

# Contours of Internet Access in Rural-Urban Landscapes in India



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## **Introduction**

Digital is a new parameter that is added in the last two decades wherein digital gadgets were familiarized across households in India. Digital gadgets are devices that are functional and operational at best when these gadgets accessed the high-speed Internet. However, the digital divide is wider if we compare both rural and urban in terms of accessibility of the Internet in the country. The accessibility of the Internet is often considered the backbone of the social media industry. The efficient digital infrastructure will enhance digital consumption in the country.

The internet has made the communication revolution or in other words, the fourth-biggest revolution in the history of human civilization after hunting and gathering, agriculture, and industrial revolution. It has become an important part of our economic, political and social lives, changing the way to purchase commodities or online banking transactions. The digital divide may refer to the gap between demographics and regions that have access to Information and communications technology (ICTs) and those that do not access the same. The digital divide rises due to the lack of access to informational tools. The reasons behind digital divides may be socioeconomic status, income, education, race, caste, gender, geographic (rural-urban) location, age, skills, awareness, political, cultural, and psychological attitudes. This paper mainly discusses the rural-urban digital divide in the sense of the accessibility of the Internet.

TRAI (Telecom Regulatory Authority of India) is a nodal agency that issues yearly data of the Internet and Telephone subscribers in India. TRAI formulated state-wise data in both rural and urban separately in terms of numbers as well as the number of Internet subscribers in the hundred population. According to TRAI, the accessibility of the Internet among rural subscribers is 27.57 out of a hundred population and among urban subscribers, it is 104.25 out of a hundred population while, in totality, the number of Internet subscribers is 52.08 out of hundred population person in the country.

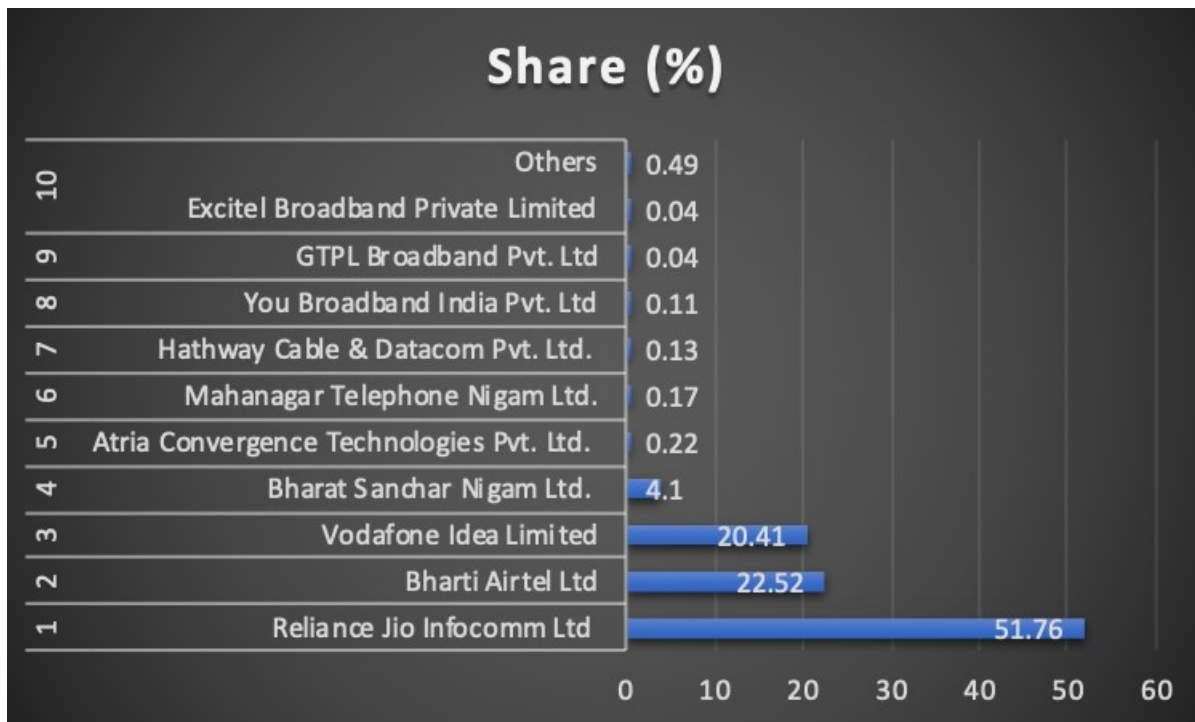
A region can be based on physical, climate, vegetation, and geological characteristics, and further it can be divided into subtypes including social, cultural, and political as well (Singh, 1993). Here, regions are demarcated on the basis of political territorial extent. There are thirty-five regions and seven union territories (two more Union Territories are constituted Ladakh and J&K in 2019, however, J&K include Ladakh also) in India but in the report, Twenty-Two regions are mentioned because TRAI formulated its own data through combining two or more regions which they considered as a unit for better representations.

