

**TELECOM REGULATORY AUTHORITY OF INDIA**New Delhi, 28th January, 2021

(www.trai.gov.in)

**Highlights of Telecom Subscription Data as on 30th November, 2020**

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1155.20	20.07	1175.27
Net Addition in November, 2020 (Million)	3.39	0.08	3.47
Monthly Growth Rate	0.29%	0.40%	0.30%
Urban Telephone Subscribers (Million)	630.40	18.20	648.60
Net Addition in November, 2020 (Million)	1.12	0.18	1.30
Monthly Growth Rate	0.18%	1.02%	0.20%
Rural Telephone Subscribers (Million)	524.80	1.87	526.67
Net Addition in November, 2020 (Million)	2.27	-0.10	2.17
Monthly Growth Rate	0.43%	-5.23%	0.41%
Overall Tele-density*(%)	85.08%	1.48%	86.56%
Urban Tele-density*(%)	134.82%	3.89%	138.72%
Rural Tele-density*(%)	58.95%	0.21%	59.16%
Share of Urban Subscribers	54.57%	90.67%	55.19%
Share of Rural Subscribers	45.43%	9.33%	44.81%
Broadband Subscribers (Million)	720.18	21.89	742.06

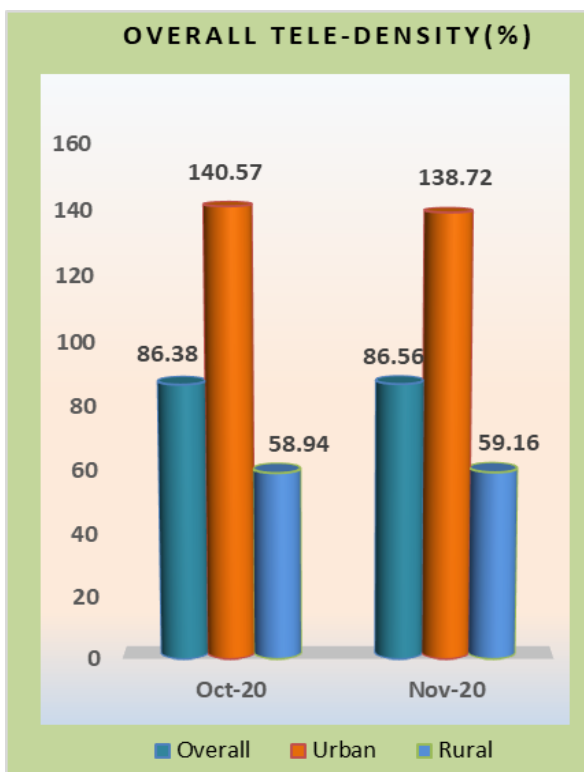
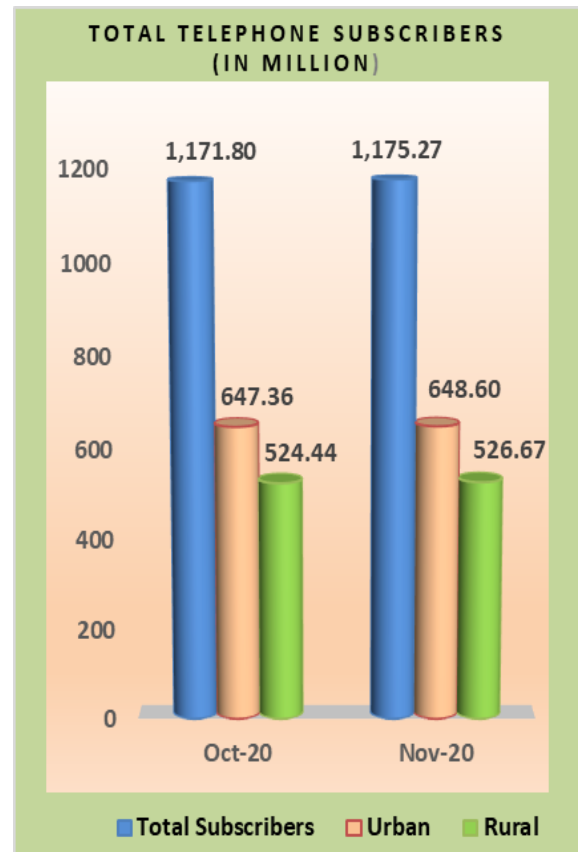
- ❖ In the month of November, 2020, 6.81 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 529.60 million at the end of October-20 to 536.41 million at the end of November-20, since implementation of MNP.
- ❖ Number of active wireless subscribers (on the date of peak VLR#) in November, 2020 was 968.42 million.

Note:

- Information in this Press Release is based on the data provided by the Service Providers
- * Based on the projection of population from the 'Report of the Technical Group on Population Projections for India and States 2011 – 2036', Ministry of Health & Family Welfare.
- # VLR is acronym of Visitor Location Register. The dates of peak VLR for various TSPs are different in different service areas.

