



**Telecom Regulatory Authority of India**  
Government of India



**YEARLY  
PERFORMANCE  
INDICATORS**

**Indian Telecom Sector**  
(Third Edition)

**2018**

**New Delhi, India**



# Disclaimer

The Information and Statistics contained in this report are derived from variety of sources but are mainly reliant on data obtained from Service Providers. This report does not constitute commercial or other advice. No warranty, representation or undertaking of any kind, express or implied, is given in relation to the information and statistics contained in this report.







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# Snapshot

(Data As on 31<sup>st</sup> December, 2018)

Telecom Subscribers (Wireless +Wireline)	
Total Subscribers	1,197.87 Million
% change over the previous year	0.54%
Urban Subscribers	666.28 Million
Rural Subscribers	531.59 Million
Market share of Private Operators	88.93%
Market share of PSU Operators	11.07%
Teledensity	91.45
Urban Teledensity	159.98
Rural Teledensity	59.50
Wireless Subscribers	
Total Wireless Subscribers	1,176.00 Million
% change over the previous year	0.57%
Urban Subscribers	647.52 Million
Rural Subscribers	528.48 Million
Market share of Private Sector Operators	89.98%
Market share of Public Sector Operators	10.02%
Teledensity	89.78
Urban Teledensity	155.48
Rural Teledensity	59.15
No. of total Public Mobile Radio Trunk Services (PMRTS)	57,784
No. of Very Small Aperture Terminals (VSAT)	2,87,424
Wireline Subscribers	
Total Wireline Subscribers	21.87 Million
% change over the previous year	-1.11%
Urban Subscribers	18.76 Million
Rural Subscribers	3.11 Million
Market share of Private Operators	32.76%
Market share of PSU Operators	67.24%
Teledensity	1.67
Urban Teledensity	4.50
Rural Teledensity	0.35
No. of Village Public Telephones (VPT)	1,32,403
No. of Public Call Office (PCO)	2,75,032

Internet/Broadband Subscribers	
Total Internet Subscribers	604.21 Million
% change over previous year	7.89%
Narrowband subscribers	78.86 Million
Broadband subscribers	525.36 Million
Wired Internet Subscribers	21.42 Million
Wireless Internet Subscribers	582.79 Million
Urban Internet Subscribers	390.91 Million
Rural Internet Subscribers	213.30 Million
Total Internet Subscribers per 100 population	46.13
Urban Internet Subscribers per 100 population	93.86
Rural Internet Subscribers per 100 population	23.87
Telecom Financial Data for the Calendar Year-2018	
Gross Revenue (GR) during the year 2018	₹ 2,37,417 Crore
% change in GR over the previous year	-7.13%
Adjusted Gross Revenue (AGR) during the year 2018	₹ 1,44,446 Crore
% change in AGR over the previous year	-10.18%
Share of Public Sector Operators in Access AGR	9.66%
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	880
Number of Pay TV Channels	330
Number of private FM Radio Stations (excluding All India Radio)	355
Number of Pay Subscribers Active with Private DTH Operators	70.49 Million
Number of Operational Community Radio Stations	248
Number of pay DTH Operators	5
Revenue & Usage Parameters (for the Calendar Year 2018)	
Monthly ARPU for Wireless (Full Mobility) Service	₹ 70.55
Minutes of Usage (MOU) per subscriber per month - Wireless (Full Mobility) Service	622 Minutes
Average Revenue for wireless data per data subscribers per month for (including LTE)	₹ 90.02
Average cost to subscriber for per GB wireless data	₹ 11.78
Average wireless data usage per data subscriber per month	7.60 GB

# Introduction

- This Report presents the Key Parameters and growth trends for the Telecom Services in India for the calendar year 2018. To provide a broad perspective on the Telecom Services and to serve as a reference document for various stakeholders, research agencies and analysts. Chapter-1 depicts the growth pattern, in terms of Subscriber base and Tele-density of Wireline, Wireless, Internet and Value Added Services (VAS). Chapter-2 covers the key revenue and usage parameters of GSM, CDMA and Wireless Data services. Chapter-3 gives the financial and accounting data. The information relating to Cable TV, DTH & Radio Broadcast services is provided in Chapter-4.
- The Report has been prepared based on the information furnished by the Service Providers. It is also available on TRAI's website ([www.trai.gov.in](http://www.trai.gov.in) under the link <http://www.trai.gov.in/release-publication/reports/performance-indicators-reports>). For any suggestion or clarification pertaining to this report, the following persons may be contacted:

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## CHAPTER 1

# Subscription Data



- In this report, Tele-density is based on the population projections from census data published by the Office of Registrar General & Census Commissioner of India.
- The Report has been prepared based on the information furnished by the Service Providers.



# Section A :

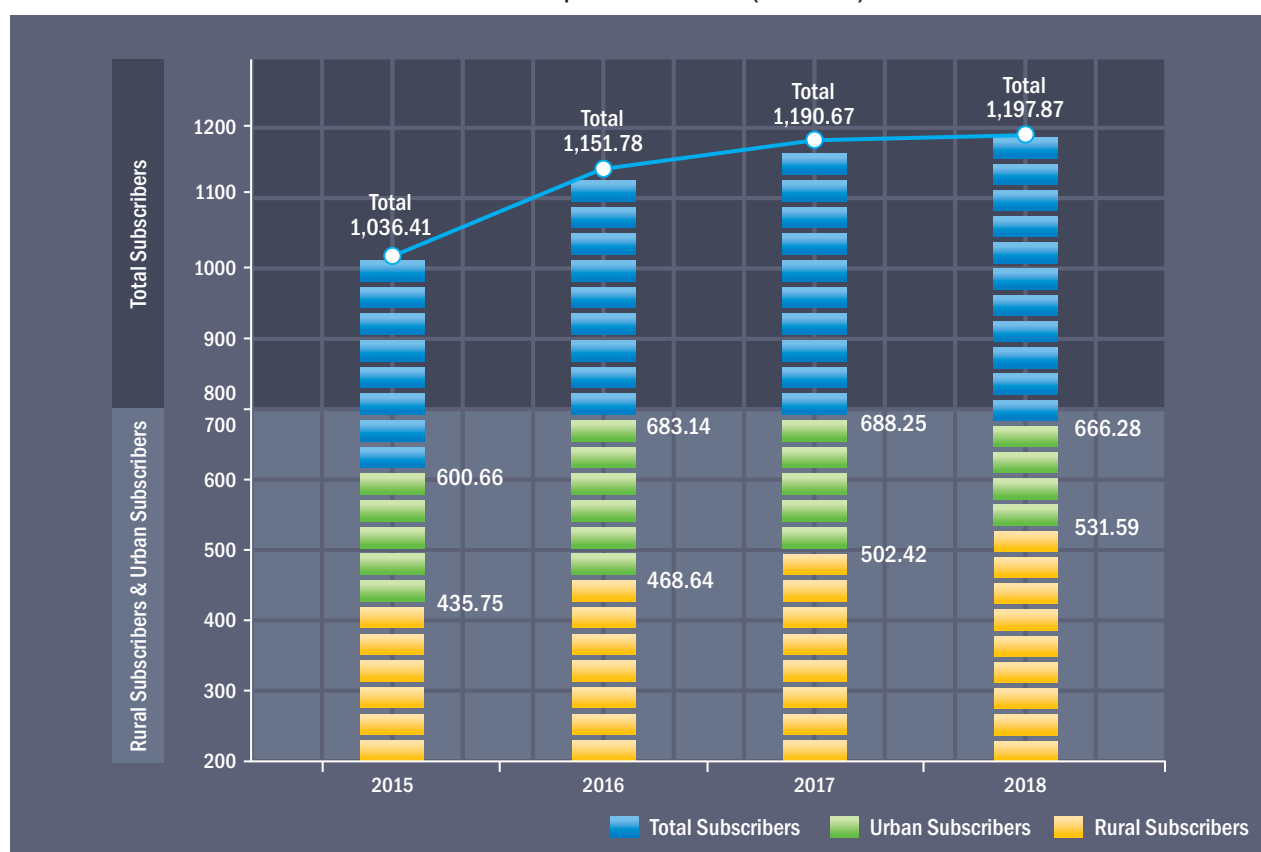
## Access Service — An overview



1. The number of telephone subscribers in India increased from 1,190.67 million at the end of Dec-17 to 1,197.87 million at the end of Dec-18, registering a yearly growth rate of 0.60%. However, the overall Teledensity in India declined from 91.90 at the end of Dec-17 to 91.45 at the end of Dec-18 at yearly decline rate of 0.49%.

**Chart 1.1: Trend of Telephone Subscriptions in India**

Number of Telephone Subscribers (in millions)



2. Telephone subscription in Urban Areas declined from 688.25 million at the end of Dec-17 to 666.28 million at the end of Dec-18 at the yearly decline rate of 3.19%. Urban Teledensity also declined from 168.29 at the end of Dec-17 to 159.98 at the end of Dec-18 with yearly decline rate of 4.93%.

\*Teledensity – Number of telephone connections (fixed lines and mobile phone subscribers) per 100 inhabitants within a geographical area.

(Source-ITU)

3. Rural telephone subscription increased from 502.42 million at the end of Dec-17 to 531.59 million at the end of Dec-18 at the yearly growth rate of 5.81%. Rural Teledensity also increased from 56.66 at the end of Dec-17 to 59.50 at the end of Dec-18 with yearly growth rate of 5.01%.

**Chart 1.2: Trend of Tele-density in India**



**Table1: Subscriber Base & Teledensity - Rural & Urban**

Year ending	Subscriber Base (million)			Teledensity		
	Rural	Urban	Total	Rural	Urban	Overall
2015	435.75	600.66	1036.41	49.94	152.45	81.83
2016	468.64	683.14	1151.78	53.27	170.15	89.90
2017	502.42	688.25	1190.67	56.66	168.29	91.90
2018	531.59	666.28	1197.87	59.50	159.98	91.45

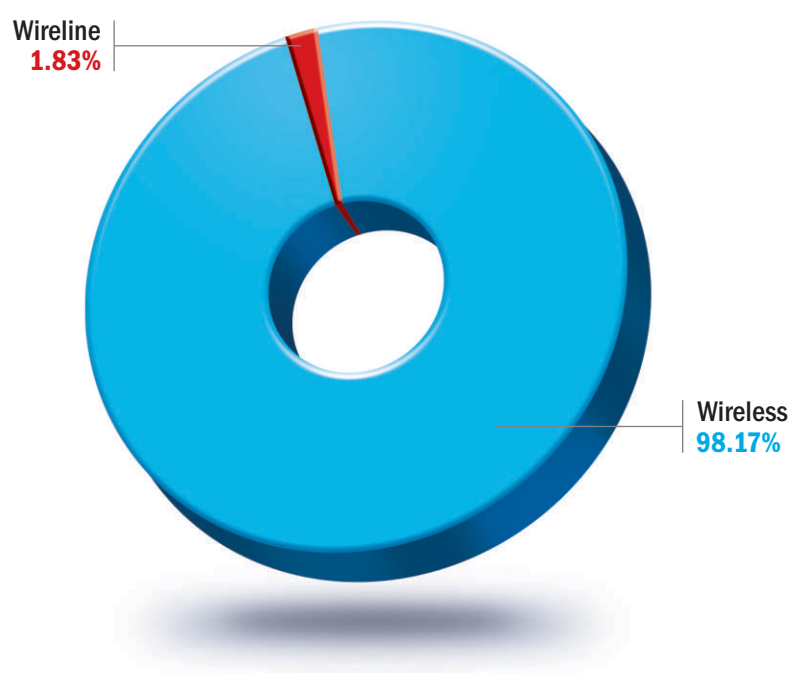
4. Out of the total telephone subscription, the shares of Rural telephone subscription increased from 42.20% at the end of Dec-17 to 44.36% at the end of Dec-18. However, share of Urban telephone subscription in total telephone subscription, declined from 57.80% at the end of Dec-17 to 55.64% at the end of Dec-18. The following chart depicts the rural-urban market share of telephone subscribers at the end of Dec-18.

**Table 1.2: Composition of Telephone Subscribers**

Network Type	Share (%)
Urban Wireless	54.06%
Rural Wireless	44.12%
Urban Wireline	1.57%
Rural Wireline	0.26%

5. Out of 1,197.87 million of total telephone subscriber, the number of Wireless Telephone subscribers is 1,176.00 million and the number of Wireline Telephone subscribers is 21.87 million at the end of Dec-18. The following chart depicts the market share of Wireless and Wireline subscribers in India.

**Chart 1.3: Composition of Market Share – Wireless & Wireline Subscribers**



**Table 1.3: Service Area wise Access (Wireless+Wireline)  
Subscriber base**

Service Area	Subscribers (million)			
	Dec-17	Dec-18	Yearly Net Additions	Rate of Yearly Growth (%)
Andhra Pradesh	85.84	88.64	2.80	3.27
Assam	22.74	21.86	-0.88	-3.87
Bihar	84.56	88.32	3.76	4.45
Delhi	58.77	54.33	-4.43	-7.55
Gujarat	71.89	71.87	-0.01	-0.02
Haryana	25.77	27.96	2.19	8.49
Himachal Pradesh	10.70	10.62	-0.08	-0.72
Jammu & Kashmir	13.24	11.61	-1.63	-12.29
Karnataka	69.45	70.79	1.34	1.92
Kerala	43.00	45.56	2.55	5.94
Madhya Pradesh	74.08	77.83	3.75	5.07
Maharashtra	95.15	96.58	1.43	1.50
Mumbai	41.35	40.48	-0.87	-2.11
North East	12.93	11.78	-1.15	-8.90
Orissa	34.30	33.37	-0.92	-2.69
Punjab	38.96	40.11	1.16	2.97
Rajasthan	66.42	66.93	0.51	0.76
T.N. (incl. Chennai)	89.41	84.97	-4.43	-4.96
U.P. (E)	101.26	102.24	0.98	0.97
U.P. (W)	62.68	65.06	2.38	3.80
Kolkata	29.89	27.79	-2.10	-7.01
West Bengal	58.29	59.14	0.85	1.46
<b>All India</b>	<b>1,190.67</b>	<b>1,197.87</b>	<b>7.20</b>	<b>0.60</b>

6. During the year 2018, Haryana service area has recorded the highest growth rate of 8.49% followed by Kerala service area (5.94%). On the other hand, Jammu & Kashmir service area showed maximum decline rate of 12.29% during the year 2018.

