



सत्यमेव जयते

TELECOM REGULATORY AUTHORITY OF INDIANew Delhi, 25th February, 2020

(www.traigov.in)

**Highlights of Telecom Subscription Data as on 31st December, 2019**

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1151.44	21.00	1172.44
Net Addition in December, 2019 (Million)	-3.15	-0.29	-3.44
Monthly Growth Rate	-0.27%	-1.34%	-0.29%
Urban Telephone Subscribers (Million)	643.97	18.47	662.45
Net Addition in December, 2019 (Million)	-3.36	-0.18	-3.54
Monthly Growth Rate	-0.52%	-0.97%	-0.53%
Rural Telephone Subscribers (Million)	507.46	2.53	509.99
Net Addition in December, 2019 (Million)	0.21	-0.10	0.10
Monthly Growth Rate	0.04%	-3.95%	0.02%
Overall Tele-density*(%)	86.98%	1.59%	88.56%
Urban Tele-density*(%)	151.90%	4.36%	156.26%
Rural Tele-density*(%)	56.39%	0.28%	56.67%
Share of Urban Subscribers	55.93%	87.95%	56.50%
Share of Rural Subscribers	44.07%	12.05%	43.50%
Broadband Subscribers (Million)	642.80	19.14	661.94

❖ In the month of December, 2019, 3.46 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 466.62 million at the end of Nov-19 to 470.08 million at the end of Dec-19, since implementation of MNP.

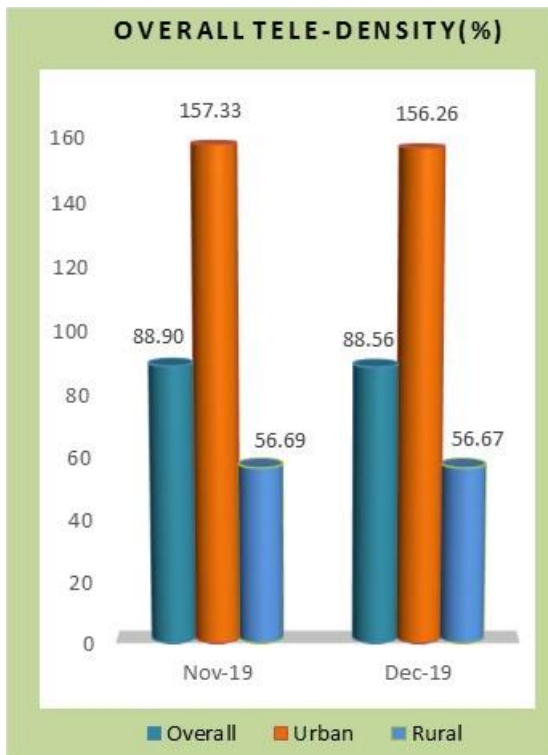
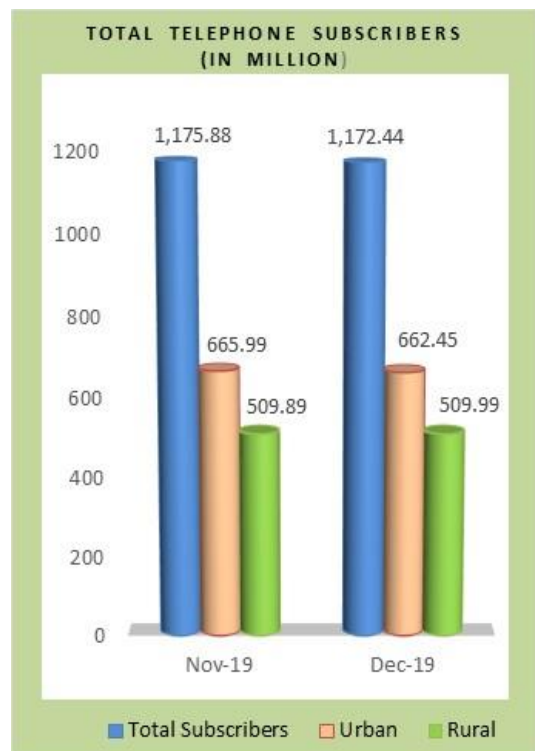
❖ Number of active wireless subscribers (on the date of peak VLR#) in December, 2019 was 982.57 million.

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.

