

**TELECOM REGULATORY AUTHORITY OF INDIA**New Delhi, 8th May, 2020

(www.traigov.in)

**Highlights of Telecom Subscription Data as on 31st January, 2020**

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1156.44	20.58	1177.02
Net Addition in January, 2020 (Million)	5.00	-0.42	4.58
Monthly Growth Rate	0.43%	-2.00%	0.39%
Urban Telephone Subscribers (Million)	644.54	18.21	662.75
Net Addition in January, 2020 (Million)	0.56	-0.26	0.30
Monthly Growth Rate	0.09%	-1.42%	0.05%
Rural Telephone Subscribers (Million)	511.90	2.37	514.27
Net Addition in January, 2020 (Million)	4.44	-0.16	4.28
Monthly Growth Rate	0.87%	-6.21%	0.84%
Overall Tele-density*(%)	85.92%	1.53%	87.45%
Urban Tele-density*(%)	140.20%	3.96%	144.16%
Rural Tele-density*(%)	57.76%	0.27%	58.03%
Share of Urban Subscribers	55.73%	88.47%	56.31%
Share of Rural Subscribers	44.27%	11.53%	43.69%
Broadband Subscribers (Million)	654.30	19.08	673.39

❖ In the month of January, 2020, 5.33 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 470.08 million at the end of Dec-19 to 475.40 million at the end of Jan-20, since implementation of MNP.

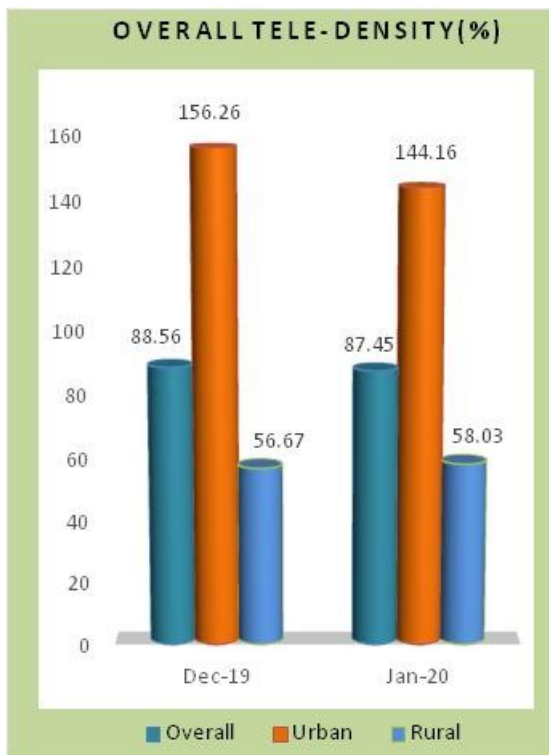
❖ Number of active wireless subscribers (on the date of peak VLR#) in December, 2019 was 986.42 million.

Note:

- Information in this Press Release is based on the data provided by the Service Providers
- * Based on the population projections from Census data published by the Office of Registrar General & Census Commissioner of India.
- # VLR is acronym of Visitor Location Register. The dates of peak VLR for various TSPs are different in different service areas.