**Table 1.4: Service Area wise Rural-Urban Subscribers**

Service Area	Subscribers (million) as on 31 <sup>st</sup> December, 2018			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	88.64	42.44	46.20	47.88
Assam	21.86	12.57	9.29	57.51
Bihar	88.32	55.62	32.70	62.98
Delhi	54.33	2.50	51.83	4.61
Gujarat	71.89	28.19	43.69	39.22
Haryana	27.96	11.99	15.97	42.88
Himachal Pradesh	10.62	7.75	2.88	72.93
Jammu & Kashmir	11.61	5.63	5.99	48.45
Karnataka	70.79	25.77	45.02	36.40
Kerala	45.56	21.15	24.40	46.43
Madhya Pradesh	77.83	35.93	41.90	46.17
Maharashtra	96.58	45.41	51.17	47.02
Mumbai	40.48	2.29	38.19	5.66
North East	11.78	5.26	6.52	44.65
Orissa	33.37	21.89	11.48	65.60
Punjab	40.11	13.90	26.21	34.66
Rajasthan	66.93	36.52	30.41	54.57
T.N. (incl. Chennai)	84.97	24.04	60.93	28.30
U.P. (E)	102.24	59.88	42.37	58.56
U.P. (W)	65.06	30.27	34.79	46.52
Kolkata	27.79	2.94	24.85	10.59
West Bengal	59.14	39.63	19.51	67.02
<b>All India</b>	<b>1,197.87</b>	<b>531.59</b>	<b>666.28</b>	<b>44.38</b>



**Table 1.5 : Service Area wise Tele-density**

Service Area/ States	As on 31 <sup>st</sup> December, 2017			As on 31 <sup>st</sup> December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	59.52	189.15	95.82	65.38	182.58	98.25
Assam	51.68	154.74	68.69	45.14	165.80	65.35
Bihar	40.78	181.06	60.22	45.52	165.79	62.23
Delhi	-	-	262.14	-	-	235.65
Gujarat	72.98	161.91	110.74	75.07	155.63	109.53
Haryana	63.41	139.02	91.43	67.23	148.79	97.88
Himachal Pradesh	118.86	367.89	148.66	121.57	327.43	146.50
J&K	70.60	191.27	104.70	61.63	164.75	90.99
Karnataka	59.31	186.89	109.64	67.01	177.25	110.87
Kerala	73.11	255.17	119.08	77.92	266.76	125.52
Madhya Pradesh	43.54	137.83	69.69	46.30	139.42	72.29
Maharashtra (incl. Mumbai)*	71.78	148.38	109.42	74.91	142.94	108.61
North East	62.51	173.66	90.93	49.34	176.07	82.01
Orissa	58.14	176.96	79.61	61.72	144.80	76.90
Punjab	80.90	176.18	123.63	79.99	181.26	125.98
Rajasthan	58.33	184.28	88.89	63.77	165.26	88.45
Tamil Nadu (incl. Chennai)	94.37	143.37	124.55	89.02	134.97	117.77
Uttar Pradesh (incl. UPE & UPW)	44.91	152.25	69.72	49.22	139.13	70.12
West Bengal (incl. Kolkata)*	61.82	165.28	91.65	61.72	158.30	89.62
<b>All India</b>	<b>56.66</b>	<b>168.29</b>	<b>91.90</b>	<b>59.50</b>	<b>159.98</b>	<b>91.45</b>

\* Population data/projections are available state-wise only.

**Notes:-**

1. Tele-density figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. Delhi Service area, apart from the State of Delhi, includes wireless subscribers of the areas served by the local exchanges of Ghaziabad & Noida (in UP) and Gurgaon & Faridabad (in Haryana).
3. 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.

7. Himachal Pradesh service area has the highest Rural Tele-density of 121.57 followed by Tamil Nadu service area (89.02) at the end of Dec-18. Assam service area continues to have the lowest Rural Tele-density of 45.14 in the same period.

**Table 1.6 : Service Provider-wise growth in Subscriber base**

Service Provider	Subscriber Base (in million)			Rate of Growth (%)	Market Share as on Dec-17 (%)	Market Share as on Dec-18 (%)
	Dec-17	Dec-18	Yearly Net Addition			
Bharti Airtel	294.03	344.30	8.36	2.49	24.69	28.74
Telenor	41.91				3.52	
Vodafone	212.73	419.03	9.80	2.40	17.87	34.98
IDEA	196.50				16.50	
Reliance Com.	34.30	0.78	-33.53	-97.73	2.88	0.06
Tata Tele.	38.55	20.86	-17.69	-45.89	3.24	1.74
Aircel	85.00	-	-85.00	-	7.14	-
Quadrant	0.25	0.23	-0.02	-9.27	0.02	0.02
Reliance Jio	160.09	280.12	120.03	74.97	13.45	23.38
BSNL	120.35	125.81	5.47	4.54	10.11	10.50
MTNL	6.96	6.74	-0.22	-3.18	0.58	0.56
<b>Total</b>	<b>1,190.67</b>	<b>1,197.87</b>	<b>7.20</b>	<b>0.60</b>	<b>100</b>	<b>100</b>

\*Note: M/s Telenor has been merged with M/s Bharti Airtel Ltd.

M/s Vodafone & M/s Idea have been merged together during the year 2018 and became M/s Vodafone Idea Ltd.

8. After merger, M/s Vodafone Idea Ltd became the market leader with 34.98% market share of total telephone subscription at the end of Dec-18 and M/s Bharti Airtel slipped at second position with 28.74% market share. M/s Reliance Jio Infocomm Ltd added maximum number of telephone subscribers (120.03 million net addition) during the year 2018.

**Table 1.7 : Service provider-wise Market Share of rural subscribers in their total subscribers – as on 31<sup>st</sup> December, 2018**

Service Provider	No. of Total Subscribers (in millions)	No. of Rural Subscribers (in millions)	Percentage of Rural subscribers	Market share of Rural subscribers (%)
Vodafone Idea Ltd	419.03	220.71	52.67	41.52
Bharti Airtel	344.30	168.63	48.98	31.72
Reliance Jio	280.12	100.47	35.87	18.90
BSNL	125.81	39.06	31.04	7.35
Tata Tele.	20.86	2.63	12.60	0.49
Quadrant	0.23	0.05	20.64	0.01
MTNL	6.74	0.05	0.69	0.01
Reliance Com.	0.78	0.001	0.19	0.00
<b>Total</b>	<b>1,197.87</b>	<b>531.59</b>	<b>44.38</b>	<b>100</b>

9. M/s Vodafone Idea Ltd is the service provider with highest proportion of rural subscribers (52.67%), followed by Bharti Airtel (48.98%) to their total number of telephone subscribers at the end of Dec-18.

## Section B : Wireless Service



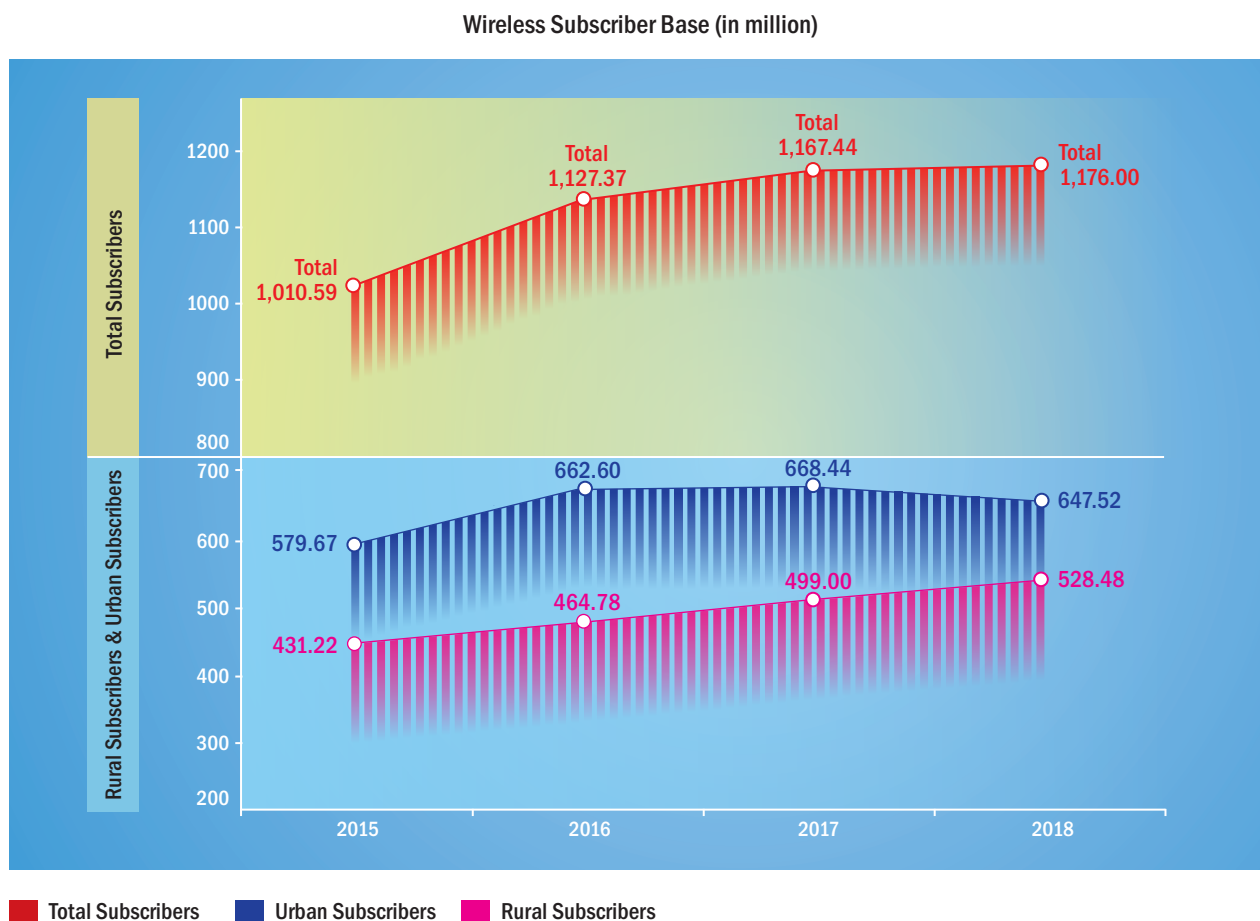
**Table 1.8: List of Cellular Mobile (GSM, CDMA & LTE) Service Providers currently providing service [As on 31<sup>st</sup> December, 2018]**

Sl. No.	Service Provider	Area of Operation
1	Bharti Airtel Ltd	All India
2	Reliance Communications / Reliance Telecom Ltd	All India
3	Vodafone Idea Ltd	All India
4	Tata Teleservices	All India except Assam, NE & J&K
5	BSNL	All India (except Delhi & Mumbai)
6	MTNL	Delhi & Mumbai
7	Reliance Jio Infocom Ltd	All India

10. Total Wireless (GSM+CDMA) subscriber base increased from 1,167.44 million at the end of Dec-17 to 1,176.00 million at the end of Dec-18, thereby showing a yearly growth rate of 0.73%. During the year 2018, net addition of 8.56 million wireless subscribers was recorded.
11. The Rural Wireless subscribers increased from 499.00 million at the end of Dec-17 to 528.48 million at the end of Dec-18 with yearly growth rate of 5.91%.
12. The urban wireless subscribers declined from 668.44 million at the end of Dec-17 to 647.52 million at the end of Dec-18 with yearly decline rate of 3.13%.

13. The following chart and table depict the trend of rural-urban wireless subscribers during last four years.

**Chart 1.4: Trend of Wireless Subscriber Base**



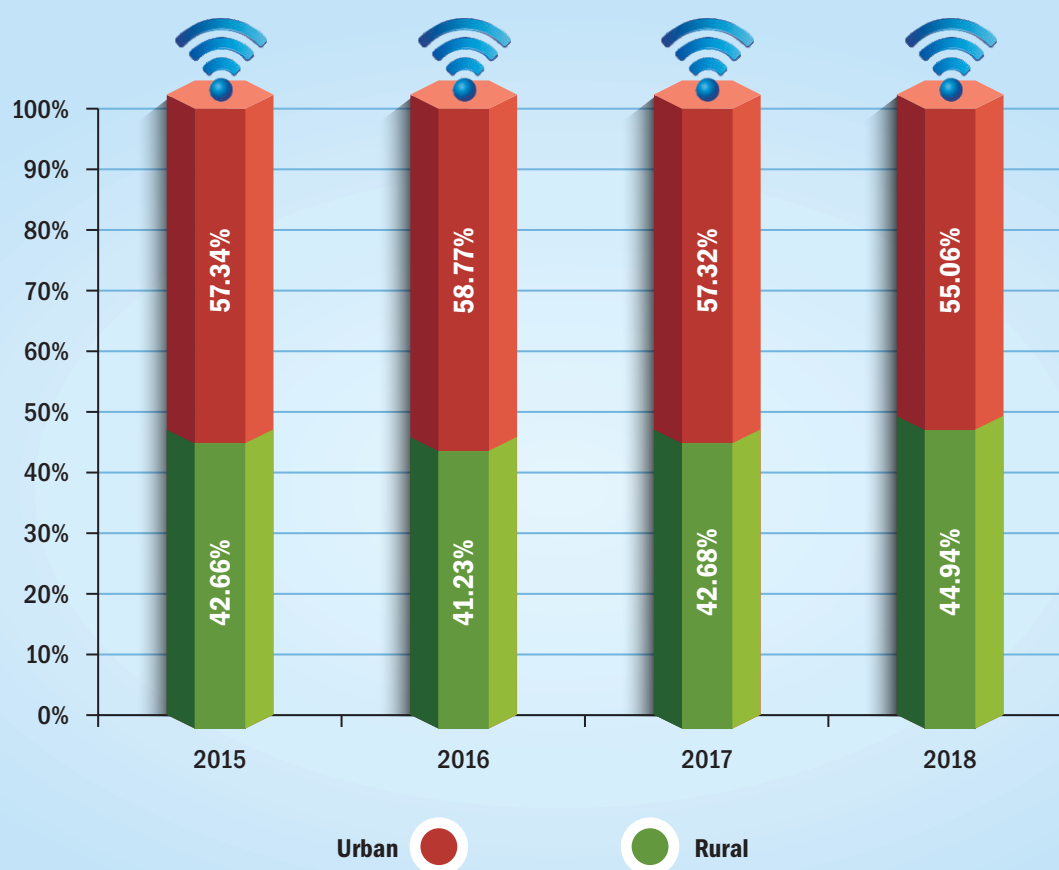
**Table 1.9: Wireless Subscriber Base & Teledensity - Rural & Urban**

Year ending	Subscriber Base (million)			Tele-density		
	Rural	Urban	Total	Rural	Urban	Overall
Dec-15	431.22	579.67	1010.89	49.43	147.12	79.82
Dec-16	464.78	662.60	1127.37	52.84	165.04	88.00
Dec-17	499.00	668.44	1167.44	56.28	163.44	90.11
Dec-18	528.48	647.52	1176.00	59.15	155.48	89.78



14. Overall Wireless Teledensity declined from 90.11 at the end of Dec-17 to 89.78 at the end of Dec-18. Rural wireless Teledensity increased from 56.28 to 59.15, however Urban wireless Teledensity declined from 163.44 to 155.48 at the end of Dec-18.
15. The share of rural wireless subscription increased from 42.74% at the end of Dec-17 to 44.94% at the end of Dec-18 and the share of urban wireless subscription declined from 57.26% to 55.06% during the same period.
16. The following chart depicts the composition of rural-urban market share in total wireless telephone subscribers during last four years.

**Chart 1.5: Composition of Wireless Market Share – Rural & Urban Subscribers**



**Table 1.10: Growth in Wireless Subscriber base**

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Dec-17 (%)	Market Share Dec-18 (%)
	Dec-17	Dec-18	Net Addition			
Bharti Airtel	290.11	340.26	8.24	2.84	24.85	28.93
Telenor	41.91				3.59	
Vodafone	212.53	418.75	9.72	4.57	18.20	35.61
IDEA	196.50				16.83	
Reliance Com.	33.17	0.02	-33.14	-99.93	2.84	0.002
Tata	36.69	19.01	-17.69	-48.20	3.14	1.62
Aircel	84.93	-	-84.93	-	7.28	-
BSNL	107.92	114.37	6.46	5.98	9.24	9.73
MTNL	3.58	3.47	-0.11	-3.06	0.31	0.29
Reliance Jio	160.09	280.12	120.03	74.97	13.71	23.82
<b>Total</b>	<b>1,167.44</b>	<b>1,176.00</b>	<b>8.56</b>	<b>0.73</b>	<b>100</b>	<b>100</b>

\*Note: M/s Telenor has been merged with M/s Bharti Airtel Ltd.

M/s Vodafone & M/s Idea Cellular have been merged together during the year 2018 and became M/s Vodafone Idea Ltd.