### **Map 1. India: States and Union Territories**



There are ten companies that provide more than 99 percent of Internet services in the country. The share of private corporates is around 95 percent while two public companies (BSNL & MTNL) have a share of less than 5 percent in Internet service providers. Reliance JIO has maximum reach followed by Airtel, Vodafone, and BSNL in the country.

**Figure 1. Internet Service Providers in India**



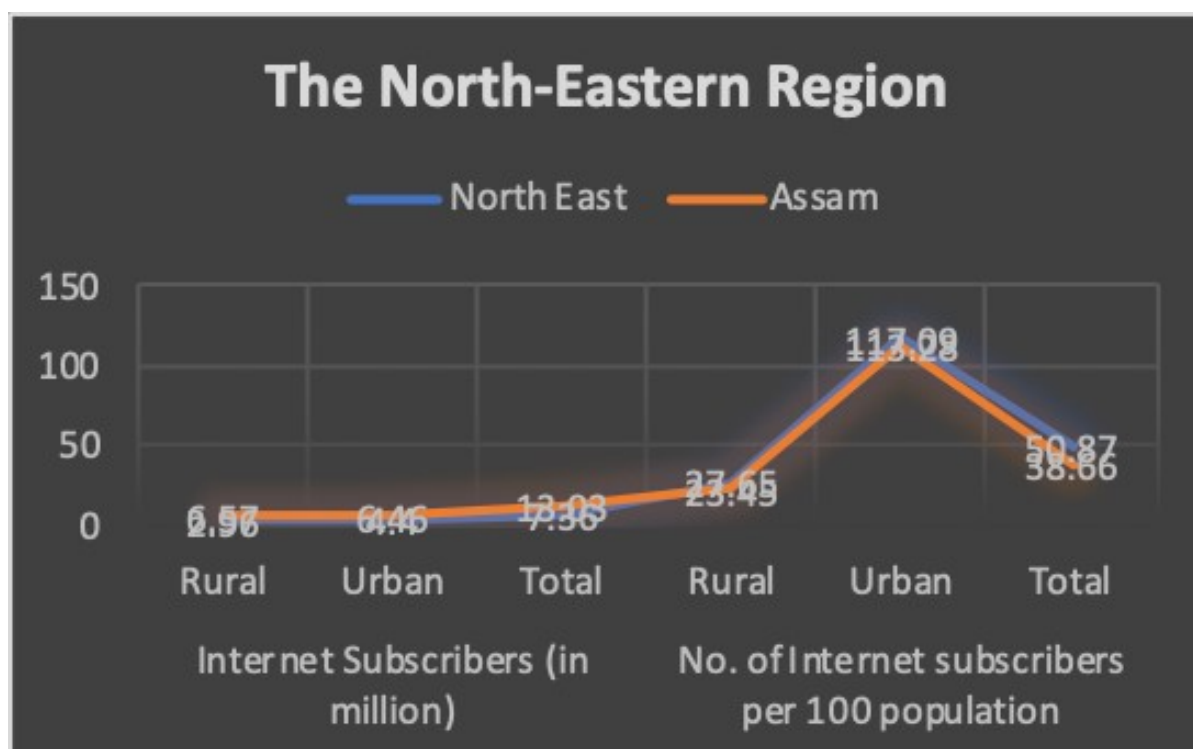
Source: TRAI, 2020

## The North-Eastern Region

In North-East India, there are seven regions (Assam, Arunachal Pradesh, Meghalaya, Mizoram Tripura, Nagaland, and Manipur) or 'seven sisters' of India. However, Assam is not considered as part of the north-eastern rather mentioned separately in the report. Every region has its own distinct cultural identity across north-eastern regions but economic development is least recorded in the regions. In the last few years, digital infrastructures were given priority in the regions. The total population of North-Eastern India is 46 million with 68 percent of that living in Assam alone while the other six states comprised 32 percent of the population in the region. The population of other northeastern regions is meager and sparse in nature. As a result, around 2.96 million people are using the Internet from rural backgrounds while 4.40 million people from urban backgrounds are using the Internet for communication and other purposes. But we can map the same in terms of subscribers, around 27.65 subscribers out of hundred people in rural terrains while 117.09 subscribers out of hundred people in urban landscapes are using the Internet in the region. In total, 50.87 subscribers out of hundred people i.e. slightly above half of the population have accessed the Internet, so far. Still, there are miles to go in terms of digital coverage however disparity between rural and urban is wider that swings more towards the urban sphere. Assam is home to 30.09 million people (according to

the census of India, 2011). Assam is the gateway region to the North-Eastern regions. Nearly 6.57 million rural and around 6.46 million urban population are using the Internet in Assam. There are 23.45 subscribers in the hundred population in the rural landscapes while in urban landscapes there are 113.28 subscribers in the hundred population who availed the Internet. In Assam, there are 38.66 subscribers in the hundred population who availed the Internet. The contrast between rural and urban spaces is wider that needs to be parted away.

