(Press Release No.09/2020)

Information Note to the Press





TELECOM REGULATORY AUTHORITY OF INDIA

New Delhi, 16th January, 2020 (www.trai.gov.in)

Highlights of Telecom Subscription Data as on 30th November, 2019

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1154.59	21.29	1175.88
Net Addition in November, 2019 (Million)	-28.82	-0.16	-28.97
Monthly Growth Rate	-2.43%	-0.73%	-2.40%
Urban Telephone Subscribers (Million)	647.33	18.66	665.99
Net Addition in November, 2019 (Million)	-15.59	-0.11	-15.70
Monthly Growth Rate	-2.35%	-0.58%	-2.30%
Rural Telephone Subscribers (Million)	507.26	2.63	509.89
Net Addition in November, 2019 (Million)	-13.22	-0.05	-13.27
Monthly Growth Rate	-2.54%	-1.81%	-2.54%
Overall Tele-density*(%)	87.29	1.61	88.90
Urban Tele-density*(%)	152.92	4.41	157.33
Rural Tele-density*(%)	56.40	0.29	56.69
Share of Urban Subscribers	56.07%	87.63%	56.64%
Share of Rural Subscribers	43.93%	12.37%	43.36%
Broadband Subscribers (Million)	642.14	19.13	661.27

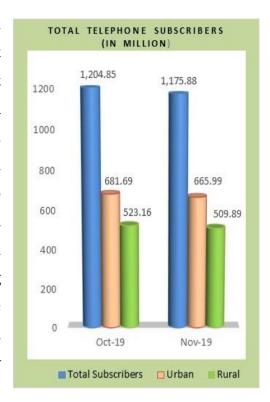
- ❖ In the month of November, 2019, 4.88 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 461.73 million at the end of Oct-19 to 466.62 million at the end of Nov-19, since implementation of MNP.
- Number of active wireless subscribers (on the date of peak VLR*) in November, 2019 was 979.09 million.

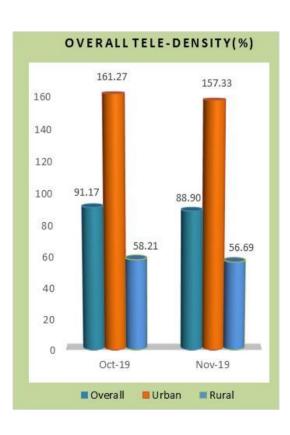
Note:

- 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

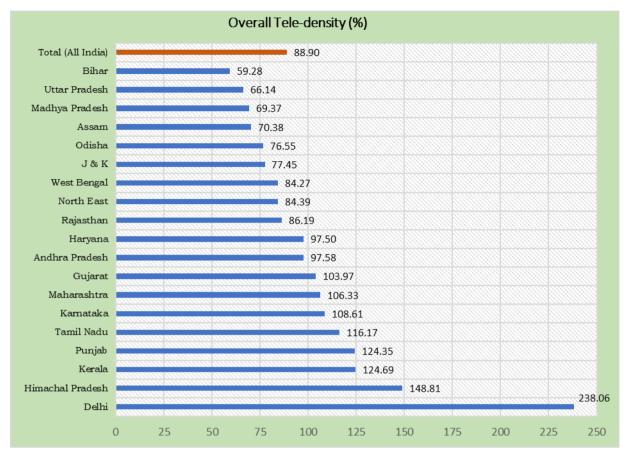
• The number of telephone subscribers in India declined from 1,204.85 million at the end of Oct-19 to 1,175.88 million at the end of Nov-19, thereby showing a monthly decline rate of 2.40%. Urban telephone subscription declined from 681.69 million at the end of Oct-19 to 665.99 million at the end of Nov-19, and the rural subscription also declined from 523.16 million to 509.89 million during the same period. The monthly decline rates of urban and rural subscription 2.30% 2.54% were and respectively during the month of Nov-19.





