

## Analysing Digital India through the lens of gender.

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*Establishing India as a 'metapower' does not seem too distant an aim. India continues to push forward as a digitally powered and empowered nation, astonishing the world. With its position at the G20's helm and drive towards a trillion-dollar-plus digital economy, the country has its building blocks in place to be at the forefront of the next digital revolution.*

*India is home to the largest number of women anywhere in the world—an estimated 691 million. This represents 691 million opportunities for women to contribute, participate and innovate in this ever expanding and dynamic digital ethos.*

*This article will try to examine the progress made in this aspect and flagship schemes like National Digital Literacy Mission (NDLM) or Digital Saksharta Mission, efforts made by the government to bridge the gender gap, the urban-rural digital divide. In this paper we will also take stock of how India's Digital financial revolution and innovation has affected commons with a focus on gender inclusivity.*

**Keywords:** Digital India, Financial Inclusion, SDGs, Good Governance and Innovation, gender divide.

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### I. Introduction

Not only is gender equality an essential human right. It is also a corner stone of a thriving, contemporary economy that offers inclusive, sustainable growth. G20 Leaders initially committed to "women's full economic and social participation" in Los Cabos in 2012, realizing that gender equality is necessary to guarantee that men and women may contribute fully for the improvement of societies and economies at large. At the 2014 Brisbane Summit, they then established the audacious aim of reducing the gender gap in labor market participation by 25% by 2025 (known as the 25x25 objective). They also pledged to put a number of measures into place to enhance the standard of women's employment and the availability of support services. The majority of G20 nations have made progress since then, according to OECD data, but considerable work still needs to be done.

For the G20 economies in 2016, there was a about 26% difference in the labor market participation rates between men and women aged 15 to 64. These days, women have more opportunities for economic empowerment because to the digital revolution, which can also advance gender equality. By enabling women to access expertise and general information, enhance their career chances, and make additional revenue, the Internet, digital platforms, mobile phones, and digital financial services can help close the gender gap. We must take use of this chance to promote more gender parity in the workforce, accelerate economic expansion, and create a more inclusive digital society.

According to OECD (2001), the "digital divide" is the difference in how easily accessible information and communication technologies (ICTs) are to individuals, households, businesses, and geographic areas at varying socio economic levels, as well as how widely they use the Internet for various purposes

**Digital India is a flagship programme of the Government of India with a vision to Transform India into a digitally empowered society and knowledge economy.**

E-governance initiatives in India took a broader dimension in the mid 1990s for wider sectoral applications with emphasis on citizen-centric services. The major ICT initiatives of the Government included, inter alia, some major projects, such as railway computerization, land record computerisation etc., which focused mainly on the development to information systems. Later on, many states started ambitious individual e-governance projects aimed at providing electronic services to citizens.

Though these e-governance projects were citizen-centric, they could make less than the desired impact due to their limited features. The isolated and less interactive systems revealed major gaps that were thwarting the successful adoption of e-governance along the entire spectrum of governance. They clearly pointed towards the need for a more comprehensive planning and implementation for the infrastructure required to be put in

place, interoperability issues to be addressed etc., to establish a more connected government.

India wants to take use of its demographic advantage and grow its economy to be worth \$5 trillion by the year 2020. Since women make up 48% of the population in India; there has been widespread support for involving them in the process of the economy's growth. To a great extent, our country has been successful in empowering women, ensuring their active involvement in the economic growth trajectory, and attempting to guarantee that Indian women share equally in the benefits of this prosperity.

The focus of the programme is defined in terms of nine key areas, termed the “programmatic pillars”. They are summarized below (Department of Electronics and Information Technology, 2014):

(1) Building national broadband highways: Expanding the National Optic Fibre Network to provide high-speed broadband to all 2,50,000 Gram Panchayats, and developing the National Information Infrastructure: an integrated high speed and network infrastructure for ensuring connectivity to government offices from state upto Gram Panchayat level.