**Figure 2. The North-Eastern Region**



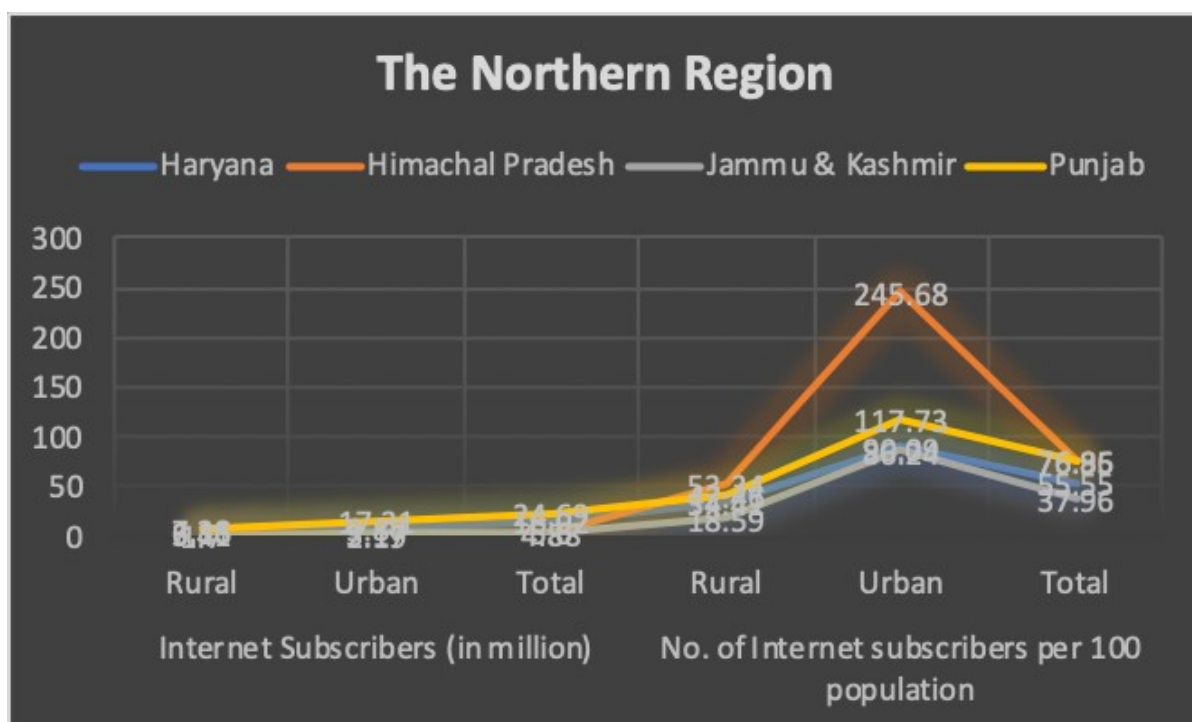
Source: TRAI, 2020

### The Northern Region

The northern regions comprised four major regions Jammu & Kashmir (J&K), Himachal Pradesh, Punjab, and Haryana. According to the Census of India, 2011, the population of these states are as; Punjab (27.70 million), Himachal Pradesh (6.80 million), Haryana (25.35 million), and J&K (12.54 million). The accessibility of the Internet in rural landscapes is highest in Punjab (7.38 million) and followed by Haryana (6.16 million), Himachal Pradesh (3.41 million), and J&K (1.70 million). In Urban morphology, the availability of the Internet is maximum in Punjab (17.31 million) and followed by Haryana (9.87 million), J&K (3.17 million), and Himachal Pradesh (2.19 million). Henceforth, the number of digital

subscribers (out of hundred population) across the rural landscapes is maximum in Himachal Pradesh (53.34) and followed by Punjab (42.46), Haryana (34.41), and J&K (18.59), while across the urban locality the number of subscribers are almost hundred percent or near about, that as; Himachal Pradesh (245.68), followed by Punjab (117.73), Haryana (90.09), and J&K (86.24). In totality, the availability of the Internet in the hundred population is maximum in Punjab (76.96) followed by Himachal Pradesh (76.85), Haryana (55.55), and J&K (37.96). Punjab has the maximum number of Internet users in the region.

