Information Note to the Press





TELECOM REGULATORY AUTHORITY OF INDIA

New Delhi, 21st May, 2019 (www.trai.gov.in)

Highlights of Telecom Subscription Data as on 31st March, 2019

Particulars	Wireless	Wireline	Total (Wireless+ Wireline)
Total Telephone Subscribers (Million)	1161.81	21.70	1183.51
Net Addition in March, 2019 (Million)	-21.87	-0.02	-21.89
Monthly Growth Rate	-1.85%	-0.09%	-1.82%
Urban Telephone Subscribers (Million)	650.49	18.67	669.16
Net Addition in March, 2019 (Million)	-6.09	0.01	-6.08
Monthly Growth Rate	-0.93%	0.04%	-0.90%
Rural Telephone Subscribers (Million)	511.32	3.02	514.35
Net Addition in March, 2019 (Million)	-15.78	-0.03	-15.81
Monthly Growth Rate	-2.99%	-0.87%	-2.98%
Overall Tele-density*(%)	88.46	1.65	90.11
Urban Tele-density*(%)	155.49	4.46	159.96
Rural Tele-density*(%)	57.13	0.34	57.47
Share of Urban Subscribers	55.99%	86.06%	56.54%
Share of Rural Subscribers	44.01%	13.94%	43.46%
Broadband Subscribers (Million)	544.89	18.42	563.31

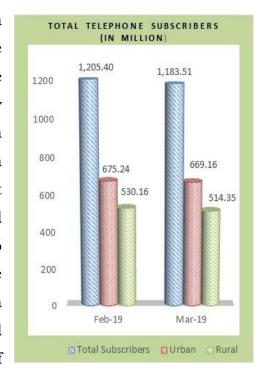
- ❖ In the month of March, 2019, 5.30 million subscribers submitted their requests for Mobile Number Portability (MNP). With this, the cumulative MNP requests increased from 423.11 million at the end of Feb-19 to 428.40 million at the end of Mar-19, since implementation of MNP.
- ❖ Number of active wireless subscribers (on the date of peak VLR#) in March, 2019 was 1,021.75 million.

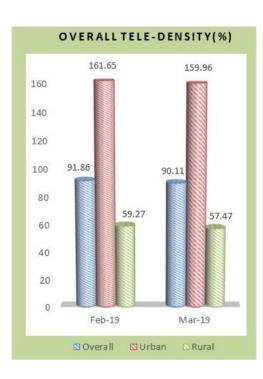
Note:

- 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

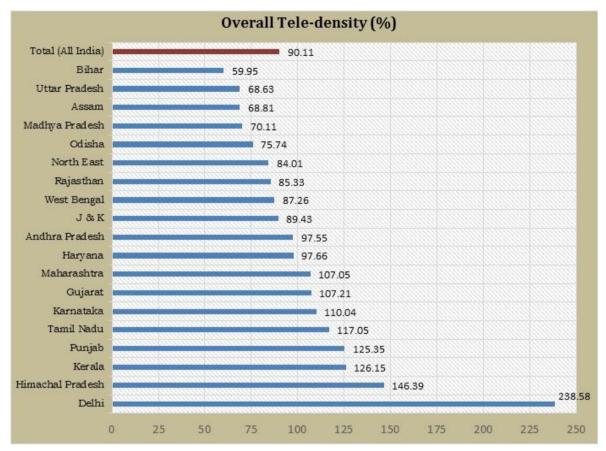
• The number of telephone subscribers in India declined from 1,205.40 million at the end of Feb-19 to 1,183.51 million at the end of Mar-19, thereby showing a monthly decline rate of 1.82%. The subscription declined from 675.24 million at the end of Feb-19 to 669.16 million at end of Mar-19, and the rural the subscription also declined from 530.16 million to 514.35 million during the same period. The monthly decline rates of urban and rural subscription were 0.90% and 2.98% respectively during the month of Mar-19.





• The overall Tele-density in India declined from 91.86 at the end of Feb-19 to 90.11 at the end of Mar-19. The Urban Tele-density declined from 161.65 at the end of Feb-19 to 159.96 at the end of Mar-19, and Rural Tele-density also declined from 59.27 at the end of Feb-19 to 57.47 at the end of Mar-19. The share of urban and rural subscribers in total number of telephone subscribers at the end of Mar-19 was 56.54% and 43.46% respectively.