• The overall Tele-density in India declined from 91.17 at the end of Oct-19 to 88.90 at the end of Nov-19. The Urban Tele-density declined from 161.27 at the end of Oct-19 to 157.33 at the end of Nov-19. Rural Tele-density also declined from 58.21 at the end of Oct-19 to 56.69 at the end of Nov-19. The share of rural and urban subscribers in total number of telephone subscribers at the end of Nov-19 was 56.64% and 43.36% respectively.





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 Nov-19. Delhi service area
has maximum tele-density of 238.06 and the Bihar service area has
minimum tele-density of 59.28 at the end of November, 2019.

Notes:

- 1. Population data/projections are available state wise only.
- 2. 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.
- 3. 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).
- 4. Data/information for West Bengal includes Kolkata, Maharashtra includes Mumbai, Tamil Nadu includes Chennai and Uttar Pradesh includes UPE & UPW service area(s).
- 5. 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 November, 2019

Circle		s in the month mber, 2019	Telephone Subscriber base as on 30 th November, 2019				
Category	Wireline segment	Wireless segment	Wireline segment	Wireless segment			
Circle A	-46,765	-6,064,864	8,249,024	397,546,259			
Circle B	-76,306	-16,300,283	5,128,851	465,595,054			
Circle C	-7,758	-4,010,485	845,195	174,342,684			
Metro	-25,905	-2,439,761	7,067,029	117,103,920			
All India	-156,734	-28,815,393	21,290,099	1,154,587,917			

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

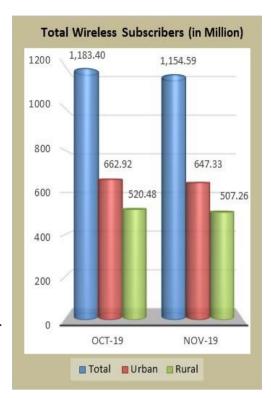
Circle	Monthly gro (Oct-19 t	wth rate (%) o Nov-19)	Yearly growth rate (%) (Nov-18 to Nov-19)				
Category	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment			
Circle A	-0.56	-1.50	-4.59	-1.29			
Circle B	-1.47	-3.38	-6.56	-2.52			
Circle C	-0.91	-2.25	-9.77	-0.95			
Metro	-0.37	-2.04	2.57	1.51			
All India	-0.73	-2.43	-3.06	-1.47			

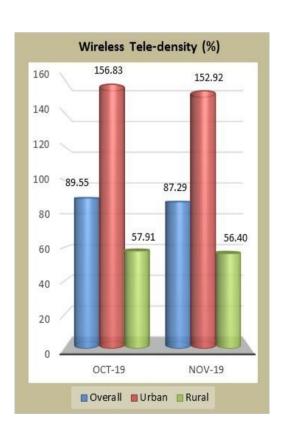
Note: Circle Category-Metro includes Delhi, Mumbai and Kolkata. Data for Chennai has been included in Circle Category-A, as part of TamilNadu.

- 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 Nov-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 Nov-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 1,183.40 million at the end of Oct-19 to 1,154.39 million at the end of Nov-19, thereby registering a monthly decline rate of 2.43%. Wireless subscription in urban areas declined from 662.92 million at the end of Oct-19 to 647.33 million at the end of Nov-19, and wireless subscription in rural areas also declined from 520.48 million at the end of Oct-19 to 507.26 million at the end of Nov-19. Monthly decline rates of urban and rural wireless subscription were 2.35% and 2.54% respectively.

