SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

# A SOCIOLOGICAL STUDY ON DIGITAL DIVIDE: A COMPARATIVE ANALYSIS BETWEEN SELECTED URBAN AND RURAL AREAS IN TAMIL NADU, INDIA

**Dr. S.T. Akilan**
*Assistant Professor, Department of Sociology, University of Madras, Chepauk, Chennai-5, Tamil Nadu, India.*

**Article DOI:** https://doi.org/10.36713/epra24414
**DOI No: 10.36713/epra24414**

**ABSTRACT**

*Digital technology is instrumental in driving social transformations in areas such as the economy, politics, culture, and religion. An attempt was made in this present study to analyse the ground reality of Rural and Urban areas in the field of digitalization and digital practices in Tamilnadu, India. It is necessary to promote digitalized practices in Urban areas since its deliberately intertwined with business or economic activities. Apart from such factors the educational, political and legal aspects are seeking the direct interventions with digital world. In contrast the digitalization has been still growing and yet to be improved in rural areas according to its need. The study is based on qualitative in nature by employing the tools such as interviews schedule, case studies, and participant observation and hence, seeking the comparative analysis between a selected Urban area of Chennai region and a selected rural area in the outskirts of Chenni. India has been part of the digital society since the beginning of the 21st century with the introduction of the Internet and information and communication technology. People's every move and behavior in a digital society are calculated and recorded as data. In this global context of a digital society, India has created opportunities for digitalization for its people since 2000, with significant strides made between 2015 and 2016. Reliance Jio, a telecom company, helped to accelerate this process by offering free unlimited Internet packages on a mass scale. This led to a tremendous surge in service industries and the emergence of new sectors, as well as a digital revolution in the conventional systems of the economy, politics, culture, education, religion, and law. However, this transformation has also exposed a significant challenge namely the digital divide or digital inequalities. The study revealed that the prevailing socio-economic divide is the source of its wide digital divide. This digital divide exists across both rural and urban areas, affecting access to digital education and economic opportunities. The digital divide is also found between under-resourced urban areas and affluent residential areas. This comparative study exclusively brings out the equality and inequality aspects in both rural and urban polarities with respect to the digitalization.*

**KEY WORDS:** *Digital Divide, Transformation, Technology, Rural-Urban Differences, Socio-Economic Changes.*

## INTRODUCTION

Digital divide is a term that refers to the gap between demographics and regions that have access to modern information and communications technology, and those that don't or have restricted access. The term describes a gap in terms of access to and usage of information and communication technology. The digital divide can exist between those living in rural areas and those living in urban areas, between the educated and uneducated, between economic classes, and on a global scale between more and less industrially developed nations. Instead of focusing on defining the digital society as a separate physical entity, it may be more useful to revisit Castell's (2010) concept of the network society. He elaborated on how the emergence of a new technology or technological paradigm, based on the development of information and communication technology, has transformed the world since 1970 and diffused unevenly across various regions of the world. Technology does not determine society; rather, it is a society that determines technology. This indicates that technology is regulated by the values, norms, and needs of people within society, as stated by Castells (2010). In this context, it can be argued that the digital divide cannot be understood in isolation but rather in relation to the global socioeconomic divide. India has been part of the digital society since the beginning of the 21st century with the introduction of the Internet and information and communication technology.

According to Internet Society Foundation 2023, Two-thirds of the world's population uses the Internet, but 2.7 billion people remain offline. This means that one in three people cannot benefit from the economic, educational, political, social and health potential of being connected.

There are many questions being risen between digital divide and nature of Society. Does society determine the digital divide? The answer to this question is yes, because the prevailing socioeconomic divide (Marxian View) is the root cause of the digital divide in any society.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

## THE DIGITAL DIVIDE IN RURAL PERSPECTIVE

### Infrastructure Gaps

One of the primary factors contributing to the digital divide in rural India is the lack of infrastructure. Reliable access to electricity and internet connectivity remains a significant challenge in many rural areas, preventing residents from using digital tools. According to a report by the Telecom Regulatory Authority of India (TRAI, 2021), only about 35% of rural households in India have access to the internet, compared to over 70% in urban areas. This gap is particularly pronounced in states with lower levels of economic development, such as Bihar, Odisha, and Uttar Pradesh.