17. After merger, M/s Vodafone Idea Ltd became the market leader with 35.61% market share of total wireless telephone subscription at the end of Dec-18 and M/s Bharti Airtel slipped at second position with 28.93% market share. During a short period of about two years, M/s Reliance Jio reached at third position with wireless market share of 23.82% at the end of Dec-18.
18. In term of net addition, M/s Reliance Jio Infocomm Ltd added maximum number of telephone subscribers of 120.03 million during the year 2018 and its yearly growth rate recorded as 75% during the year 2018.

**Table 1.11: Service Area wise Wireless Subscriber base**

Service Area	Subscriber base (in million)			
	Dec-17	Dec-18	Net Additions	Rate of change(%)
Andhra Pradesh	84.32	87.21	2.90	3.44
Assam	22.60	21.74	-0.86	-3.79
Bihar	84.29	88.08	3.80	4.50
Delhi	55.55	51.13	-4.42	-7.95
Gujarat	70.59	70.65	0.06	0.08
Haryana	25.47	27.68	2.21	8.70
Himachal Pradesh	10.57	10.50	-0.07	-0.64
Jammu & Kashmir	13.12	11.51	-1.62	-12.32
Karnataka	67.20	68.62	1.42	2.12
Kerala	41.01	43.65	2.64	6.43
Madhya Pradesh	73.10	76.90	3.80	5.21
Maharashtra	93.38	95.01	1.62	1.74
Mumbai	38.33	37.54	-0.79	-2.05
North East	12.81	11.67	-1.14	-8.93
Orissa	34.02	33.14	-0.89	-2.61
Punjab	38.07	39.32	1.25	3.29
Rajasthan	65.81	66.39	0.58	0.88
T.N. (incl. Chennai)	87.03	82.75	-4.28	-4.92
U.P. (E)	100.77	101.79	1.02	1.01
U.P. (W)	62.32	64.75	2.43	3.89
Kolkata	29.07	27.06	-2.01	-6.90
West Bengal	58.00	58.89	0.89	1.54
<b>All India</b>	<b>1,167.44</b>	<b>1,176.00</b>	<b>8.56</b>	<b>0.73</b>

19. Detailed table on service provider wise subscriber base in each service area is available at Annexure-1.1.

**Table 1.12: Service Area wise Wireless Rural-Urban Subscriber base**

Service Area	Subscriber base (in million) - Dec-18			
	Total	Rural	Urban	% of Rural Subscriber
Andhra Pradesh	87.21	42.21	45.00	48.40
Assam	21.74	12.55	9.91	57.73
Bihar	88.08	55.59	32.49	63.11
Delhi	51.13	2.50	48.63	4.90
Gujarat	70.65	28.01	42.64	39.64
Haryana	27.68	11.94	15.74	43.12
Himachal Pradesh	10.50	7.68	2.82	73.14
Jammu & Kashmir	11.51	5.61	5.89	48.80
Karnataka	68.62	25.62	43.01	37.33
Kerala	43.65	20.00	23.65	45.83
Madhya Pradesh	76.90	35.83	41.08	46.59
Maharashtra	95.01	45.15	49.86	47.52
Mumbai	37.54	2.29	35.25	6.11
North East	11.67	5.24	6.43	44.87
Orissa	33.14	21.84	11.29	65.92
Punjab	39.32	13.73	25.59	34.93
Rajasthan	66.93	36.44	29.94	54.90
Tamil Nadu (incl. Chennai)	82.75	23.73	59.02	28.67
U.P. (E)	101.79	59.80	41.99	58.75
U.P. (W)	64.75	30.24	34.52	46.70
Kolkata	27.06	2.94	24.12	10.87
West Bengal	58.89	39.52	19.37	67.11
<b>All India</b>	<b>1,176.00</b>	<b>528.48</b>	<b>647.52</b>	<b>44.94</b>

**Table 1.13 : Service Area wise Wireless Tele-density**

Service Area/ States	As on 31 <sup>st</sup> December, 2017			As on 31 <sup>st</sup> December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	59.11	184.12	94.12	65.02	177.85	96.66
Assam	51.59	152.63	68.27	45.07	164.03	64.99
Bihar	40.71	180.05	60.03	45.49	164.75	62.06
Delhi	-	-	247.78	-	-	221.76
Gujarat	72.49	157.89	108.75	74.59	151.92	107.67
Haryana	63.09	136.61	90.34	66.93	146.66	96.89
Himachal Pradesh	117.64	362.03	146.89	120.56	321.30	144.88
J&K	70.46	188.37	103.77	61.51	162.15	90.17
Karnataka	58.89	178.51	106.08	66.62	169.30	107.47
Kerala	68.65	246.50	113.56	73.68	258.48	120.26
Madhya Pradesh	43.40	134.88	68.77	46.17	136.70	71.43
Maharashtra (incl. Mumbai)*	71.29	141.07	105.58	74.49	136.14	105.03
North East	62.30	171.18	90.13	49.13	173.78	81.27
Orissa	57.97	174.23	78.98	61.58	142.43	76.35
Punjab	79.72	171.35	120.81	79.00	176.96	123.48
Rajasthan	58.17	181.40	88.07	63.64	162.72	87.73
Tamil Nadu (incl. Chennai)	93.17	138.75	121.24	87.85	130.75	114.69
Uttar Pradesh (incl. UPE & UPW)*	44.85	150.89	69.36	49.17	137.94	69.80
West Bengal (incl. Kolkata)*	61.64	161.74	90.50	61.57	155.20	88.61
<b>All India</b>	<b>56.28</b>	<b>163.44</b>	<b>90.11</b>	<b>59.15</b>	<b>155.48</b>	<b>89.78</b>

\* Population data/projections are available state-wise only.

**Notes:-**

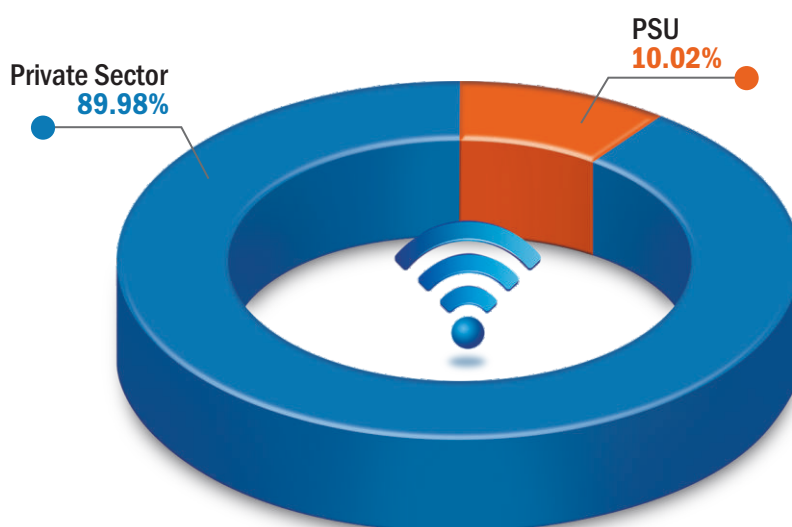
1. Teledensity figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. Delhi service area, apart from the State of Delhi, includes the areas served by the local exchanges of Ghaziabad & Noida (in UP) and Gurgaon & Faridabad (in Haryana).
3. 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.



**Table 1.14 : Rural Wireless Subscriber base and Market Share**

Service Provider	Total number of wireless Subscribers (in millions)	Rural Subscribers (in millions)	% of Rural subscribers in total	Market Share of Rural Subscribers (%)
Vodafone Idea Ltd	418.75	220.71	52.71	41.76
Bharti Airtel	340.26	168.63	49.56	31.91
Reliance Jio	280.12	100.47	35.87	19.01
BSNL	114.37	39.04	31.51	6.82
Tata Tele.	19.01	2.58	13.56	0.49
MTNL	3.47	0.05	1.34	0.01
Reliance Com.	0.02	0.00	0.00	0.00
<b>Total</b>	<b>1,176.00</b>	<b>528.48</b>	<b>44.94</b>	<b>100</b>

**Chart 1.6: Composition of Public (PSUs) and Private sectors in Wireless Subscription as on 31.12.2018**



20. Private telecom service providers hold 89.98% market share of total wireless telephone subscriptions and PSUs (BSNL & MTNL) hold only 10.02% market share of wireless telephone subscription as on 31<sup>st</sup> December, 2018.

# Section C :

## Wireline Service



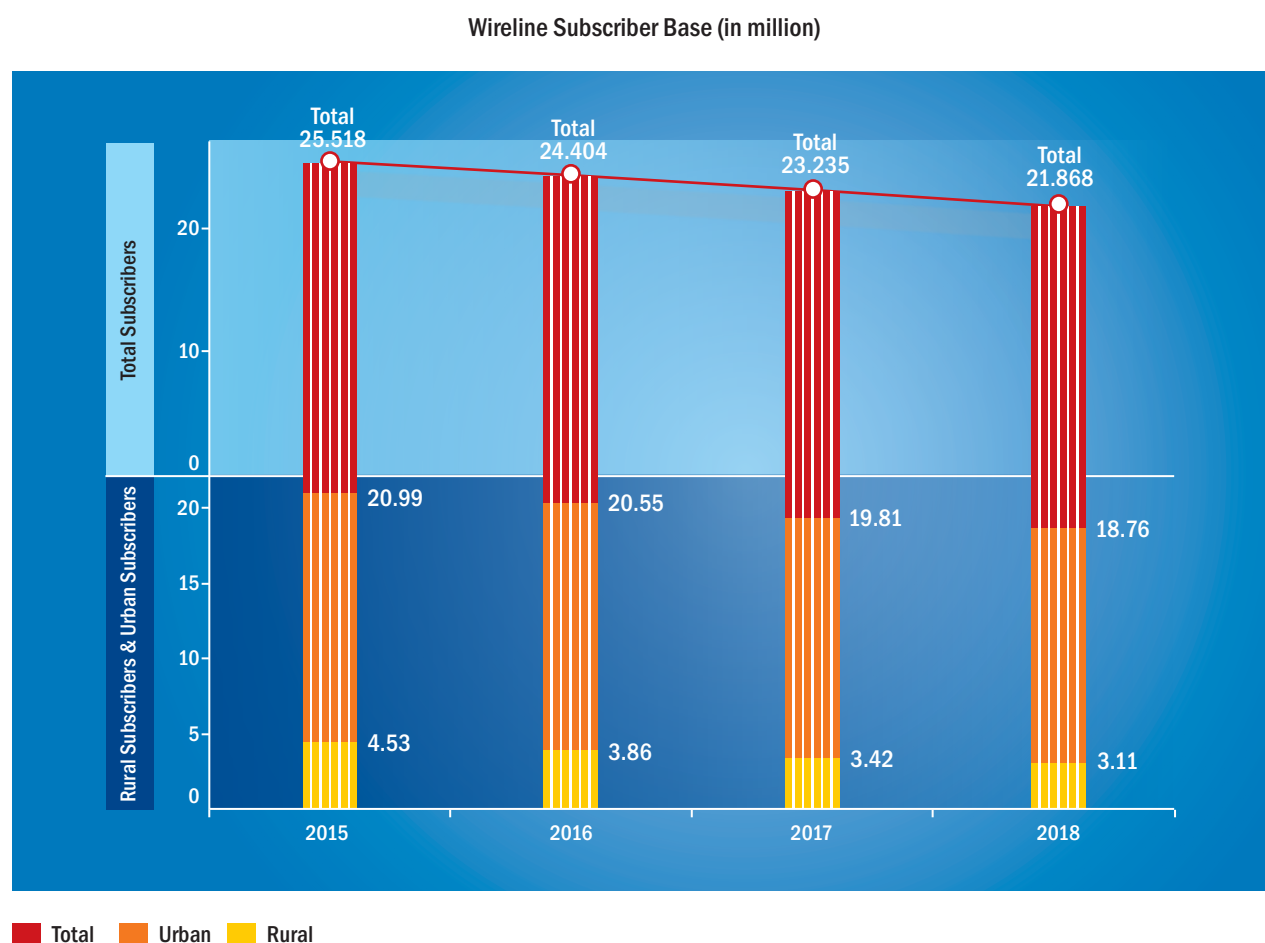
**Table 1.15 : Service Providers providing Wireline Service**

[As on 31<sup>st</sup> December, 2018]

Sl. No.	Name of the Service Provider	Area of Operation
1	Bharti Airtel Ltd.	Telangana, Delhi, Gujarat, Haryana, Karnataka, Kerala, Kolkata, Madhya Pradesh (excluding Chhattisgarh), Chhattisgarh, Maharashtra (excluding Mumbai), Mumbai, Punjab, Rajasthan, Tamilnadu (excluding Chennai), Chennai, UP-East and UP-West (excluding Uttarakhand).
2	BSNL	All India except Delhi & Mumbai
3	MTNL	Delhi & Mumbai
4	Quadrant Televentures Ltd.	Punjab
5	Reliance Communications Ltd.	Andhra Pradesh (excluding Telangana), Telangana, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (excluding Chattisgarh), Chhattisgarh, Maharashtra (Excluding Mumbai & Goa) Goa, Mumbai, Orissa, Punjab, Rajasthan, Tamilnadu (excluding Chennai), Chennai, UP-East, UP-West (Excluding Uttarakhand) and West Bengal (Excluding Andaman & Nicobar)
6	Tata Teleservices (Maharashtra) Ltd.	Maharashtra & Goa, Mumbai
	Tata Teleservices Ltd.	Andhra Pradesh (Excluding Telangana), Telangana, Assam, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Kolkata, Madhya Pradesh (Excluding Chattisgarh), Chhattisgarh, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Tripura, Orissa, Punjab, Rajasthan, Tamilnadu (Excluding Chennai), UP-East, UP-West (Excluding Uttarakhand), West Bengal (Excluding Andaman & Nicobar) and Sikkim
7	Vodafone	Andhra Pradesh (Excluding Telangana), Telangana, Assam, Bihar (Excluding Jharkhand), Jharkhand, Delhi, Gujarat, Haryana, Himachal Pradesh, Karnataka, Kerala, Kolkata, Madhya Pradesh (Excluding Chattisgarh), Maharashtra (Excluding Mumbai & Goa), Goa, Mumbai Meghalaya, Orissa, Punjab, Rajasthan, Tamilnadu (Excluding Chennai), UP-East, UP-West (Excluding Uttarakhand), Uttarakhand and West Bengal (Excluding Andaman & Nicobar)

21. Total Wireline subscriber base declined from 23.23 million at the end of Dec-17 to 21.87 million at the end of Dec-18 with yearly decline rate of 5.88%.
22. Detailed table on service provider wise wireline subscriber base in each service area is available at Annexure-1.2
23. Rural wireline subscriber base has shown decline of 9.06%, from 3.42 Million at the end of Dec-17 to 3.11 Million at the end of Dec-18. During the same period, Urban wireline subscription also recorded decline of 5.33%, from 19.81 million to 18.76 million.
24. The following chart and table depict the trend of wireline subscriber base and wireline tele-density (rural-urban) during the last four years.