**Figure 3. The Northern Region**



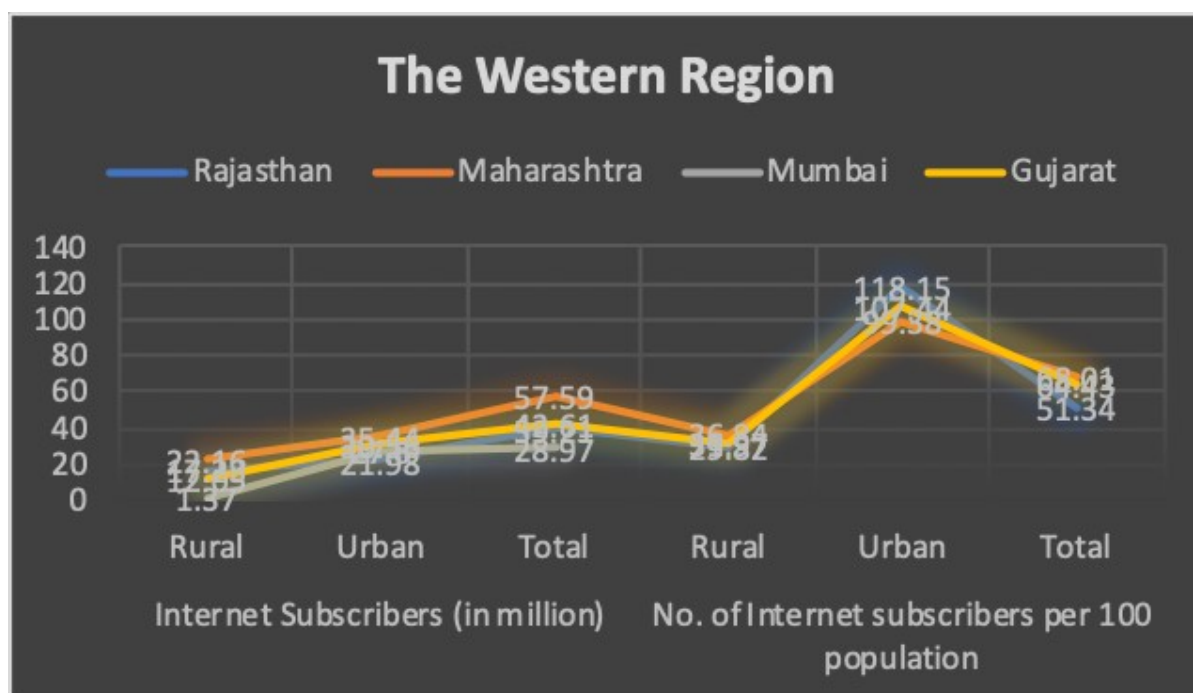
Source TRAI, 2020

### The Western Region

The Western regions consist of the region-Maharashtra (including Mumbai circle), Gujarat and Rajasthan. Mumbai is the capital city of Maharashtra therefore being a separate circle it has been reported by TRAI. According to the Census of India, 2011, the population of these regions are as; Maharashtra (112.40 million), Rajasthan (68.6 million), Gujarat (60.3 million) while Mumbai is a metropolitan city. The number of Internet users varied in the rural regions where in Maharashtra (22.16 million), Rajasthan (17.23 million), Gujarat (12.05 million), and Mumbai (1.37 million) while the number of Internet users varied in the urban terrains as Maharashtra (35.44 million) followed by Gujarat (30.56 million),

Mumbai (27.60 million), and Rajasthan (21.98 million). In totality, Maharashtra (57.59 million) is leading in terms of the number of Internet users followed by Gujarat (42.61 million), and Rajasthan (39.21 million). However, in terms of subscribers in a rural setup, out of hundred people, Maharashtra (36.84) is leading followed by Gujarat (31.97), and Rajasthan (29.82) while in urban geographies Rajasthan (118.15) is leading followed by Gujarat (107.44), and Maharashtra (99.38). In totality, across the Western regions, Maharashtra (68.01) has the leading Internet users followed by Gujarat (64.43), and Rajasthan (51.34). Maharashtra has the maximum number of Internet users in the region.