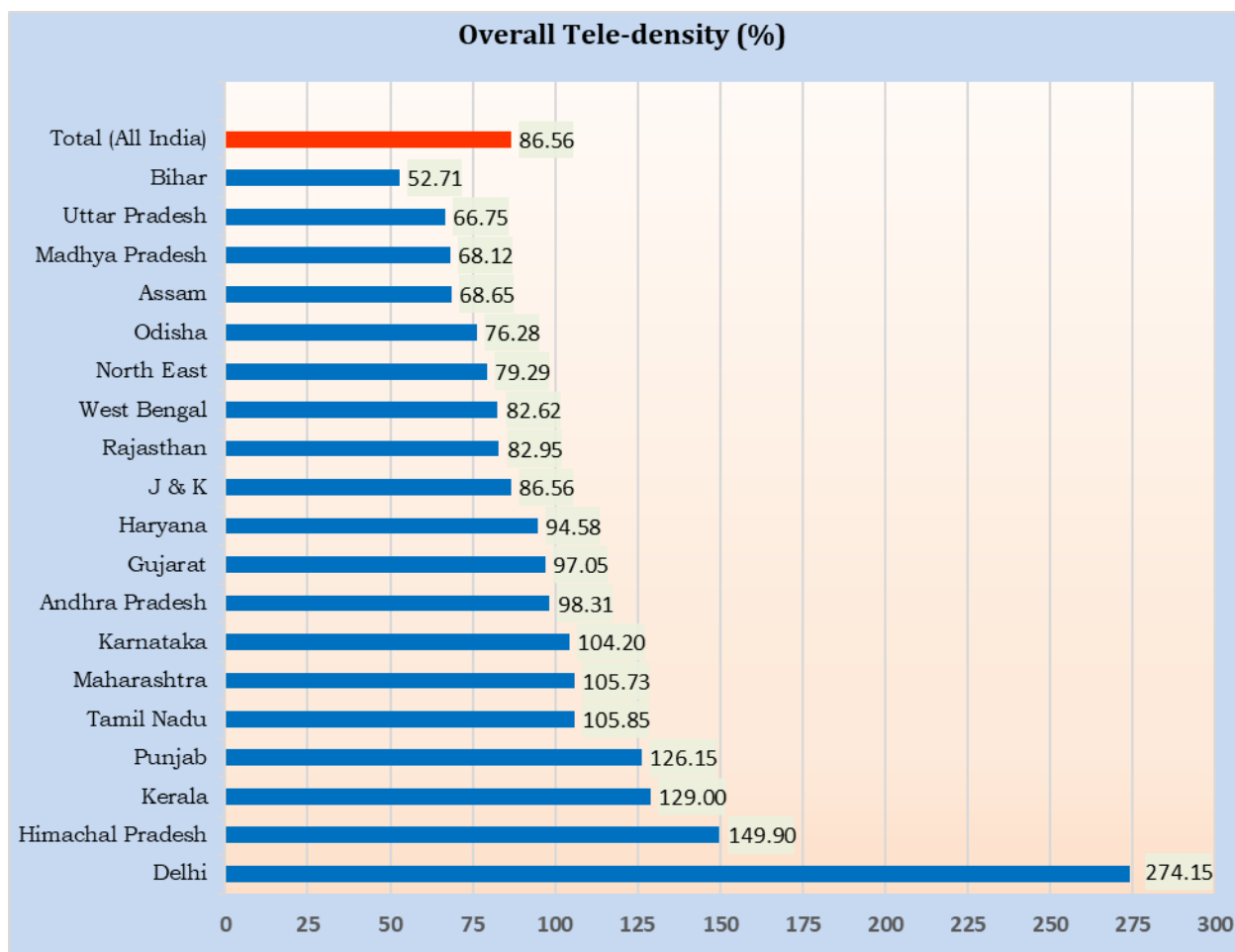
I. Total Telephone Subscribers

- The number of telephone subscribers in India increased from 1,171.80 million at the end of October-20 to 1,175.27 million at the end of November-20, thereby showing a monthly growth rate of 0.30%. Urban telephone subscription increased from 647.36 million at the end of October-20 to 648.60 million at the end of November-20 and the rural subscription also increased from 524.44 million to 526.67 million during the same period. The monthly growth rates of urban and rural telephone subscription were 0.20% and 0.41% respectively during the month of November-20.



- The overall Tele-density in India increased from 86.38 at the end of October-20 to 86.56 at the end of November-20. The Urban Tele-density decreased from 140.57 at the end of October-20 to 138.72 at the end of November-20. However, Rural Tele-density increased from 58.94 at the end of October-20 to 59.16 at the end of November-20. The share of urban and rural subscribers in total number of telephone subscribers at the end of November-20 was 55.19% and 44.81% respectively.

Overall Tele-density (Circle/State Wise) – As on 30th November 2020



- As may be seen in the above chart, eight states have less tele-density than the all India average tele-density at the end of November-20. Delhi service area has maximum tele-density of 274.15 and the Bihar service area has minimum tele-density of 52.71 at the end of November-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 projection of population from the "Report of the Technical Group on Population Projections for India and States 2011 – 2036, Ministry of Health & Family Welfare".
- 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 Chhatisgarh, 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, 2020

Circle Category	Net additions in the month of November, 2020		Telephone Subscriber base as on 30 th November, 2020	
	Wireline segment	Wireless segment	Wireline segment	Wireless segment
Circle A	54,739	1,498,060	7,798,046	3,95,814,445
Circle B	-2,298	1,773,866	4,418,842	468,119,421
Circle C	13,886	524,194	871,531	176,671,155
Metro	13,546	-409,270	6,981,301	114,590,885
All India	79,873	3,386,850	20,069,720	1,155,195,906

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

Circle Category	Monthly growth rate (%) (October-20 to November-20)		Yearly growth rate (%) (November-19 to November-20)	
	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment
Circle A	0.71%	0.38%	-5.47%	-0.44%
Circle B	-0.05%	0.38%	-13.84%	0.54%
Circle C	1.62%	0.30%	3.12%	1.34%
Metro	0.19%	-0.36%	-1.21%	-2.15%
All India	0.40%	0.29%	-5.73%	0.05%

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, on monthly basis except circle Metro Circles of all Categories showed growth rate in their subscribers during the month of November-20. On yearly basis only Circle B and Circle C have registered growth rate in their subscriber base.
- In Wireline segment, on monthly basis except Circle B Circle of all categories showed growth rate in their number of wireline subscribers during the month of November, 2020. However, on yearly basis only Circle C have registered growth rate in its subscriber base.