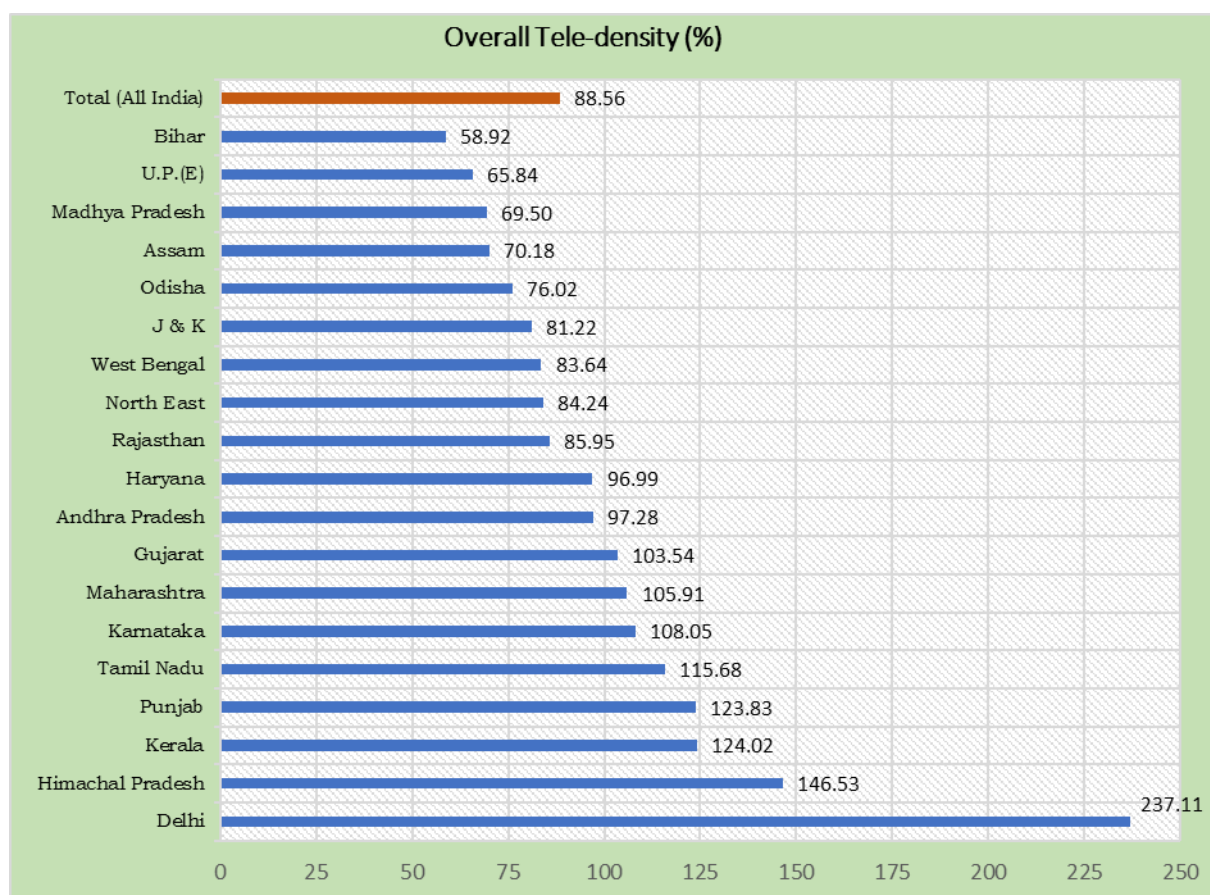
I. Total Telephone Subscribers

- The number of telephone subscribers in India declined from 1,175.88 million at the end of Nov-19 to 1,172.44 million at the end of Dec-19, thereby showing a monthly decline rate of 0.29%. Urban telephone subscription declined from 665.99 million at the end of Nov-19 to 662.45 million at the end of Dec-19, and the rural subscription increased from 509.89 million to 509.99 million during the same period. The monthly growth rates of urban and rural telephone subscription were -0.53% and 0.02% respectively during the month of Dec-19.



- The overall Tele-density in India declined from 88.90 at the end of Nov-19 to 88.56 at the end of Dec-19. The Urban Tele-density declined from 157.33 at the end of Nov-19 to 156.26 at the end of Dec-19. Rural Tele-density also declined from 56.69 at the end of Nov-19 to 56.67 at the end of Dec-19. The share of rural and urban subscribers in total number of telephone subscribers at the end of Dec-19 was 43.50% and 56.50% respectively.

Overall Tele-density (Circle/State Wise) – As on 31st December, 2019



- 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 Dec-19. Delhi service area has maximum tele-density of 237.11 and the Bihar service area has minimum tele-density of 58.92 at the end of Dec-19.

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 published by the Office of the Registrar General & Census Commissioner, India.
- 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 December, 2019

Circle Category	Net additions in the month of December, 2019		Telephone Subscriber base as on 31 st December, 2019	
	Wireline segment	Wireless segment	Wireline segment	Wireless segment
Circle A	-1,17,163	-12,61,950	81,31,861	39,62,84,308
Circle B	-1,06,497	-11,10,286	50,22,354	46,44,84,768
Circle C	-5,786	-3,68,684	8,39,409	17,39,74,000
Metro	-56,119	-4,09,897	70,10,910	11,66,94,023
All India	-2,85,565	-31,50,817	21004534	1,15,14,37,099

Circle Category-wise monthly and yearly Growth Rates in Telephone Subscribers in the month of December, 2019