**Chart 1.7: Trend of Wireline Subscriber Base**

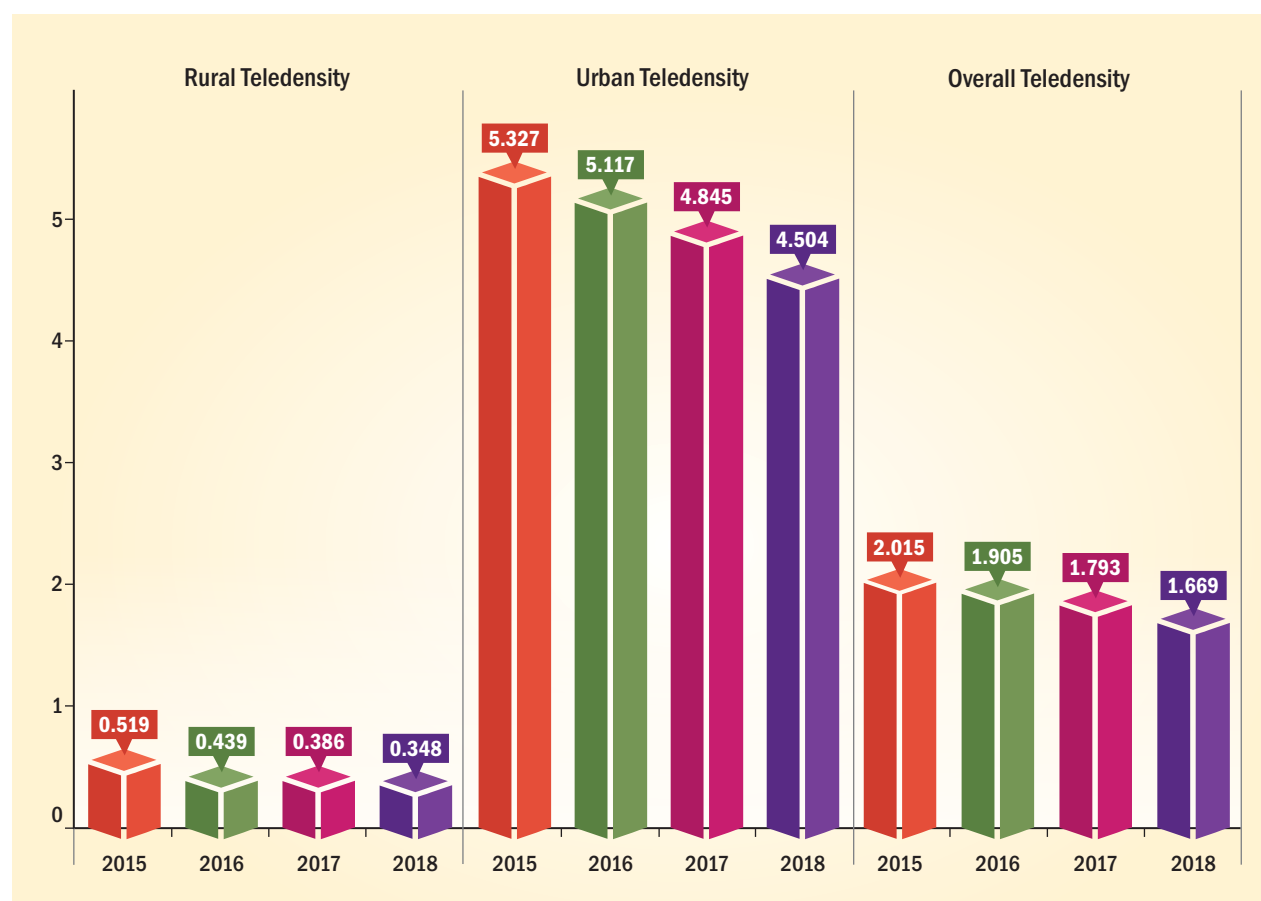


**Table 1.16 : Wireline Subscriber Base & Teledensity - Rural & Urban**

Year ending	Subscriber Base (in million)			Wireline Teledensity		
	Rural	Urban	Total	Rural	Urban	Overall
Dec-15	4.53	20.99	25.52	0.52	5.33	2.01
Dec-16	3.86	20.55	24.40	0.44	5.12	1.90
Dec-17	3.42	19.81	23.23	0.39	4.84	1.79
Dec-18	3.11	18.76	21.87	0.35	4.50	1.67

25. Overall Wireline Teledensity declined from 1.79 at the end of Dec-17 to 1.67 at the end of Dec-18. During the same period Urban wireline teledensity declined from 4.84 to 4.50 and Rural Wireline Teledensity also declined from 0.39 to 0.35.

**Chart 1.8: Trend of Wireline Tele-density (rural-urban)**



**Table 1.17 : Service Provider wise growth in Wireline Subscriber base**

Service Provider	Subscriber Base (in million)			Rate of Growth (%)	Market Share Dec-17 (%)	Market Share Dec-18 (%)
	Dec-17	Dec-18	Net Addition			
BSNL	12.43	11.44	-0.99	-7.98	53.50	52.31
Bharti	3.91	4.04	0.13	3.30	16.84	18.49
MTNL	3.38	3.26	-0.11	-3.30	14.53	14.93
Tata	1.86	1.86	-0.01	-0.26	8.01	8.49
Reliance	1.14	0.76	-0.38	-33.55	4.90	3.46
Quadrant	0.25	0.23	-0.02	-9.27	1.08	1.04
Vodafone	0.20	0.28	0.09	43.12	0.85	1.29
Aircel	0.07	-	-0.07	-	0.29	-
<b>Total</b>	<b>23.23</b>	<b>21.87</b>	<b>-1.37</b>	<b>-5.88</b>	<b>100</b>	<b>100</b>

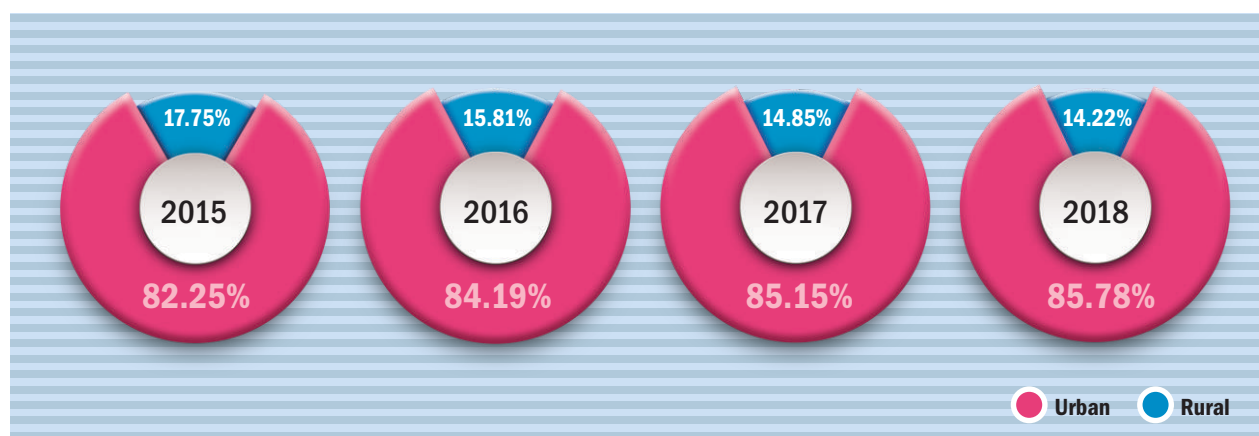
26. M/s BSNL is the leading operator in wireline service with 11.44 million subscriber at the end of Dec-18 followed by Bharti with 4.04 million subscribers.
27. In term of net addition, only M/s Bharti Airtel and M/s Vodafone showed positive growth with net additions 0.13 million and 0.09 million respectively during the year 2018. All other service providers showed decline in their wireline subscriber base during the year.
28. In total wireline subscriber base, PSUs hold 67.24% of market share at the end of Dec-18 as against 68.03% at the end of Dec-17. However, both PSUs, BSNL and MTNL showed decline in their wireline subscriber base during the year 2018.

**Table 1.18 : Service Provider wise Subscriber base (Rural - Urban)**

Service Provider	Subscriber Base (million) Dec-18			Share of Rural subscription (%)
	Rural	Urban	Total	
<b>BSNL</b>	3.01	8.43	11.44	26.32
<b>Bharti</b>	-	4.04	4.04	-
<b>MTNL</b>	-	3.26	3.26	-
<b>Tata</b>	0.05	1.80	1.86	2.77
<b>Reliance</b>	0.001	0.75	0.76	0.20
<b>Quadrant</b>	0.05	0.18	0.23	20.64
<b>Vodafone</b>	-	0.28	0.28	-
<b>Total</b>	<b>3.11</b>	<b>18.76</b>	<b>21.87</b>	<b>14.18</b>

29. The following charts show the trend of share of rural-urban wireline subscription during last four years.

**Chart 1.9: Composition of Wireline Subscriber base - Rural & Urban**



30. As may be seen that share of rural wireline subscription showed declined trend year-on-year. The share of rural wireline subscribers was only 14.22% over the total wireline subscribers at the end of year 2018.

**Table 1.19: Service Area wise Wireline Subscriber base & Net Additions (in million)**

Service Area	Dec-17	Dec-18	Net Additions	Rate of Change (%)
Andhra Pradesh	1.52	1.43	-0.10	-6.24
Assam	0.14	0.12	-0.02	-15.35
Bihar	0.27	0.24	-0.04	-13.02
Delhi	3.22	3.20	-0.02	-0.53
Gujarat	1.29	1.22	-0.07	-5.57
Haryana	0.31	0.28	-0.03	-8.37
Himachal Pradesh	0.13	0.12	-0.01	-7.81
Jammu & Kashmir	0.12	0.11	-0.01	-9.83
Karnataka	2.25	2.17	-0.09	-3.82
Kerala	1.99	1.91	-0.08	-4.24
Madhya Pradesh	0.98	0.93	-0.05	-5.38
Maharashtra	1.76	1.57	-0.20	-11.06
Mumbai	3.03	2.94	-0.09	-2.83
North East	0.11	0.11	-0.01	-5.71
Orissa	0.27	0.24	-0.04	-13.05
Punjab	0.89	0.79	-0.10	-10.80
Rajasthan	0.62	0.55	-0.07	-11.51
T.N. (incl. Chennai)	2.38	2.22	-0.15	-6.51
U.P. (E)	0.49	0.45	-0.03	-7.16
U.P. (W)	0.36	0.31	-0.05	-13.27
Kolkata	0.82	0.73	-0.09	-11.04
West Bengal	0.28	0.25	-0.04	-13.17
<b>All India</b>	<b>23.23</b>	<b>21.87</b>	<b>-1.37</b>	<b>-5.88</b>

31. All the service areas showed decline in their wireline subscriber base during the year 2018.



**Table 1.20: Service Area wise Wireline Rural-Urban Subscriber Base (in million)**

Service Area	Total Subscribers	Rural Subscribers	Urban Subscribers	(%) of Rural Subscribers
Andhra Pradesh	1.43	0.23	1.20	16.24
Assam	0.12	0.02	0.10	16.79
Bihar	0.24	0.03	0.21	13.11
Delhi	3.20	0.00	3.20	0.00
Gujarat	1.22	0.18	1.04	14.77
Haryana	0.28	0.05	0.23	18.71
Himachal Pradesh	0.12	0.06	0.05	54.36
Jammu & Kashmir	0.11	0.01	0.09	10.55
Karnataka	2.17	0.15	2.02	6.94
Kerala	1.91	1.15	0.76	60.31
Madhya Pradesh	0.93	0.11	0.82	11.44
Maharashtra	1.57	0.26	1.30	16.87
Mumbai	2.94	0.00	2.94	0.00
North East	0.11	0.02	0.08	20.74
Orissa	0.24	0.05	0.19	20.84
Punjab	0.79	0.17	0.62	21.63
Rajasthan	0.55	0.08	0.47	14.15
T.N. (incl. Chennai)	2.22	0.32	1.91	14.26
U.P. (E)	0.45	0.07	0.38	15.60
U.P. (W)	0.31	0.03	0.28	10.15
Kolkata	0.73	0.00	0.73	0.00
West Bengal	0.25	0.11	0.14	43.80
<b>All India</b>	<b>21.87</b>	<b>3.11</b>	<b>18.76</b>	<b>14.22</b>

32. In the above table, it can be seen that share of rural wireline subscribers in Himachal Pradesh and Kerala service areas was more than 50% of their total wireline subscribers at the end of Dec-18.

**Table 1.21: Service Area wise Wireline Teledensity**

Service Area/ States	As on 31 <sup>st</sup> December, 2017			As on 31 <sup>st</sup> December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.41	5.03	1.70	0.36	4.73	1.58
Assam	0.09	2.11	0.43	0.07	1.77	0.36
Bihar	0.06	1.01	0.19	0.03	1.04	0.17
Delhi	-	-	14.37	-	-	13.89
Gujarat	0.49	4.03	1.99	0.48	3.71	1.86
Haryana	0.32	2.40	1.09	0.30	2.14	0.99
Himachal Pradesh	1.22	5.86	1.78	1.01	6.13	1.63
Jammu & Kashmir	0.15	2.90	0.92	0.12	2.59	0.83
Karnataka	0.42	8.38	3.56	0.39	7.94	3.39
Kerala	0.46	8.66	5.52	4.24	8.28	5.26
Madhya Pradesh	0.14	2.94	0.92	0.14	2.73	0.86
Maharashtra (incl. Mumbai)*	0.49	7.30	3.84	0.42	6.79	3.57
North East	0.22	2.48	0.80	0.21	2.28	0.74
Orissa	0.17	2.73	0.63	0.14	2.37	0.55
Punjab	1.19	4.83	2.82	0.99	4.30	2.49
Rajasthan	0.16	2.88	0.82	0.13	2.54	0.72
Tamil Nadu (incl. Chennai)	1.20	4.63	3.31	1.17	4.22	3.08
Uttar Pradesh (incl. UPE & UPW)*	0.06	1.36	0.36	0.06	1.19	0.32
West Bengal (incl. Kolkata)*	0.18	3.54	1.15	0.16	3.10	1.01
<b>All India</b>	<b>0.39</b>	<b>4.84</b>	<b>1.79</b>	<b>0.35</b>	<b>4.50</b>	<b>1.67</b>

\* Population data/projections are available state-wise only

**Notes:-**

1. Teledensity figures are derived from the subscriber data provided by the operators and the population projections, for Urban and Rural areas, of the country, published by the Office of the Registrar General & Census Commissioner, India.
2. 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.

## Public Call Offices (PCO)

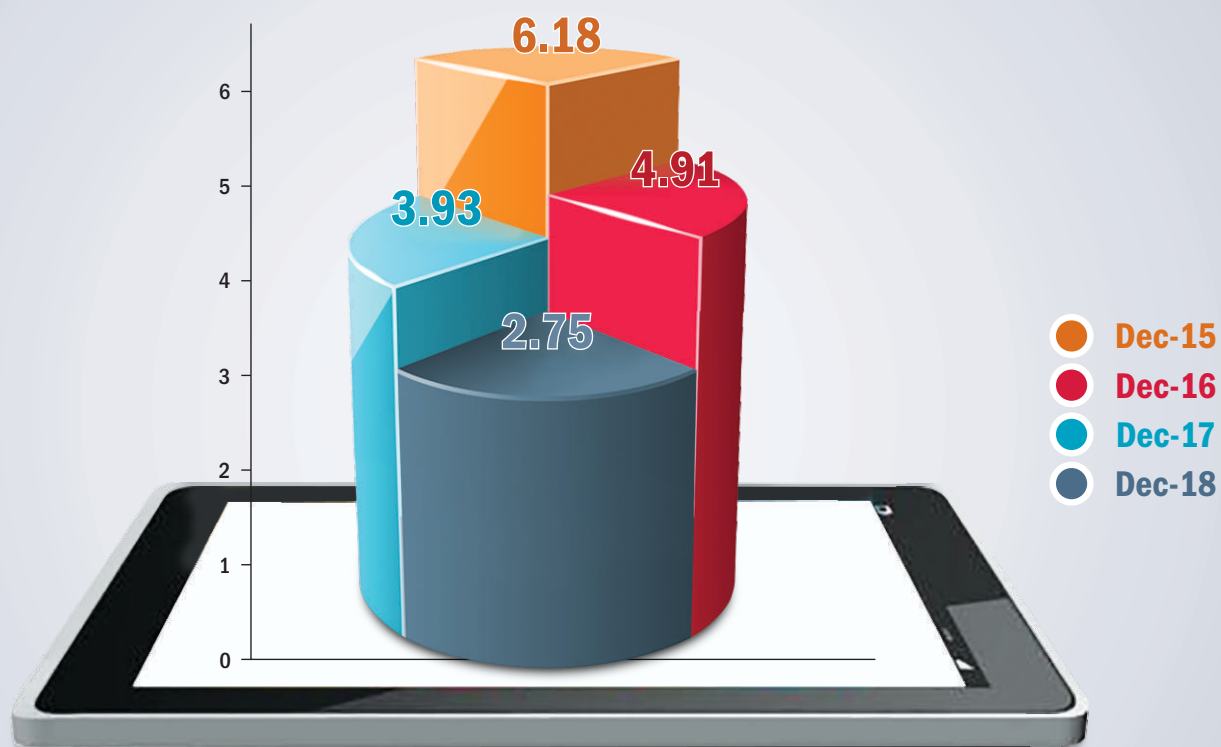
33. Total number of PCOs in the country declined from 3.93 lakh at the end of Dec-17 to 2.75 lakh at the end of Dec-18 with yearly declining rate of 30.10%. Detailed table of service provider wise PCOs is available at Annexure -1.3.