**Figure 4. The Western Region**



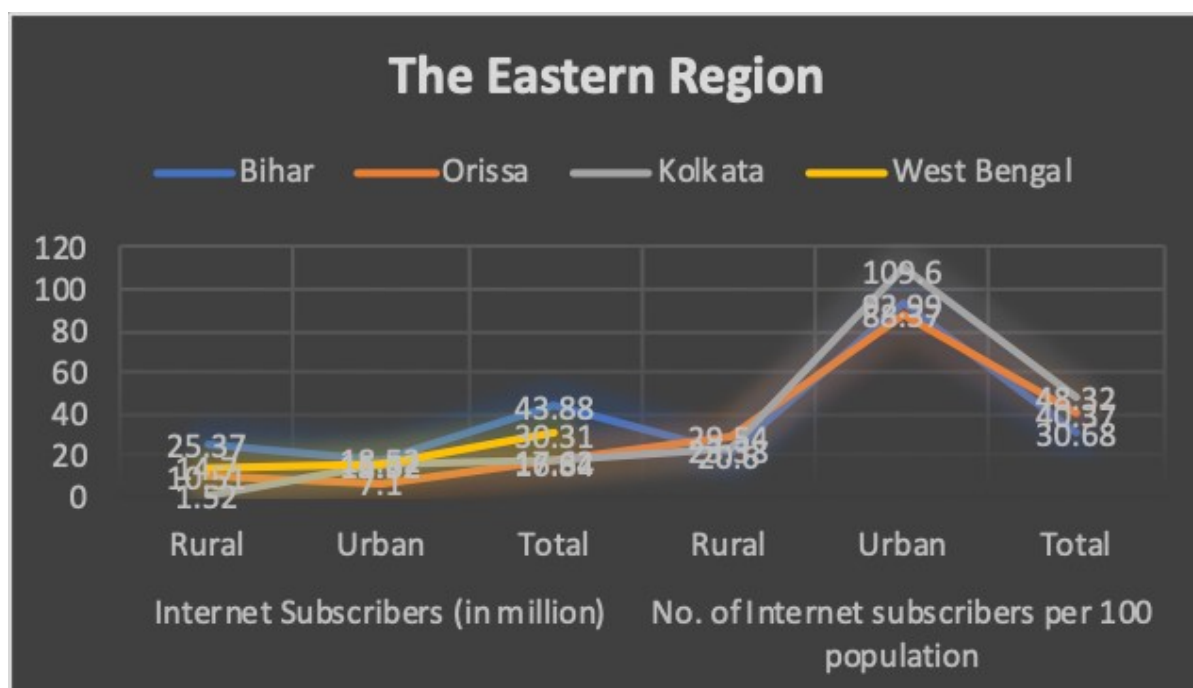
Source: TRAI, 2020

### **The Eastern Region**

The Eastern regions comprised Orissa, West Bengal (Including Kolkata-the capital city that has been reported by TRAI), and Bihar. The location of Bihar does not exactly belong to being an Eastern region but in the available data, it is suitable to consider Bihar as the eastern region. The Eastern regions, unlike other regions, vary in both rural and urban Internet coverages. According to the Census of India, 2011, the population of these regions are as; Bihar (103.8 million), West Bengal (91.34 million), Orissa (41.94 million), while Kolkata is a metropolitan city. In rural landscapes, the number of Internet users is maximum in Bihar (25.37

million) followed by West Bengal (14.70 million), Orissa (10.51 million) and Kolkata (1.52 million). Across urban landscapes, the number of Internet users is maximum in Bihar (18.52 million) followed by West Bengal (15.62 million), Kolkata (15.32 million), and Orissa (7.10 million). In total, the number of Internet users is maximum in Bihar (43.88 million), followed by West Bengal (30.31 million), Orissa (17.62 million) and Kolkata (16.84 million). However, in rural regions, the number of subscribers of the Internet users in hundred population is maximum in Orissa (29.54), followed by West Bengal (20.60), while in urban topography the number of subscribers of the Internet users in hundred population is maximum in West Bengal (including Kolkata) (109.60), followed by Bihar (92.99) and Orissa (88.37). West Bengal has the maximum number of Internet subscribers while Bihar has the maximum number of Internet users in the region.