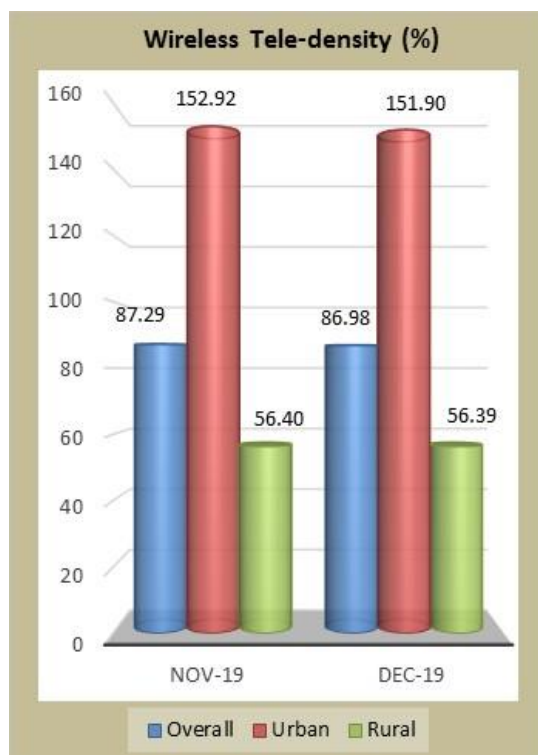
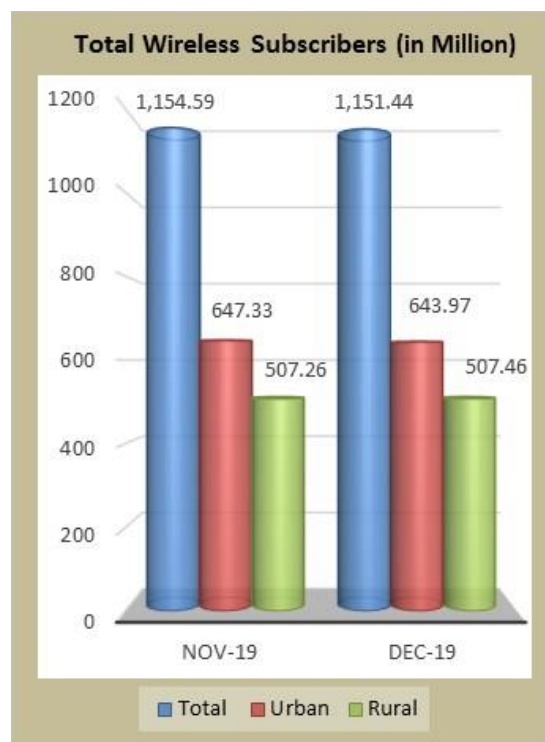
Circle Category	Monthly growth rate (%) (Nov-19 to Dec-19)		Yearly growth rate (%) (Dec-18 to Dec-19)	
	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment
Circle A	-1.42	-0.32	-5.56	-1.97
Circle B	-2.08	-0.24	-8.06	-3.11
Circle C	-0.68	-0.21	-9.05	-1.51
Metro	-0.79	-0.35	2.10	0.83
All India	-1.34	-0.27	-3.95	-2.09

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 decline rate in their subscribers during the month of Dec-19. 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 Dec-19. On yearly basis, only Metro Circles showed growth in their number of wireline subscribers.

III. Wireless Subscribers

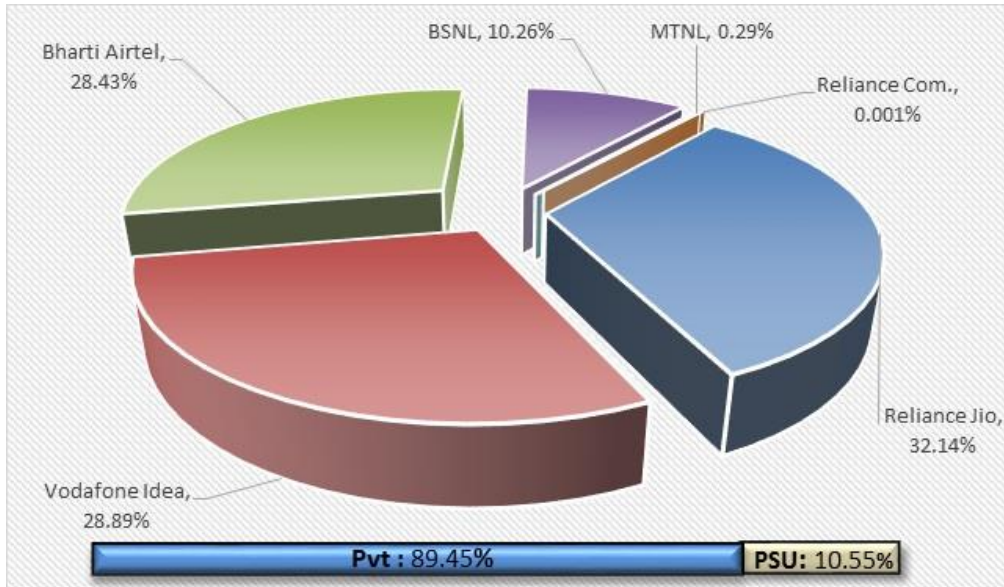
- Total wireless subscribers (2G, 3G & 4G) declined from 1,154.59 million at the end of Nov-19 to 1,151.44 million at the end of Dec-19, thereby registering a monthly decline rate of 0.27%. Wireless subscription in urban areas declined from 647.33 million at the end of Nov-19 to 643.97 million at the end of Dec-19, however wireless subscription in rural areas increased from 507.26 million at the end of Nov-19 to 507.46 million at the end of Dec-19. Monthly growth rates of urban and rural wireless subscription were -0.52% and 0.04% respectively.