**Table 1.22 : Rate of change & Market share of PCOs**

Service Provider	Dec-17	Dec-18	Rate of change (%)	Market Share (%) (Dec-18)
BSNL	2,36,188	1,94,023	-17.85	70.55
MTNL	1,21,118	68,579	-43.38	24.93
Bharti	12,624	11,010	-12.79	4.00
Quadrant	1,420	1,420	0.00	0.52
Tata	22,133	0.00	-	-
<b>Total</b>	<b>3,93,483</b>	<b>2,75,032</b>	<b>-30.10</b>	<b>100</b>

34. M/s BSNL is the market leader in term of number of PCOs with 70.55% of total number of PCOs followed by MTNL with 24.93% at the end of Dec-18.
35. It may be seen in the following chart that the number of PCOs in India continuously showing year-on-year declining trend. The following chart depicts the trend of number of PCOs in last four years.

**Chart 1.10: Trend of Number of PCOs in India (in lakh)**

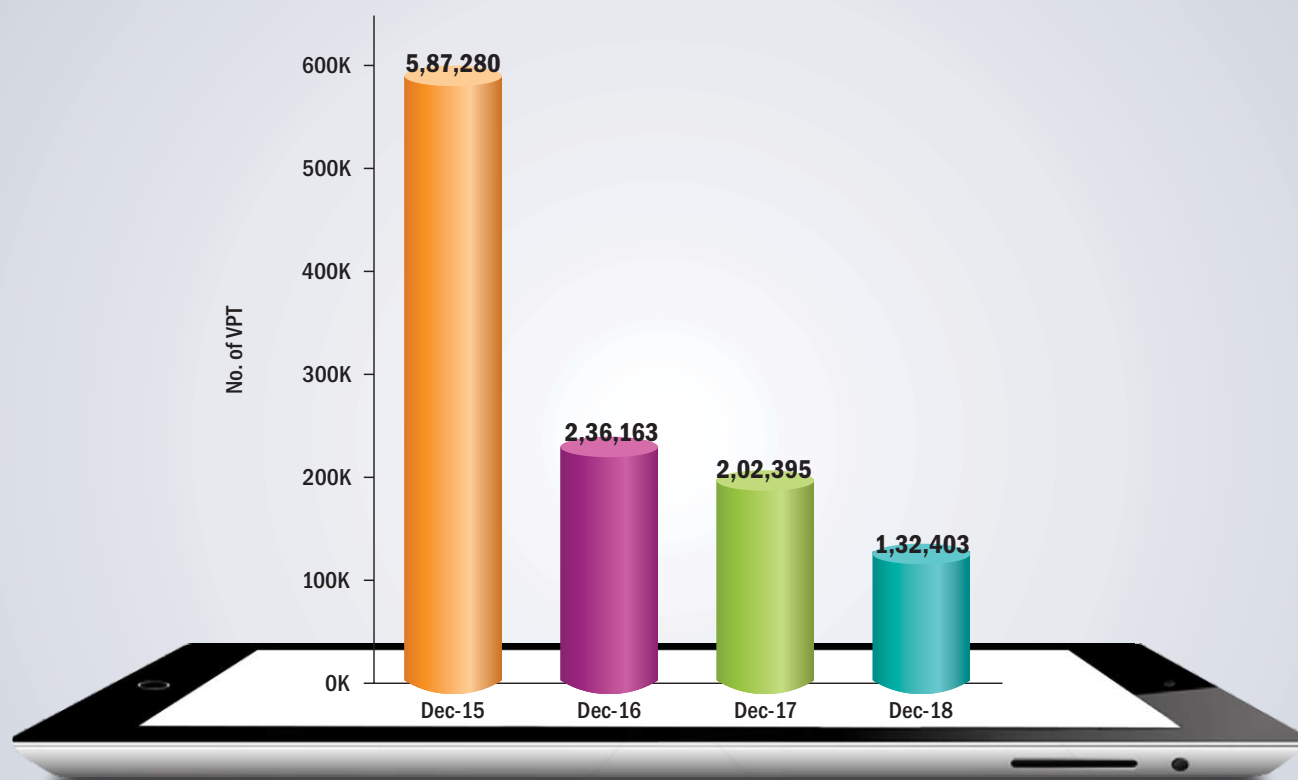


## Village Public Telephones (VPTs)

36. There are 5,93,731 inhabited villages in India as per census 2001. At the end of Dec-18, 22.30% of the total inhabited villages in India have been connected by VPTs.
37. Number of VPTs declined from 2,02,395 at the end of Dec-17 to 1,32,403 at the end of Dec-18 with yearly decline rate of 34.58%. As per the information received in TRAI as on December, 2018, only M/s BSNL is providing VPT service in India. Service area wise detailed table of VPT is available at Annexure -1.4.

38. The following chart depicts the trend of number of VPTs in India during last four years.

**Chart 1.11: Trend of Number of VPTs in India**



## Section D : Internet Service



39. This section summarizes information submitted by 326 operators for the year ending 2018. **Part-I** consists of information of Internet service (both narrowband and broadband), **Part-II** consists of broadband service and **Part-III** covers narrowband service.

### Part-I: Internet\* Service (broadband<sup>#</sup> + narrowband<sup>^</sup>)

40. As per reports received from operators, total number of internet subscribers increased from 445.96 million at the end of Dec-17 to 604.21 million at the end of Dec-18 with yearly growth rate of 35.49%. Out of total 604.21 million internet subscribers, number of broadband subscribers is 525.36 million and number of narrowband subscribers is 78.86 million at the end of Dec-18.
41. Wireless Internet subscribers increased from 424.67 million at the end of Dec-17 to 582.79 million at the end of Dec-18 with yearly growth rate of 37.23%. Wired Internet subscribers increased from 21.28 million at the end of Dec-17 to 21.42 million at the end of Dec-18 with yearly growth rate of 0.66%.
42. Number of Broadband subscribers increased from 362.87 million at the end of Dec-17 to 525.36 million at the end of Dec-18 with yearly growth rate of 44.78%. However, the number of Narrowband subscribers declined from 83.09 million at the end of Dec-17 to 78.86 million at the end of Dec-18 with yearly decline rate of 5.09%.

\* Internet: Interconnected global networks that use the internet protocol.

# Broadband: Internet access with a minimum capacity of greater or equal 512 Kbit/s in one or both directions.

^ Narrowband: Internet access with a capacity of less than 512 Kbit/s in one or both directions.

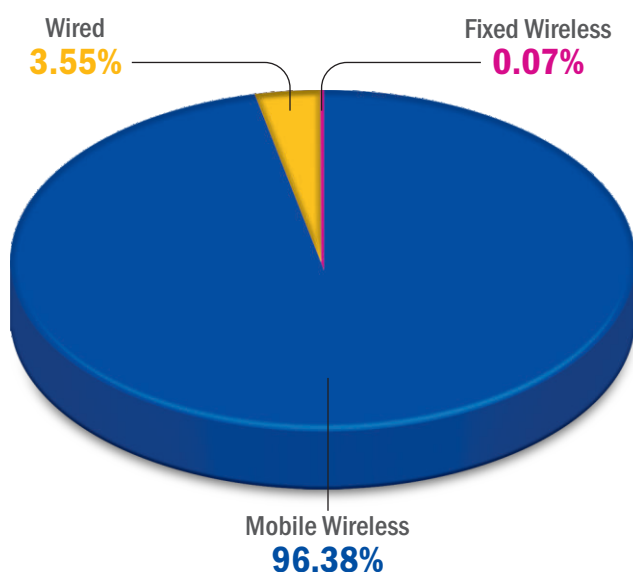
(Source-ITU)

**Table 1.23 : Trend of Internet subscriber base**

Segment	Mode of Access								Total Subscribers (in million)	
	Wired Subscribers (in million)		Wireless Subscribers (in million)							
			Fixed Wireless (Wi-Fi, Wi-Max, Radio & VSAT)		Mobile Wireless (Phone + Dongle)		Total Wireless			
	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18
Broadband	17.86	18.17	0.44	0.43	344.57	506.76	345.01	507.19	362.87	525.36
Narrowband	3.43	3.26	0.01	0.01	79.65	75.59	79.66	75.60	83.09	78.86
Total	21.28	21.42	0.45	0.44	424.22	582.35	424.67	582.79	445.96	604.21

43. The following charts present the composition of Internet Subscribers by mode of access and composition of Broadband & Narrowband subscription.

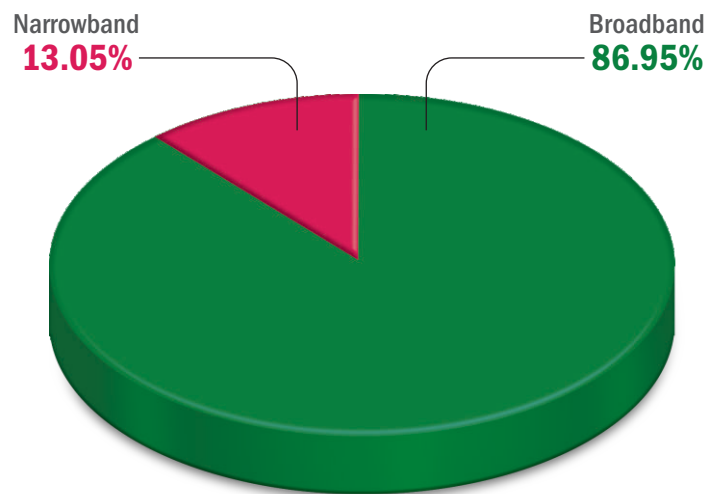
**Chart 1.12: Composition of Internet subscription  
as on 31<sup>st</sup> December, 2018**



44. More than 96% of total internet subscribers use wireless mobile technology to access internet services.

45. Out of total internet subscription, the share of broadband subscription is 86.95% and the share of narrowband subscription is only 13.05% as on 31<sup>st</sup> December, 2018. The following chart depicts the composition of market share of broadband and narrowband subscriptions.

**Chart 1.13 : Composition of Broadband & Narrowband subscription  
as on 31<sup>st</sup> December, 2018**



46. Number of rural internet subscribers increased from 132.03 million at the end of Dec-17 to 213.30 million at the end of Dec-18 and the number of urban internet subscribers increased from 313.92 million to 390.91 million during the same period.
47. Out of 525.36 million broadband subscribers, number of rural broadband subscribers is 173.30 million and number of urban broadband subscribers is 352.06 million.
48. Out of 78.86 million narrowband subscribers, number of rural narrowband subscribers is 40.00 million and number of urban narrowband subscribers is 38.86 million.



49. The service area wise urban/rural break up of internet subscribers (narrowband and broadband) as on 31<sup>st</sup> December, 2018 is as per the following table.

**Table 1.24: Break up of Rural-Urban internet subscriber base (in million)**

Telecom Service Area	Narrowband		Broadband		Total Internet	
	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	4.64	4.64	16.09	25.37	20.72	30.01
Assam	0.93	0.67	4.65	4.51	5.59	5.18
Bihar	4.26	1.89	16.24	13.50	20.50	15.38
Delhi	0.22	2.73	0.51	31.15	0.73	33.88
Gujarat	1.55	1.91	9.14	25.26	10.68	27.17
Haryana	0.83	0.61	4.28	8.24	5.11	8.85
Himachal Pradesh	0.32	0.18	2.79	1.66	3.11	1.84
Jammu & Kashmir	0.44	0.31	2.29	3.44	2.74	3.75
Karnataka	1.94	2.00	9.51	24.99	11.45	26.99
Kerala	1.15	1.27	8.62	12.77	9.77	14.03
Kolkata	0.15	1.60	1.17	12.15	1.32	13.75
Madhya Pradesh	3.39	2.52	10.30	22.36	13.69	24.88
Maharashtra	3.33	2.93	15.50	28.74	18.83	31.67
Mumbai	0.12	2.63	1.04	21.94	1.16	24.57
North East	0.41	0.42	2.30	3.24	2.71	3.65
Orissa	1.64	0.68	6.99	5.16	8.64	5.84
Punjab	0.91	1.10	6.02	14.41	6.94	15.50
Rajasthan	2.40	1.78	12.35	17.48	14.75	19.25
Tamil Nadu	1.77	3.12	9.64	29.49	11.41	32.62
Uttar Pradesh (East)	4.60	2.41	15.60	18.24	20.19	20.66
Uttar Pradesh (West)	2.62	1.90	8.32	17.05	10.94	18.94
West Bengal (incl. Kolkata)*	2.38	1.55	9.94	10.94	12.33	12.50
<b>All India</b>	<b>40.00</b>	<b>38.86</b>	<b>173.30</b>	<b>352.06</b>	<b>213.30</b>	<b>390.91</b>

50. The following table depicts the number of internet subscribers of top ten service providers and their market share as on 31<sup>st</sup> December, 2018.