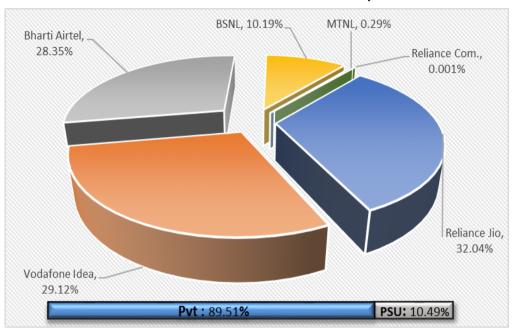




- The Wireless Tele-density in India declined from 89.55 at the end of Oct-19 to 87.29 at the end of Nov-19. The Urban Wireless Tele-density declined from 156.83 at the end of Oct-19 to 152.92 at the end of Nov-19 and Rural Wireless Tele-density also declined from 57.91 to 56.40 during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 56.07% and 43.93% respectively at the end of Nov-19. Detailed statistics of wireless subscriber base is available at **Annexure-I**.
- As on 30th November, 2019, the private access service providers held 89.51% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 10.49%.

• 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 30th November, 2019



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



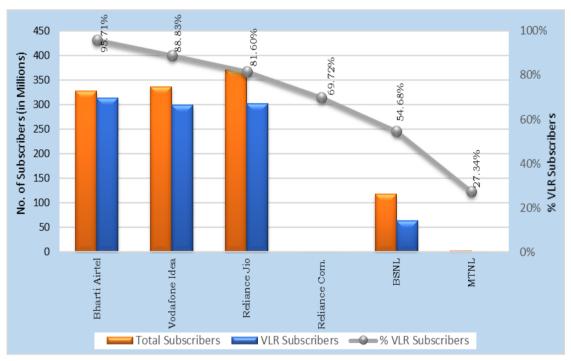
Note: 1. M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd. However, DoT has not yet approved merger of them.

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)

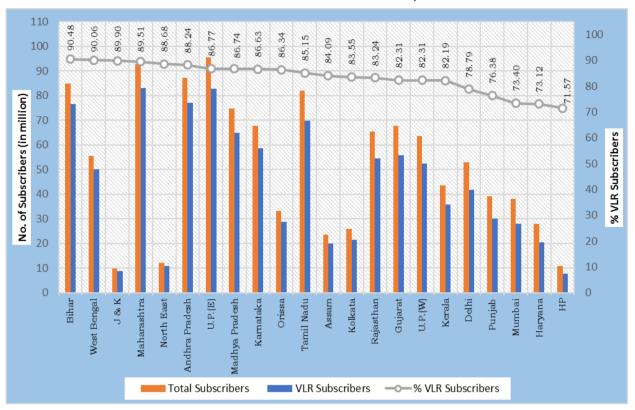
- ofthe total wireless Out subscribers (1,154.59)million), 979.09 million wireless subscribers were active on the date of peak VLR in the month of Nov-19. The of proportion active wireless subscribers approximately was 84.80% of total wireless the subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of Nov-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 November, 2019



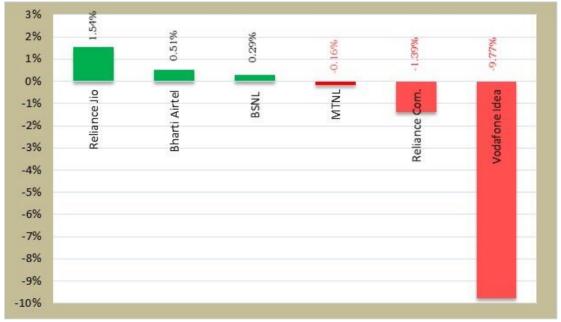
- Bharti Airtel has the maximum proportion (95.71%) of its active wireless subscribers (VLR) as against its total wireless subscribers (HLR) on the date of
- peak VLR in the month of Nov-19 and MTNL has the minimum proportion of VLR (27.34%) of its HLR during the same period.