- The Wireless Tele-density in India declined from 87.29 at the end of Nov-19 to 86.98 at the end of Dec-19. The Urban Wireless Tele-density declined from 152.92 at the end of Nov-19 to 151.90 at the end of Dec-19 and Rural Wireless Tele-density also declined from 56.40 to 56.39 during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 55.93% and 44.07% respectively at the end of Dec-19. Detailed statistics of wireless subscriber base is available at **Annexure-I**.

- As on 31st December, 2019, the private access service providers held 89.45% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 10.55%.
- 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 December, 2019



Net Additions in Wireless Subscribers of Access Service Providers in the month of December, 2019

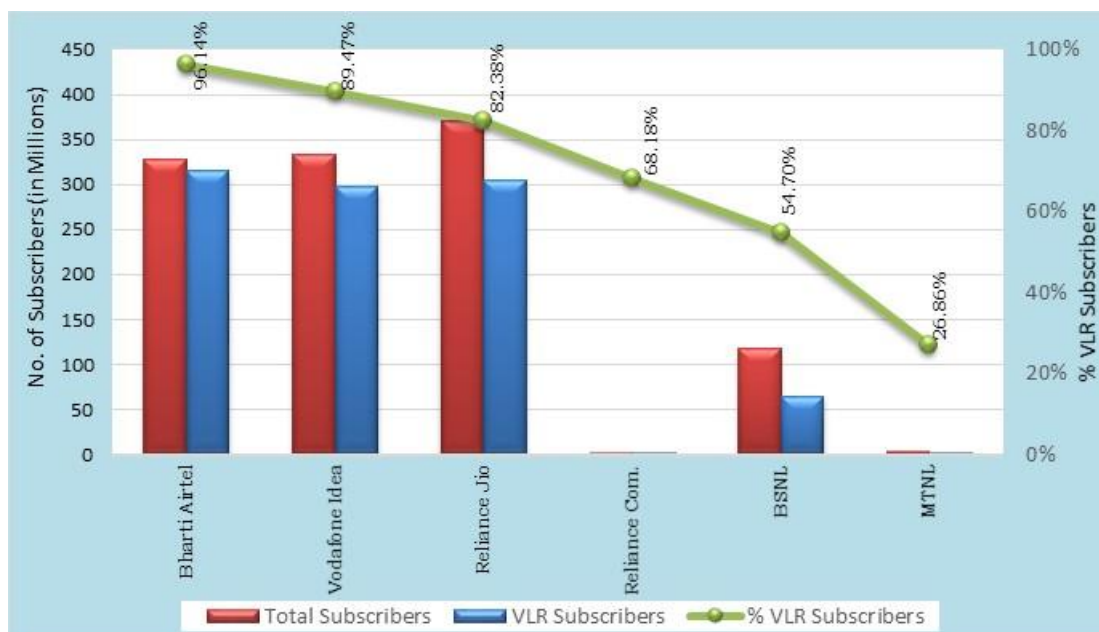


- Note:**
1. M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd. However, DoT has not yet approved merger of them.
 2. Virtual Network Operator (VNO) of BSNL has started reporting of its subscribers from the month of October, 2018 and the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

IV. Active Wireless Subscribers (VLR Data)

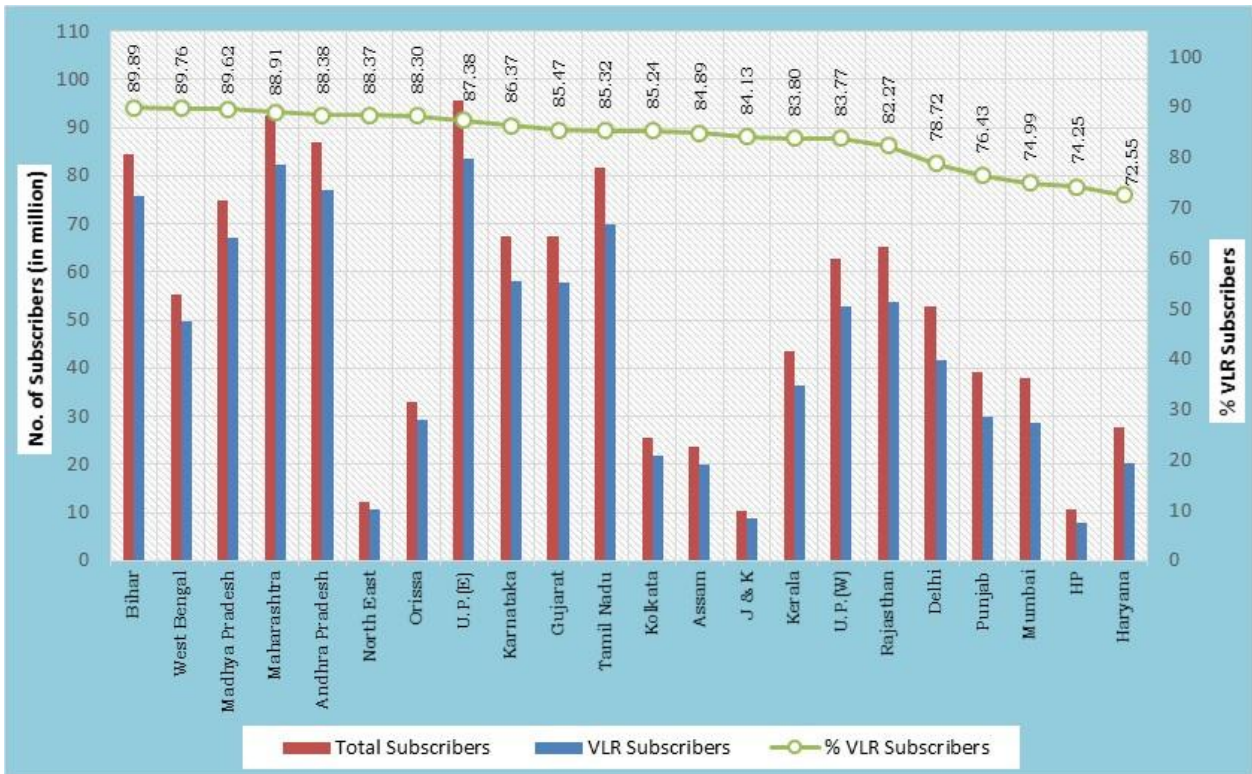
- Out of the total wireless subscribers (1,151.44 million), 982.57 million wireless subscribers were active on the date of peak VLR in the month of Dec-19. The proportion of active wireless subscribers was approximately 85.33% of the total wireless subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of Dec-19 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 December, 2019