Wireless subscriber

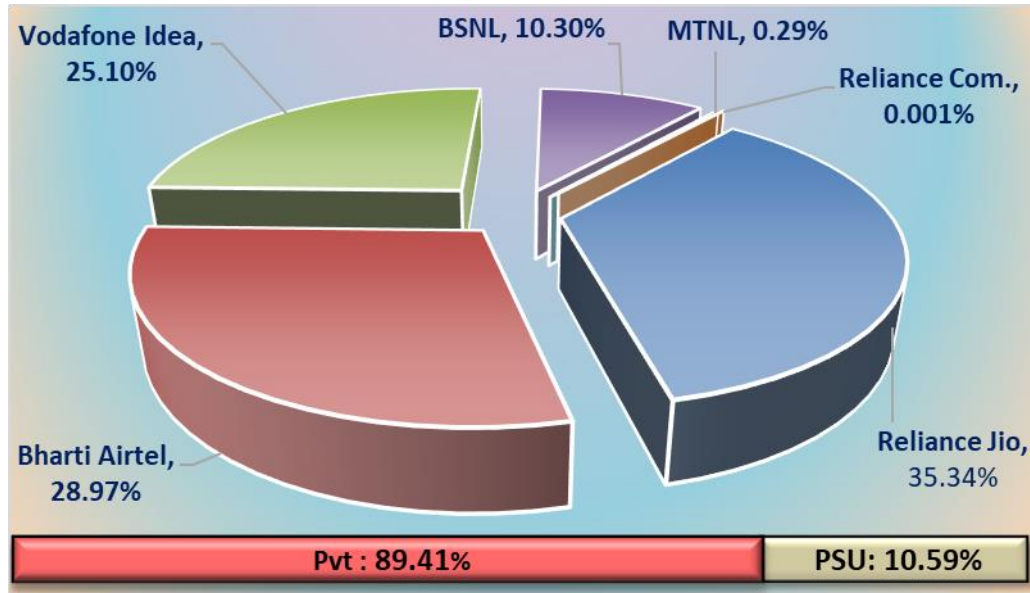
• Total wireless subscribers increased from 1,151.81 million at the end of October-20 to 1,155.20 million at the end of November-20, thereby registering a monthly growth rate of 0.29%. Wireless subscription in urban areas increased from 629.28 million at the end of October-20 to 630.40 million at the end of November-20 and wireless subscription in rural areas also increased from 522.53 million to 524.80 million during the same period. Monthly growth rates of urban and rural wireless subscription were 0.18% and 0.43% respectively.



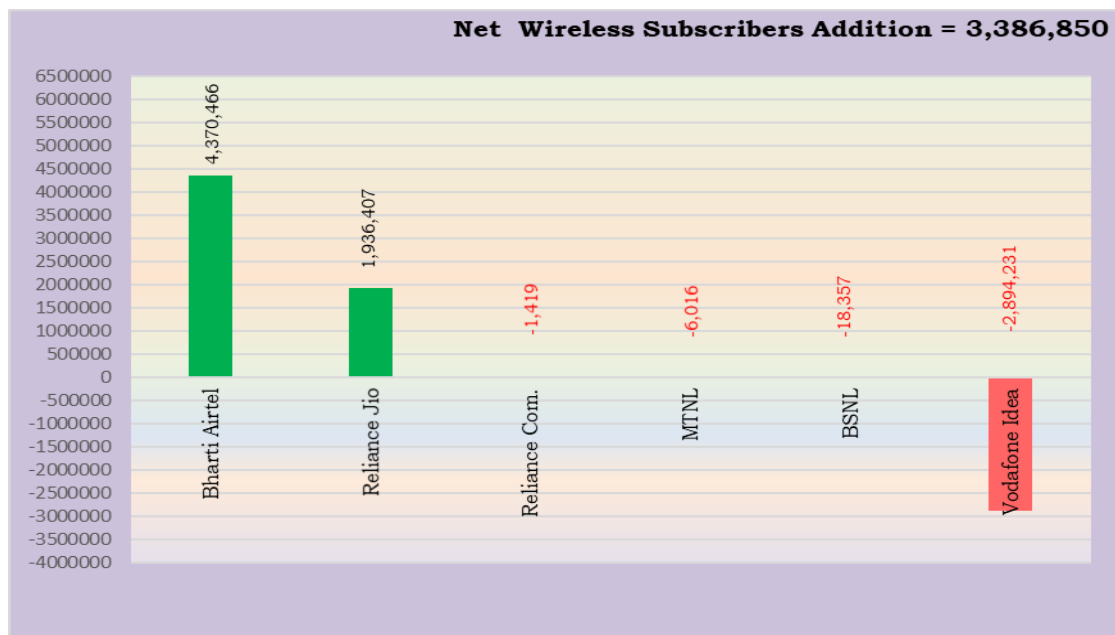
• The Wireless Tele-density in India increased from 84.90 at the end of October-20 to 85.08 at the end of November-20. The Urban Wireless Tele-density decreased from 136.65 at the end of October-20 to 134.82 at the end of November-20 however, Rural Tele-density increased from 58.72 to 58.95 during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 54.57% and 45.43% respectively at the end of November-20. Detailed statistics of wireless subscriber base is available at **Annexure-I**.

- As on 30th November, 2020, the private access service providers held 89.41% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 10.59%.
- 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, 2020



Net Additions/decline in Wireless Subscribers of Access Service Providers in the month of November 2020



- Note:**
1. M/s Bharti Airtel Ltd has reported the wireless subscribers including the subscribers of M/s Tata Teleservices Ltd.
 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.