(2) Universal access to mobile connectivity

(3) Public Internet access programme: Setting up Common Service Centres, Internet enabled kiosks at the village level to provide access to digitalised public and private services for citizens, in all 2,50,000 Gram Panchayats of the country, under a franchisee model involving village level entrepreneurs; and converting 1,50,000 post offices across the country to digitalised multi-service centres.

(4) Reforming Government through technology

(5) E-kranti/electronic delivery of services

(6) Information for all: Strengthening online access to information and open data for citizens, and promoting online citizen engagement through the MyGov portal.

(7) Electronics Manufacturing: Ensuring net zero import so electronics by 2020.

(8) IT for Jobs

(9) Early Harvest Programmes: Initiating short term projects for digitalisation, mainly pertaining to in-house administration of government departments and establishment of Public Wi-Fi. These nine pillars are seen as jointly contributing to the realisation of three core objectives:

the provisioning of digital infrastructure as a core utility, shifting to an e-governance paradigm that guarantees services on-demand, and the digital empowerment of all citizens (“How Digital India will be realised”, n.d.).

‘Women’s empowerment’, however, features rather prominently in popular discourse and official narratives on Digital India, including public statements and speeches by the Prime Minister and members of his Cabinet. The Startup India campaign has been seen as critical for promoting women-owned MSMEs in the digital economy. For example, in his 2015 Independence Day address, the Prime Minister announced that the Start up India campaign would ensure that “the country could, in no time, have at least 125,000 startups by women and Dalits” (Varma and Anuja, 2015).

Similarly, the 2,50,000 Common Service Centres – Internet-enabled one-stop-shops that provide access to e-government services and other commercial digital services to rural communities across the country – have been celebrated for opening up opportunities for women to become digital entrepreneurs in their villages. The Union Minister of Electronics and IT, Shri Ravi Shankar Prasad, has heralded these centres as catalysts of “an information technology revolution for social change that is led by women” (Abbas, 2016) and “a digital revolution for women’s empowerment” (CSC in News, 2017).

The Pradhan Mantri Gramin Digital Saksharata Abhiyan (PMGDISHA) aims at making “six crore persons in rural areas, across States/UTs, digitally literate, reaching to around 40% of rural households by covering one member from every eligible household by 31st March 2019” (“About PMGDISHA”, nd). Though the scheme guidelines specify that “preference would be given to SC, ST, BPL, women, differently-abled persons and minorities” (Ministry of Electronics and Information Technology 2017b, pp2), they do not provide for gender-disaggregated training targets. The following section evaluates the three key outcome areas of Digital India from a gender perspective, and focus on: women’s access to the gains of connectivity, gender responsiveness of emerging e-service delivery arrangements, and the programme’s implications for women’s socio-political and economic empowerment.

Despite number of national and international initiatives, there are still obstacles to achieving women's equity and equality in the process of growth that prevent their inclusive development.

The rapid evolution of information technology and its widespread adoption is the most recent obstacle to accomplishing this goal. The World Economic Forum predicts that 60% of the world's GDP will be digital by 2022. People's lives in all aspects of life have undergone radical upheaval as a result of digital technology.

The National Digital Literacy Mission's impact assessment revealed a 23 percent gender imbalance in

the number of trainees, despite the program's preference for teaching digital literacy to a female household member. The results of the NDLM, according to this study by the Council for Social Development (2019), were divided into three categories: the overall benefit of the training, the daily application of digital devices, and the purpose of using them. Against the national average of 0.41, Maharashtra received a score of 0.39 for the total result. The research indicates that there exists a larger disparity in digital capabilities between genders, with males being more likely to use sophisticated programs and those requiring internet connectivity. This tendency is also shown in the split between rural and urban areas (Singh, 2019). In 2018, Tapashi D. Discovered different levels of the digital divide in India. A secondary database analysis uncovered a digital divide in internet usage across genders, with men using the internet at a higher rate than women and a notable difference between rural and urban areas.