- Bharti Airtel has the maximum proportion (96.14%) of its active wireless subscribers (VLR) as against its total wireless subscribers (HLR) on the date of peak VLR in the month of Dec-19 and MTNL has the minimum proportion of VLR (26.86%) of its HLR during the same period.

Service Area wise percentage of VLR Subscribers in the Month of December, 2019



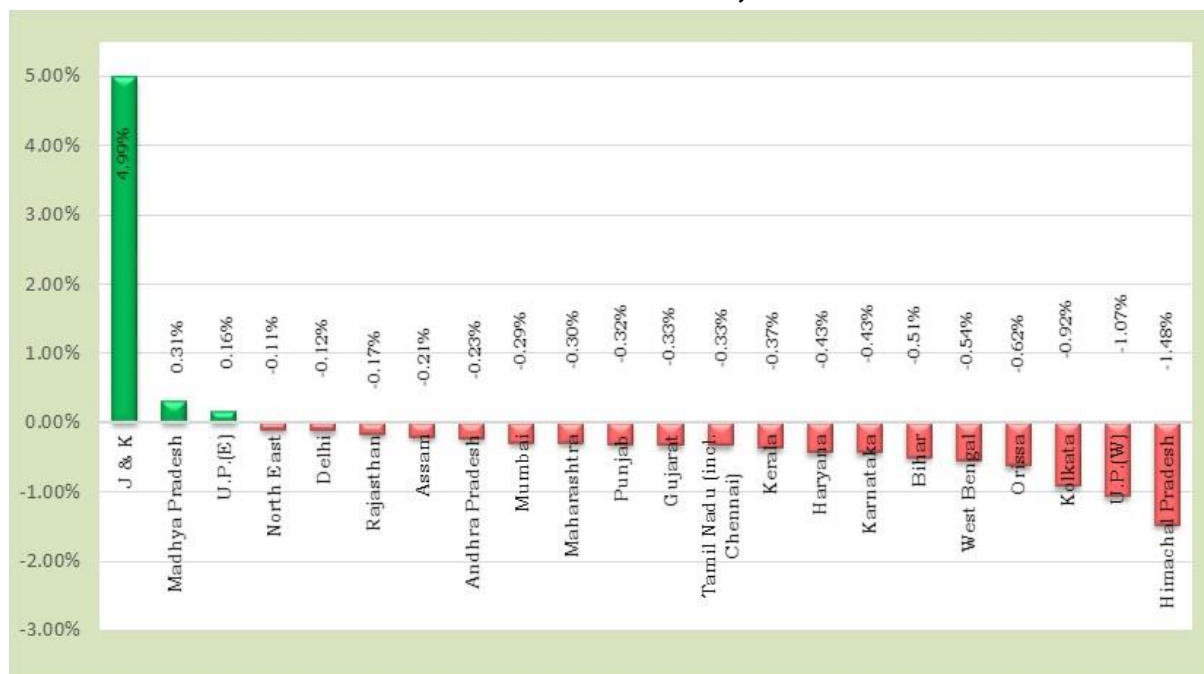
V. Growth in Wireless Subscribers

Access Service Provider-wise Monthly Growth Rate of Wireless Subscribers in the month of December, 2019



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

Service Area-wise Monthly Growth Rate of Wireless Subscribers in the month of December, 2019



- All service areas showed decline except J&K, Madhya Pradesh and U.P.(East) in their wireless subscribers during the month of

Dec-19. Jammu & Kashmir service area showed maximum growth of 4.99% 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 Dec-19, a total of 3.46 million requests were received for MNP. Out of total 3.46 million new requests, 1.76 million requests received from Zone-I and 1.70 million requests received from Zone-II. The cumulative MNP requests increased from 466.62 million at the end of Nov-19 to 470.08 million at the end of Dec-19, 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 36.45 million) followed by Maharashtra (about 35.88 million) service area.