 Delhi service area has maximum tele-density of 238.58 at the end of Mar-19 and the Bihar service area has minimum tele-density of 59.95 during the same period.

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 March, 2019

Circle		s in the month ch, 2019	Telephone Subscriber base a on 31st March, 2019				
Category	Wireline segment			Wireless segment			
Circle A	14,450	-6,045,163	8,545,150	399,664,826			
Circle B	-34,896	-10695,683	5,362,969	471,075,852			
Circle C	-2,531	-4,642,996	900,587	174,582,065			
Metro	3,055	-483,446	6,887,630	116,488,826			
All India	-19,922	-21,867,288	21,696,336	1,161,811,569			

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

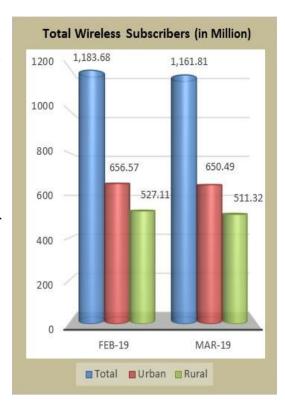
Circle	Monthly gro (Feb-19 t	wth rate (%) o Mar-19)	Yearly growth rate (%) (Mar-18 to Mar-19)				
Category	Wireline Segment	Wireless Segment	Wireline Segment	Wireless Segment			
Circle A	0.17	-1.49	-5.17	-3.28			
Circle B	-0.65	-0.65 -2.22		0.85			
Circle C	-0.28	-2.59	-14.06	-5.45			
Metro	0.04	-0.41	-1.24	-1.67			
All India	-0.09	-1.85	-4.89	-1.82			

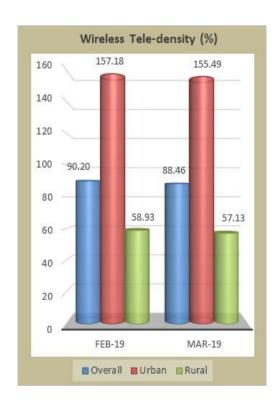
Note: Circle Category-Metro includes Delhi, Mumbai and Kolkata. Data for Chennai has been included in Circle Category-A, as part of TamilNadu.

- As can be seen in the above tables, in wireless segment, Circles of all categories showed monthly decline in their subscriber base in Mar-19. However, on yearly basis, Circles in Category 'B' showed growth in their wireless subscribers during the month.
- In Wireline segment, Circles of Category 'A' and Metro circles showed monthly growth rate, however circles in Categories 'B' and 'C' showed decline rate in their wireline subscribers during the month of Mar-19. On yearly basis, circles of all categories showed decline rate in wireline subscribers during the same period.

III. Wireless Subscribers

Total wireless subscribers (GSM, CDMA & LTE) declined from 1,183.68 million at the end of Feb-19 to 1,161.81 million at the end of Mar-19, thereby registering a monthly decline rate of 1.85%. The Wireless subscription in urban areas declined from 656.57 million at the end of Feb-19 to 650.49 million at the end of Mar-19, and rural wireless subscription also declined from 527.11 million to 511.32 million during the month. The monthly decline rates of urban and rural wireless subscription were 0.93% and 2.99% respectively.