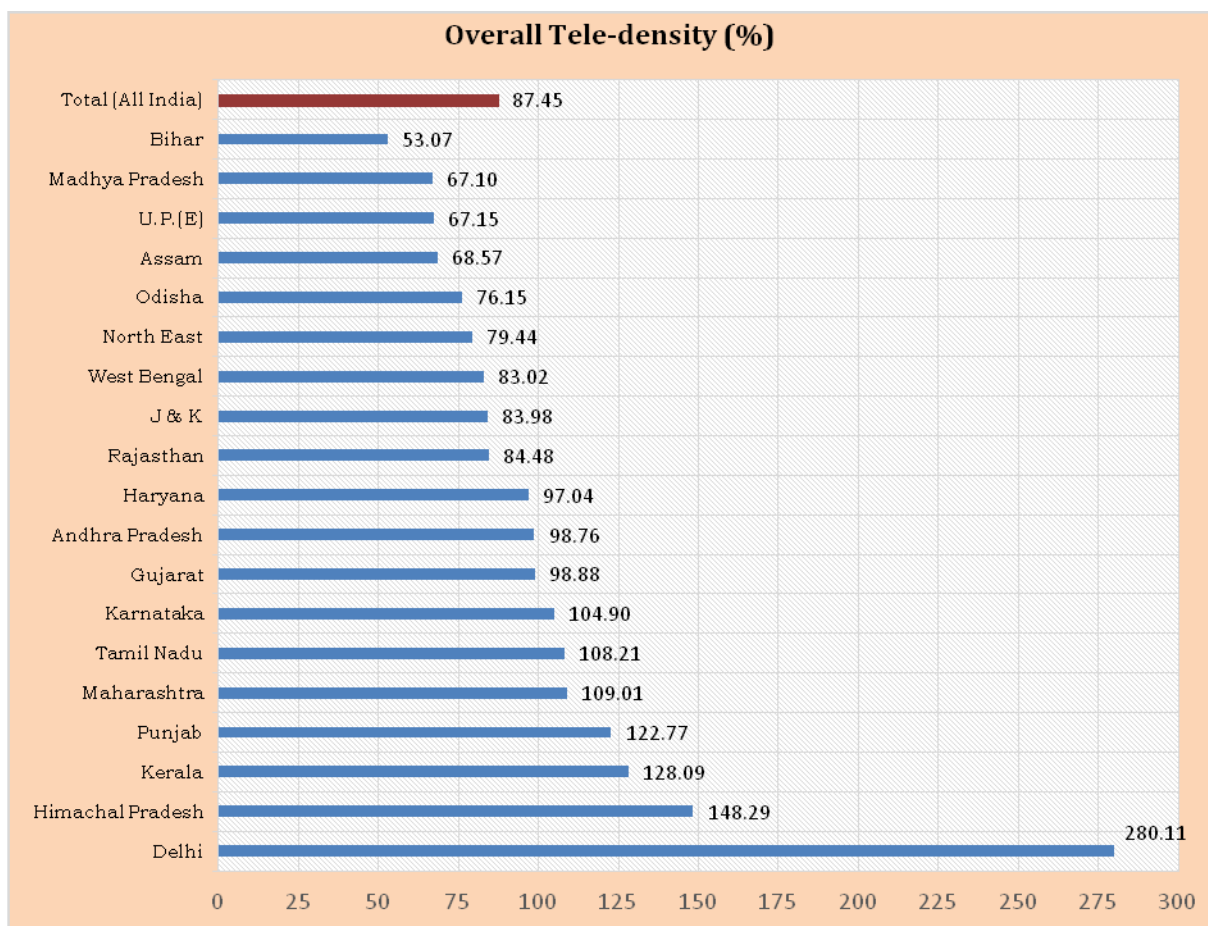
I. Total Telephone Subscribers

- The number of telephone subscribers in India increased from 1,172.44 million at the end of Dec-19 to 1,177.02 million at the end of Jan-20, thereby showing a monthly increase rate of 0.39%. Urban telephone subscription increased from 662.45 million at the end of Dec-19 to 662.75 million at the end of Jan-20, and the rural subscription increased from 509.99 million to 514.27 million during the same period. The monthly growth rates of urban and rural telephone subscription were 0.05% and 0.84% respectively during the month of Jan-20.



- The overall Tele-density in India declined from 88.56 at the end of Dec-19 to 87.45 at the end of Jan-20. The Urban Tele-density declined from 156.26 at the end of Dec-19 to 144.16 at the end of Jan-20. Rural Tele-density increased from 56.67 at the end of Dec-19 to 58.03 at the end of Jan-20. The share of rural and urban subscribers in total number of telephone subscribers at the end of Jan-20 was 43.69% and 56.31% respectively.

Overall Tele-density (Circle/State Wise) – As on 31st January, 2020



- As may be seen in the above chart, nine states have less tele-density than the all India average tele-density at the end of Jan-20. Delhi service area has maximum tele-density of 280.11 and the Bihar service area has minimum tele-density of 53.07 at the end of Jan-20.

Notes:

- Population data/projections are available state wise only.
- Tele-density figures are derived from the telephone subscriber data provided by the access service providers and the projections of population of the CENSUS OF INDIA 2011.
- Telephone subscriber data for Delhi, includes, apart from the data for the State of Delhi, wireless subscriber data for the areas served by the local exchanges of Ghaziabad & Noida (in Uttar Pradesh) and Gurgaon & Faridabad (in Haryana).
- Data/information for West Bengal includes Kolkata, Maharashtra includes Mumbai, Tamil Nadu includes Chennai and Uttar Pradesh includes UPE & UPW service area(s).
- Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhatishgarh, Bihar includes Jharkhand, Maharashtra includes Goa, Uttar Pradesh includes Uttarakhand, West Bengal includes Sikkim and North-East includes Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland & Tripura States.

II. Category-wise Growth in subscriber base

Circle Category-wise Net Additions in Telephone Subscribers in the month of January, 2020

Circle Category	Net additions in the month of January, 2020		Telephone Subscriber base as on 31 st January, 2020	
	Wireline segment	Wireless segment	Wireline segment	Wireless segment
Circle A	-1,85,059	18,20,499	79,46,802	39,81,04,807
Circle B	-2,27,234	14,41,628	47,95,120	46,59,26,396
Circle C	-7,444	14,36,377	8,31,965	17,54,10,377
Metro	-42	3,03,167	70,10,868	11,69,97,190
All India	-4,19,779	50,01,671	2,05,84,755	1,15,64,38,770

Circle Category-wise monthly and yearly Growth Rates in Telephone Subscribers in the month of January, 2020

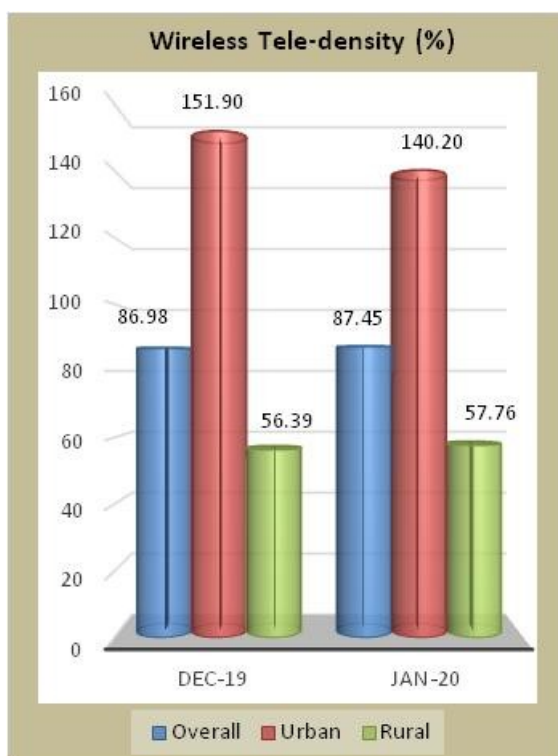
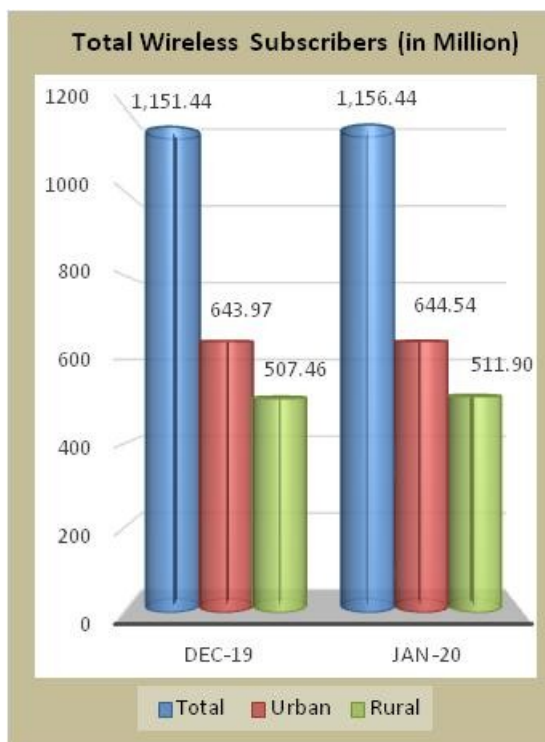
Circle Category	Monthly growth rate (%) (Dec-19 to Jan-20)		Yearly growth rate (%) (Jan-19 to Jan-20)	
	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment
Circle A	-2.28%	0.46%	-7.40%	-1.86%
Circle B	-4.52%	0.31%	-11.68%	-3.23%
Circle C	-0.89%	0.83%	-8.71%	-1.54%
Metro	0.00%	0.26%	2.02%	0.23%
All India	-2.00%	0.43%	-5.55%	-2.16%