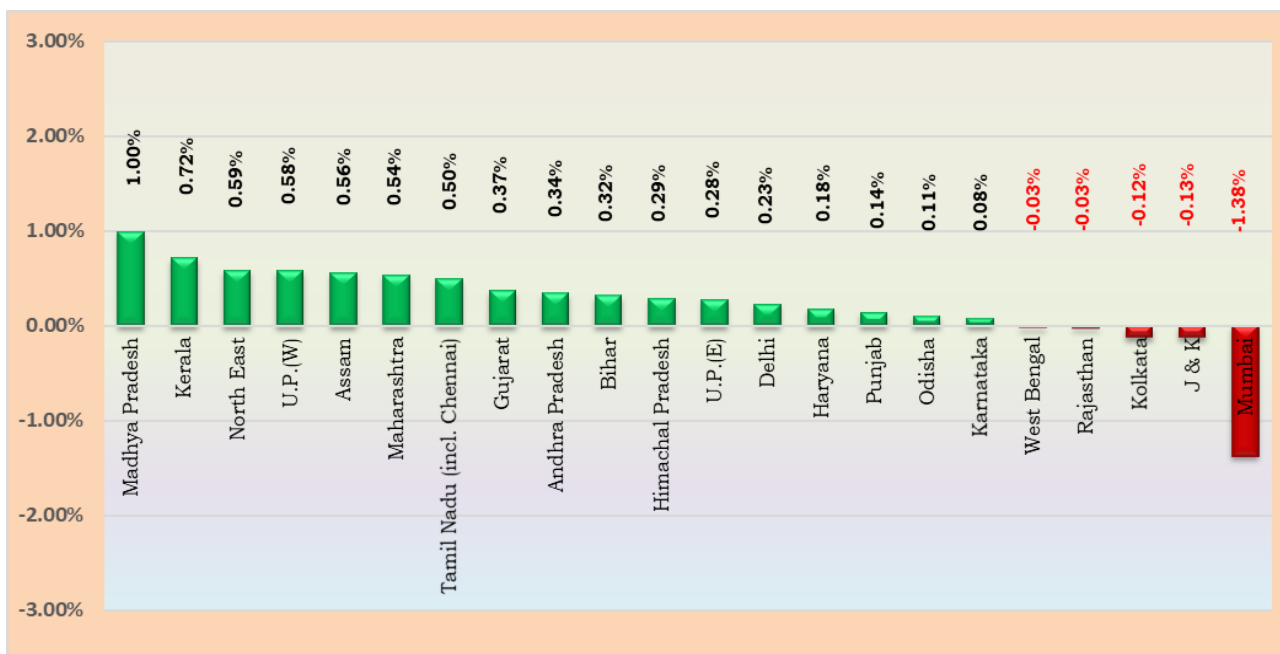
III. Growth in Wireless Subscribers

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



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

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

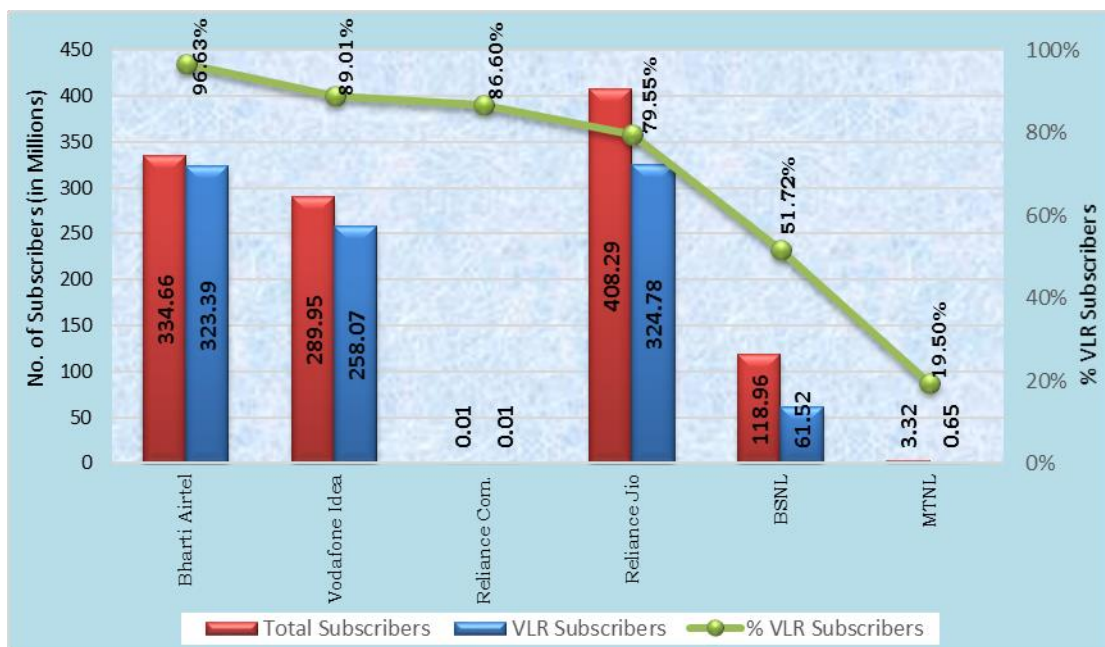


- All service areas except West Bengal, Rajasthan, Kolkata, J&K and Mumbai showed growth in their wireless subscribers during the month of November-20. Madhya Pradesh service area showed maximum growth of 1% in its wireless subscriber base during the month.