The quality and speed of connections in rural areas are often inadequate for accessing services such as online education, telemedicine, and e-commerce. In many cases, rural residents must rely on 2G or 3G networks, which limit their ability to be fully participated in the digital economy.

### Affordability and Access to Devices

Affordability is another significant factor that contributes to the digital divide. Many rural households in India are unable to afford the devices needed to access the internet, such as smartphones, tablets, or computers. The cost of data services, while relatively low compared to global standards, remains prohibitive for low-income families in rural areas. The Indian government's Digital India initiative, launched in 2015, has aimed to address these challenges by promoting affordable internet access and digital infrastructure development. However, the benefits of these programs have been unevenly distributed, with rural areas continuing to face significant barriers to digital access.

NFHS (National Family Health Survey) data shows a concerning trend – men are nearly twice as likely as women to use the internet (49% vs 25%). Social norms and limited access to digital resources further restrict women's participation in the digital world, hindering their access to education, healthcare, and online employment opportunities. This gender disparity reflects broader socio-economic inequalities and cultural norms that restrict women's access to technology and education.

### Healthcare

Access to healthcare services in rural India is often limited by geographic isolation, a shortage of healthcare professionals, and inadequate infrastructure. ICT has the potential to address these challenges by enabling telemedicine and mobile health services that connect rural patients with healthcare providers in urban areas.

### Digital Access in Urban Perspective:

Today's urban and rural scenarios in India highlight significant disparities in infrastructure and basic services. While larger cities offer luxurious amenities and numerous job opportunities, rural areas face challenges in overcoming poverty and lacking essential services. This situation underscores the need for balanced development to bridge the gap and promote more equitable growth across the nation.

### Statement of the Problem

The present study has made an attempt to assess the level of digital divide in rural and urban communities of India. In the Indian context, the digital divide is critical issue though our society has been technologically advanced and developed multiple stages. Such a growth has exemplary Sociological implications among haves and have-nots. By socializing and adopting new digital applications and ICTs of members of Urban community enhance its growth rate enormously. In contrast, even in certain portions of urban or major areas of rural communities has less impact with digital applications and ICTs. This is a sign of digital divide.

India is a diverse country with a vast population and access to technology the internet varies widely across different regions, socio-economic classes and demographics. Urban areas have wide access to high-speed internet and digital technologies, but rural areas face significant challenges. Many people in these areas lack basic digital infrastructure that making it hard to study online courses, find jobs or use critical services. This imbalance contribute inequality in society.

### A Stark Urban-Rural Divide and its Ripple Effects

India faces a major challenge in its digitalization journey – the unequal distribution of digital access. NSSO (National Sample Survey Office) data reveals a staggering disparity: only 24% of rural households have internet access, compared to 66% in cities. This lack of infrastructure and awareness in rural areas creates a ripple effect, limiting access to quality education, employment opportunities, and economic growth.

The social distance between the urban and the rural population in India also widens the gender bifurcation. With more education, employment, and access to healthcare facilities, urban women enjoy better prospects than rural women who are locked into traditional roles that offer limited opportunities and poor support; this aggravates gender inequalities and restricts gender mainstreaming across the nation.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

**Types of Research**
A Comparative analysis was used to study the Digital divide between rural and urban communities.
**Objectives of the Study**
The following objectives were employed for the study:
To anayze the Socio-economic inequalities through the lens of digital and ICT accessibilities between the respondents of selected rural and Urban areas
To evaluate the Geographic and demographic variables associated with digital divide in the study areas
To Study the level of benefits by accessing the Digital platforms of rural and urban respondents in the research field.

**Demographic Profile of the study areas**
From the city of Chennai, Anna Nagar was chosen since it's a hub of ICT in Chennai region. Anna Nagar falls in Chennai district situated in Tamil Nadu state, with a population 167257. The male and female population are 87128 and 80121 respectively. Putlur is one of the villages of Tiruvallur District of Tamil Nadu. Putlur is a large village located in Thiruvallur Taluk of Thiruvallur district, Tamil Nadu with total 1472 families residing. The Putlur village has population of 6047 of which 3088 are males while 2959 are females as per Population Census 2011. In Putlur village population of children with age 0-6 is 629 which makes up 10.40 % of total population of village. Average Sex Ratio of Putlur village is 958 which is lower than Tamil Nadu state average of 996. Child Sex Ratio for the Putlur as per census is 918, lower than Tamil Nadu average of 943.