Note: Circle Category-Metro includes Delhi, Mumbai and Kolkata. Data for Chennai has been included in Circle Category-A, as part of TamilNadu.

- As can be seen in the above tables, in wireless segment, Circles of all Categories showed monthly increase rate in their subscribers during the month of Jan-20. On yearly basis, only Metro Circles showed growth in their number of wireless subscribers.
- In Wireline segment, Circles of all Categories showed monthly decline rate in their subscribers during the month of Jan-20. On yearly basis, only Metro Circles showed growth in their number of wireline subscribers.

III. Wireless Subscribers

- Total wireless subscribers (2G, 3G & 4G) increased from 1,151.44 million at the end of Dec-19 to 1,156.44 million at the end of Jan-20, thereby registering a monthly increase rate of 0.43%. Wireless subscription in urban areas increased from 643.97 million at the end of Dec-19 to 644.54 million at the end of Jan-20 and wireless subscription in rural areas increased from 507.46 million at the end of Dec-19 to 511.90 million at the end of Jan-20. Monthly growth rates of urban and rural wireless subscription were 0.09% and 0.87% respectively.

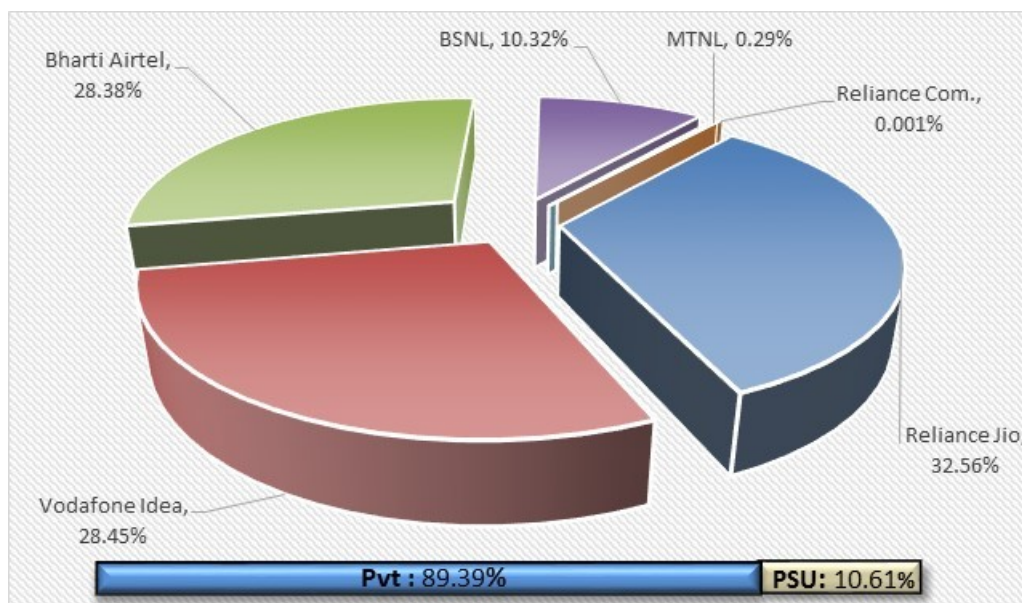


- The Wireless Tele-density in India increased from 86.98 at the end of Dec-19 to 87.45 at the end of Jan-20. The Urban Wireless Tele-density declined from 151.90 at the end of Dec-19 to 140.20 at the end of Jan-20, however, Rural Wireless Tele-density increased from 56.39 to 57.76 during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 55.73% and 44.27% respectively at the end of Jan-20. Detailed

statistics of wireless subscriber base is available at **Annexure-I**.

- As on 31st January, 2020, the private access service providers held 89.39% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 10.61%.
- The graphical representation of access service provider-wise market share and net additions in wireless subscriber base are given below:

Access Service Provider-wise Market Shares in term of Wireless Subscribers as on 31st January, 2020



Net Additions in Wireless Subscribers of Access Service Providers in the month of January, 2020