For the aim of evaluating the e-Kranti initiative, the federal and state government ministries suggested handing over e-service delivery to a programme management committee. Only a small number of the total projects were selected as Mission Mode Projects, which must be completed within a given time frame. Technical considerations alone were used for the evaluation; social considerations were left out. As expected, there was no progress made in incorporating gender viewpoints into the delivery of e-services. The 2016 Draft National Policy for Women also lacks a crucial vision for using e-government as a tool for public policy to promote gender equality.

However, there are a few actions that are part of the transformative revolution; these include: Women-specific health information was provided by the Ministry of Health and Family Welfare's nutrition resource portal for Anganwadi personnel.

The Ministry of Health and Family Welfare's nutrition resource platform for Anganwadi workers, along with the Sreesakthi site of the Kudumbashree Mission in Kerala, provided women with targeted health information outreach services. The Indian government launched the "Aadhaar" digitalized citizen identification system, which creates a unique 12-digit number based on an individual's biometric and demographic information. This effort was launched with the goal of challenging venality in the provision of welfare services by building an impenetrable government-citizen interface.

The main concept was

- a) Using Aadhaar-seeding to eliminate duplication and inconsistencies in beneficiaries records for various government projects
- b) Open authentication, which allows recipients to benefit from the schemes by having their biometrics analyzed immediately on the spot and compared to their UIDAI records.
- c) Direct benefit transfers via bank accounts connected to Aadhaar will take the place of subsidies in order to completely eliminate middlemen.

Oppositely, these shifts to Aadhaar-enabled service delivery result in certain rights violations for citizens, while also raising alarming questions for women from low socioeconomic backgrounds.

i) The inability of biometric authentication and the quantity of mistakes in the recipient's Aadhaar database seeding led to the discriminatory extermination of marginalized women. The failure of e-governance technology has resulted in the loss of women's prerogative rights. It was a complete loss of women's rightful claims, whether it was for food rations, old age pensions, maternal health benefits, or earnings under the Mahatma Gandhi National Rural Employment Guarantee Scheme.

ii) The rights to social security, privacy, and dignity posed a serious threat to women. There is a combination of multiple recipient records and absenteeism from required constraints.

The goal of Digital India's economic empowerment was to create new opportunities in the digital economy for improving employment and enterprise. It was vital to "take women along" on this technologically facilitated road of growth, but the results really reveal different results.

The concept fell short of offering a compelling plan for women's economic emancipation in a labor market driven by digital efficiency. As per the National Family Health Survey (2019-21), only one in three women in India (33%) have ever used the internet, compared to more than half (57%) of men. Rural India faces an even more pronounced divide, with men twice as likely as women to have used the internet (49% vs 25%).

The goal of the Digital India Treatise was to facilitate women-owned enterprises' entry into the digital economy. The government launched Mahila e-Haat, an online digital platform that authorizes female entrepreneurs to promote their products digitally by allowing them to register for free and facilitating women's access to bank credit through MUDRA and Stand up India programs. Due to the small number of female entrepreneurs who are proficient in technology, Mahila e-Haat's impact was insufficient. What was lacking was the broader basis needed to support and encourage women entrepreneurs' digital presence, contributions, and market network expansion. Another drawback of e-Haat is that it does not support online transactions and only allows individual business owners to showcase their products. Moreover, women-specific

loan schemes are not effectively accessed.

More than 10 years ago, there were more digital gadgets, and today, mobile devices play a major role in internet access. Nevertheless, it is also noted that women are less integrated in to this digital revolution, which may prevent the intended result of inclusivity from materializing. Whether to buy a computer/laptop, tablet, notebook, or smart phone is still a household decision, and women are typically not included in the decision-making process when it comes to buying these devices, nor are they users or latent users. They are equally hesitant to use digital technology for financial transactions, such as sending money using BHIM, or for education, such as the various MOOCs offered by MHRD, or for economic opportunities, such as utilizing it for entrepreneurship through the Ministry of Women and Child Welfare's Mahilaa e-Haats. In rural areas, where it is frequently forbidden for women and girls to own personal cell phones. While the first order gender digital divide—the difference in access to digital devices—might not be as noticeable in cities, the second order gender digital divide—the difference in functionality and use—is definitely something to be

Concerned about. Women in metropolitan areas have become more reliant on social networking apps as their primary source of digital knowledge and usage. Therefore, it is likely that there is significant room for improvement in the results of digital literacy and the opportunities that come with it. The Ministry of Health & Family Welfare, in conjunction with measures of women empowerment, has for the first time gathered statistics on internet usage by men and women across the nation's states through the newly released National Family & Health Survey-5.