- In MNP Zone-II (Southern and Eastern India), the highest number of requests till date have been received in Karnataka (about 42.77 million) followed by Andhra Pradesh (about 39.58 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)	
	Nov-19	Dec-19		Nov-19	Dec-19
Delhi	24.06	24.23	Andhra Pradesh	39.28	39.58
Gujarat	31.10	31.33	Assam	3.59	3.61
Haryana	16.88	16.97	Bihar	19.05	19.23
Himachal Pradesh	2.28	2.29	Karnataka	42.55	42.77
Jammu & Kashmir	1.13	1.14	Kerala	11.73	11.86
Maharashtra	35.44	35.88	Kolkata	11.04	11.11
Mumbai	23.43	23.55	Madhya Pradesh	30.90	31.16
Punjab	18.06	18.15	North East	1.40	1.40
Rajasthan	36.28	36.45	Orissa	9.31	9.39
U.P.(East)	26.10	26.36	Tamil Nadu	38.98	39.27
U.P.(West)	21.11	21.27	West Bengal	22.92	23.06
Total	235.87	237.63	Total	230.74	232.44
Total (Zone-1 + Zone-2)				466.62	470.08
Net Addition (December, 2019)			3.46		

VII. Wireline Subscribers

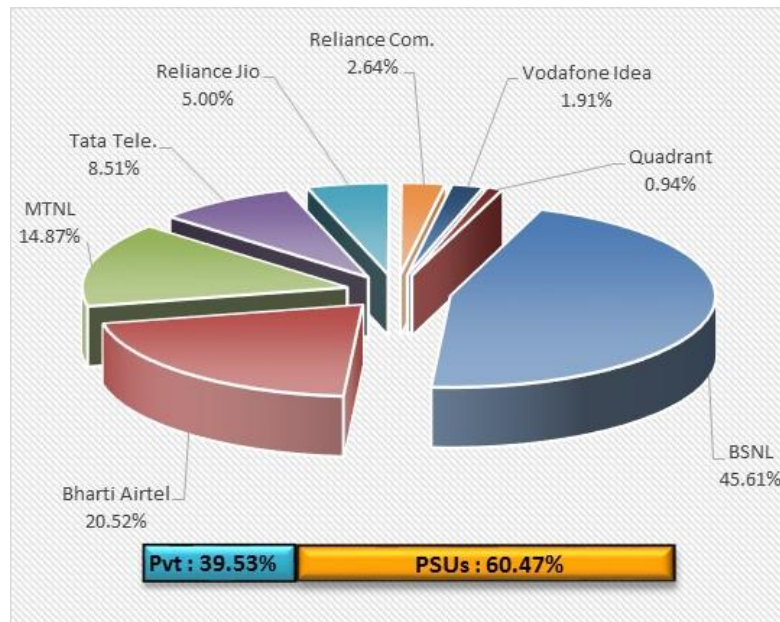
- Wireline subscribers declined from 21.29 million at the end of Nov-19 to 21.00 million at the end of Dec-19. Net decline in the wireline subscriber base was 0.29 million with a monthly decline rate of

1.34%. The share of urban and rural subscribers in total wireline subscribers were 87.95% and 12.05% respectively at the end of Dec-19.

- The Overall Wireline Tele-density declined from 1.61 at the end of Nov-19 to 1.59 at the end of Dec-19. Urban and Rural Wireline Tele-density were 4.36 and 0.28 respectively during the same period.

- BSNL and MTNL, the two PSU access service providers, held 60.47% of the wireline market share as on 31st December, 2019. Detailed statistics of wireline subscriber base are available at **Annexure-III.**

Access Service Provider-wise Market Shares of Wireline Subscribers as on 31st December, 2019



Access Service Provider-wise Net Additions/declines in Wireline Subscribers during the month of December, 2019



VIII. Broadband (\geq 512 Kbps download)

- As per the reports received from 341 operators in the month of December, 2019, the number of broadband subscribers increased from 661.27 million at the end of Nove-19 to 661.94 million at the end of Dec-19 with a monthly growth rate of 0.10%. Segment-wise broadband subscribers and their monthly growth rates are as below:

Segment-wise Broadband Subscribers and Monthly Growth Rate in the month of December, 2019

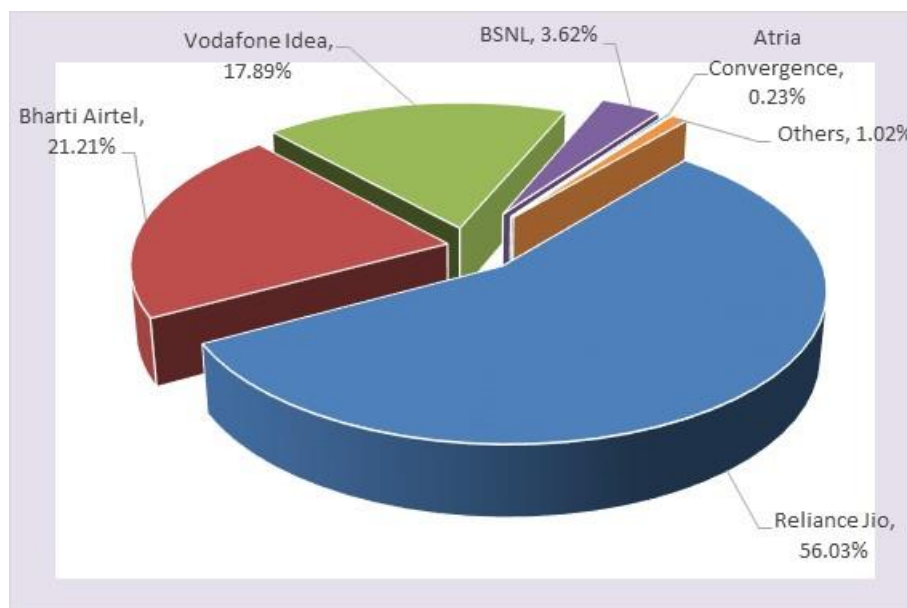
Segment	Broadband subscribers (in million)		Monthly growth rate in the month of Dec-19
	As on 30 th November, 2019	As on 31 st December, 2019	
Wired subscribers	19.13	19.14	0.03%
Mobile devices users (Phones and dongles)	641.54	642.19	0.10%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.60	0.61	1.80%
Total	661.27	661.94	0.10%