IV. Active Wireless Subscribers (VLR Data)

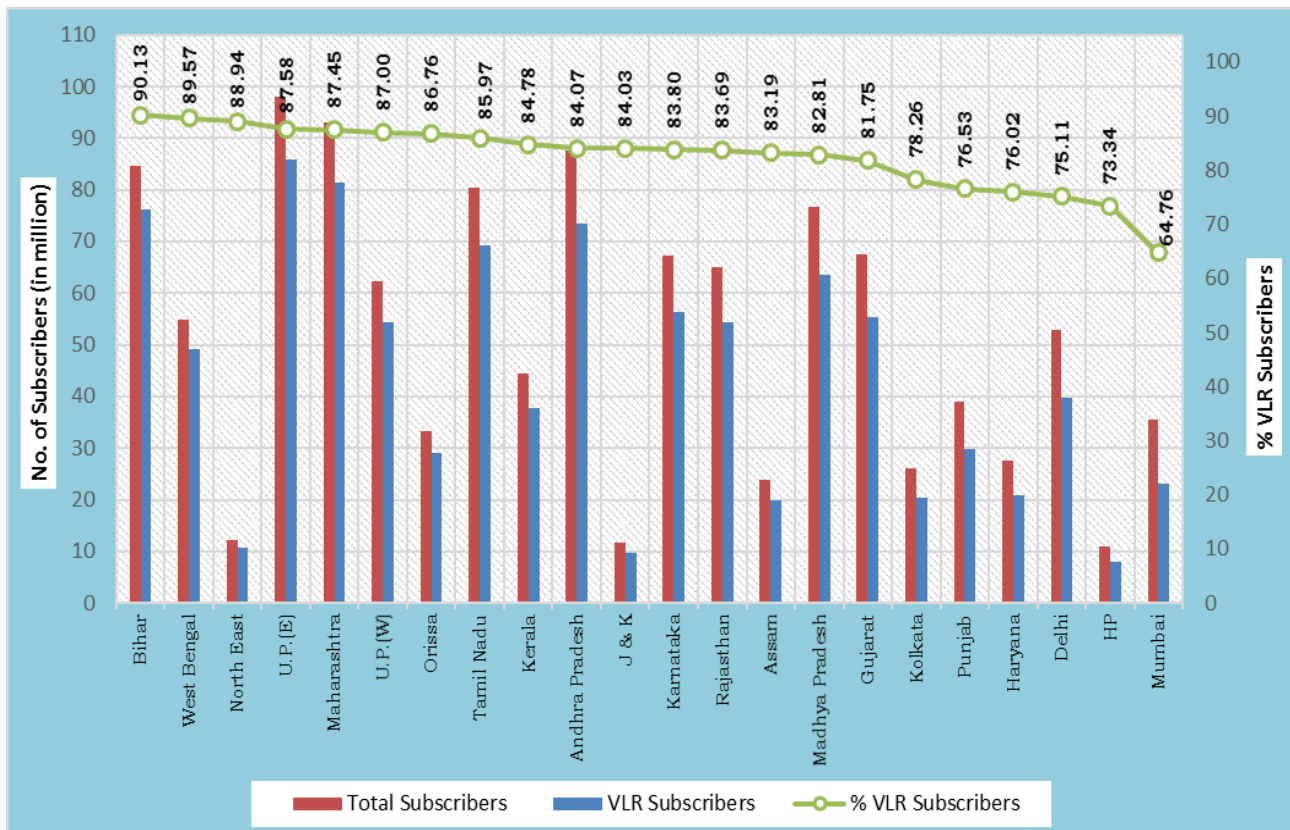
- Out of the total wireless subscribers (1,155.20 million), 968.42 million wireless subscribers were active on the date of peak VLR in the month of November-20. The proportion of active wireless subscribers was approximately 83.83% of the total wireless subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of November-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 November 2020



- Bharti Airtel has the maximum proportion (96.63%) of its active wireless subscribers (VLR) as against its total wireless subscribers (HLR) on the date of peak VLR in the month of November-20 and MTNL has the minimum proportion of VLR (19.50%) of its HLR during the same period.

Service Area wise percentage of VLR Subscribers in the month of November 2020



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 November-20, a total of 6.81 million requests

were received for MNP. Out of total 6.81 million new requests, 3.73 million requests received from Zone-I and 3.08 million requests received from Zone-II. The cumulative MNP requests increased from 529.60 million at the end of October-20 to 536.41 million at the end of November-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 Maharashtra (about

43.27 million) followed by Rajasthan (about 39.96 million) service area.

- In MNP Zone-II (Southern and Eastern India), the highest

number of requests till date have been received in Karnataka (about 46.21 million) followed by Andhra Pradesh (about 43.72 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)	
	Oct-20	Nov-20		Oct-20	Nov-20
Delhi	26.66	26.95	Andhra Pradesh	43.28	43.72
Gujarat	35.70	36.11	Assam	3.93	3.97
Haryana	18.63	18.80	Bihar	23.05	23.44
Himachal Pradesh	2.56	2.58	Karnataka	45.81	46.21
Jammu & Kashmir	1.25	1.26	Kerala	14.18	14.44
Maharashtra	42.53	43.27	Kolkata	11.98	12.08
Mumbai	24.65	24.80	Madhya Pradesh	36.72	37.25
Punjab	20.07	20.29	North East	1.50	1.51
Rajasthan	39.61	39.96	Orissa	10.30	10.45
U.P.(East)	32.31	33.04	Tamil Nadu	42.82	43.20
U.P.(West)	25.93	26.57	West Bengal	26.13	26.51
Total	269.90	273.63	Total	259.70	262.78
Total (Zone-1 + Zone-2)				529.60	536.41
Net Addition (November 2020)			6.81 million		

VII. Wireline Subscribers

- Wireline subscribers increased from 19.99 million at the end of October-20 to 20.07 million at the end of November-20. Net increase in the wireline subscriber base was 0.08 million with a monthly growth rate of 0.40%. The share of urban and rural subscribers in total

wireline subscribers were 90.67% and 9.33% respectively at the end of November-20.