## RESEARCH METHODOLOGY

**Sampling**
Since, the study has been connected with Information and Communication Technology, a developed urban area namely Anna Nagar was chosen in contrast, one of the villages namely Putlur was chosen based on its Socio-economic and demographic profile. The sample frame namely, general public, agrarian population, male and female population, business men, students, Government and private sector employees were the portion of sample frame. Regarding Sample size, 100 from each community (Urban:100 and Rural:100) were randomly chosen for the study.

**Sources and Tools of Data Collection**
Both primary and secondary sources were used. Related literature from books, Articles, Journals were used for collecting secondary data. A case study comprising interview schedule with closed ended questions were used as primary source to collect the data from the field.

**Data Analysis**
Simple frequency tables after processed with SSPS was used for the purpose of analysis of collected data.

**Limitations**
Within Anna Nagar zone (urban) and Putlur revenue village (rural) were used for the study purpose.
Questions covered: the following questions were mainly featured in the interview schedule:

1. Does demographic structure decide the technological interventions both in Urban and Rural communities?
2. Does economic structure decide the ICT?
3. Does technological inequality lead to knowledge gap?
4. Accessing ICT of both (Rural and Urban) communities directly proportional to educational growth/ e-marketing and rural / urban development?
5. Does material growth promote civilization (LPG)? Urban (becomes Over urbanization) Rural community yet to be grown.
6. Are geographical conditions drawing the social status, norms, etc. irrespective of rural and urban communities?

## DATA ANALYSIS AND INTERPRETATION

| Sl No. | Particulars | Urban | Total No. of Respondents | Rural | Total No. of Respondents |
|---|---|---|---|---|---|
| 1. | Usage of Internet | 92 (92%) | 100 | 48 (48%) | 100 |
| 2. | Entertaining Apps visited | 77 (77%) | 100 | 39 (39%) | 100 |
| 3. | Apps used food for delivery | 61(61%) | 100 | 12 (12%) | 100 |
| 4. | Telemedicine | 43 (43%) | 100 | 6 (6%) | 100 |
| 5. | E. Commerce | 62 (62%) | 100 | 14 (14%) | 100 |
| 6. | Learning purpose | 64 (64%) | 100 | 36 (36%) | 100 |
| 7. | Social media | 92 (92%) | 100 | 42 (42%) | 100 |
| 8. | Online Ticket booking | 68 (68%) | 100 | 18 (18%) | 100 |

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

| | | | | | |
|---|---|---|---|---|---|
| 9. | Subscribing News | 54 (54%) | 100 | 23 (23%) | 100 |
| 10. | Political awareness through internet Access | 88 (88%) | 100 | 43 (43%) | 100 |
| 11. | Competency level improved while using online portals | Yes 79 (79 %) | 100 | 26 (26%) | 100 |
| 12. | Self confidence level improved | Yes 82 (82 %) | 100 | 34 (34%) | 100 |

From the above group / list of tables it's clear that how Urban community has developed and having varied contrast with rural community. Out of total Number of respondents from the study area, 92% of the respondents of Urban community have access of internet but a mere number (48%) of the respondents from rural community has internet usage in their rural community. Majority 77 % of the urban respondents are using entertaining apps such as Face book, Whatsapp, twitter, Chatgpt etc. and only 39% of the rural people has awareness of very limited Apps such as Whatsapp and Facebook only; Telemedicine have been accessed by 43% and only 6% of the rural population were aware of telemedicine; majority, 61% of the urbanites use Apps for food delivery such as Swiggy, Zomato and Foodie Apps; Majority 64% of the internet users get benefited by Learning portals and used for educational purposes, but in rural 36% of the respondents get benefited by e-learning or educational purposes. 92% and 42% use Social media in urban and rural communities respectively. Regarding Online ticket booking, 68% of the urban respondents and only 18% of the rural respondents avail and utilize them. The respondents in Urban community (54%) and rural communities (23%) of them subscribe news apps; 88% of the respondents use internet facilities and telecommunications for political awareness such as enlightening the knowledge regarding the details of contestants of constitutions (election related knowledge among local population) in urban areas but in rural only 43% of the respondents receive the election related knowledge; its mandatory to know the Psychological attributes in study area, hence its clear that 79% of the urbanites have high Competency level and in contrast only 26% of the rural citizens have low competency level while accessing the ICT in their circle. Finally, there was an attempt to know their confidence level comparatively both in urban and in rural communities, therefore, 82% of the urbanites have enormous self confidence and just 34% of the rural inhabitants have poor self confidence level out of respective population. Altogether, the study delineates high level polarity between Urban and rural communities with respect to the internet usage and digital knowledge. The following inference were made as per the field survey from study area.