Furthermore, it is incorrect to assume that all women will inevitably benefit from digital dividends due to market-led connectedness. The market will not make the necessary investments to provide broadband and content services to people with little purchasing power. Currently, the Government has elected to set up public access points under a public private partnership model, under the Common Service Centres initiative. It is unclear to what extent the CSCs have aided in the development of women-friendly access areas at the community level, and this needs to be evaluated. Additionally, there are worries that public access areas established under PPP models might not be able to successfully strike a balance between social inclusion and financial sustainability.

Covid-19 brought plethora of concerns pertaining to girls' education to the fore front in India and around the world, adding gasoline to an already raging fire. UNICEF emphasizes that gender inequity in the real world is regrettably mirrored online. The UN has labeled the risks associated with the digital divide as the "New Face of Inequality" because a startling 50% of people on the planet are still offline. Additionally, UNICEF notes that the crucial gender gap in the digital sphere is mostly caused by educational inequality. Lockdowns were implemented nationwide, and the whole educational system switched to an online learning environment. This made a long list of gender disparities even more evident, one of which being that girls have less equitable access to digital devices than boys do. A strong confluence of these elements severely diminishes females' digital autonomy and empowerment. If a girl is crippled, lives in a remote or rural region, or comes from a family that is struggling financially, the situation becomes even more difficult.

### **Bridging the technological divide to promote gender parity**

In a nation as highly stratified as India, it is imperative to confront and close this glaring divide before it widens and becomes more entrenched. To support digital gender equality for females, the public, corporate, and academic sectors' efforts should concentrate on three interconnected areas: access, digital literacy, and online safety. Digital learning must change from being a barrier to girls' education to a potent facilitator that gives girls confidence.

With programs like the National Scheme of Incentive for the Girls of Secondary Education and the Balika Saridhhi Yojna, the Indian government has been in the forefront of ensuring equitable opportunity for girls. Organizations may make a big difference in education by interacting with community volunteers and utilizing the government's current investment in schools.

Building digital literacy is essential to bridging the gender gap in the digital sphere for girls and has the potential to be revolutionary. Access to digital literacy and skill-building programs is essential for girls to become independent and capable participants in the economy. Promoting gender-neutral gains in mobile phone access and internet usage across the country is essential. Although the government has launched a number of programs to promote gender equality in education, adopting a gender lens in policymaking would help combat gender bias more quickly.

The concept of education for all is also supported by the 34-partner Bharat EdTech initiative (BEI). The program is dedicated to providing all impoverished students with air and efficient access to EdTech. Since the start of on-the-ground operations in August 2021, BEI has connected 117,000 students from ten states to the EdTech platforms of their partners. More significantly, 45% of all enrolled students are girls in grades 1 through