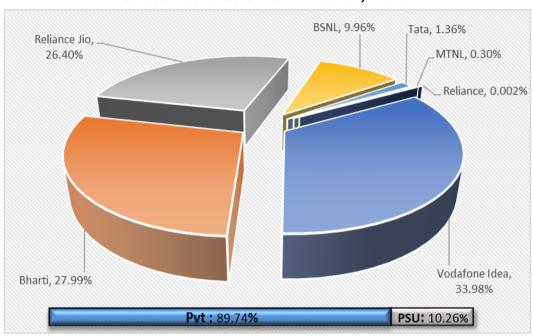




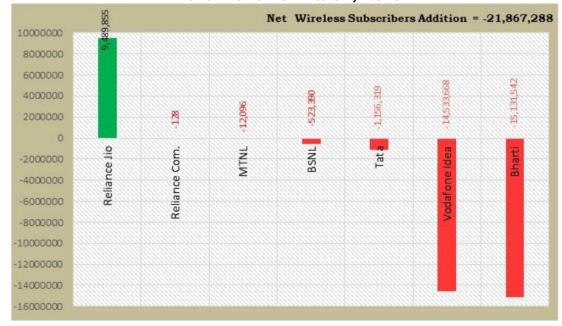
- Wireless Tele-density The in declined from 90.20 at the end of Feb-19 to 88.46 at the end of Mar-19. The Urban Wireless Tele-density declined from 157.18 at the end of Feb-19 to 155.49 at the end of Mar-19, and Rural Wireless Tele-density also declined from 58.93 to 57.13 during the same period. The share of urban and rural wireless subscribers in total number of wireless subscribers was 55.99% and 44.01% respectively at the end of Mar-19. Detailed statistics of wireless subscriber base is available at Annexure-I.
- As on 31st March, 2019, the private access service providers held 89.74% market share of the wireless subscribers whereas BSNL and MTNL, the two PSU access service providers, had a market share of only 10.26%.

• 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 March, 2019



Net Additions in Wireless Subscribers of Access Service Providers in the Month of March, 2019



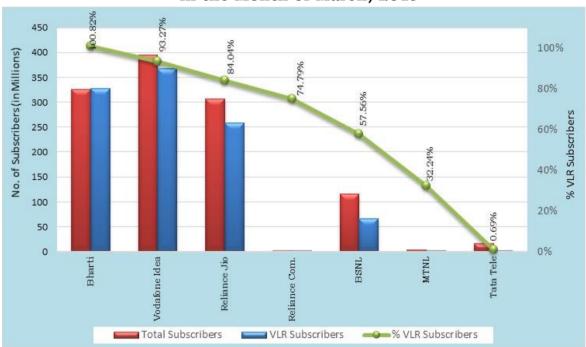
Note: 1. On noticing that while reporting number of subscribers, some of the TSPs were deducting inactive subscribers. A Direction was issued on 18th August 2017 to TSPs to strictly adhere to the Department of Telecommunications' methodology for reporting their number of subscribers. However, some of the Telecom Service Providers are yet to comply with the Direction.

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 number of BSNL.

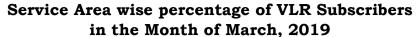
IV. Active Wireless Subscribers (VLR Data)

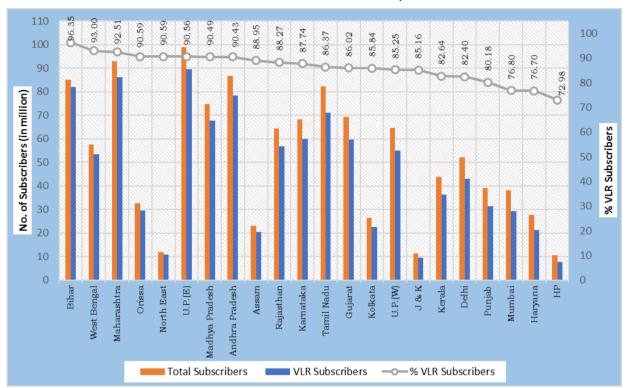
- Out of the total wireless subscribers (1.161.81)million), 1,021.75 million wireless subscribers were active on the date of peak VLR in the month of Mar-19. The proportion of active wireless subscribers was approximately 87.94% of the total wireless subscriber base.
- The detailed statistics on proportion of active wireless subscribers (also referred to as VLR subscribers) on the date of peak VLR in the month of Mar-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 March, 2019



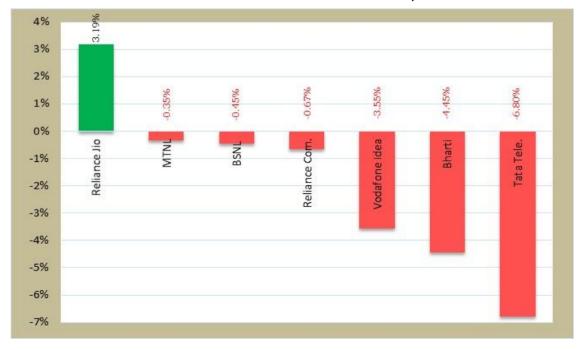
- Bharti Airtel has the maximum proportion (100.82%) of its active wireless subscribers (VLR) as
- against its total wireless subscribers (HLR) on the date of peak VLR in the month of Mar-19.