**Figure 5. The Eastern Regions**



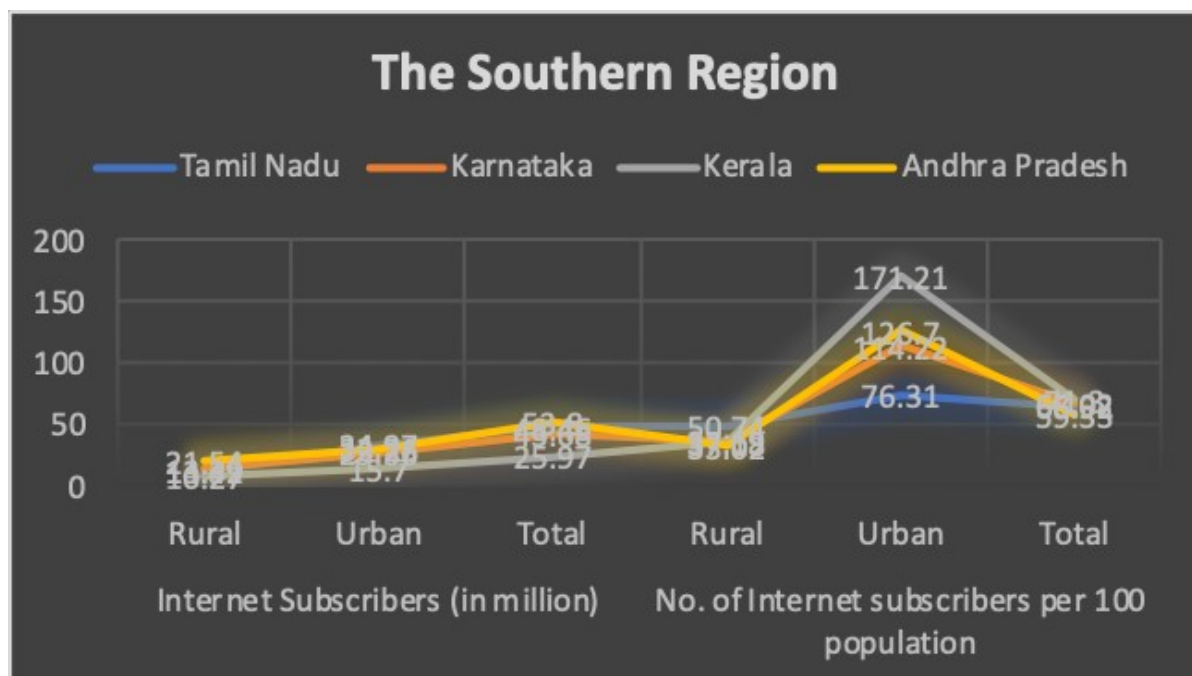
Source: TRAI, 2020

### The Southern Region

This region consists of four developed regions of Tamil Nadu, Kerala, Andhra Pradesh and Karnataka. These regions are not much different than other regions in terms of Internet users. According to the Census of India, 2011, the population

of these regions are as; Tamil Nadu (72.13 million), Kerala (33.38 million), Karnataka (61.13 million) and Andhra Pradesh (49.38 million). The rural landscapes of Andhra Pradesh (21.54 million) is the leading in sense of Internet users followed by Tamil Nadu (13.49 million), Karnataka (14.32 million), and Kerala (10.27 million) while in urban terrains; Tamil Nadu (34.97 million) is the heading in terms of the Internet users followed by Andhra Pradesh (32.26 million), Karnataka (29.36 million), and Kerala (15.70million). In totality, Andhra Pradesh (53.80 million) is leading in the sense of Internet users, followed by Tamil Nadu (48.46 million), Karnataka (43.68 million), and Kerala (25.97 million). However, in rural landscapes, the number of subscribers in hundred population is the highest in Tamil Nadu (50.74), followed by Kerala (37.69), Karnataka (37.18), and Andhra Pradesh (33.02) while across the urban regions, the number of subscribers in hundred population is the highest in Kerala (171.21), followed by Andhra Pradesh (126.70), Karnataka (114.22), and Tami Nadu (76.31). In totality, Kerala (71.30) is the progressed region in terms of Internet users and tracked by Karnataka (68.02), Tamil Nadu (66.92), and Andhra Pradesh (59.33) respectively. Tamil Nadu has the maximum number of Internet users in the region.