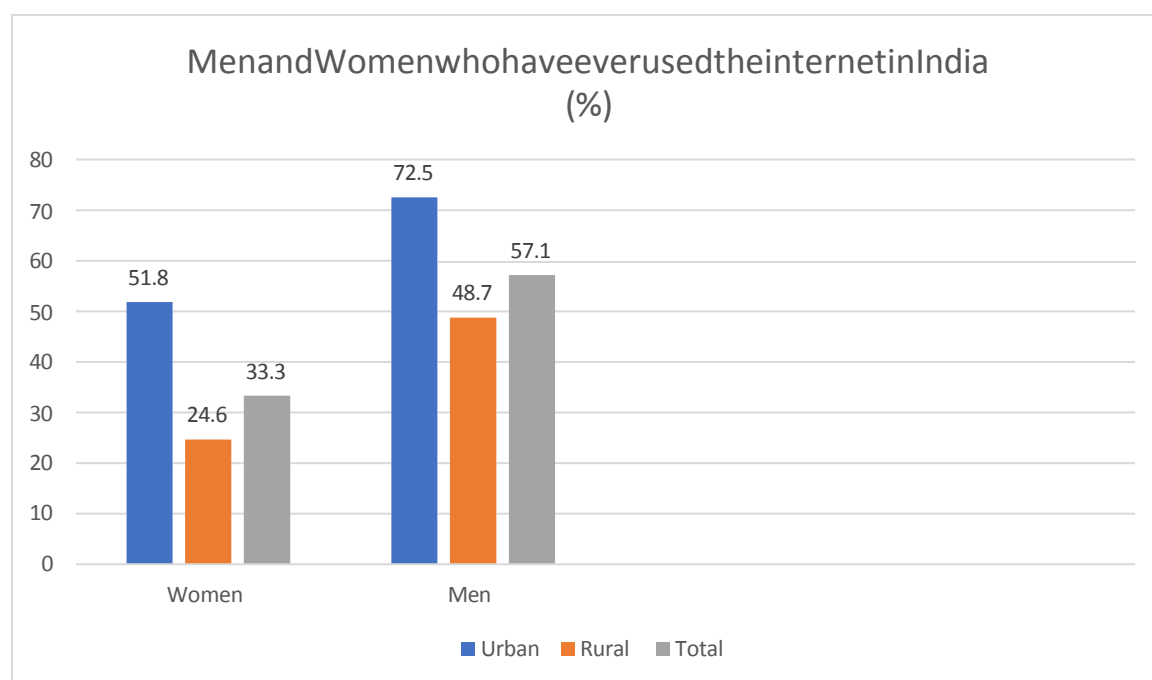
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Since the organization's founding in 2007, Educate Girls has enrolled 11,00,000 girls in order to guarantee that girls receive their right to an education. We do this by working with the government and the communities in the most remote areas of India. At the height of the digital divide, we responded to Covid by launching Camp Vidya, a community-based learning program. To make sure kids don't miss out on an education, our Team Balika volunteers ran over 5,700 of these programs integrating the government's digital learning applications in isolated areas around Rajasthan, Madhya Pradesh, and Uttar Pradesh.

Digitalization is seen by the designers of Digital India as a means of enforcing the economy's quick formalization. With the help of an open social production model and the unpaid labor of technical specialists from top software product businesses in India, a collection of open digital APIs known as "India Stack" that facilitate presence less, paperless, and cashless transactions has been created. The Indian Software Product Industry and Roundtable, or iSPIRT, is the volunteer organization driving the development of this digital infrastructure. Its mission is to "develop digital public goods without public money" in order to "save India from digital colonialization" by lowering reliance on digital firms in the global South for basic digital infrastructure (Product Nation, 2017).

Moreover, developing women's digital skills within the context of equality of opportunity and empowerment necessitates critical education in order for them to acquire new sensibilities regarding participation and citizenship. Widespread digital literacy initiatives are mired in an antiquated definition of digital skills and fail to acknowledge digital fluency as a dynamic goal. If the Mahila Shakti Kendras are geared toward providing rights-based connectivity, they can serve as hubs for revolutionary change, paving the way for digital literacy that is connected to women's pragmatic and strategic gender demands.