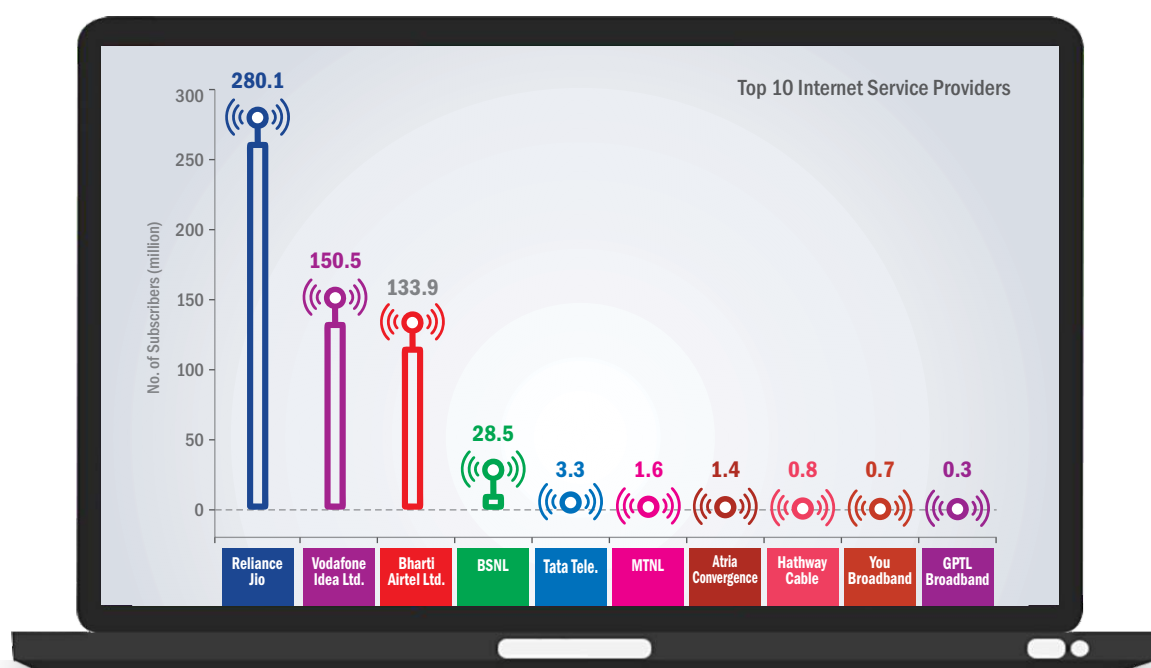
**Table 1.25: Internet Subscriber Base and Market Share of top 10 Service Providers – Dec-18**

Sl. No	Service Providers	No. of Internet Subscribers	Share (%)
1	Reliance Jio Infocomm Ltd	280117768	46.36
2	Vodafone Idea Limited	150474135	24.90
3	Bharti Airtel Ltd.	133941589	22.17
4	Bharat Sanchar Nigam Ltd.	28474380	4.71
5	Tata Teleservices Limited	3273604	0.54
6	Mahanagar Telephone Nigam Ltd.	1594354	0.26
7	Atria Convergence Technologies Pvt. Ltd.	1390471	0.23
8	Hathway Cable & Datacom Pvt. Ltd	781791	0.13
9	You Broadband India Pvt. Ltd	724713	0.12
10	GTPL Broadband Pvt. Ltd.	263694	0.04
	<b>Total of Top 10 ISPs</b>	<b>601036499</b>	<b>99.47</b>
	<b>Others</b>	<b>3177764</b>	<b>0.53</b>
	<b>Grand Total</b>	<b>604214263</b>	<b>100</b>

Note: M/s Vodafone and M/s Idea Cellular merged together and became M/s Vodafone Idea Ltd

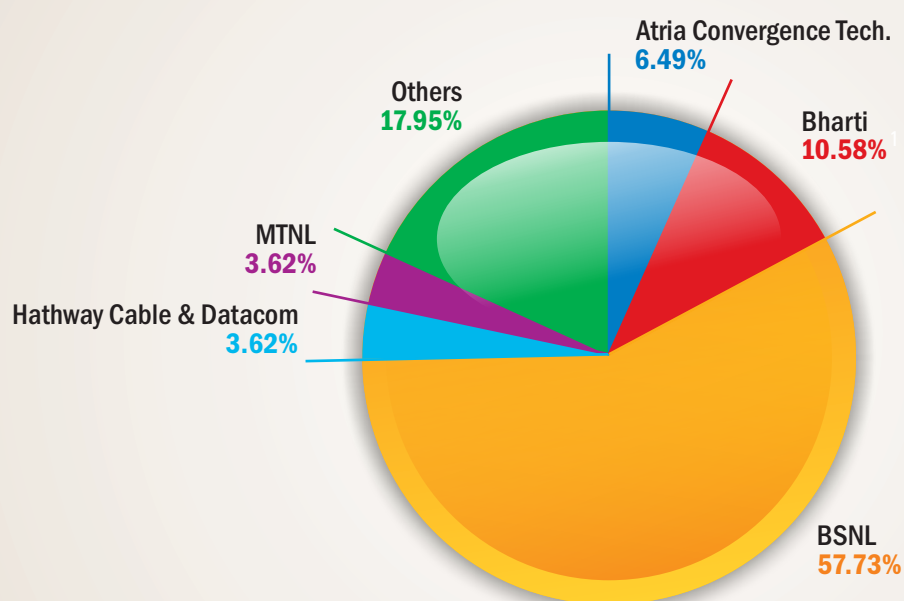
51. Reliance Jio Infocomm Ltd holds the top position with 46.36% market share of total internet subscribers followed by Vodafone Idea Ltd with 24.90%. Top 10 Service Providers together hold 99.47% share of total internet subscriber base at the end of Dec-18.
52. Detailed table of number of subscriber base (Broadband & Narrowband subscribers) of all the service providers is available at Annexure-1.5.

**Chart 1.14 : Subscriber base of top ten Service Providers (in million)**



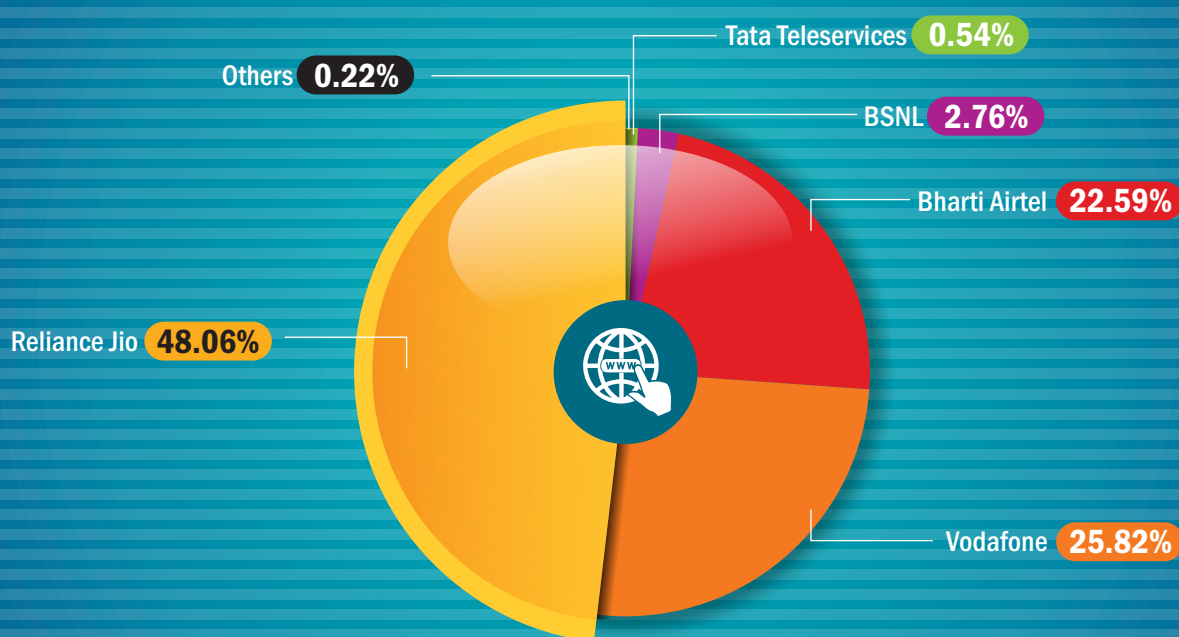
53. Out of total 21.42 million wired internet subscribers, BSNL holds 57.73% market share with 12.37 million subscribers, followed by Bharti with 2.27 million subscribers at the end of Dec-18.

**Chart 1.15 : Composition of Wired Internet subscribers as on 31<sup>st</sup> December, 2018**



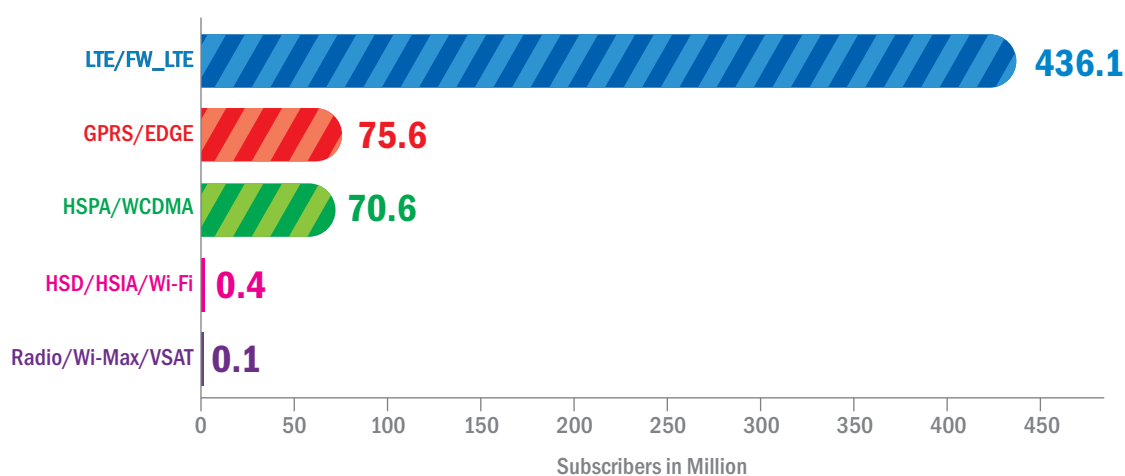
54. In wireless internet segment, Reliance Jio holds 48.06% market share with 280.12 million subscribers followed by Vodafone Idea Ltd with 150.47 million wireless internet subscribers at the QE Dec-18.

**Chart 1.16 : Composition of Wireless Internet subscription**



55. The following chart depicts the technology-wise distribution of wireless internet subscriptions

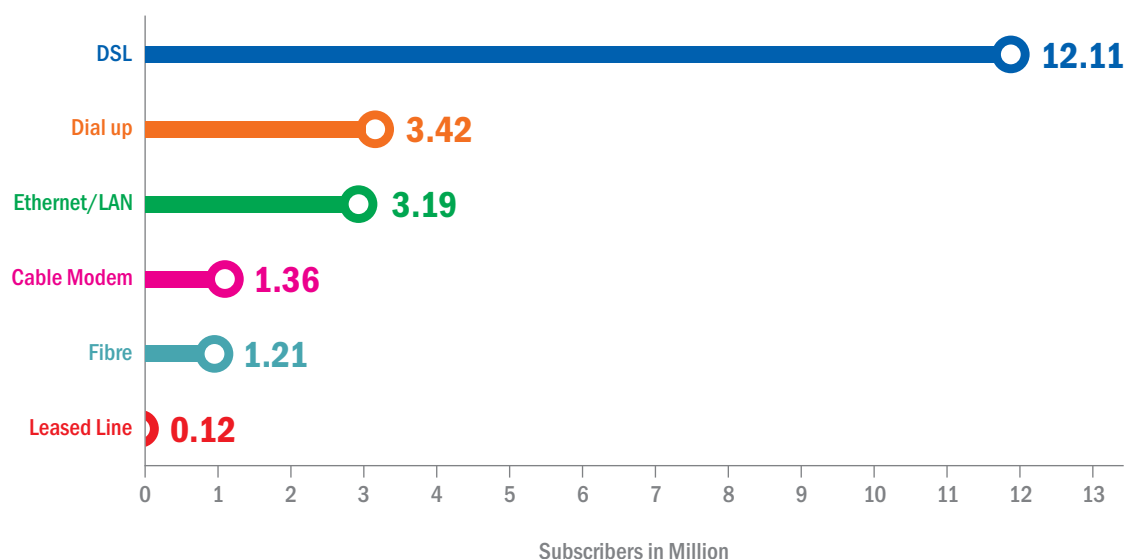
**Chart 1.17 : Technology\*\* trend for Wireless Internet Access– Dec-18**



\*\* Long Term Evolution (LTE), Fixed Wireless Long Term Evolution (FW\_LTE), General packet Radio Service (GPRS), Enhanced Data for GSM (Global system for mobile communications) Evolution (EDGE), High Speed Packet Access (HSPA), Wideband Code Division Multiple Access (WCDMA), High Speed Data (HSD), High Speed Internet Access (HSIA), Wireless Fidelity (Wi-Fi), Worldwide Interoperability for Microwave Access (Wi-Max), Very Small Aperture Terminal (VSAT)

56. The following chart depicts the technology-wise distribution of wired internet subscriptions.

**Chart 1.18 : Technology\*\* trend for Wired Internet Access – Dec-18**



57. Number of internet subscribers per 100 populations (internet teledensity) increased from 34.42 as on 31<sup>st</sup> December, 2017 to 46.13 as on 31<sup>st</sup> December, 2018. Rural internet teledensity increased from 14.89 to 23.87 and urban intrtnet teledensity increased from 76.76 to 93.86 from Dec-17 to Dec-18.

**Table1.26 : Subscriber Base & Teledensity - Rural & Urban**

Year Ending	Internet Subscribers (million)			Internet Teledensity		
	Rural	Urban	Total	Rural	Urban	Overall
2015	112.16	219.50	331.66	12.86	55.71	26.19
2016	115.06	276.44	391.50	13.08	68.86	30.56
2017	132.03	313.92	445.96	14.89	76.76	34.42
2018	213.30	390.91	604.21	23.87	93.86	46.13

\*\*DSL – Digital Subscriber Line, LAN – Local Area Network

**Table 1.27 : Service Area wise number of Internet Subscribers per 100 population at the end of Dec-18**

Telecom Service Area	Internet Subscribers (in million)			Internet Subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	20.72	30.01	50.73	31.92	118.60	56.23
Assam	5.59	5.18	10.77	20.06	92.42	32.18
Bihar	20.50	15.38	35.88	16.77	78.01	25.28
Delhi	-	-	34.60	-	-	150.08
Gujarat	10.68	27.17	37.85	28.46	96.79	57.69
Haryana	5.11	8.85	13.97	28.67	82.48	48.89
Himachal Pradesh	3.11	1.84	4.96	48.88	209.65	68.35
Jammu & Kashmir	2.74	3.75	6.48	29.97	103.19	50.82
Karnataka	11.45	26.99	38.44	29.79	106.25	60.20
Kerala	9.77	14.03	23.80	35.97	153.41	65.57
Madhya Pradesh	13.69	24.88	38.57	17.64	82.79	35.82
Maharashtra	18.83	31.67	50.50	31.39	89.97	60.41
Mumbai	1.16	24.57	25.73			
North East	2.71	3.65	6.36	25.43	98.67	44.31
Orissa	8.64	5.84	14.47	24.35	73.61	33.35
Punjab	6.94	15.50	22.44	39.90	107.22	70.47
Rajasthan	14.75	19.25	34.00	25.75	104.63	44.93
Tamil Nadu	11.41	32.62	44.03	42.26	72.25	61.03
Uttar Pradesh (East)	20.19	20.66	40.85	17.00	71.40	29.64
Uttar Pradesh (West)	10.94	18.94	29.88			
Kolkata	1.32	13.75	15.07	19.78	93.68	41.13
West Bengal	12.33	12.50	24.80			
<b>All India</b>	<b>213.30</b>	<b>390.91</b>	<b>604.21</b>	<b>23.87</b>	<b>93.86</b>	<b>46.13</b>

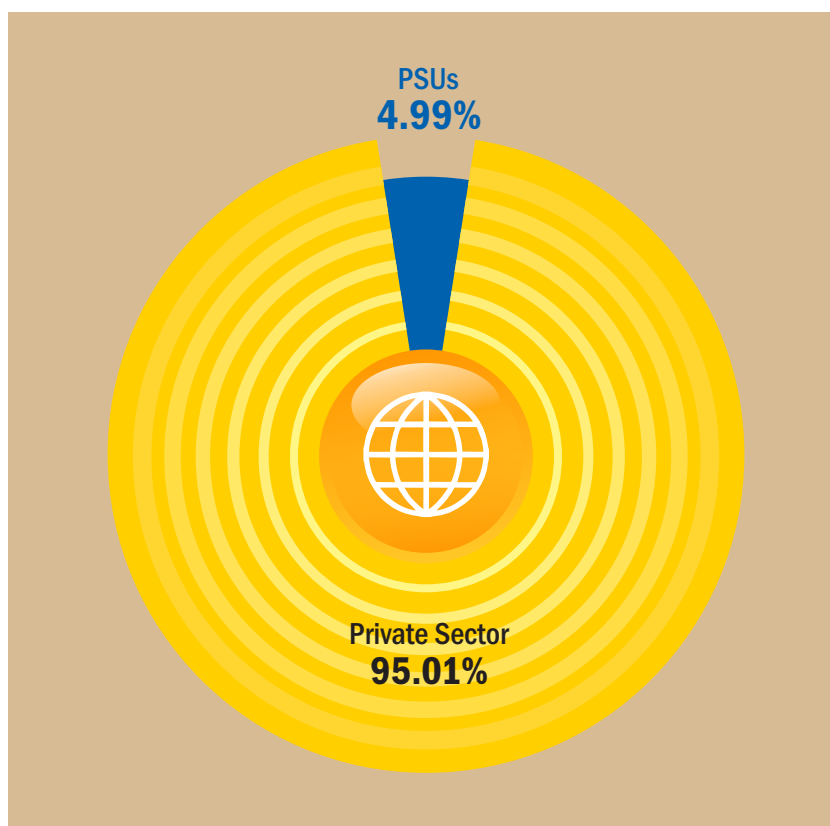
\* Population data/projections are available state-wise only.