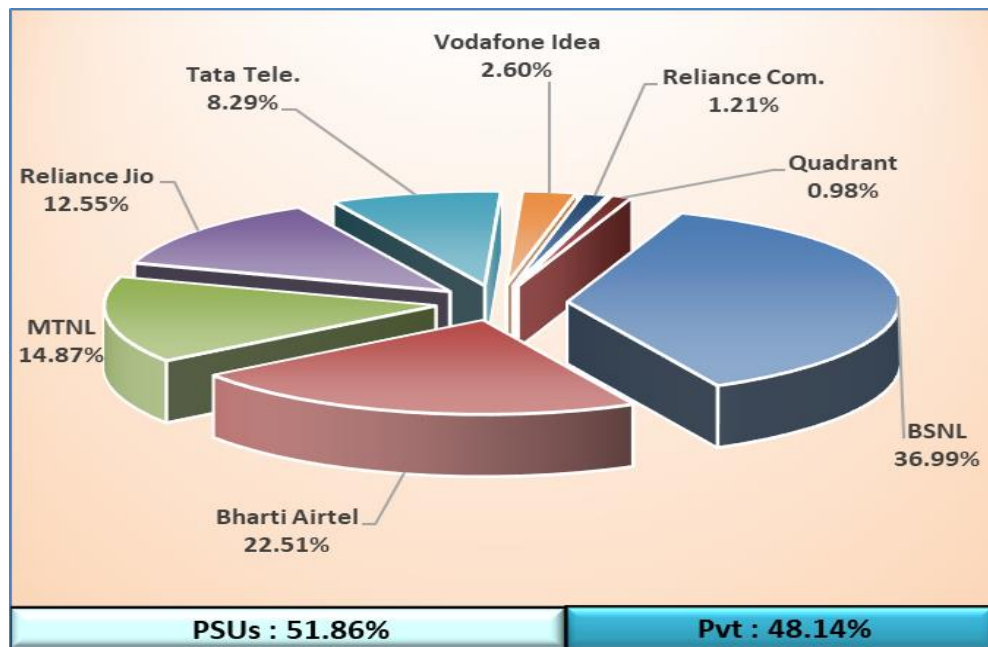
- The Overall Wireline Tele-density increased from 1.47 at the end of October-20 to 1.48 at the end of November-20. Urban and Rural Wireline Tele-density were 3.89

and 0.21 respectively during the same period.

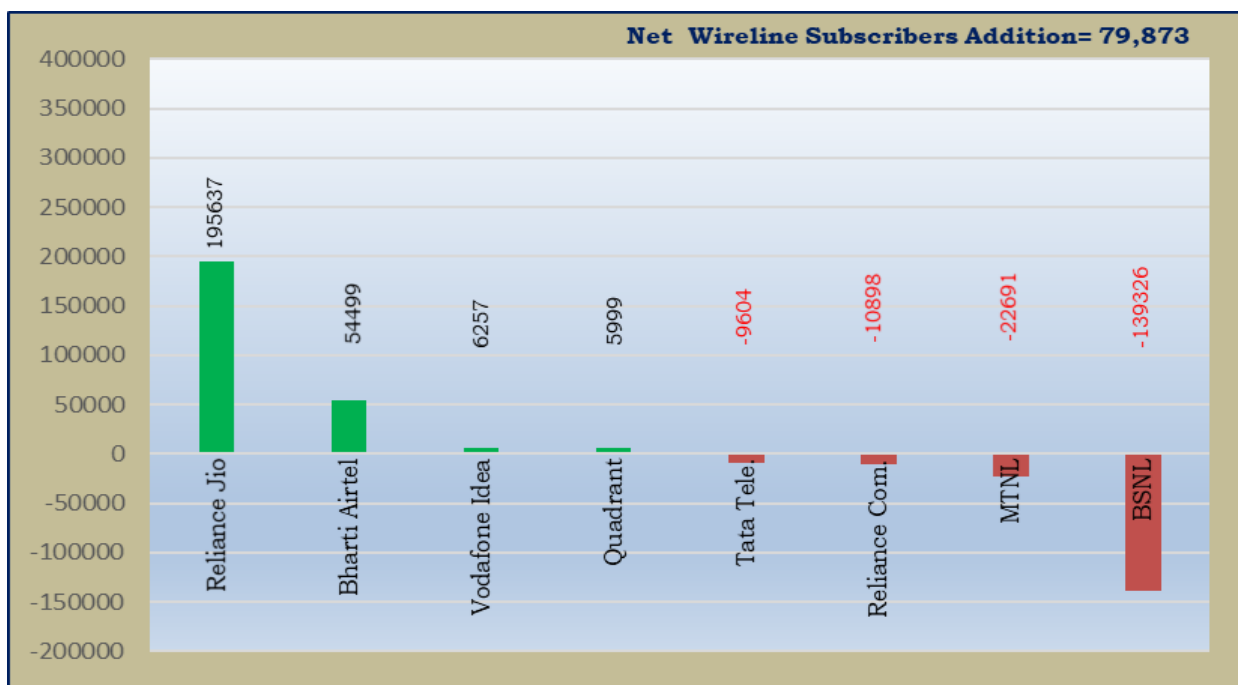
- BSNL and MTNL, the two PSU access service providers, held

51.86% of the wireline market share as on 30th November 2020. Detailed statistics of wireline subscriber base are available at **Annexure-III.**

Access Service Provider-wise Market Share of Wireline Subscribers as on 30th November, 2020



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



VIII. Broadband (\geq 512 Kbps download)

- As per the reports received from 379 operators in the month of November, 2020, the number of broadband subscribers increased from 734.82 million at the end of October-20 to 742.06 million at the end of November-20 with a monthly growth rate of 0.99%. 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, 2020

