [29]. Telecomlead (2019). *India telecom performance in April 2019: TRAI*. In Telecom Statistics published in 30<sup>th</sup> April 2019, <https://www.telecomlead.com/telecom-statistics/india-telecom-performance-in-april-2019-tra-90920> (Accessed on 04/07/2019).
- [30]. United Nations (2006) *Encyclopedia Britannica*, Available at <http://search.eb.com/eb/article-250455> (Accessed on 15/07/2019).
- [31]. World Bank (1996). *Effects of Globalization on Developing Countries*. World Bank Publications. p. 30. ISBN 9780821332856.