## RESULTS AND DISCUSSIONS AS PER PRIMARY DATA

### Series of Impacts

In general, the effect of technological inequality is leading to create **knowledge gap.** For individuals without accessing the technology, the information gap is increasing. The knowledge gap affects education and their skill development in India. Digitally disadvantages students do not get access to crucial educational tools. As the job market increasingly demands digital skills, those without access to technology may have trouble finding work and advancing in their careers.

**Rural-Urban Divide**: one of the most prominent aspects of the digital divide in India is the rural-urban disparity. While urban communities boast relatively better internet connectivity, rural regions often struggle with limited access and connectivity issues. This divide hampers rural development, access to education and economic opportunities.

**Socioeconomic Inequalities:** India's socioeconomic disparities contribute significantly to the digital divide. Affluent individuals and families in urban areas have easy access to the latest technology, high speed internet and digital devices. In contrast, the less privileged sections of society, particularly in rural areas, face hurdles in acquiring even basic tools. Rural citizens may face limited access to government services, reduced participation in democratic processes, and fewer opportunities for economic development through digital channels (Kumar et al., 2019)

### Causes of Digital Inequities

Apart from the filed survey taken for the present study, the following list is not exhaustive and draws on various sources, including studies by the International Telecommunications Union (2020), United Nations (2019), Robinson et al. (2015) and DiMaggio et al. (2004) that have explored barriers to digital equity.

**Income**: Technology use rates increase with higher family income levels, as affordability can be a barrier for low-income individuals and families. Both within and across countries, lower incomes correlate with lower rates of Internet use.

**Region and place of residence**: Disparities in digital access exist between urban and rural areas or regions where infrastructure and connectivity may be limited in specific locations. As of 2022, 82% of people living in urban areas across the world are using the Internet, which is 1.8 times higher than the percentage of Internet users in rural areas.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

**Employment Status**: Employed individuals may have better access to digital technologies and resources than those who are unemployed or underemployed. In addition, digitally disadvantaged workers and entrepreneurs face barriers to full participation in the economy that their more digitally advantaged peers do not confront.

**Education**: In 40% of countries reporting data, less than 40% of individuals reported being able to carry out a digital activity considered a "basic" information communication technology (ICT) skill.

**Digital divide across the country:** India, which has been appreciated globally for providing IT services, faces a huge digital divide, having a relatively low percentage of population with access to the Internet. In 2020, it had only about 42 people per 100 using the Internet (World Bank Data 2022).

## GENERAL DISCUSSION (COMBINING PRIMARY AND SECONDARY DATA)

**Indian Scenario**

North-South, East-West divide: Southern states are more digitally literate that Northern counterpart. This is consistent with their traditional literacy also. For example Digital divide is least or meagre in Kerala while greater in West Bengal.

**Rural- Urban Divide:** While urban areas are more digitally literate, rural counterparts are lacking in the respective states. In general, the states which are more urbanised digitally literate and vice versa. About 70% of over one billion Indians live in rural areas, and only about 40 million have Internet access.

**Linguistic Divide:** More than 80% of the content on the Internet is in English, so, where the people are more competent in English are more digitally efficient.

In addition, the people with higher levels of education are often associated with higher rates of Internet usage and digital skills. Limited educational opportunities can hinder access to the technology and digital literacy.

**Gender Disparity:** Gender-based inequality is another critical dimension of the digital divide in India. Women, particularly in rural areas, often have limited access to the internet due to social and cultural norms. Additionally, they do have lack confidence in using digital technology.

**Educational Accessibility:** Education is a vital factor in bringing the digital divide. Those with access to quality education and digital resources are better equipped to navigate the digital landscape. However, a considerable portion of the population, especially in remote and disadvantaged areas, lacks access to proper education and digital learning resources.