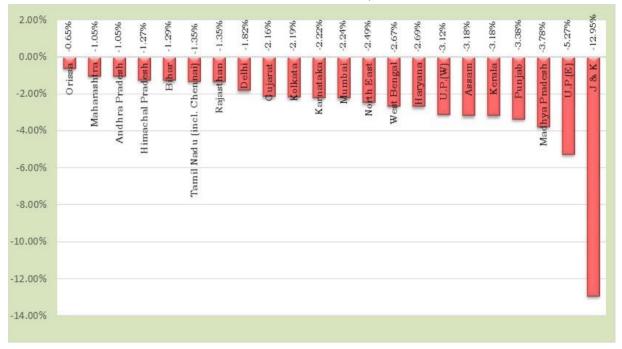
V. Growth in Wireless Subscribers

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



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





 All service areas showed decline in their wireless subscribers during the month of Nov-19. Jammu & Kashmir service area showed maximum decline of 12.95% 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 Nov-19, a total of 4.88 million requests were received for MNP. Out of total 4.88 million new requests, 2.66 million requests received from Zone-I and 2.22 million requests received from Zone-II. The cumulative MNP requests increased from 461.73 million at the end of Oct-19 to 466.62 million at the end of Nov-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 36.28 million) followed by Maharashtra (about 35.44 million) service area.
- In MNP Zone-II (Southern and Eastern India), the highest number of requests till date have been received in Karnataka (about 42.55 million) followed by Andhra Pradesh (about 39.28 million).

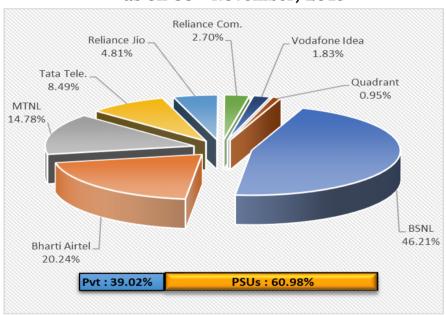
Service Area Wise MNP Status									
Zon	e -1	Zone - 2							
Service Area	Number o Reque Mill	•	Service Area	Number of Porting Requests (in Million)					
	Oct-19	Nov-19		Oct-19	Nov-19				
Delhi	23.79	24.06	Andhra Pradesh	38.90	39.28				
Gujarat	30.80	31.10	Assam	3.56	3.59				
Haryana	16.74	16.88	Bihar	18.81	19.05				
Himachal Pradesh	2.25	2.28	Karnataka	42.26	42.55				
Jammu & Kashmir	1.13	1.13	Kerala	11.53	11.73				
Maharashtra	34.83	35.44	Kolkata	10.97	11.04				
Mumbai	23.24	23.43	Madhya Pradesh	30.54	30.90				
Punjab	17.89	18.06	North East	1.39	1.40				
Rajasthan	36.03	36.28	Orissa	9.24	9.31				
U.P.(East)	25.68	26.10	Tamil Nadu	38.60	38.98				
U.P.(West)	20.81	21.11	West Bengal	22.72	22.92				
Total 233.21		235.87	Total	228.53	230.74				
Total (Zone-1 + Zone	e-2)			461.73	466.62				
Net Addition (Novemb	per, 2019)				4.88				

VII. Wireline Subscribers

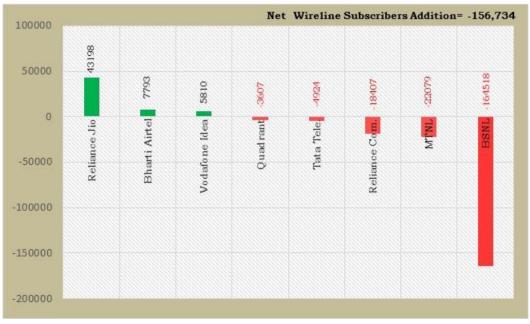
 Wireline subscribers declined from 21.45 million at the end of Oct-19 to 21.29 million at the end of Nov-19. Net decline in the wireline subscriber base was 0.16 million with a monthly decline rate of 0.73%. The share of urban and rural subscribers in total wireline subscribers were 87.63% and 12.37% respectively at the end of Nov-19.

- The Overall Wireline Tele-density declined from 1.62 at the end of Oct-19 to 1.61 at the end of Nov-19. Urban and Rural Wireline Tele-density were 4.41 and 0.29 respectively during the same period.
- BSNL and MTNL, the two PSU access service providers, held 60.98% of the wireline market share as on 30th November, 2019. Detailed statistics of wireline subscriber base are available at **Annexure-III**.