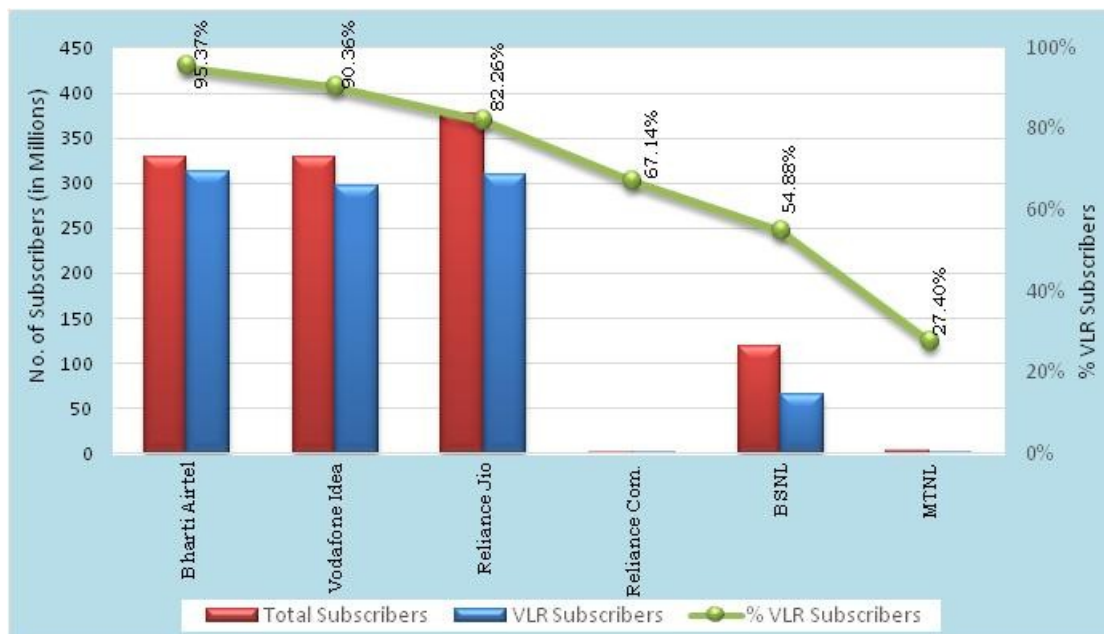


- Note:**
- M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd. However, DoT has not yet approved merger of them.
 - Virtual Network Operator (VNO) of BSNL has started reporting of its subscribers from the month of October, 2018 and the same has been included in the subscriber base of BSNL.

IV. Active Wireless Subscribers (VLR Data)

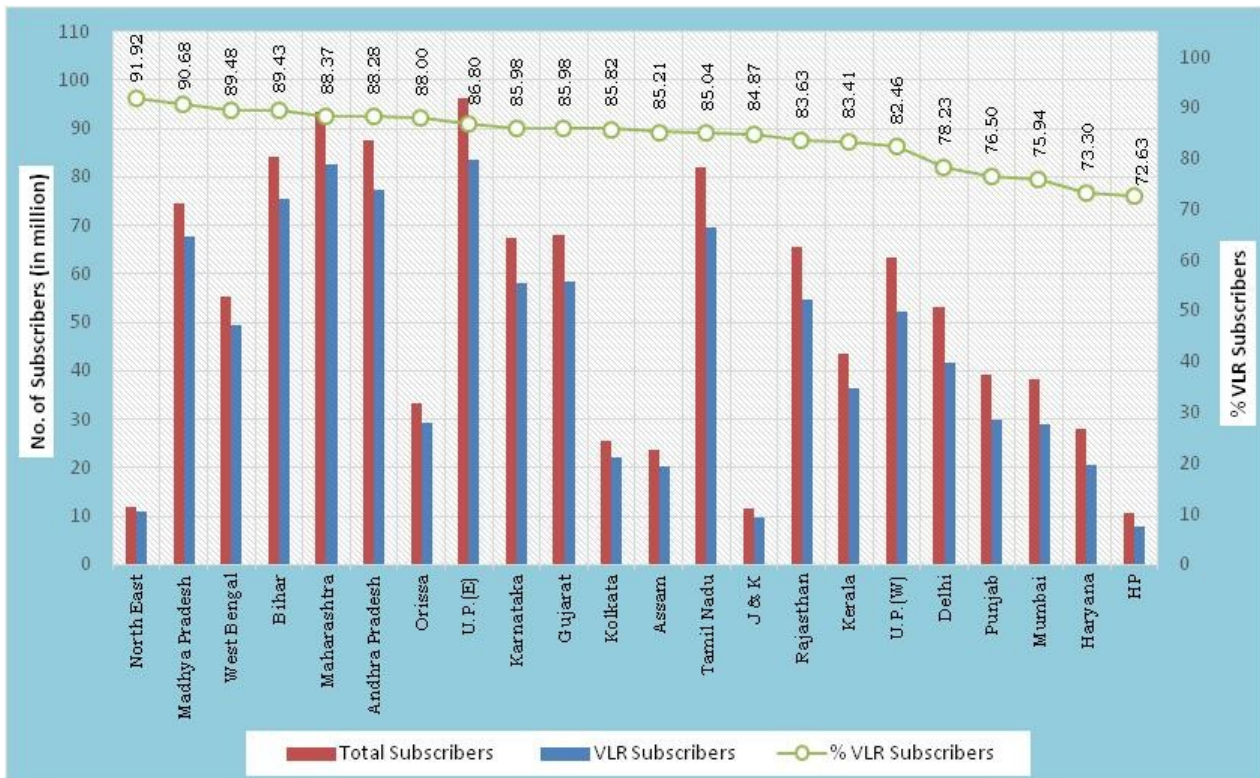
- Out of the total wireless subscribers (1,156.44 million), 986.42 million wireless subscribers were active on the date of peak VLR in the month of Jan-20. The proportion of active wireless subscribers was approximately 85.30% of the total wireless subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of Jan-20 is available at **Annexure-II** and the methodology used for reporting VLR subscribers is available at **Annexure-IV**.

Access Service Provider-wise Percentage of VLR Subscribers in the month of January, 2020



- Bharti Airtel has the maximum proportion (95.37%) of its active wireless subscribers (VLR) as against its total wireless subscribers (HLR) on the date of peak VLR in the month of Jan-20 and MTNL has the minimum proportion of VLR (27.40%) of its HLR during the same period.