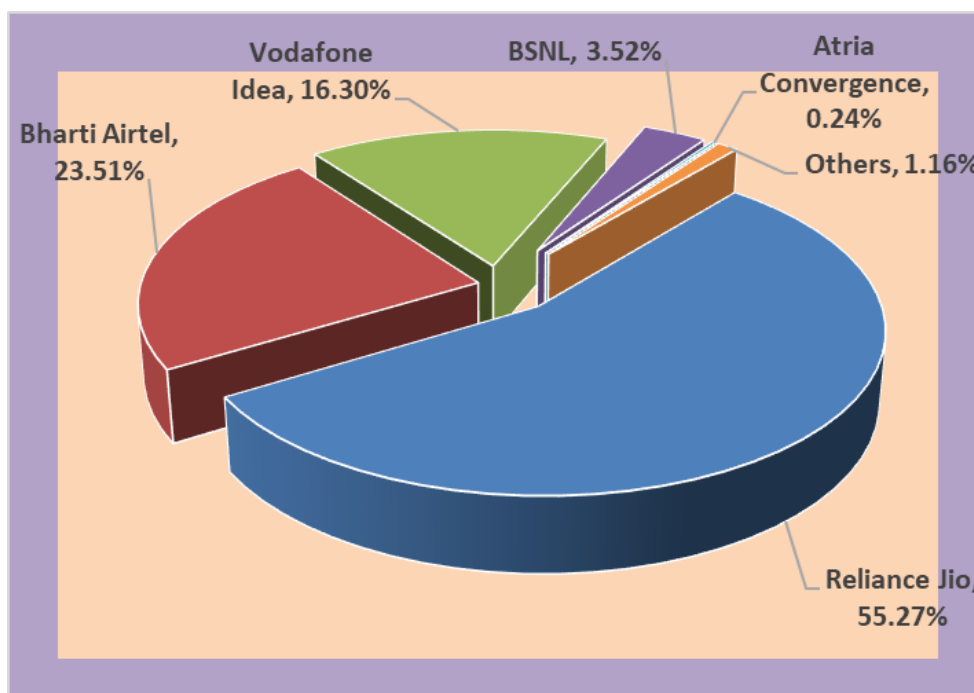
Segment	Broadband subscribers (in million)		Monthly growth rate in the month of November-20
	As on 31 st October, 2020	As on 30 th November, 2020	
Wired subscribers	21.51	21.89	1.76%
Mobile devices users (Phones and dongles)	712.67	719.53	0.96%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.65	0.65	0.25%
Total	734.82	742.06	0.99%

- Top five service providers constituted 98.84% market share of the total broadband subscribers at the end of November-20. These service providers were Reliance Jio Infocomm Ltd (410.17 million), Bharti Airtel (174.47 million), Vodafone Idea (120.97 million), BSNL (26.13 million) and Atria Convergence (1.76 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 30th November 2020**



- As on 30th November, 2020, the top five Wired Broadband Service providers were BSNL (7.73 million), Bharti Airtel (2.73 million), Reliance Jio Infocomm Ltd (1.87 million), Atria Convergence Technologies (1.76 million) and Hathway Cable & Datacom (1.04 million).
- As on 30th November, 2020, the top five Wireless Broadband Service providers were Reliance Jio Infocomm Ltd (408.29 million), Bharti Airtel (171.74 million), Vodafone Idea (120.96 million), BSNL (18.40 million) and Tikona Infinet Ltd. (0.31 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.trai@nic.in

(S. K. Gupta)
Secretary, TRAI

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
	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	
Andhra Pradesh	29668196	30073806	1503	1436	16528248	16436017	9713693	9676241					31262744	31286574	87174384	87474074	299690
Assam	8591982	8747100			3500718	3430062	2911665	2935442					8734549	8759386	23738914	23871990	133076
Bihar	34712441	34897258	299	281	12646068	12488789	5897628	5929468					31123759	31332648	84380195	84648444	268249
Delhi	15587303	15729071	1098	628	16124925	16040962					2172229	2170862	18841531	18905074	52727086	52846597	119511
Gujarat	10796568	11188822	451	405	25393117	25183976	6112210	6111937					25021618	25089441	67323964	67574581	250617
Haryana	4856620	4956421	118	118	8075479	8023115	5068181	5061105					9439947	9448436	27440345	27489195	48850
Himachal Pradesh	3282662	3295139	102	102	732036	721869	2997054	3004030					3932415	3954642	10944269	10975782	31513
J & K	5530091	5507879	0	0	530354	512775	1259888	1262324					4381138	4403683	11701471	11686661	-14810
Karnataka	29038010	29327910	2293	2281	10147702	9888696	7256922	7257169					20844267	20866923	67289194	67342979	53785
Kerala	6138044	6325416	652	647	17319382	17314379	10955911	10958555					9765595	9897544	44179584	44496541	316957
Kolkata	5935061	5945649	30	29	7129319	7043506	2395041	2406445					10698091	10730269	26157542	26125898	-31644
Madhya Pradesh	14241776	14499776	765	758	22951010	23017716	6295680	6310134					32471133	32888083	75960364	76716467	756103
Maharashtra	16806314	17360473	703	687	33712109	33502000	7040134	6900110					34874588	35167879	92433848	92931149	497301
Mumbai	9587522	9699623	1528	1176	10964403	10237068					1157862	1153213	14404212	14527310	36115527	35618390	-497137
North East	5220598	5272620	0	0	1517824	1495482	1387154	1366299					3939263	4001265	12064839	12135666	70827
Odisha	10834583	10854304	371	371	2676778	2617883	6324069	6372565					13481472	13507489	33317273	33352612	35339
Punjab	10395236	10503476	392	390	8656560	8642184	5885579	5834048					14035256	14049174	38973023	39029272	56249
Rajasthan	21336223	21432450	386	384	12458919	12315910	6345382	6358278					24965553	24979315	65106463	65086337	-20126
Tamil Nadu (incl. Chennai)	25422052	25741209	1930	1513	19268866	19171519	11108090	11203679	92489	93045			24201568	24280697	80094995	80491662	396667
U.P.(E)	32388360	32919322	717	713	24129613	23715285	11625974	11644315					29714290	29849410	97858954	98129045	270091
U.P.(W)	15092973	15460246	311	311	20773006	20685091	5887605	5878650					20250897	20340296	62004792	62364594	359802
West Bengal	14823336	14918447	1197	1197	17603281	17461202	2420100	2398253					19974116	20028871	54822030	54807970	-14060
Total	330285951	334656417	14846	13427	292839717	289945486	118887960	118869047	92489	93045	3330091	3324075	406358002	408294409	1151809056	1155195906	3386850
Net Addition		4370466		-1419		-2894231		-18913		556		-6016		1936407	0	3386850	
Rural Subscribers	156020439	158915458	0	0	157339002	155684298	37934237	37904498	0	0	45400	45371	171187748	172247386	522526826	524797011	2270185