Access Service Provider-wise Market Shares of Wireline Subscribers as on 30th November, 2019



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



VIII. Broadband (≥ 512 Kbps download)

 As per the reports received from 340 operators in the month of November, 2019, the number of broadband subscribers increased from 644.08 million at the end of Oct-19 to 661.27 million at the end of Nov-19 with a monthly growth rate of 2.67%. Segment-wise broadband subscribers and their monthly growth rates are as below:

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

	Broadband s	Monthly growth	
Segment	As on 31 st October, 2019	As on 30 th November, 2019	rate in the month of Nov-19
Wired subscribers	19.08	19.13	0.28%
Mobile devices users (Phones and dongles)	624.41	641.54	2.74%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	0.59	0.60	0.47%
Total	644.08	661.27	2.67%

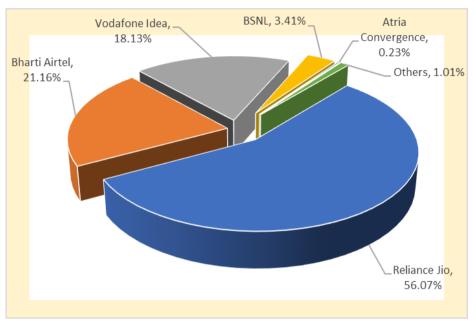
• Top five service providers constituted 98.99% market share of the total broadband subscribers at the end of Nov-19. These service providers were Reliance Jio

Infocomm Ltd (370.76 million), Bharti Airtel (139.92 million), Vodafone Idea (119.89 million), BSNL (22.54 million) and Atria Convergence (1.50 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 30.11.2019



- As on 30th November, 2019, the top five Wired Broadband Service providers were BSNL (8.51 million), Bharti Airtel (2.41 million), Atria Technologies Convergence (1.50)Cable million), Hathway & (0.88)million) Datacom and Reliance Jio Infocomm Ltd (0.83 million).
- As on 30th November, 2019, the top five Wireless Broadband Service providers Reliance Jio were Ltd Infocom (369.93)million), Airtel Bharti (137.51)million), Vodafone Idea (119.87 million), BSNL (14.02 million) and MTNL (0.20 million).

Contact details in case of any clarification:

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		·		 '	Wireless	Subscribe	er Base					Т				Annexu	are-I
Circle	Bharti . (including 1		Relian	ce Com.	Vodafo	one Idea	BS	BSNL		(VNO's)	МТ	TNL	Relian	ce Jio	Total		Net
Official	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Oct-19	Nov-19	Addition
Andhra Pradesh	28545826	28750922	2 2013	2012	2 20648025	19084767	9974217	9927070	,				28981853	29461868	88151934	87226639	-925295
Assam	8310285	8382286	,		5698641	4712355	2705457	2730679					7719510	7831468	24433893	23656788	-777105
Bihar	35711415	35815764	4 228	228	18111434	15916391	5035542	5140243					27002003	27880382	85860622	84753008	-1107614
Delhi	15292490	15504485	5 1779	1779	19091543	17790694		,l			2190398	3 2187738	17414580	17523680	53990790	53008376	-982414
Gujarat	10904762	10995363	3 582	583	3 29598515	27624359	6068524	6076716	,				22592688	22972945	69165071	67669966	-1495105
Haryana	4395690	4473276	5 172	172	10210941	9318951	5007976	4985316	,				9072816	9137369	28687595	27915084	-772511
Himachal Pradesh	3410759	3433764	4 72	72	1187943	965559	2929237	2940044					3366959	3417657	10894970	10757096	-137874
J & K	5232540	4114051			1078820	576932	1263290	1269058		[]			3717749	3870140	11292399	9830181	-1462218
Karnataka	28361506	28559283	3 1372	1373	14115962	12171470	7319075	7320502	اا				19419199	19626706	69217114	67679334	-1537780
Kerala	5519712	5557018	8 533	533	3 20123224	18552272	10922653	10928286	,				8530002	8623730	45096124	43661839	-1434285
Kolkata	6348947	6369152	2 33	33	8498065	7790420	1752817	1790275	,				9869438	9938455	26469300	25888335	-580965
Madhya Pradesh	14819228	14908793	3 886	889	27552061	24990695	7169907	6344618	-				28033989	28399476	77576071	74644471	-2931600
Maharashtra	15490210	15841466	6 874	878	43065411	40296333	6325755	7128441					28998313	29631665	93880563	92898783	-981780
Mumbai	9628598	9762390	3334	3067	14708919	13628224		,	,		1196411	1193720	13546329	13619808	39083591	38207209	-876382
North East	5208515	5228707			2352533	1957784	1458757	1465344	-				3414911	3473244	12434716	12125079	-309637
Orissa	11944911	11908090	339	340	3983604	3502168	5832597	5905152					11675118	11904782	33436569	33220532	-216037
Punjab	10277540	10375636	5 292	295	11418748	9804885	5624285	5676700	,				13281121	13370870	40601986	39228386	-1373600
Rajasthan	21184395	21320162	2 420	420	15541970	14095061	6096708	6111684	,	<u> </u>	<u> </u>		23513775	23911376	66337268	65438703	-89856
Tamil Nadu (incl. Chennai)	25418608	25611329	2878	2879	23114232	21417991	12181968	12252922	87578	90820			22391177	22695596	83196441	82071537	-112490
U.P.(E)	30489866	30879095	5 871	881	32664058	26490350	11615374	11601074	اا	'			26091202	26574041	100861371	95545441	-531593
U.P.(W)	13249633	13548234	4 62	62	2 27683546	25191076	5882081	5917215					18808356	18919770	65623678	63576357	-204732
West Bengal	15904162	15969509	778	778	3 22228494	20378587	2093714	2087075					16884096	17148824	57111244	55584773	-152647
Total	325649598	327308775	17518	17274	372676689	336257324	117259934	117598414	87578	90820	3386809	3381458	364325184	369933852	1183403310	1154587917	-2881539
Net Addition		1659177		-244		-36419365		338480	I	3242		-5351	ıl	5608668	0	-28815393	1
Rural Subscribers	141666588	144769017	7 0	$\sqrt{-c'}$	193321464	173756808	37368209	37449402	0	0	45779	45724	148076996	151234791	520479036	507255742	-1322329

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 V	Proportion of VLR on the date of Peak VLR in the month of Nov-19 (%)								
Circle	Bharti	BSNL	Vodafone Idea	MTNL	Reliance Com.	Reliance Jio	Total		
Andhra Pradesh	103.55	65.53	89.45		64.07	80.16	88.24		
Assam	95.89	54.05	82.65		-	82.79	84.09		
Bihar	94.46	54.95	82.92		37.72	96.22	90.48		
Delhi	86.22		83.41	17.76	99.89	75.15	78.79		
Gujarat	91.59	48.78	92.61		30.19	74.37	82.31		
Haryana	102.07	36.10	86.94		38.95	65.05	73.12		
Himachal Pradesh	93.49	39.76	94.70		44.44	70.37	71.57		
J & K	115.69	50.53	78.06		-	77.17	89.90		
Karnataka	97.39	58.59	90.97		99.64	78.74	86.63		
Kerala	95.23	67.22	93.54		32.83	68.36	82.19		
Kolkata	93.22	57.19	89.09		-	77.77	83.55		
Madhya Pradesh	97.02	48.55	86.60		41.51	90.01	86.74		
Maharashtra	97.29	52.93	93.37		58.43	88.89	89.51		
Mumbai	75.32		75.15	44.90	99.93	72.77	73.40		
North East	97.10	72.74	79.56		-	87.87	88.68		
Orissa	93.38	68.86	90.28		13.82	86.81	86.34		
Punjab	96.76	42.17	84.18		23.05	69.37	76.38		
Rajasthan	94.50	46.17	91.62		33.57	77.75	83.24		
Tamil Nadu (incl. Chennai)	92.64	68.26	93.01		78.92	78.46	85.15		
U.P. (E)	101.52	38.63	90.15		37.91	87.28	86.77		
U.P. (W)	96.80	41.88	87.54		45.16	77.61	82.31		
West Bengal	92.74	82.57	88.41		27.76	90.43	90.06		
Total	95.71	54.68	88.83	27.34	69.72	81.60	84.80		