**Notes:-**

- No. of total internet subscribers per 100 population is derived from the subscriber data provided by the operators and the population projections of the country, published by the Office of the Registrar General & Census Commissioner, India.
- 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.

58. Top five service areas in terms of internet subscriptions (wired + wireless) as on 31<sup>st</sup> December, 2018 are Andhra Pradesh (50.73 million), Maharashtra (50.50 million), Tamil Nadu including Chennai (44.03 million), U.P.(East) (40.85 million) and Madhya Pradesh (38.57 million).
59. Top five service areas in terms of internet subscribers per 100 population (internet teledensity) are Delhi (150.08), Punjab (70.47), Himachal Pradesh (68.35), Kerala (65.57) and Tamilnadu (61.03). Bihar service area has the lowest number of internet subscribers (25.28) per 100 population.
60. Himachal Pradesh service area has the highest Rural internet teledensity (48.88) among all service areas. The average rural internet teledensity in India is 23.87 as on 31<sup>st</sup> December, 2018.
61. Share of private internet service providers in respect of subscriber base, increased from 92.34% at the end of 2017 to 95.01% at the end of 2018. The following charts present the composition of market share of PSUs and Private Internet service providers as on Dec-18.

**Chart 1.2 : Market share of PSUs and Private Internet Service Providers**



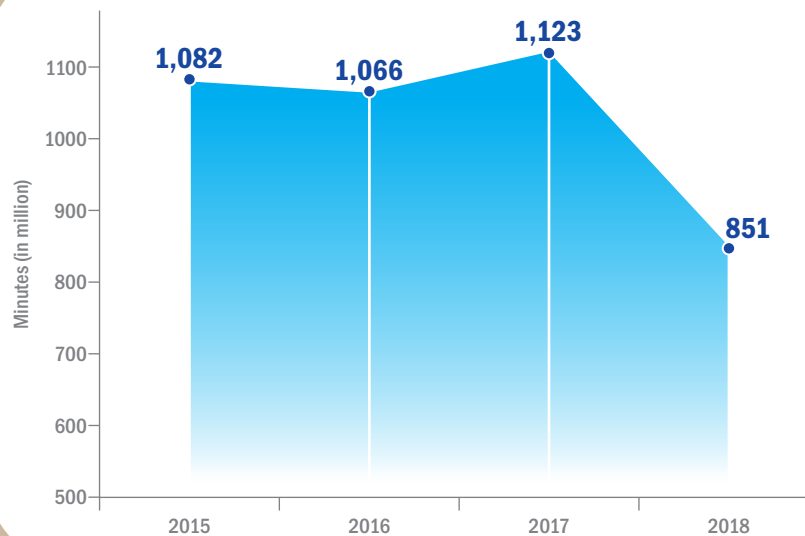
## ISP Connectivity

62. The International Internet bandwidth owned by various service providers is reported to be 7,840 Gbps at the year ending Dec-18 as compared to 3,054 Gbps at the year ending Dec-17.

## Internet Telephony<sup>#</sup>

63. As per the reports received from 17 service providers, providing Internet Telephony services, the total outgoing minutes of usage (MoU) for internet telephony is 851 million during the year 2018 as compare to 1,123 million during the year 2017. List of Internet Telephony Service providers is available at Annexure-1.7.

**Chart 1.20 : Trends in MOU for Internet Telephony**



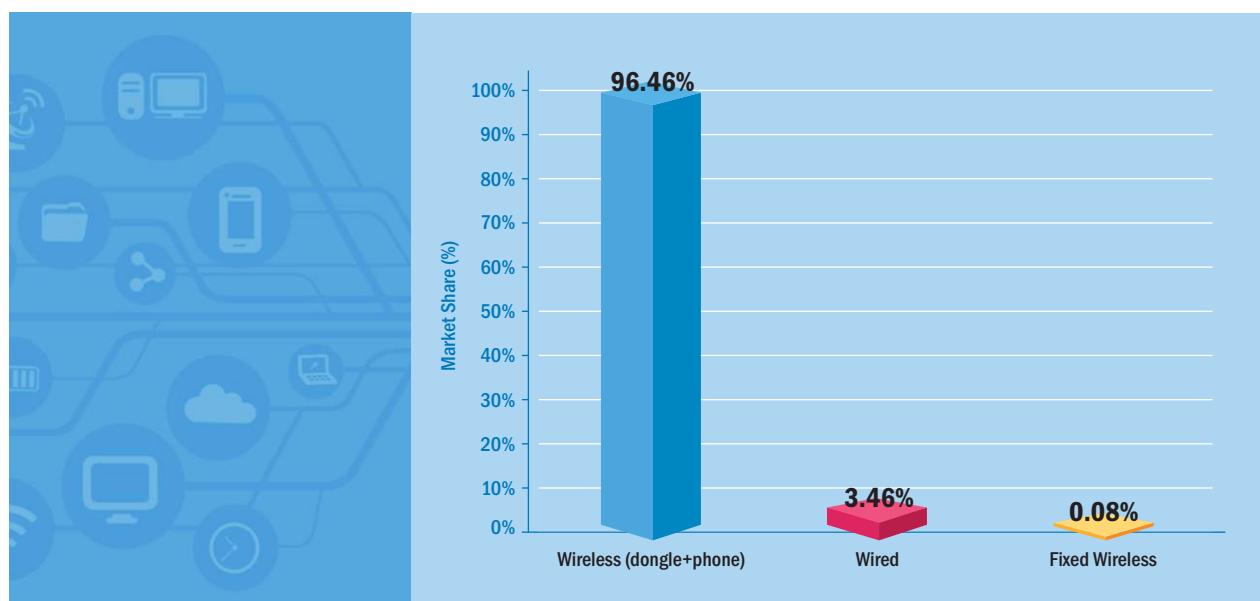
<sup>#</sup> Internet Telephony : Internet telephony is used as a generic term for the conveyance of voice, fax and related services, partially or wholly over packet-based, IP-based networks.



## Part-II : Broadband Service (Download Speed $\geq$ 512 Kbps)

64. The total number of broadband subscribers increased from 362.87 million at the end of Dec-17 to 525.36 million at the end of Dec-18 with yearly growth rate of 44.78%. Out of total number of broadband subscribers, number of wired broadband subscribers are 18.17 million and number of wireless broadband subscribers are 507.19 million at the end of Dec-18.
65. Top five broadband (wired+wireless) service providers in term of subscribers as on 31<sup>st</sup> December, 2018 are Reliance Jio (280.12 million), Vodafone Idea Ltd (107.92 million), Bharti Airtel (107.07 million), BSNL (20.55 million) and Tata Teleservices (2.26 million).
66. In wired broadband segment, BSNL holds 50.50% market share with 9.17 million subscribers followed by Bharti with 2.27 million subscribers at the end of Dec-18.
67. In wireless broadband segment, Reliance Jio holds 55.23% market share with 280.12 million subscribers followed by Vodafone Idea Ltd (21.27%) with 107.90 million subscribers at the end of Dec-18.
68. Top five service areas in respect of broadband subscriptions as on 31<sup>st</sup> December, 2018 are Maharashtra (44.24 million), Andhra Pradesh including Telengana (41.45 million), Tamil Nadu including Chennai (39.14 million), Karnataka (34.50 million) and Gujarat (34.40 million).
69. The following chart depicts the composition of technology wise broadband subscriptions as on 31<sup>st</sup> December, 2018.

**Chart 1.21 : Composition of Broadband subscription – Technology wise**

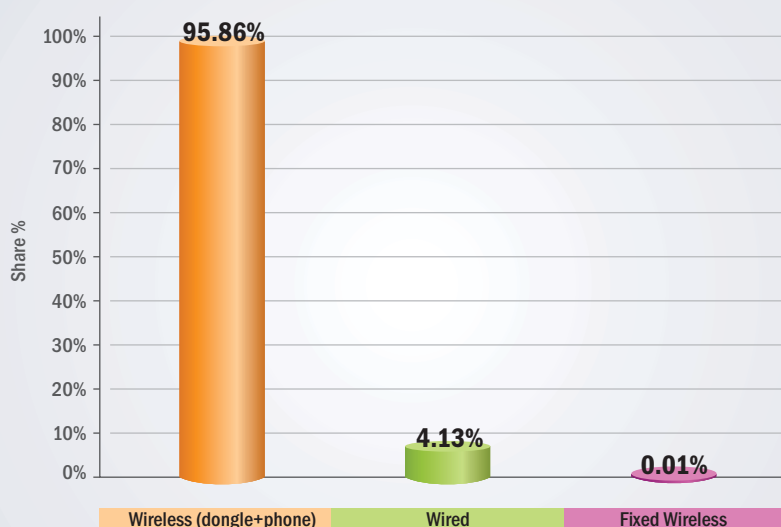


70. Mobile Device (dongle+phone) is the most popular mode of broadband access and it constitutes 96.46% of total broadband subscribers at the end of Dec-18. On the other hand, share of wired internet subscribers is only 3.46% during the same period.

### Part-III : Narrowband Service (Download Speed <512 Kbps)

71. Total number of narrowband subscribers declined from 83.09 million at the end of Dec-17 to 78.86 million at the end of Dec-18 with the yearly decline rate of 5.09%. Out of 83.09 million narrowband subscribers, number of Wired Narrowband subscribers are 3.27 million and number of Wireless Narrowband subscribers are 75.59 million at the end of Dec-18.
72. The top five narrowband (wired + wireless) service providers in term of subscriber base are Vodafone Idea Ltd (42.56 million), Bharti Airtel (26.87 million), BSNL (7.92 million), Tata Teleservices (1.01 million) and MTNL (0.42 million) at the end of Dec-18.
73. In wired narrowband segment, BSNL holds 98.10% market share with 3.195 million subscribers followed by Microscan Computers Pvt Ltd with 0.015 million subscribers at the end of Dec-18.
74. In wireless narrowband segment, Vodafone Idea Ltd holds 56.30% market share with 42.56 million subscribers followed by Bharti Airtel with 26.87 million subscribers at the end of Dec-18.
75. The following chart depicts the composition of technology wise narrowband subscription as on 31<sup>st</sup> December, 2018.

**Chart 1.22 : Composition of Narrowband subscription – Technology wise**



# Section E :

## Other Value Added Services - PMRTS & VSAT



### Public Mobile Radio Trunk Services (PMRTS)

76. The subscriber base of Public Mobile Radio Trunk Service (PMRTS) increased from 54,233 at the end of Dec-17 to 57,784 at the end of Dec-18 with yearly growth rate of 6.55%.

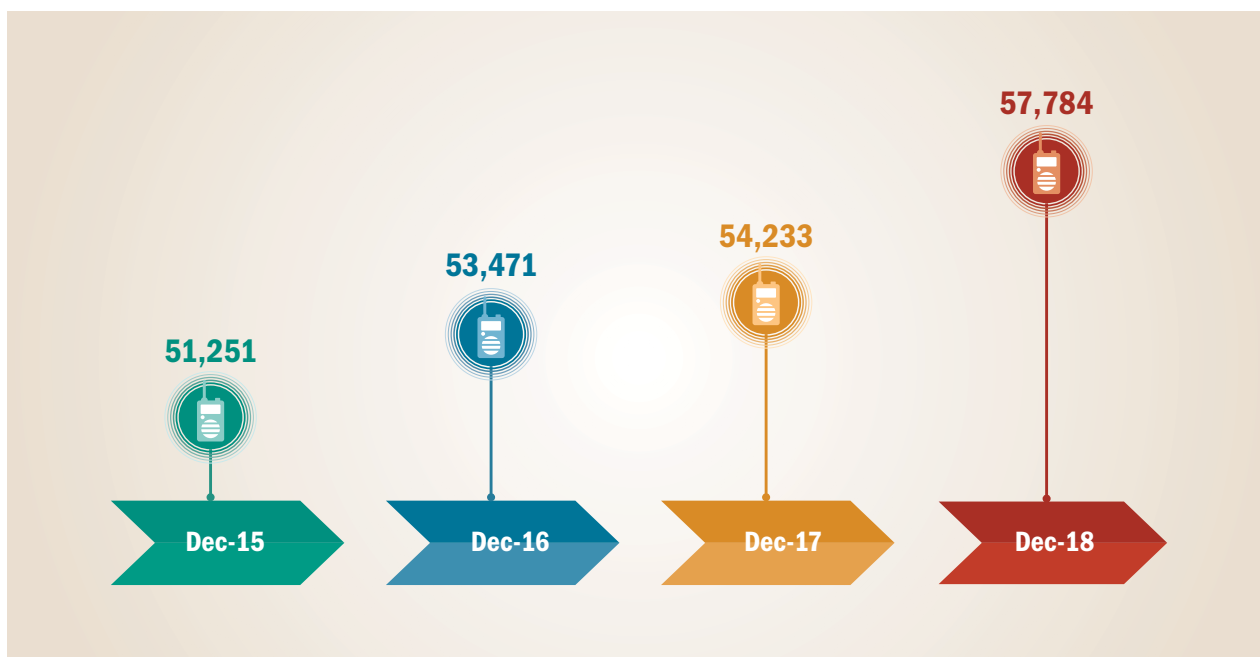
**Table 1.28 : PMRTS Subscriber base - Service Provider wise**

Sl. No.	Name of the Service Provider	Subscriber Base as on 31.12.2017	Subscriber Base as on 31.12.2018	Net Addition in Subscribers %	Market share as on 31.12.2018
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	45290	48121	2831	83.28
2	Procall Ltd.	3054	3218	164	5.57
3	Inative Networks Pvt Ltd	1820	1820	0	3.15
4	Quick Call	1618	2065	447	3.57
5	Smartlink Pvt Ltd	968	968	0	1.68
6	Bhilwara Telenet Services Pvt Ltd	818	870	52	1.51
7	Wiwonet Solutions Pvt Ltd	361	361	0	0.62
8	Airtalk Solutions & Services Pvt Ltd	304	361	57	0.62
	<b>Total</b>	<b>54,233</b>	<b>57,784</b>	<b>3,551</b>	<b>100</b>

77. M/s Arya Omnitalk Radio Trunking Services Pvt. Ltd. is the market leader in PMRTS with 83.28% share of total subscription as on 31<sup>st</sup> December, 2018. Detailed table on Service Area wise subscriber base of PMRTS is available at Annexure-1.6.