Service Area wise percentage of VLR Subscribers in the Month of January, 2020



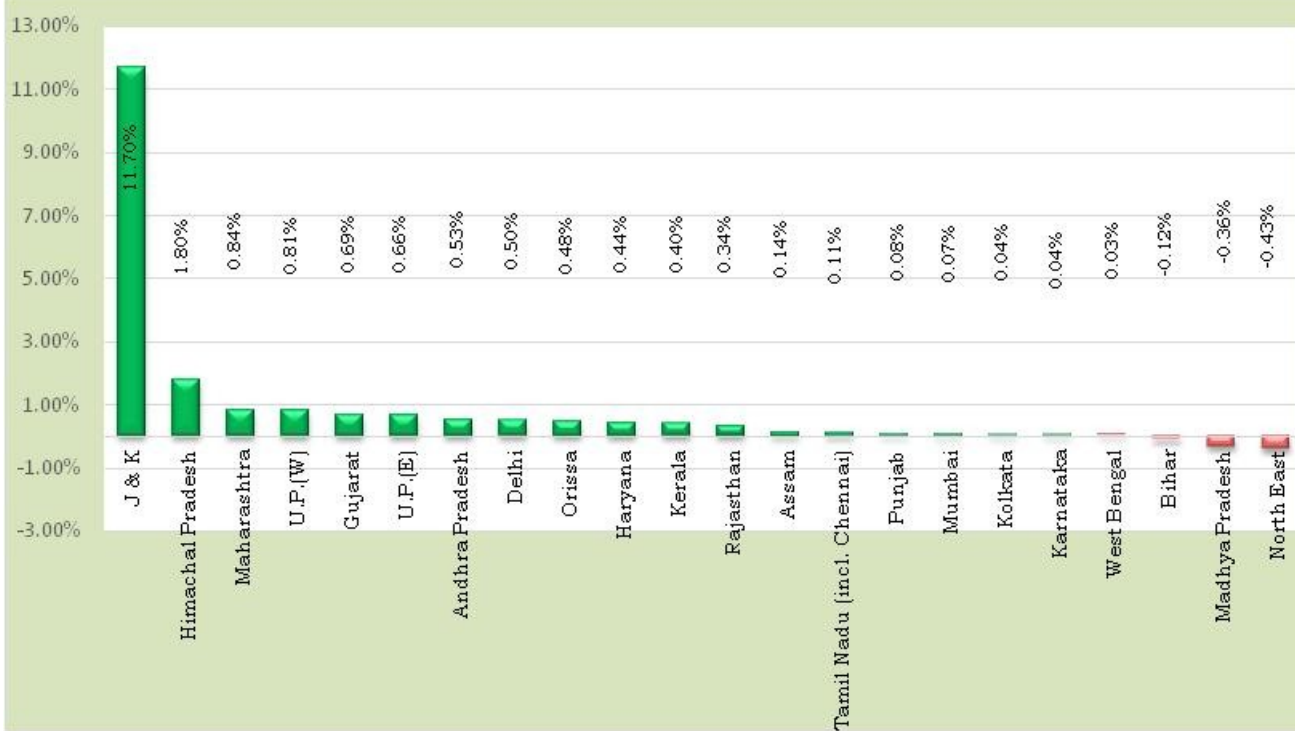
V. Growth in Wireless Subscribers

Access Service Provider-wise Monthly Growth Rate of Wireless Subscribers in the month of January, 2020



Note: BSNL includes its Virtual Network Operator (VNO).

Service Area-wise Monthly Growth Rate of Wireless Subscribers in the month of January, 2020



- All service areas showed increase except Bihar, Madhya Pradesh and North East in their wireless subscribers during the month of

Jan-20. Jammu & Kashmir service area showed maximum growth of 11.70% in their wireless subscriber during the month.

VI. Mobile Number Portability (MNP)

- Intra-service area Mobile number portability (MNP) was implemented first in Haryana service area w.e.f. 25.11.2010 and in the rest of the country w.e.f. 20.01.2011. Inter-Service Area MNP has been implemented in the country w.e.f. 03.07.2015. Now, the wireless telephone subscribers can retain their mobile numbers when they

relocate from one service area to another.

- During the month of Jan-20, a total of 5.33 million requests were received for MNP. Out of total 5.33 million new requests, 3.14 million requests received from Zone-I and 2.19 million requests received from Zone-II. The cumulative MNP requests increased from 470.08 million at the end of Dec-19 to

475.41 million at the end of Jan-20, since the implementation of MNP.

- In MNP Zone-I (Northern and Western India), the highest number of requests till date have been received in Rajasthan (about 36.76

million) followed by Maharashtra (about 36.54 million) service area.

- In MNP Zone-II (Southern and Eastern India), the highest number of requests till date have been received in Karnataka (about 43.06 million) followed by Andhra Pradesh (about 39.95 million).

Service Area Wise MNP Status					
Zone - 1			Zone - 2		
Service Area	Number of Porting Requests (in Million)		Service Area	Number of Porting Requests (in Million)	
	Dec-19	Jan-20		Dec-19	Jan-20
Delhi	24.23	24.52	Andhra Pradesh	39.58	39.95
Gujarat	31.33	31.71	Assam	3.61	3.63
Haryana	16.97	17.14	Bihar	19.23	19.51
Himachal Pradesh	2.29	2.32	Karnataka	42.77	43.06
Jammu & Kashmir	1.14	1.15	Kerala	11.86	12.03
Maharashtra	35.88	36.54	Kolkata	11.11	11.20
Mumbai	23.55	23.74	Madhya Pradesh	31.16	31.51
Punjab	18.15	18.35	North East	1.40	1.41
Rajasthan	36.45	36.76	Orissa	9.39	9.47
U.P.(East)	26.36	26.90	Tamil Nadu	39.27	39.60
U.P.(West)	21.27	21.65	West Bengal	23.06	23.27
Total	237.63	240.77	Total	232.44	234.64
Total (Zone-1 + Zone-2)				470.08	475.41
Net Addition (January, 2020)			5.33 million		

VII. Wireline Subscribers

- Wireline subscribers declined from 21.00 million at the end of Dec-19 to 20.58 million at the end of Jan-20. Net decline in the wireline

subscriber base was 0.41 million with a monthly decline rate of 2.00%. The share of urban and rural subscribers in total wireline