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	Subscri	ber Base	:								Annexure	-III
	BS	NL	мт	NL	Bharti	Airtel	Reliance Com.		Tata	Tata Tele.		Quadrant		ne Idea	Reliance Jio		Tot	tal
Service Area	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19	Oct-18	Nov-19
Andhra Pradesh	818180	809997			212705	213246	34897	33703	173281	171789			45835	46285	94057	98707	1378955	1373727
Assam	101030	98837											3330	3390	9541	10501	113901	112728
Bihar	158276	155193					2382	2317	8347	8381			1920	1920	13300	14408	184225	182219
Delhi			1442500	1427369	1493575	1494423	84650	82869	152184	151113			67165	68335	77776	80556	3317850	3304665
Gujarat	847524	836759			97387	97330	14519	11470	87629	86892			31476	31596	133529	136638	1212064	1200685
Haryana	189959	187134			22362	22070	1970	1918	38792	38936			270	270	19081	20508	272434	270836
Himachal Pradesh	100412	99302					1573	1543	1897	1953			60	60	256	355	104198	103213
J & K	120911	122540													6140	8043	127051	130583
Karnataka	940274	933093			720736	724105	107469	105468	274799	275334			53567	54887	51317	54835	2148162	2147722
Kerala	1705177	1677609			62819	62983	12798	12142	19761	19703			5250	5250	11027	12107	1816832	1789794
Kolkata	427302	415297			132047	132570	35987	35461	53328	53616			11600	11810	31913	32879	692177	681633
Madhya Pradesh	599419	572546			241111	240853	5699	5527	14964	14603			1770	1800	45804	48099	908767	883428
Maharashtra	952275	935736			105354	105969	41041	39313	265370	264587			26503	26503	35171	36750	1425714	1408858
Mumbai			1725228	1718280	384665	387168	155253	152538	548975	547784			69707	71557	199079	203404	3082907	3080731
North East	95509	94064											240	240	3712	4242	99461	98546
Orissa	201943	195006					1911	1877	8511	8535			5460	5670	6292	6818	224117	217906
Punjab	342884	337178			137495	137543	10393	10232	12265	12048	205232	201625	3000	3000	36356	38153	747625	739779
Rajasthan	391762	385204			57595	57527	15438	14174	11622	11657			13560	13590	38063	40107	528040	522259
Tamil Nadu (incl. Chennai)	1294695	1281102			546741	547050	58510	56137	125506	125364			25210	25360	80232	83019	2130894	2118032
U.P.(E)	306281	302460			63235	62592	3904	3333	8277	8291			12470	12680	30449	32508	424616	421864
U.P.(W)	233204	227643			24164	24355	2368	2335	4885	4918			5460	5460	50251	53269	320332	317980
West Bengal	175070	170869					1654	1652	2530	2495			120	120	7137	7775	186511	182911
Total	10002087	9837569	3167728	3145649	4301991	4309784	592416	574009	1812923	1807999	205232	201625	383973	389783	980483	1023681	21446833	21290099
Net Addition		-164518		-22079		7793		-18407		-4924		-3607		5810		43198		-156734
Rural Subscribers	2591960	2543997	0	0	0	0	1125	1097	47069	46926	40322	39764	0	0	2322	2446	2682798	2634230

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.