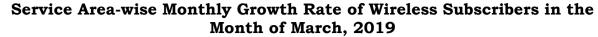


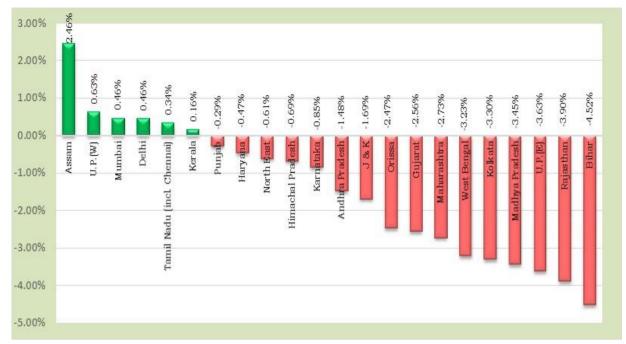
V. Growth in Wireless Subscribers

Access Service Provider-wise Monthly Growth Rate of Wireless Subscribers in the Month of March, 2019



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





 Out of 22 service areas, only six service areas showed positive growth in their wireless subscribers during the month of March, 2019. Assam service area showed Maximum growth of 2.46% and Bihar service area showed maximum decline (4.52%) 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 Mar-19, a total of 5.30 million requests were received for MNP. Out of total 5.30 million new requests, 2.94 million requests received from Zone-I and 2.36 million requests received from Zone-II. The cumulative MNP requests increased from 423.11 million at the end of Feb-19 to 428.40 million at the end of Mar-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 34.20 million) followed by Maharashtra (about 31.13 million) service area. In MNP Zone-II

(Southern and Eastern India), the highest number of requests till date have been received in Karnataka (about 39.83 million) followed by Andhra Pradesh (about 36.32 million) and Tamil Nadu (about 36.30 million).

Service Area Wise MNP Status										
Zon	e -1	Zone - 2								
Service Area		of Porting sts (in ion)	Service Area	Number of Porting Requests (in Million)						
	Feb-19	Mar-19		Feb-19	Mar-19					
Delhi	21.71	22.02	Andhra Pradesh	35.93	36.32					
Gujarat	27.96	28.43	Assam	3.35	3.37					
Haryana	15.38	15.60	Bihar	16.74	17.05					
Himachal Pradesh	2.05	2.08	Karnataka	39.50	39.83					
Jammu & Kashmir	1.02	1.04	Kerala	10.20	10.33					
Maharashtra	30.62	31.13	Kolkata	10.22	10.31					
Mumbai	21.84	22.04	Madhya Pradesh	27.69	28.06					
Punjab	16.17	16.43	North East	1.31	1.32					
Rajasthan	33.89	34.20	Orissa	8.44	8.55					
U.P.(East)	23.17	23.49	Tamil Nadu	35.92	36.30					
U.P.(West)	18.64	18.93	West Bengal	21.37	21.57					
Total	212.45	215.39	Total	210.66	213.02					
Total (Zone-1 + Zon	e-2)			423.11	428.40					
Net Addition (March,	2019)				5.30					

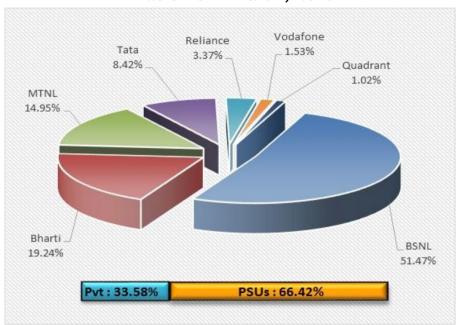
VII. Wireline Subscribers

• Wireline subscribers further declined from 21.72 million at the end of Feb-19 to 21.70 million at the end of Mar-19. Net decline in the wireline subscriber base was 0.02 million with a monthly

decline rate of 0.09%. The share of urban and rural subscribers in total wireline subscribers were 86.06% and 13.94% respectively at the end of Mar-19.