**Infrastructure Gaps:** The vast geographical expanse of India presents challenges in extending digital infrastructure to remote areas. Building and maintaining the necessary infrastructure can be costly and logically complex.

**Digital Illiteracy:** Digital illiteracy remains a significant challenge, especially in rural areas. Bridging the divide requires providing access and ensuring people have the skills to use technology.

**Affordability:** the cost of digital devices can be a barrier for many. Smartphones and computers are often beyond the reach of economically disadvantaged populations.

## SOCIOLOGICAL IMPACTS OF BRIDGING THE DIGITAL DIVIDE IN INDIA

Efforts to bridge the digital divide in India have sociological implications that extend beyond mere access to technology. **Some critical social impacts as follows:**

**Economic Empowerment**: increased access to technology and the internet can empower individuals and communities economically. It opens doors to online job opportunities, e-commerce and entrepreneurships reducing economic disparities.

**Education and Knowledge**: Bridging the digital divide enhances access to education and knowledge. Students can access online educational resources even in the country's remotest corners.

**Social Inclusion**: Digital inclusion facilitates social inclusion by connecting marginalized communities with the rest of the world. It can help raise awareness about social issues and connect people from diverse backgrounds.

**Health Care Access**: Telemedicine and health-related apps can provide healthcare services to underserved areas. Access to health information and services improves overall public health.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

**Women Empowerment**: Effort to bridge the digital divide often include programmes to empower women with digital literacy. This in turn can contribute to reducing gender disparities and promoting women's participation in the workforce.
The digitalization of life has undoubtedly upgraded the standard of living,

**Bridging the Digital Divide**
Bridging the digital divide is beneficial for businesses because the marketplace is online, and, in this case, having more online customers is profitable (Riggins and Dewan, 2005). There are three levels of analysis of the policy and managerial implications of the digital divide (Riggins and Dewan, 2005, p. 300). Individual level: At the individual level, the "digital divide" refers to a lack of access to IT due to technological, sociological, and economic disadvantages. The gap exists between individuals who have access to IT as an integral part of their lives and those who do not. Access to technology also varies across geographical areas. For instance, rural areas have poor access to the Internet (Riggins and Dewan, 2005, p. 300).

Organizational level: At the organizational level, the "digital divide" refers to the disparity in digital management among industry organizations. Global level: At the global level, the "digital divide" refers to the inequality in investment and policies for both corporate and individual adoption of ICT among different countries (Riggins and Dewan, 2005, p. 300).

The analysis of the digital divide at these three levels considers two types of effects: first-order effects, which relate to inequalities in access to ICT, and second-order effects, which relate to inequalities in the ability to effectively utilize ICT, among those who already have access (Riggins and Dewan, 2005, p. 300). The digital divide refers to the gap between individuals, households, businesses, and geographic areas at different socioeconomic levels regarding opportunities to access information and communication technologies (ICTs) and their use of the Internet for a wide variety of activities. However, access to telecommunications is a precondition for the access and use of the Internet (OECD India, 2021, p. 5).

## CONCLUSION
By reducing the digital divide among individuals or among communities, everyone will have equal access to information, education, job opportunities, healthcare services, and civic engagement platforms. This fosters inclusivity, promotes social and economic justice, and helps individuals thrive in a technology-driven society. Without digital equity, marginalized communities may be left behind, worsening existing disparities and hindering social progress.

Access to technology and the internet is not merely convenient; it has profound societal consequences. The digital divide increases social disparities, making it critical issue for policy makers and society. Efforts to bridge the digital divide in India, such as the digital India program, BharatNet and initiatives by private organizations have made substantial progress. These initiatives provide access and empower individuals and communities particularly in rural and disadvantaged areas. To address the gender digital divide in rural India, Google in partnership with Tata Trusts, initiated the "**Internet Saarathi**" program. This program trains women in rural areas to become digital trainers and empowers them with digital skills.

As India moves further into the digital age, it is essential to assess and address the Sociological aspects of internet usage continually. This includes ensuring equitable access, promoting digital literacy and encouraging an inclusive digital environment. By doing so, India can harness the internet's full potential to improve education, healthcare, employment opportunities and Social inclusion ultimately creating a more equitable and connected society.