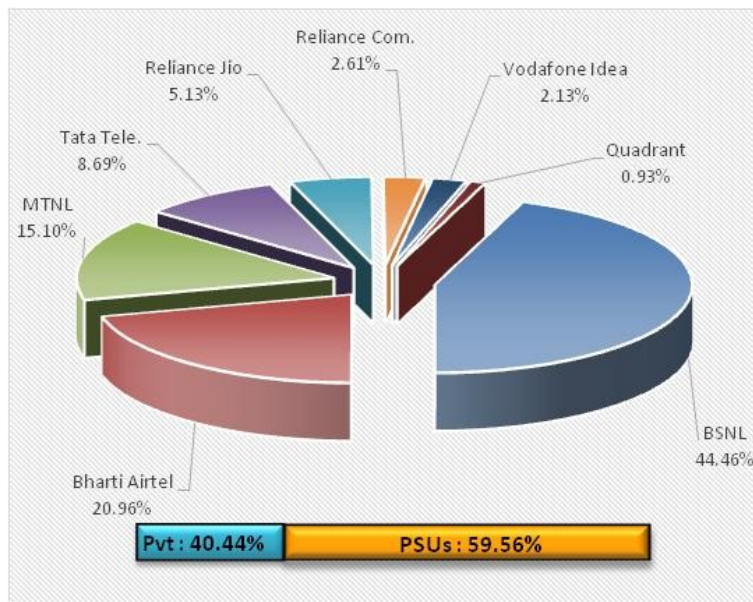
subscribers were 88.47% and 11.53% respectively at the end of Jan-20.

- The Overall Wireline Tele-density declined from 1.59 at the end of Dec-19 to 1.53 at the end of Jan-20. Urban and Rural Wireline Tele-density were 3.96 and 0.27

respectively during the same period.

- BSNL and MTNL, the two PSU access service providers, held 59.56% of the wireline market share as on 31st January, 2020. Detailed statistics of wireline subscriber base are available at **Annexure-III.**

Access Service Provider-wise Market Shares of Wireline Subscribers as on 31st January, 2020



Access Service Provider-wise Net Additions/declines in Wireline Subscribers during the month of January, 2020



VIII. Broadband (\geq 512 Kbps download)

- As per the reports received from 343 operators in the month of January, 2020, the number of broadband subscribers increased from 661.94 million at the end of Dec-19 to 673.40 million at the end of Jan-20 with a monthly growth rate of 1.73%. Segment-wise broadband subscribers and their monthly growth rates are as below:

Segment-wise Broadband Subscribers and Monthly Growth Rate in the month of January, 2020

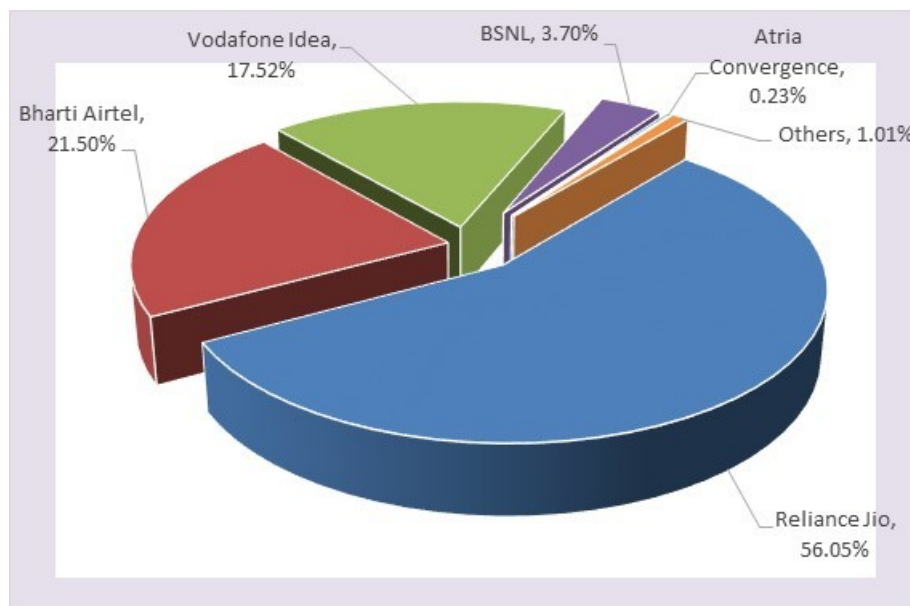
Segment	Broadband subscribers (in million)		Monthly growth rate in the month of Jan-20
	As on 31 st December, 2019	As on 31 st January, 2020	
Wired subscribers	19.14	19.08	-0.27%
Mobile devices users (Phones and dongles)	642.19	653.71	1.79%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.61	0.60	-2.21%
Total	661.94	673.39	1.73%

- Top five service providers constituted 98.99% market share of the total broadband subscribers at the end of Jan-20. These service providers were Reliance Jio Infocomm Ltd (377.41 million), Bharti Airtel (144.77 million), Vodafone Idea (117.95 million), BSNL (24.91 million) and Atria Convergence (1.54 million).

Note: Some wireless service providers exclude incidental data users from their subscriber base, based on minimum usage decided by them.

- The graphical representation of the service provider-wise market share of broadband services is given below:

**Service Provider-wise Market Share of Broadband
(wired + wireless) Services as on 31.01.2020**



- As on 31st January, 2020, the top five Wired Broadband Service providers were BSNL (8.23 million), Bharti Airtel (2.43 million), Atria Convergence Technologies (1.54 million), Hathway Cable & Datacom (0.92 million) and Reliance Jio Infocomm Ltd (0.84 million).
- As on 31st January, 2020, the top five Wireless Broadband Service providers were Reliance Jio Infocom Ltd (376.57 million), Bharti Airtel (142.34 million), Vodafone Idea (117.93 million), BSNL (16.67 million) and MTNL (0.20 million).