#### Digital Gender Divide through the lens of National Family Health Survey - 5 (2019-21)



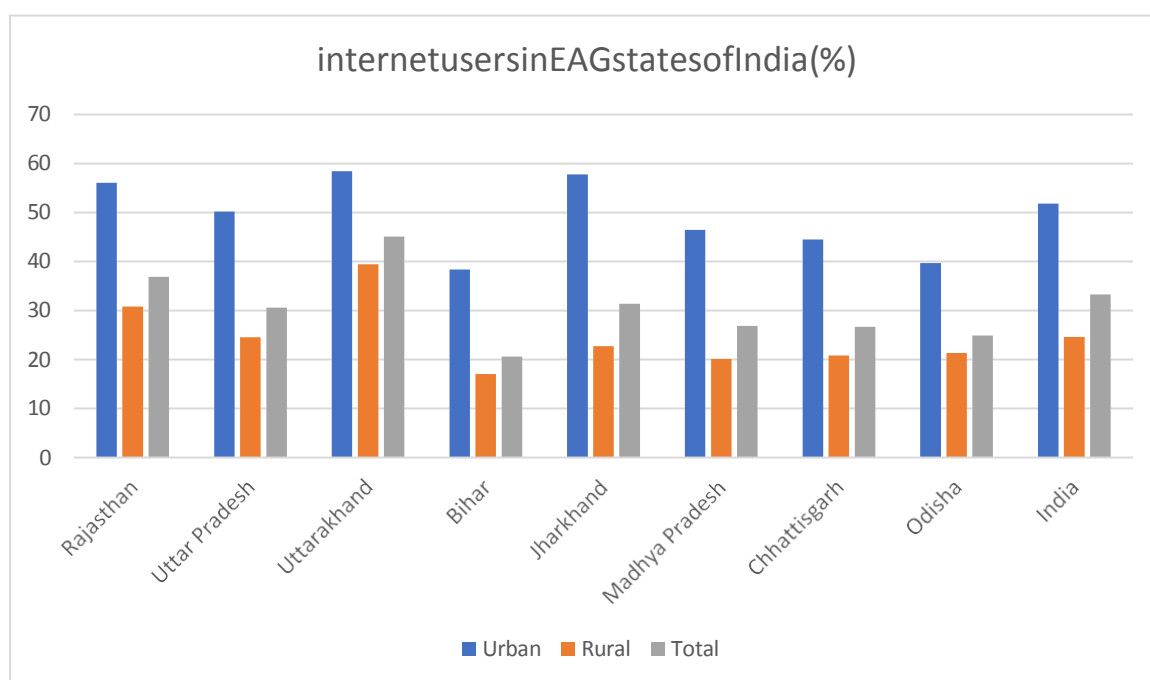
**Table 1:** Women who have ever used the internet (%) - Hilly States

State/UT	Urban	Rural	Total
Uttarakhand	58.4	39.4	45.1
Himachal Pradesh	78.9	45.2	49.7
Arunachal Pradesh	70	49.6	52.9
Manipur	50.8	40.4	44.8
Meghalaya	57.8	28.0	34.7
Mizoram	83.8	48.0	67.6
Nagaland	66.5	40.3	49.9
Sikkim	90.0	68.1	76.7

Tripura	36.6	17.7	22.9
Assam	49.0	24.4	28.2
Ladakh			
Jammu&Kashmir			
India	51.8	24.6	33.3

Table2-women who have used the internet for the first time in EAG (Empowered Action Group States) – 8 states

State/UT	Urban	Rural	Total
Rajasthan	56.1	30.8	36.9
UttarPradesh	50.2	24.5	30.6
Uttarakhand	58.4	39.4	45.1
Bihar	38.4	17.0	20.6
Jharkhand	57.8	22.7	31.4
MadhyaPradesh	46.5	20.1	26.9
Chhattisgarh	44.5	20.8	26.7
Odisha	39.7	21.3	24.9
India	51.8	24.6	33.3