- Top five service providers constituted 98.98% market share of the total broadband subscribers at the end of Dec-19. These service providers were Reliance Jio Infocomm Ltd (370.87 million), Bharti Airtel (140.40 million), Vodafone Idea (118.45 million), BSNL (23.96 million) and Atria Convergence (1.52 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 31.12.2019**



- As on 31st December, 2019, the top five Wired Broadband Service providers were BSNL (8.39 million), Bharti Airtel (2.42 million), Atria Convergence Technologies (1.52 million), Hathway Cable & Datacom (0.90 million) and Reliance Jio Infocomm Ltd (0.86 million).
- As on 31st December, 2019, the top five Wireless Broadband Service providers were Reliance Jio Infocom Ltd (370.02 million), Bharti Airtel (137.98 million), Vodafone Idea (118.43 million), BSNL (15.56 million) and MTNL (0.20 million).

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(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
	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	
Andhra Pradesh	28750922	28873882	2013	2176	19084767	18885514	9927070	9914603					29461868	29346713	87226640	87022888	-203752
Assam	8382286	8358529			4712355	4633250	2730679	2743312					7831468	7872608	23656788	23607699	-49089
Bihar	35815764	35456281	228	383	15916391	15431406	5140243	5310328					27880382	28123388	84753008	84321786	-431222
Delhi	15504485	15572477	1779	1729	17790694	17701405					2187738	2186235	17523680	17485005	53008376	52946851	-61525
Gujarat	10995363	10962911	582	577	27624359	27506873	6076716	6085008					22972945	22893405	67669965	67448774	-221191
Haryana	4473276	4479975	172	140	9318951	9156703	4985316	4955027					9137369	9203509	27915084	27795354	-119730
Himachal Pradesh	3433764	3424834	72	105	965559	934451	2940044	2767116					3417657	3471715	10757096	10598221	-158875
J & K	4114051	4544784		0	576932	561433	1269058	1264988					3870140	3949544	9830181	10320749	490568
Karnataka	28559283	28630803	1372	1550	12171470	12007384	7320502	7324448					19626706	19423779	67679333	67387964	-291369
Kerala	5557018	5531696	533	625	18552272	18471237	10928286	10936754					8623730	8561983	43661839	43502295	-159544
Kolkata	6369152	6354972	33	36	7790420	7679355	1790275	1856520					9938455	9760191	25888335	25651074	-237261
Madhya Pradesh	14908793	14769663	889	738	24990695	24926265	6344618	6315355					28399476	28865775	74644471	74877796	233325
Maharashtra	15841466	15970302	878	1082	40296333	39676542	7128441	7089469					29631665	29884843	92898783	92622238	-276545
Mumbai	9762390	9800346	3067	2420	13628224	13468986					1193720	1190068	13619808	13634278	38207209	38096098	-111111
North East	5228707	5227184		0	1957784	1926024	1465344	1466782					3473244	3492349	12125079	12112339	-12740
Orissa	11908090	11756381	340	368	3502168	3430621	5905152	6023748					11904782	11802088	33220532	33013206	-207326
Punjab	10375636	10342217	295	279	9804885	9712824	5676700	5723473					13370870	13325697	39228386	39104490	-123896
Rajasthan	21320162	21334295	420	333	14095061	13958201	6111684	6139102					23911376	23897943	65438703	65329874	-108829
Tamil Nadu (incl. Chennai)	25611329	25604916	2879	3200	21417991	21164029	12252922	12370450	90820	90951			22695596	22568898	82071537	81802444	-269093
U.P.(E)	30879095	30864257	881	856	26490350	26665805	11601074	11654121					26574041	26509498	95545441	95694537	149096
U.P.(W)	13548234	13545301	62	306	25191076	24679320	5917215	5941889					18919770	18731325	63576357	62898141	-678216
West Bengal	15969509	15891719	778	814	20378587	20035243	2087075	2142879					17148824	17211626	55584773	55282281	-302492
Total	327308775	327297725	17273	17717	336257324	332612871	117598414	118025372	90820	90951	3381458	3376303	369933852	370016160	1154587916	1151437099	-3150817
Net Addition		-11050		444		-3644453		426958		131		-5155		82308	0	-3150817	
Rural Subscribers	144769017	145481978	0	0	173756808	172444916	37449402	37354225	0	0	45724	45692	151234791	152137653	507255742	507464464	208722