Noting that digital literacy is an important force for good governance and transparency, India has tried to bridge the digital divide gap by enacting some programmes like Digital India, efforts to make India a cashless economy, Pradhan Mantri Grameen Digital Saksharta Abhiyan (PMGDISHA) aimed at spreading digital literacy among the rural population. Govt in states are trying to address these issues through various schemes in conjugation with Central govt's Digital India programme and PMDISHA. Multi-pronged approach (spreading across various ministries and departments) is needed to address these issues.

## SUGGESTIONS
Telemedicine platforms, such as eSanjeevani, have been used to deliver healthcare services to remote rural communities, allowing patients to consult with doctors via video calls. These platforms can help reduce the need for rural residents to travel long distances to access medical care, improving healthcare outcomes and reducing healthcare costs.

Additionally, mobile health applications can be used to disseminate health information, track disease outbreaks, and provide remote monitoring of chronic conditions. For example, the mHealth initiative by the Ministry of Health and Family Welfare has been used to improve maternal and child health services in rural areas by providing mobile-based reminders for vaccinations and antenatal check-ups.

SJIF Impact Factor (2025): 8.688| ISI I.F. Value: 1.241| Journal DOI: 10.36713/epra2016 ISSN: 2455-7838(Online)
EPRA International Journal of Research and Development (IJRD)
Volume: 10 | Issue: 10 | October 2025 - Peer Reviewed Journal

ICT also plays a critical role in promoting economic development in rural India by providing access to financial services, markets, and e-commerce platforms. Digital payment systems, such as Unified Payments Interface (UPI) and mobile banking apps, have expanded financial inclusion by enabling rural residents to conduct transactions, access credit, and save money without the need for a traditional bank account.

E-commerce platforms, such as Amazon India and Flipkart, have begun targeting rural consumers by offering delivery services to remote areas and partnering with local sellers to expand their market reach. These platforms provide rural entrepreneurs with access to new markets, enabling them to sell their products online and increase their income.

Additionally, ICT can support rural development by promoting smart agriculture, where farmers use digital tools to access weather forecasts, market prices, and agricultural best practices. Initiatives such as e-NAM (National Agriculture Market) provide a digital marketplace where farmers can sell their produce directly to buyers, bypassing traditional middlemen and improving their profit margins.

- Taking initiation to expand Digital Infrastructure
- Need to be enhanced Digital Literacy
- MoUs needed (with corporate companies) to Promote affordable access (affordability to buy) to Devices
- Tie up with NGOs

## REFERENCE

1. *Adorno, T. W., and Horkheimer, M. (1944). Dialectic of Enlightenment: Philosophical Fragments. New York, NY: Social Studies Association, Inc.*
2. *Banholzer, V. M. (2022). From Industry 4.0 to Society 5.0 and Industry 5.0: Value- andMission-Oriented Policies: Technological and Social Innovations-Aspects of Systemic Transformation. IKOM WP Vol. 3, No. 2/2022.*
3. *Castells, M. (2005). "The network society: from knowledge to policy," in The Network Society: From Knowledge to Policy, eds M. Castells, and G. Cardoso (Washington, DC: Johns Hopkins Center for Transatlantic Relations).doi: 10.4337/9781845421663*
4. *Castells, M. (2010). The Rise of the Network Society. London: Blackwell Publishing Ltd.*
5. *Census India (2011). Circular-26 Posts of Stenographer Grade-I on Deputation. New Delhi: Census India. Available online at: https://censusindia.gov.in/census.website/ (accessed December 25, 2022).*
6. *GSMA. (2020). The Mobile Gender Gap Report 2020. GSMA.*
7. *Ministry of Health and Family Welfare. (2020). mHealth Initiative for Rural Health Improvement. Government of India.*
8. *Nurnberg: Technische Hochschule Nurnberg Georg Simon Ohm.*
9. *OECD India (2021). Economic Policy Reforms 2021: Going for Growth. Available online at: https://www.oecd.org/economy/growth/India-country-note-going-forgrowth- 2021.pdf*
10. *Pratham. (2020). Digital Education for Rural India. Retrieved from [source].*
11. *Riggins, F. J., and Dewan, S. (2005). The digital divide: current and future research directions. J. Assoc. Inform. Syst. 6, 298–337. doi: 10.17705/1jais. 00074*
12. *Telecom Regulatory Authority of India (TRAI). (2021). Annual Report on Telecom and Internet Connectivity in India. Government of India.*