- The Overall Wireline Tele-density remained same (1.65) at the end of Mar-19 as compared to the end of Feb-19. Urban and Rural Wireline Tele-density were 4.46 and 0.34 respectively during the same period.
- BSNL and MTNL, the two PSU access service providers, held 66.42% of the wireline market share as on 31st March, 2019. Detailed statistics of wireline subscriber base are available at **Annexure-III**.

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



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



VIII. Broadband (≥ 512 Kbps download)

 As per the reports received from 315 operators in the month of March 2019, the number of broadband subscribers increased from 550.24 million at the end of Feb-19 to 563.31 million at the end of Mar-19 with a monthly growth rate of 2.37%. Segment-wise broadband subscribers and their monthly growth rates are as below:

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

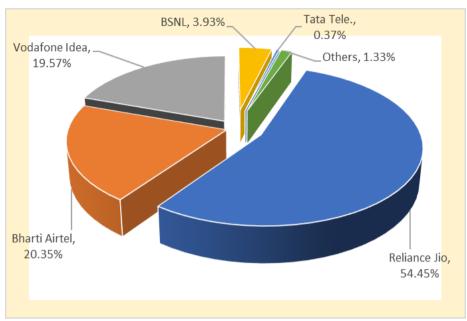
	Broadband s	Monthly growth	
Segment	As on 28 th February, 2019	As on 31st March, 2019	rate in the month of Mar-19
Wired subscribers	18.29	18.42	0.72%
Mobile devices users (Phones and dongles)	531.54	544.37	2.41%
Fixed Wireless subscribers (Wi-Fi, Wi-Max, Point-to- Point Radio & VSAT)	0.42	0.52	24.33%
Total	550.24	563.31	2.37%

 Top five service providers constituted 98.67% market share of the total broadband subscribers at the end of Mar-19. These service providers were Reliance Jio Infocomm Ltd (306.72 million), Bharti Airtel (114.62 million), Vodafone Idea (110.22 million), BSNL (22.14 million) and Tata Tele. Group (2.10 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 31.03.2019



- As on 31st March, 2019, the top five Wired Broadband Service providers were BSNL (9.21 million), Bharti Airtel (2.36 million), Atria Convergence Technologies (1.42 million), Hathway Cable & Datacom (0.81 million) and MTNL (0.76 million).
- As on 31st March, 2019, the top five <u>Wireless</u> Broadband Service providers were Reliance Jio Infocomm Ltd (306.72 million), Bharti Airtel (112.26 million), Vodafone Idea (110.20 million), BSNL (12.93 million) and Tata Teleservices (1.68 million).