Note: 1. The subscribers of M/s Bharti Airtel includes subscribers of M/s Tata Teleservices Ltd.
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 November-20 (%)							Annexure-II
Circle	Bharti	BSNL	Vodafone Idea	MTNL	Reliance Com.	Reliance Jio	Total
Andhra Pradesh	97.22	60.08	89.58		83.50	75.94	84.07
Assam	97.18	48.81	88.51		-	78.65	83.19
Bihar	95.74	48.93	88.04		263.06	92.52	90.13
Delhi	84.63		76.37	11.82	39.51	73.38	75.11
Gujarat	95.00	46.33	91.02		39.51	75.18	81.75
Haryana	107.77	36.35	91.75		54.24	67.26	76.02
Himachal Pradesh	104.96	36.19	98.99		32.35	70.52	73.34
J & K	95.74	56.89	86.12		-	76.91	84.03
Karnataka	93.40	51.59	87.55		64.23	79.74	83.80
Kerala	100.42	65.70	95.40		38.02	77.34	84.78
Kolkata	90.00	43.98	86.11		-	74.29	78.26
Madhya Pradesh	96.47	45.30	80.67		47.49	85.48	82.81
Maharashtra	102.25	56.89	91.27		68.85	82.50	87.45
Mumbai	71.75		79.35	33.97	247.53	52.24	64.76
North East	99.18	64.43	87.45		-	84.39	88.94
Orissa	101.77	61.30	89.66		17.79	86.15	86.76
Punjab	98.76	40.06	89.65		36.15	66.99	76.53
Rajasthan	94.98	45.12	93.51		43.23	78.98	83.69
Tamil Nadu (incl. Chennai)	96.66	66.03	92.47		145.47	78.79	85.97
U.P. (E)	101.72	36.37	93.76		26.93	87.05	87.58
U.P. (W)	107.90	43.51	89.82		10.93	80.83	87.00
West Bengal	96.37	77.88	89.66		16.54	85.82	89.57
Total	96.63	51.72	89.01	19.50	86.60	79.55	83.83

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	
	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20	Oct-20	Nov-20		
Andhra Pradesh	652610	639750			232544	242458	25126	23964	156446	155162			62160	62370	231459	256725	1360345	1380429	20084	
Assam	86873	85726											3450	3450	29204	33231	119527	122407	2880	
Bihar	135936	134050					19	19	7528	7416			1830	1830	53564	61642	198877	204957	6080	
Delhi	0	0	1352768	1344543	1470770	1484421	42830	40245	144248	142826			75595	77515	192862	200821	3279073	3290371	11298	
Gujarat	532431	524113			115073	115177	5540	4089	82006	81545			33387	34547	197976	204529	966413	964000	-2413	
Haryana	147400	141593			26973	28735	3	3	36605	36837			330	330	81231	92543	292542	300041	7499	
Himachal Pradesh	83470	81131			0	0	3	3	1779	1838			30	30	6109	6959	91391	89961	-1430	
J & K	100586	95714			0	0	0	0	0	0			0	0	50223	57451	150809	153165	2356	
Karnataka	796592	792957			793102	799961	29901	28846	262385	260499			101792	104422	172767	187781	2156539	2174466	17927	
Kerala	1215503	1168981			62307	63749	6483	5662	19443	19262			6090	6090	42814	50455	1352640	1314199	-38441	
Kolkata	348775	342966			138197	140235	11751	8043	47322	47033			13250	13280	101811	112266	661106	663823	2717	
Madhya Pradesh	283062	278813			254690	257484	5	5	11998	11700			3585	3585	118478	131316	671818	682903	11085	
Maharashtra	837260	849237			130545	134502	13106	12704	236645	234051			29203	29203	71053	76503	1317812	1336200	18388	
Mumbai	0	0	1653291	1638825	379755	381091	81190	84532	501531	499608			93486	93583	318323	329468	3027576	3027107	-469	
North East	75262	74363											270	270	20193	23116	95725	97749	2024	
Odisha	159713	157117					6	6	8145	8255			6210	6210	27242	31704	201316	203292	1976	
Punjab	260831	250991			139629	141731	2575	2497	12237	12455	190813	196812	3240	3270	74841	79303	684166	687059	2893	
Rajasthan	288741	276685			66817	68184	5622	5065	11585	11523			16460	16460	81998	88407	471223	466324	-4899	
Tamil Nadu (incl. Chennai)	1008796	991348			543177	548637	28936	26519	119423	119795			39635	39755	202231	216897	1942198	1942951	753	
U.P.(E)	181230	177400			70649	73476	28	27	7747	7760			20020	20020	89949	100405	369623	379088	9465	
U.P.(W)	167237	161016			38732	37618	10	8	4515	4502			4920	4980	129339	142884	344753	351008	6255	
West Bengal	201650	200681					14	13	2411	2328			120	120	30180	35078	234375	238220	3845	
Total	7563958	7424632	3006059	2983368	4462960	4517459	253148	242250	1673999	1664395	190813	196812	515063	521320	2323847	2519484	19989847	20069720	79873	
Net Addition		-139326		-22691		54499		-10898		-9604		5999		6257		195637		79873		
Rural Subscribers	1892625	1787238	0	0	0	0	651	0	42862	41536	32169	30339	0	0	7042	12928	1975349	1872041	-103308	

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.