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 Dec-19 (%)						Annexure-II	
Circle	Bharti	BSNL	Vodafone Idea	M TNL	Reliance Com.	Reliance Jio	Total
Andhra Pradesh	104.42	65.35	92.20		59.51	77.94	88.38
Assam	96.89	53.93	83.45		-	83.79	84.89
Bihar	93.37	52.27	85.98		102.49	94.76	89.89
Delhi	85.85		84.49	17.74	30.33	74.14	78.72
Gujarat	95.80	50.05	94.69		30.33	78.87	85.47
Haryana	99.94	36.76	87.21		51.43	63.89	72.55
Himachal Pradesh	97.12	41.96	97.29		33.33	71.22	74.25
J & K	105.63	50.71	79.30		-	70.77	84.13
Karnataka	94.70	58.44	91.87		88.71	81.23	86.37
Kerala	100.22	67.93	94.13		28.96	71.17	83.80
Kolkata	93.85	55.38	90.17		-	81.44	85.24
Madhya Pradesh	108.21	48.39	86.09		49.46	92.17	89.62
Maharashtra	86.88	54.87	95.57		48.15	89.25	88.91
Mumbai	77.16		77.47	43.62	126.49	73.69	74.99
North East	96.39	73.06	80.28		-	87.27	88.37
Orissa	96.79	67.41	91.36		13.32	89.63	88.30
Punjab	97.26	41.96	84.70		23.66	69.04	76.43
Rajasthan	94.49	46.32	91.16		41.44	75.42	82.27
Tamil Nadu (incl. Chennai)	93.24	67.82	91.98		71.31	79.75	85.32
U.P. (E)	102.57	37.98	87.67		38.55	91.13	87.38
U.P. (W)	99.24	41.89	87.13		11.44	81.47	83.77
West Bengal	95.51	82.78	87.65		26.90	87.78	89.76
Total	96.14	54.70	89.47	26.86	68.18	82.38	85.33

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
	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	Nov-19	Dec-19	
Andhra Pradesh	809997	789437			213246	215233	33703	32460	171789	171926			46285	46465	98707	100155	1373727	1355676	-18051
Assam	98837	97819											3390	3390	10501	11219	112728	112428	-300
Bihar	155193	151311					2317	2203	8381	8334			1920	1920	14408	15319	182219	179087	-3132
Delhi	0	0	1427369	1410426	1494423	1484992	82869	75735	151113	146623			68335	69085	80556	81880	3304665	3268741	-35924
Gujarat	836759	826150			97330	97525	11470	11058	86892	86137			31596	31785	136638	139023	1200685	1191678	-9007
Haryana	187134	185133			22070	21975	1918	1815	38936	39029			270	330	20508	24024	270836	272306	1470
Himachal Pradesh	99302	97819					1543	1343	1953	1957			60	60	355	355	103213	101534	-1679
J & K	122540	123459					0	0	0	0			0	0	8043	9284	130583	132743	2160
Karnataka	933093	900147			724105	726529	105468	103570	275334	275474			54887	58047	54835	57051	2147722	2120818	-26904
Kerala	1677609	1610709			62983	63134	12142	11847	19703	19586			5250	5640	12107	12900	1789794	1723816	-65978
Kolkata	415297	407553			132570	131949	35461	34760	53616	50247			11810	11840	32879	33036	681633	669385	-12248
Madhya Pradesh	572546	553213			240853	240471	5527	5316	14603	13635			1800	1980	48099	49614	883428	864229	-19199
Maharashtra	935736	920456			105969	107293	39313	38805	264587	262002			26503	26480	36750	36998	1408858	1392034	-16824
Mumbai	0	0	1718280	1712597	387168	390886	152538	149162	547784	542573			71557	71215	203404	206351	3080731	3072784	-7947
North East	94064	93865											240	240	4242	4675	98546	98780	234
Orissa	195006	191530					1877	1771	8535	8588			5670	5730	6818	7218	217906	214837	-3069
Punjab	337178	331049			137543	138041	10232	10165	12048	12093	201625	197881	3000	3000	38153	36878	739779	729107	-10672
Rajasthan	385204	377178			57527	57267	14174	13830	11657	11569			13590	13590	40107	41247	522259	514681	-7578
Tamil Nadu (incl.Chennai)	1281102	1238419			547050	547511	56137	52922	125364	122882			25360	25660	83019	84261	2118032	2071655	-46377
U.P.(E)	302460	294482			62592	62411	3333	3213	8291	8297			12680	19740	32508	33807	421864	421950	86
U.P.(W)	227643	222530			24355	24538	2335	2276	4918	4792			5460	5490	53269	57397	317980	317023	-957
West Bengal	170869	167020					1652	1615	2495	2477			120	120	7775	8010	182911	179242	-3669
Total	9837569	9579279	3145649	3123023	4309784	4309755	574009	553866	1807999	1788221	201625	197881	389783	401807	1023681	1050702	21290099	21004534	-285565
Net Addition		-258290		-22626		-29		-20143		-19778		-3744		12024		27021			-285565
Rural Subscribers	2543997	2440716	0	0	0	0	1097	1007	46926	46926	39764	38565	0	0	2446	2977	2634230	2530191	-104039

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.