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					Wireless	Subscribe	er Base											Annex	ıre-I
	Bharti	Airtel	Relian	ce Com.	Vodafo	ne Idea	Tata Tele	Tata Teleservices BSNL		BSNL (VNO's)		BSNL (VNO's) MTNL		Reliar	ice Jio	Total		Net	
Circle	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Addition
Andhra Pradesh	29803288	28220681	1919	1923	22632175	22283084	1567617	1484357	10147764	10171597					23884329	24568739	88037092	86730381	-1306711
Assam	8387735	8188605			5493436	5993877			2502807	2560859					6031027	6223002	22415005	22966343	551338
Bihar	39365655	36979492	187	192	22708688	20887026	270623	246948	5284522	4566337					21474536	22399889	89104211	85079884	-4024327
Delhi	15161922	15644514	2775	2623	19533394	18983299	20	20					2215617	2213046	14983601	15294371	51897329	52137873	240544
Gujarat	12320998	11527108	409	490	33216380	31642967	757856	687200	5915704	5958786					18910786	19482308	71122133	69298859	-1823274
Haryana	3816304	3937921	157	167	11004097	10605018	753295	707059	4906008	4928753					7370933	7541842	27850794	27720760	-130034
Himachal Pradesh	3615002	3395637	72	72	1311235	1409059	3221	2774	2804626	2822517					2857055	2888273	10591211	10518332	-72879
J & K	5639669	5462946			1273347	1242344			1231687	1242060					3385087	3387436	11529790	11334786	-195004
Karnataka	27193785	26776908	1878	1761	15436841	14931069	2918884	2751604	7178488	7197784					16101111	16584577	68830987	68243703	-587284
Kerala	5133759	5249759	338	379	20439838	20249640	278942	252872	10868008	10890618					7163079	7313052	43883964	43956320	72356
Kolkata	6439257	6150183	34	34	9534292	9085628	980404	921787	1896262	1571580					8386791	8608156	27237040	26337368	-899672
Madhya Pradesh	15615637	14820329	721	727	31616279	29061279	1743985	1621001	6132619	6181330					22359824	23113410	77469065	74798076	-2670989
Maharashtra	16403619	15217675	769	728	48106467	45872515	1430241	1311424	7108327	7204097					22585005	23418625	95634428	93025064	-2609364
Mumbai	8449569	8966426	5092	5070	15768365	15224742	719749	658572					1249702	1240177	11645426	11918598	37837903	38013585	175682
North East	5337843	5192375			2280327	2375119			1669984	1601944					2774210	2818913	12062364	11988351	-74013
Orissa	13114170	12178352	127	138	5458096	5161435	466573	427153	5700991	5747860					8782523	9179431	33522480	32694369	-828111
Punjab	10364241	10087180	203	219	10997595	10916410	813501	756145	5408371	5452464					11772092	12028763	39356003	39241181	-114822
Rajasthan	23357537	21816582	338	347	18253004	16662225	101331	90625	5842883	5907492					19280561	19754424	66835654	64231695	-2603959
Tamil Nadu (incl. Chennai)	25771860	25206041	2875	2829	23907799	24207464	1297656	1189091	11960560	12051558	40786	77989			19103813	19631847	82085349	82366819	281470
U.P.(E)	32742229	30403507	684	732	35998380	33836712	1621908	1529282	11946298	11844571					20422130	21384985	102731629	98999789	-3731840
U.P.(W)	13775731	12722363	62	62	28022189	28936225	1252774	1189200	5954341	5942389					15177976	15795454	64183073	64585693	402620
West Bengal	18502998	17036682	478	497	26378457	25269876	31415	26562	1764919	1819980					12783086	13388741	59461353	57542338	-1919015
Total	340312808	325181266	19118	18990	409370681	394837013	17009995	15853676	116225169	115664576	40786	77989	3465319	3453223	297234981	306724836	1183678857	1161811569	-21867288
Net Addition		-15131542		-128		-14533668		-1156319		-560593		37203		-12096		9489855	0	-21867288	
Rural Subscribers	157499361	149144364	0	0	215081102	207146349	2272559	2077600	40379934	36589621	0	0	46306	46253	111825749	116320687	527105011	511324874	-15780137

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

Proportion of	Proportion of VLR on the date of Peak VLR in the month of Mar-19 (%) Annexur											
Circle	Bharti	BSNL	Vodafone Idea	MTNL	Reliance Com.	Reliance Jio	Tata Tele.	Total				
Andhra Pradesh	103.78	64.47	98.52		73.22	83.93	0.72	90.43				
Assam	98.92	60.64	80.90			95.24		88.95				
Bihar	97.26	62.72	104.38		56.77	95.28	0.02	96.35				
Delhi	88.96		90.00	23.06	98.28	74.84	-	82.40				
Gujarat	98.13	50.76	96.13		39.80	76.25	0.02	86.02				
Haryana	117.11	36.70	92.81		46.71	66.23	0.48	76.70				
Himachal Pradesh	95.29	42.97	81.05		59.72	72.21	0.00	72.98				
J & K	95.09	67.01	80.32		-	77.58		85.16				
Karnataka	103.63	62.27	93.83		120.84	82.12	0.50	87.74				
Kerala	99.08	66.12	93.36		54.09	68.45	5.04	82.64				
Kolkata	104.41	57.12	92.05		97.06	79.91	5.09	85.84				
Madhya Pradesh	104.45	54.37	94.40		56.12	92.62	0.22	90.49				
Maharashtra	106.01	55.40	97.17		79.53	91.19	0.25	92.51				
Mumbai	82.46		77.48	48.62	67.51	78.86	0.00	76.80				
North East	99.27	75.95	80.79		-	91.16		90.59				
Orissa	99.68	73.58	94.65		47.10	91.11	0.36	90.59				
Punjab	103.32	47.65	91.05		44.75	70.69	0.07	80.18				
Rajasthan	98.83	47.78	96.17		51.30	82.45	0.32	88.27				
Tamil Nadu (incl. Chennai)	99.62	70.16	92.96		71.51	76.43	0.76	86.37				
U.P. (E)	107.14	43.47	94.14		52.32	93.87	0.15	90.56				
U.P. (W)	111.40	44.62	86.33		59.68	83.90	0.13	85.25				
West Bengal	98.07	91.26	91.03		46.68	90.70	0.70	93.00				
Total	100.82	57.56	93.27	32.24	74.79	84.04	0.69	87.94				