Contact details in case of any clarification:

Shri S. K. Mishra, Pr. Advisor (F&EA),
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg,
New Delhi – 110002,
Ph: 011-23221856
Fax: 011-23235249
E-mail: skmishra.tra@nic.in

Authorized to issue:

(S. K. Mishra)
Pr. Advisor (F&EA)

Wireless Subscriber Base															Annexure-I		
Circle	Bharti Airtel (including Tata Tele.)		Reliance Com.		Vodafone Idea		BSNL		BSNL (VNO's)		MTNL		Reliance Jio		Total		Net Addition
	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	
Andhra Pradesh	28873882	29073195	2176	2233	18885514	18794095	9914603	9891040					29346713	29724407	87022888	87484970	462082
Assam	8358529	8315900			4633250	4539372	2743312	2761008					7872608	8023651	23607699	23639931	32232
Bihar	35456281	35198140	383	383	15431406	14823964	5310328	5459122					28123388	28740101	84321786	84221710	-100076
Delhi	15572477	15624496	1729	1810	17701405	17646831				2186235	2184561	17485005	17756333	52946851	53214031	267180	
Gujarat	10962911	11070661	577	615	27506873	27359352	6085008	6097309					22893405	23387210	67448774	67915147	466373
Haryana	4479975	4493585	140	140	9156703	9083847	4955027	5039948					9203509	9299386	27795354	27916906	121552
Himachal Pradesh	3424834	3384752	105	105	934451	905435	2767116	2971171					3471715	3527200	10598221	10788663	190442
J & K	4544784	5602821	0	0	561433	649280	1264988	1271939					3949544	4003971	10320749	11528011	1207262
Karnataka	28630803	28726293	1550	1549	12007384	11737915	7324448	7327006					19423779	19621752	67387964	67414515	26551
Kerala	5531696	5567226	625	634	18471237	18441748	10936754	10972574					8561983	8693941	43502295	43676123	173828
Kolkata	6354972	6326162	36	36	7679355	7600548	1856520	1946039					9760191	9788521	25651074	25661306	10232
Madhya Pradesh	14769663	14640460	738	758	24926265	24141435	6315355	6315980					28865775	29511247	74877796	74609880	-267916
Maharashtra	15970302	16086073	1082	1077	39676542	39550093	7089469	7241522					29884843	30519389	92622238	93398154	775916
Mumbai	9800346	9877605	2420	2471	13468986	13288940				1190068	1186107	13634278	13766730	38096098	38121853	25755	
North East	5227184	5218385	0	0	1926024	1878271	1466782	1409289					3492349	3554006	12112339	12059951	-52388
Orissa	11756381	11618841	368	368	3430621	3370789	6023748	6100003					11802088	12082110	33013206	33172111	158905
Punjab	10342217	10326810	279	319	9712824	9609814	5723473	5764539					13325697	13432899	39104490	39134381	29891
Rajasthan	21334295	21260045	333	372	13958201	13898382	6139102	6198319					23897943	24194554	65329874	65551672	221798
Tamil Nadu (incl. Chennai)	25604916	25456293	3200	3226	21164029	20962158	12370450	12468041	90951	91545			22568898	22910758	81802444	81892021	89577
U.P.(E)	30864257	30873212	856	853	26665805	26443773	11654121	11768215					26509498	27243790	95694537	96329843	635306
U.P.(W)	13545301	13664867	306	305	24679320	24599457	5941889	5971430					18731325	19173890	62898141	63409949	511808
West Bengal	15891719	15746165	814	815	20035243	19663708	2142879	2271223					17211626	17615731	55282281	55297642	15361
Total	327297725	328151987	17717	18069	332612871	328989207	118025372	119245717	90951	91545	3376303	3370668	370016160	376571577	1151437099	1156438770	5001671
Net Addition		854262		352		-3623664		1220345		594		-5635		6555417	0	5001671	
Rural Subscribers	145481978	147706388	0	0	172444916	170769483	37354225	37756939	0	0	45692	45657	152137653	155623117	507464464	511901584	4437120

Note: 1. The subscribers of M/s Bharti Airtel includes subscribers of M/s Tata Teleservices Ltd. However, DoT has not yet approved the merger of them.

2. Virtual Network Operator (VNO) of BSNL has reported its subscriber number from the month of October, 2018.

Proportion of VLR on the date of Peak VLR in the month of Jan-20 (%)							Annexure-II	
Circle	Bharti	BSNL	Vodafone Idea	MTNL	Reliance Com.	Reliance Jio	Total	
Andhra Pradesh	105.28	65.20	91.10		58.26	77.56	88.28	
Assam	97.13	53.62	85.03		-	83.82	85.21	
Bihar	93.21	50.70	84.98		98.29	94.45	89.43	
Delhi	84.54		81.89	17.79	28.94	76.48	78.23	
Gujarat	94.41	50.77	97.02		28.94	78.24	85.98	
Haryana	100.99	37.32	89.87		52.14	63.23	73.30	
Himachal Pradesh	96.09	38.53	98.03		34.29	72.31	72.63	
J & K	98.60	58.04	82.99		-	74.48	84.87	
Karnataka	93.54	58.70	92.82		88.96	81.01	85.98	
Kerala	96.17	68.27	95.15		28.71	69.44	83.41	
Kolkata	93.69	51.97	92.92		-	81.94	85.82	
Madhya Pradesh	111.09	48.75	88.01		48.55	91.71	90.68	
Maharashtra	85.00	55.47	94.88		48.56	89.51	88.37	
Mumbai	78.32		79.44	45.10	124.08	73.50	75.94	
North East	98.22	75.50	80.53		-	95.21	91.92	
Orissa	96.39	67.11	93.21		13.59	89.04	88.00	
Punjab	97.37	42.28	85.51		21.32	68.70	76.50	
Rajasthan	96.18	47.39	91.08		37.37	77.60	83.63	
Tamil Nadu (incl. Chennai)	93.58	67.87	91.03		70.92	79.49	85.04	
U.P. (E)	97.39	38.53	94.09		38.92	88.56	86.80	
U.P. (W)	95.65	43.09	86.67		11.80	79.90	82.46	
West Bengal	94.43	82.24	88.85		27.36	86.71	89.48	
Total	95.37	54.88	90.36	27.40	67.14	82.26	85.30	

Note: Peak VLR figures in some circles of some of the service providers are more than their HLR figures due to a large number of inroamers.