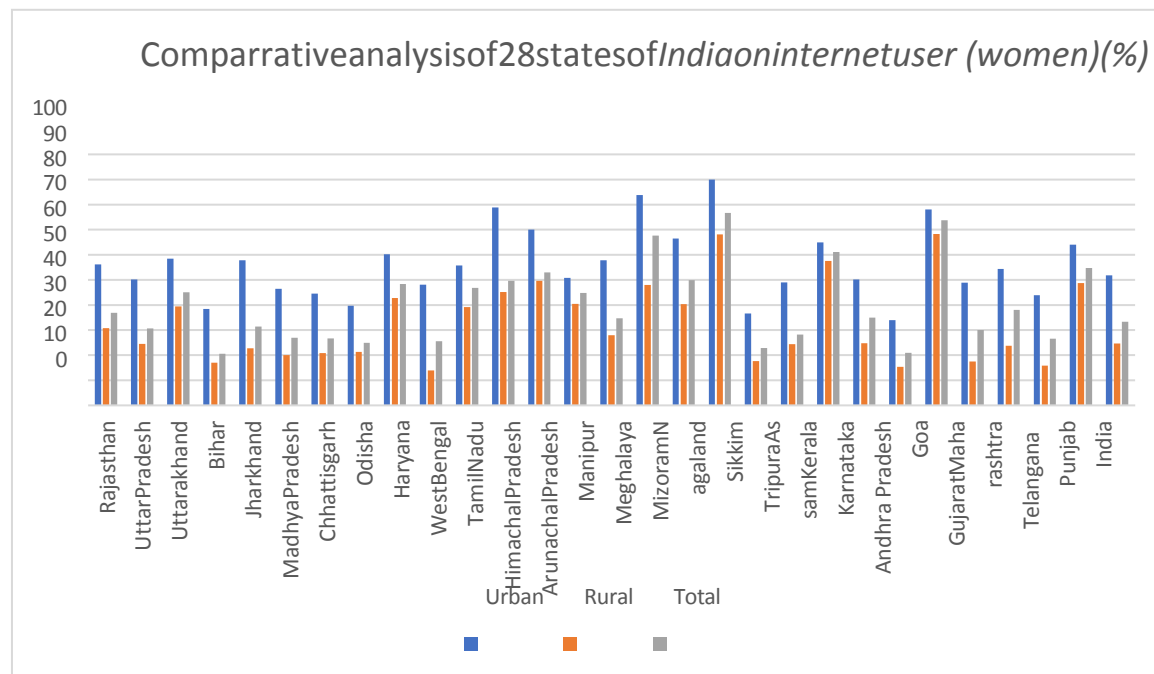
Source–NFHS–5

Table3- men and women who have used the internet for the first time in India (%) (Source– NFHS-5)

State/UT	Urban	Rural	Total	Total Men
Rajasthan	56.1	30.8	36.9	65.2
UttarPradesh	50.2	24.5	30.6	59.1
Uttarakhand	58.4	39.4	45.1	74.6
Bihar	38.4	17.0	20.6	43.6
Jharkhand	57.8	22.7	31.4	58.0
MadhyaPradesh	46.5	20.1	26.9	55.7
Chhattisgarh	44.5	20.8	26.7	71.6



Odisha	39.7	21.3	24.9	50.7
Haryana	60.2	42.8	48.4	72.4
WestBengal	48.1	14.0	25.5	46.7
TamilNadu	55.8	39.2	46.9	59.1
HimachalPradesh	78.9	45.2	49.7	67.9
ArunachalPradesh	70	49.6	52.9	71.6
Manipur	50.8	40.4	44.8	73.9
Meghalaya	57.8	28.0	34.7	42.1
Mizoram	83.8	48.0	67.6	79.7
Nagaland	66.5	40.3	49.9	64.6
Sikkim	90.0	68.1	76.7	78.2
Tripura	36.6	17.7	22.9	45.7
Assam	49.0	24.4	28.2	42.3
Kerala	64.9	57.5	61.1	76.1
Karnataka	50.1	24.8	35.0	62.4
AndhraPradesh	33.9	15.4	21.0	48.8
Goa	78.1	68.3	73.7	82.9
Gujarat	48.9	17.5	30	58.9
Maharashtra	54.3	23.7	38.0	61.5
Telangana	43.9	15.8	26.5	57.4
Punjab	64.1	48.8	54.8	78.2
India	51.8	24.6	33.3	57.1