**Figure 6. The Southern Region**

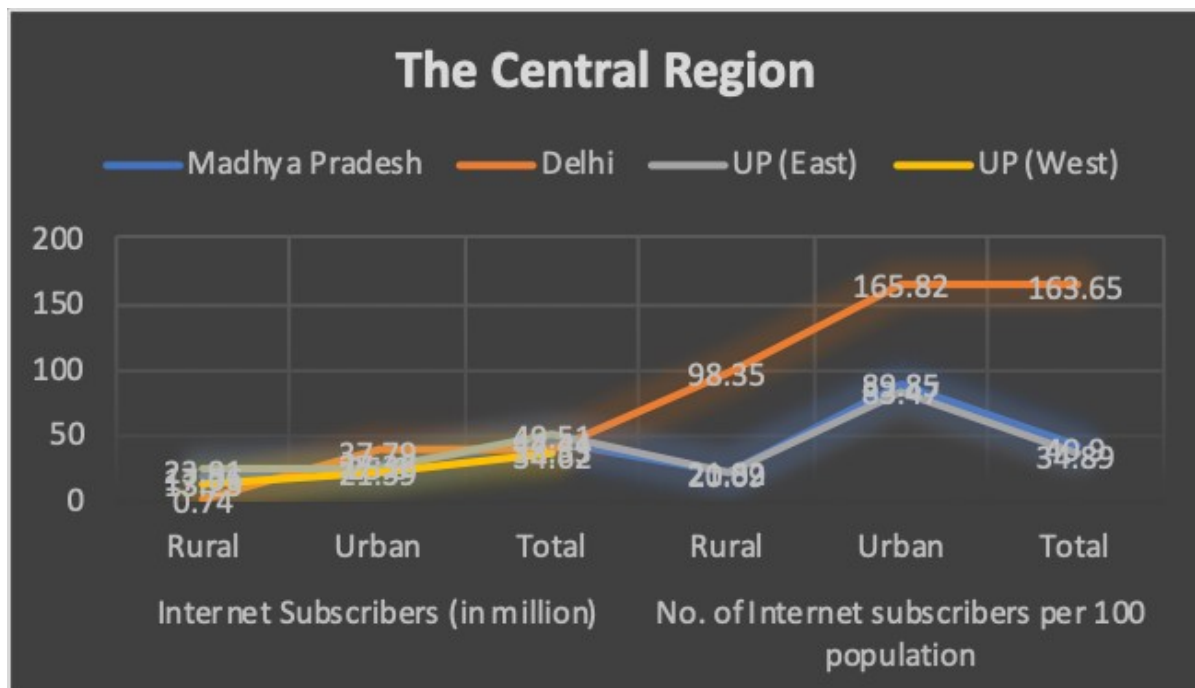


Source: TRAI, 2020

### The Central Region

The Central regions consist of Delhi, Uttar Pradesh (UP) and Madhya Pradesh (MP). Here, UP was distributed in two regions because UP is the largest populated state and the fourth-largest region in terms of area in the country. Delhi is the capital city of the country wherein rural terrains are likely fewer Internet consumers than urban spatiality. According to the Census of India, 2011, the population of these regions are as; UP (199.8 million), Madhya Pradesh (72.59 million), and Delhi (16.8 million). In rural landscapes, Madhya Pradesh (17.06 million) has the lowest Internet users while in UP (around 18.00 million). Urban Delhi (37.79 million) is the leading urbanized landscape in the number of Internet users, followed by Madhya Pradesh (27.38 million), and UP (23.45 million). However, the number of subscribers in hundred population Delhi (98.35) is the highest Internet users followed by UP (20.09), and Madhya Pradesh (21.85) while in urban locality Delhi (165.82) is again the highest Internet users and followed by Madhya Pradesh (89.85), and UP (83.47). Delhi has the maximum number of Internet users in the region.

**Figure 7. The Central Region**



Source: TRAI, 2020

## Conclusion

The patterns of Internet users are varied across the regions in India. The northern, western, and southern regions have the maximum number of Internet

users while north-eastern regions are incredibly doing better than the surrounding region. The number of subscribers is hundred percent across the urban landscapes in the following regions; Kerala, Karnataka, Rajasthan, Punjab, Gujarat, Assam, North-East, and Himachal Pradesh while the lowest number of Internet users is found in Bihar, UP, and Madhya Pradesh. The following regions: Andhra Pradesh, Delhi, Gujarat, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Punjab, and Tamil Nadu have higher numbers than the national average number of Internet subscribers in the country. Except for Delhi and Tamil Nadu, less than fifty percent rural population across the regions accessed the Internet. Haryana, Bihar, J&K, Madhya Pradesh, Maharashtra, Orissa, Tamil Nadu, and UP (East) have accessed fewer numbers of Internet subscribers than the national average.

## **References**

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TRAI=Telecom Regulatory Authority of India (2020) The Indian Telecom Services Performance Indicators July - September, 2019.

## **About the Author**

Shekh Moinuddin holds a Ph.D. in Geography from University of Delhi, Delhi. Dr. Moinuddin authored the following books: *Media Space and Gender Construction* (2010), *Mapping Media* (2015), *Mediascape and the State* (2017), *The Political Twittersphere in India* (2019), and *Digital Shutdowns and Social Media* (2021).