Wireline Subscriber Base																			Annexure-III	
Service Area	BSNL		MTNL		Bharti Airtel		Reliance Com.		Tata Tele.		Quadrant		Vodafone Idea		Reliance Jio		Total		Net Addition	
	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20	Dec-19	Jan-20		
Andhra Pradesh	789437	770343			215233	207678	32460	31428	171926	170325			46465	49025	100155	100170	1355676	1328969	-26707	
Assam	97819	96405											3390	3420	11219	11359	112428	111184	-1244	
Bihar	151311	149363					2203	2206	8334	8528			1920	1920	15319	15401	179087	177418	-1669	
Delhi	0		1410426	1401938	1484992	1482973	75735	71165	146623	148611			69085	72630	81880	81885	3268741	3259202	-9539	
Gujarat	826150	738535			97525	97489	11058	10571	86137	85666			31785	33097	139023	139027	1191678	1104385	-87293	
Haryana	185133	180830			21975	22086	1815	1766	39029	38547			330	360	24024	24030	272306	267619	-4687	
Himachal Pradesh	97819	96638					1343	1239	1957	1896			60	60	355	719	101534	100552	-982	
J & K	123459	124172					0		0				0		9284	9709	132743	133881	1138	
Karnataka	900147	881273			726529	732935	103570	101270	275474	275165			58047	61027	57051	57417	2120818	2109087	-11731	
Kerala	1610709	1503220			63134	63345	11847	11002	19586	19643			5640	5610	12900	13258	1723816	1616078	-107738	
Kolkata	407553	401784			131949	133968	34760	34192	50247	50105			11840	10220	33036	33627	669385	663896	-5489	
Madhya Pradesh	553213	471643			240471	241127	5316	5043	13635	13614			1980	2250	49614	49626	864229	783303	-80926	
Maharashtra	920456	901303			107293	109369	38805	37970	262002	260742			26480	30733	36998	37002	1392034	1377119	-14915	
Mumbai	0	0	1712597	1706484	390886	393304	149162	146722	542573	543608			71215	91271	206351	206381	3072784	3087770	14986	
North East	93865	92235											240	270	4675	4948	98780	97453	-1327	
Orissa	191530	188192					1771	1711	8588	8620			5730	5730	7218	7224	214837	211477	-3360	
Punjab	331049	325322			138041	138705	10165	9873	12093	12411	197881	192339	3000	3060	36878	39237	729107	720947	-8160	
Rajasthan	377178	369595			57267	57340	13830	13403	11569	11459			13590	10221	41247	41266	514681	503284	-11397	
Tamil Nadu (incl. Chennai)	1238419	1190911			547511	547173	52922	49968	122882	123464			25660	31450	84261	84276	2071655	2027242	-44413	
U.P.(E)	294482	288185			62411	62681	3213	3068	8297	8200			19740	20040	33807	33812	421950	415986	-5964	
U.P.(W)	222530	216687			24538	24782	2276	2216	4792	4924			5490	5550	57397	56998	317023	311157	-5866	
West Bengal	167020	164547					1615	1615	2477	2447			120	120	8010	8017	179242	176746	-2496	
Total	9579279	9151183	3123023	3108422	4309755	4314955	553866	536428	1788221	1787975	197881	192339	401807	438064	1050702	1055389	21004534	20584755	-419779	
Net Addition		-428096		-14601		5200		-17438		-246		-5542		36257		4687			-419779	
Rural Subscribers	2440716	2285459	0	0	0	0	1007	972	46926	46916	38565	37237	0	0	2977	2520	2530191	2373104	-157087	

VLR Subscribers in the Wireless Segment

Home Location Register (HLR) is a central database that contains details of each mobile phone subscriber that is authorized to use the GSM core network. The HLRs store details of every SIM card issued by the service provider. Each SIM has a unique identifier called an International Mobile Subscriber Identity (IMSI), which is the primary key to each HLR record. The HLR data is stored for as long as a subscriber remains with the service provider. HLR also manages the mobility of subscribers by means of updating their position in administrative areas. It sends the subscriber data to a Visitor Location Register (VLR).

Subscriber numbers reported by the service providers is the difference between the numbers of IMSI registered in service provider's HLR and sum of other figures as given below:-

1	Total IMSI's in HLR (A)
2	Less: (B = a + b + c + d + e)
a.	Test/Service Cards
b.	Employees
c.	Stock in hand/in Distribution Channels (Active Card)
d.	Subscriber Retention period expired
e.	Service suspended pending disconnection
3	Subscribers Base (A-B)

Visitor Location Register (VLR) is a temporary database of the subscribers who have roamed into the particular area, which it serves. Each base station in the network is served by exactly one VLR; hence a subscriber cannot be present in more than one VLR at a time.

If subscriber is in active stage i.e. he is able to send/receive calls/SMSs he is available both in HLR and VLR. However, it may be possible that the subscriber is registered in HLR but not in VLR due to the reason that he is either switched-off or moved out of coverage area, not reachable etc. In such circumstances he will be available in HLR but not in VLR. This causes difference between subscriber number reported by the service providers based on HLR and numbers available in VLR.

The VLR subscriber data calculated here is based on active subscribers in VLR on the date of Peak subscriber number in VLR of the particular month for which the data is being collected. This data is to be taken from the switches having the purge time of not more than 72 hours.