Source–NFHS-5

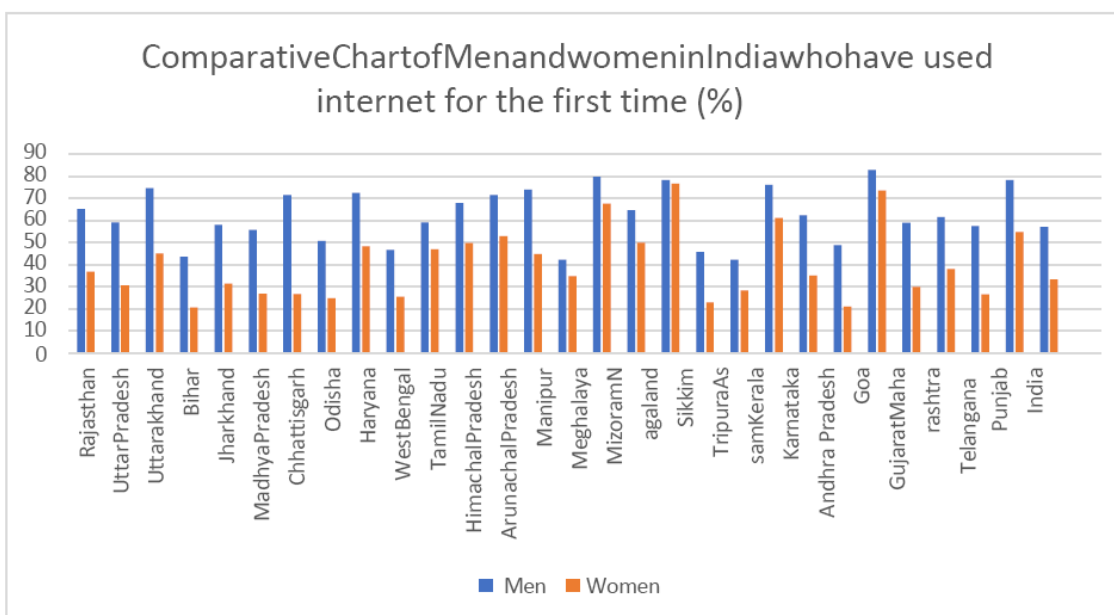


Table 4- Statewise Gender-gap with rank as per NFHS 5

States	Gender Gap	Rank
Telangana	30.9	1
Chhattisgarh	29.6	2
Uttarakhand	29.5	3
Manipur	29.1	4
Madhya Pradesh	28.8	5
Uttar Pradesh	28.5	6
Rajasthan	28.3	7
Gujarat	28.1	8
Andhra Pradesh	27.8	9
States	Gender Gap	Rank
Karnataka	27.4	10
Jharkhand	26.6	11
Odisha	25.8	12
Haryana	24	13
Maharashtra	23.5	14
Punjab	23.4	15
Tamil Nadu	23.3	16
Bihar	23	17
Tripura	22.8	18
West Bengal	21.2	19
Arunachal Pradesh	18.7	20
Himachal Pradesh	18.2	21
Kerala	15	22
Nagaland	14.7	23
Assam	14.1	24
Mizoram	12.1	25
Goa	9.2	26
Sikkim	1.5	27

According to Table 3, the gender disparity is most in the state of Telangana, with a score of 30.9, followed by Chhattisgarh (29.6), and it is at its smallest in the state of Sikkim, with a score of 1.5. According to this table, the gender difference seems to be more than 20 in the majority of the states.



## **II. Conclusion and Recommendation-**

Based on the data, it appears that there is a disparity in the number of people in each sex who are proficient in using the internet across all of India. Even more so between rural and urban areas, there is a significant gender discrepancy between men and women. Moreover, this finding indicates at just 63.06% of males and 40.65% of females have ever used the internet. Assam has one of the lowest rates of male Internet literacy in India, whereas Goa has one of the highest (82.90). Bihar has the lowest percentage of Internet literate women, while Sikkim has the most. The t-test indicates a statistically significant gender gap in Internet literacy. Based on this data, the gender gap is greatest in the state of Telengana, followed by the state of Chhattisgarh, and finally by the state of Sikkim. In India, there is a significant gender difference in internet literacy and internet use across most states.

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