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.

	ļ				<u> </u>	Wireline	: Subscri	ber Base	,						Annexure	a-III	
	BSI	NL	M T	NL	Bh	arti	Relian	ce Com.	Tata '	Tele.	Quad	Quadrant Vodafone		Vodafone		tal	Net
Service Area	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Feb-19	Mar-19	Addition
Andhra Pradesh	963708	960344			180695	199419	47497	47011	175213	173298	,		41730	59790	1408843	1439862	31019
Assam	112736	111518				1	1	1					2850	2850	115586	114368	-1218
Bihar	217854	215515		[3217	3234	8364	8369			1710	1740	231145	228858	-2287
Delhi	1		1485383	1481900	1423397	1443935	119866	119290	153571	155756	,		54300	55670	3236517	3256551	20034
Gujarat	1006150	1009423		[84485	91049	19843	19608	87092	87465	,		26480	27803	1224050	1235348	11298
Haryana	211183	209003			23065	23203	2736	2701	35730	35083	,		210	210	272924	270200	-2724
Himachal Pradesh	110612	110078		<u> </u>			2796	2795	1851	1789			60	60	115319	114722	-597
J & K	102452	102447						1	ı					Ī	102452	102447	7 -5
Karnataka	1026583	1021570			681203	683367	137081	132910	273069	272238			42895	44497	2160831	2154582	-6249
Kerala	1797358	1783570		[60279	61265	16827	16836	18849	18915			2970	3450	1896283	1884036	-12247
Kolkata	491254	479590	1		128772	129470	39746	39406	52654	53116	,		8780	8900	721206	710482	-10724
Madhya Pradesh	653663	650594		<u> </u>	242605	243345	10553	10478	15161	14571			1050	1050	923032	920038	-2994
Maharashtra	1095716	1084062			91769	94489	47763	46613	281228	278280			18560	20274	1535036	1523718	-11318
Mumbai			1766525	1761740	367590	370665	176821	173263	560615	559627			55301	55302	2926852	2920597	-6255
North East	103675	103881		<u> </u>			'						270	270	103945	104151	206
Orissa	222361	223052		['			2463	2490	7747	8219			2100	2280	234671	236041	1370
Punjab	399135	394359		'	129926	132046	11833	11361	12443	12326	222961	221854	1680	1680	777978	773626	-4352
Rajasthan	441961	439056	 	['	54245	55275	20932	20589	11256	11455			9850	10030	538244	536405	-1839
Tamil Nadu (incl. Chennai)	1434734	1423913		'	556898	556766	71445	70448	119298	120153			19565	20360	2201940	2191640	-10300
U.P.(E)	357813	357470		'	66289	66160	6528	6327	8070	8233			11960	12020	450660	450210	-450
U.P.(W)	267109	265817	 	['	23518	23671	3469	3381	4765	4820			4170	4170	303031	301859	-1172
West Bengal	231541	222417		<u> </u>			1684	1688	2368	2370			120	120	235713	226595	-9118
Total	11247598	11167679	3251908	3243640	4114736	4174125	743100	730429	1829344	1826083	222961	221854	306611	332526	21716258	21696336	-19922
Net Addition		-79919	! !	-8268	<u> </u>	59389	'	-12671	 	-3261		-1107		25915		-19922	
Rural Subscribers	2953865	2928367	0	0	0	0	1475	1444	49814	49280	46024	45572	0	0	3051178	3024663	-26515

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
	Stock in hand/in Distribution Channels
c.	(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.