78. The following chart depicts the trend of number of PMRTS subscribers during last four years.

**Chart 1.23 : Trend of number of PMRTS subscribers**



### Very Small Aperture Terminal (VSAT)

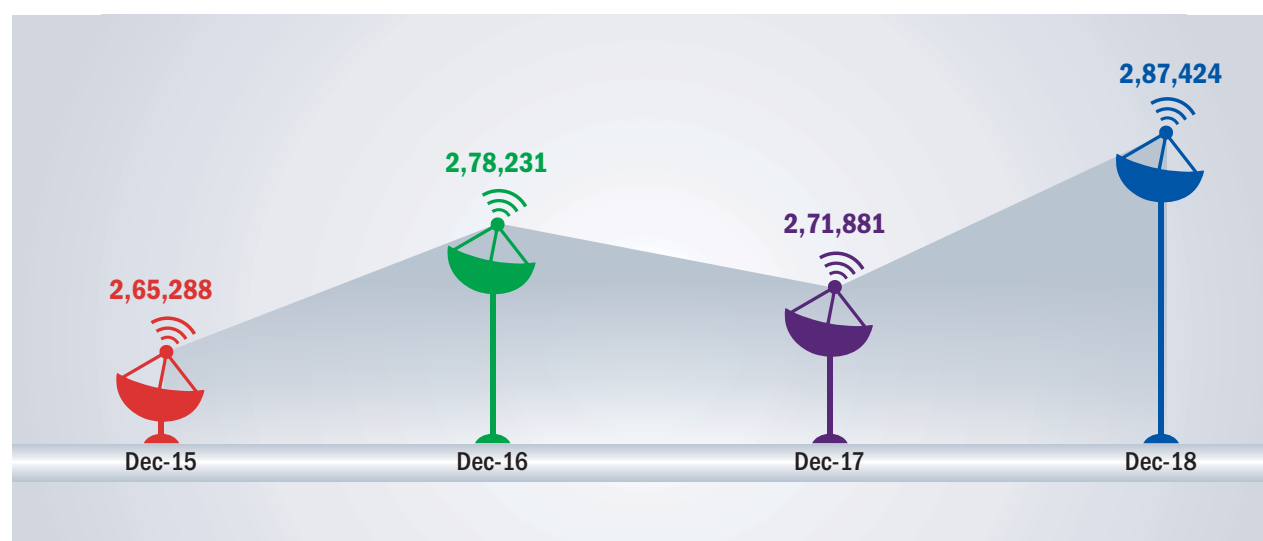
79. The total number of Very Small Aperture Terminal (VSAT) subscribers increased from 2,71,881 at the end of Dec-17 to 2,87,424 at the end of Dec-18. Net addition in VSAT subscribers during the year 2018 has been 15,543 at the yearly growth rate of 5.72%.
80. Hughes Communication Limited continues to be the market leader with subscriber base of 1,03,168 followed by Bharti Airtel Ltd (79,604) at the end of Dec-18.

**Table 1.29 : VSAT Service Providers currently providing service & their subscriber base**

Sl. No.	Name of the Service Provider	Subscriber base at the Quarter ending		Net Addition during the year 2018	Market Share (%) Dec-18
		Dec-17	Dec-18		
1	Hughes Communications Ltd.	98995	103168	4173	35.89%
2	Bharti Airtel Limited	72933	79604	6671	27.70%
3	Tatanet Services	55973	67584	11611	23.51%
4	HCL Comnet	21961	18154	-3807	6.32%
5	BSNL	19254	16307	-2947	5.67%
6	Infotel Satcom	2691	2533	-158	0.88%
7	Cloudcast Digital (eartwhile Planetcast Media Services)	74	74	0	0.03%
<b>Total</b>		<b>271881</b>	<b>287424</b>	<b>15543</b>	<b>100.00%</b>

81. M/s Tatanet Service has recorded maximum net addition of 11,611 subscribers followed by M/s Bharti Airtel Ltd (6, 671 subscribers) during the year 2018.

**Chart 1.24 : Trend of Number of VSAT Subscribers**



## CHAPTER 2

# Revenue and Usage

## Wireless Services\*



\*Wireless services included GSM, CDMA & LTE technology services.

- For all the parameters, Metros indicate data for Delhi, Mumbai & Kolkata. Data for Chennai service area has been included in Circle A, as part of TN.
- ARPU arrived after adjusting interconnect usage charges and roaming settlement charges.
- The data contained in the section A & B covers the licensees, who have been providing service during the entire period from 1<sup>st</sup> January, 2018 to 31<sup>st</sup> December, 2018 in the various service areas.

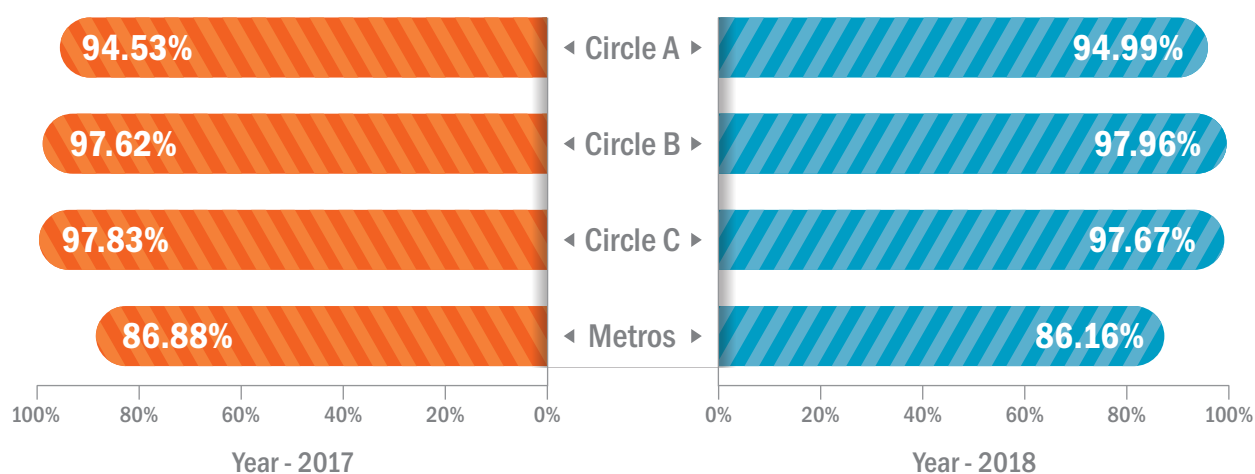
1. The following table presents a Key Indicators of Wireless Revenue and Usage for the year 2018, with compare to the previous year 2017 and yearly growth.

**Table 2.1 : Key Indicators – Wireless Service**

Parameter	Year 2017	Year 2018	Yearly Changes (%)
Wireless Subscriber base (in million)	1167.44	1176.00	0.73
Share of prepaid subscribers	95.47%	95.75%	0.27
Incoming MOUs per subscriber per month	222	310	39.47
Outgoing MOUs per subscriber per month	218	312	43.46
Total MOUs per subscriber per month	440	622	41.44
No. of outgoing SMS per subscriber per month	16.7	18.3	-12.19
Average Revenue per user (ARPU) per month (₹)	81.69	70.55	-13.65

2. Share of prepaid wireless subscriber over total wireless subscribers increased from 95.47% at the end of 2017 to 95.75% at the end of 2018. The following chart depicts Category-wise share (%) of wireless prepaid subscribers at the end of the year 2017 and 2018.

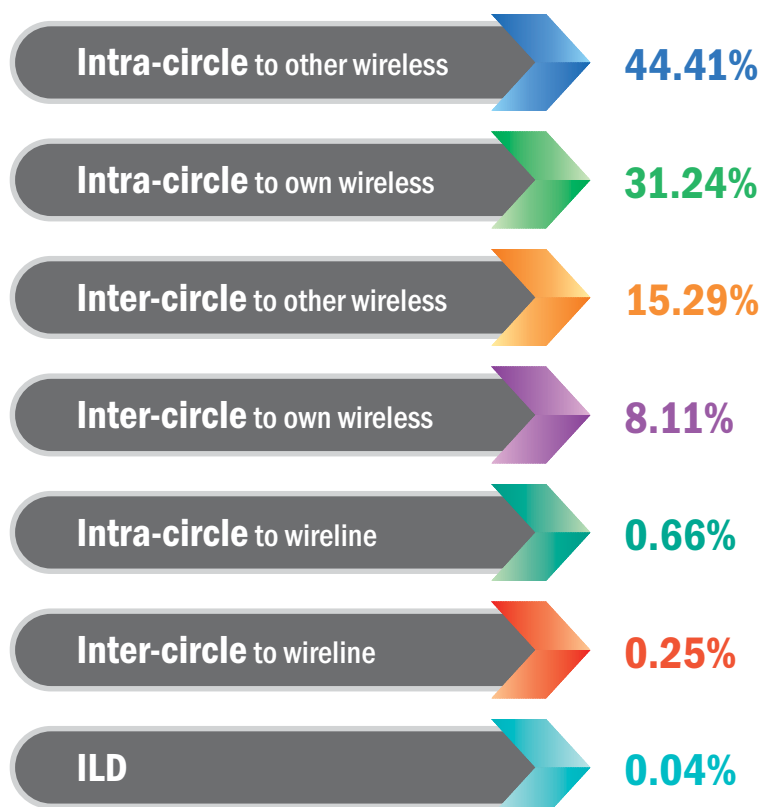
**Chart 2.1: % Share of Prepaid Subscribers over total wireless subscribers**





3. The following chart depicts % break-up of outgoing minutes from Home Service Area to inter-circles and intra-circles for wireless service:

**Chart 2.2: % break-up of outgoing minutes from Home Service Area (HSA) during the year 2018**



## A. Revenue

4. Average Revenue per User (ARPU) per month =

$$\frac{1}{3} \times \frac{\text{Qtly Revenue adjusted for interconnect usage charges and roaming settlement charges}}{\text{Average subscribers during the quarter}}$$

5. Average Revenue Per User (ARPU) per month for wireless service declined from ₹ 81.69 during the year 2017 to ₹ 70.55 during the year 2018, thereby showing a yearly decline rate of 13.65%.
6. The following table presents the ARPU per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

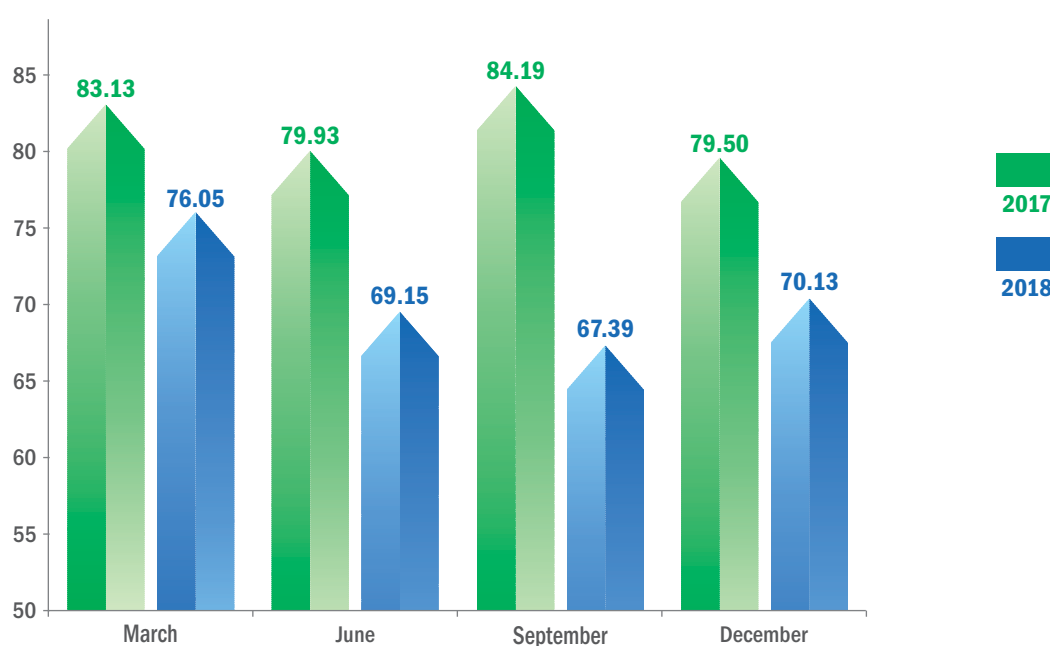


**Table 2.2 : Average Revenue Per User (ARPU) per month (₹)**

Category	Postpaid		Prepaid		Blended	
	2017	2018	2017	2018	2017	2018
Circle A	403.30	335.54	73.82	68.90	92.02	82.54
Circle B	387.04	305.79	67.54	57.64	75.28	62.86
Circle C	308.15	233.39	66.96	61.02	72.65	65.05
Metro	365.20	316.67	41.70	28.62	84.69	68.44
<b>All India</b>	<b>381.33</b>	<b>315.59</b>	<b>67.22</b>	<b>59.42</b>	<b>81.69</b>	<b>70.55</b>

7. Average Revenue Per User (ARPU) per month for postpaid service declined from ₹ 381 during the year 2017 to ₹ 316 during the year 2018. ARPU per month for prepaid service also declined from ₹ 67 during the year 2017 to ₹ 59 during the year 2018.
8. The following chart presents the Quarterly trend for ARPU per month during the year 2017 and 2018.

**Chart 2.3: Quarterly Trend of ARPU (₹) per month of Wireless Service**

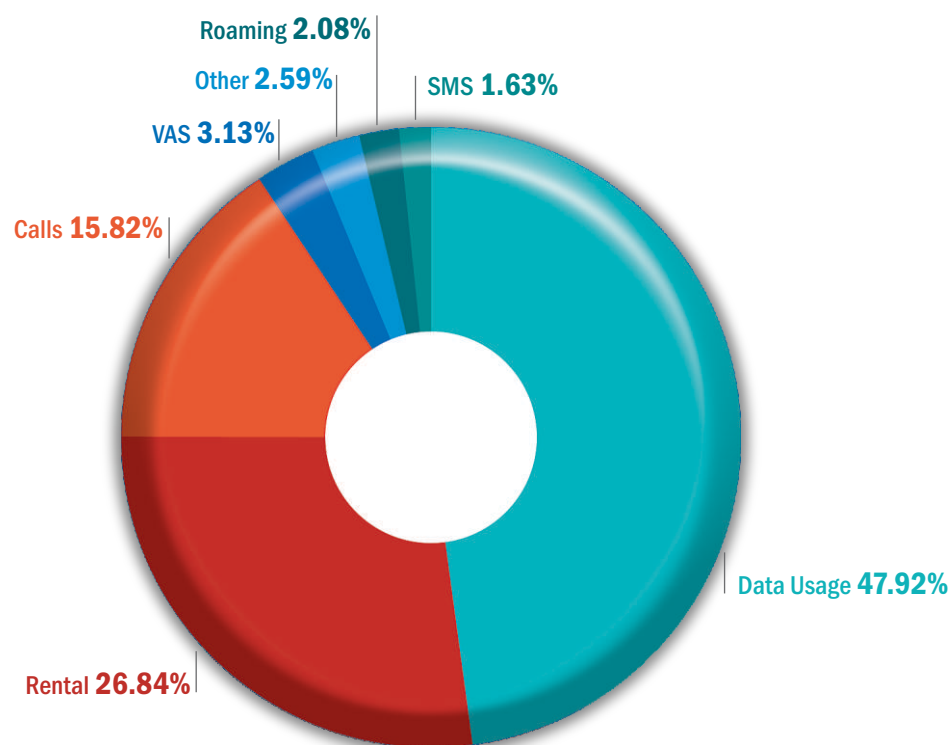


**Table 2.3 : Composition of Average Revenue Per User (ARPU)  
per month (₹)**

Sl. No.	Item	Revenue (excl. service tax) per subscriber per month for the Year 2017 (₹)	Revenue (excl. service tax) per subscriber per month for the Year 2018 (₹)
1	Rental Revenue	19.63	22.99
2	Revenue from calls	32.08	13.55
3	Revenue from SMS	2.02	1.40
4	Revenue from data usage	27.50	41.05
5	Revenue from VAS	3.95	2.68
6	Other revenue	2.32	2.25
7	Revenue from Outroamers (outside HSA)	3.77	1.78
8	<b>Total revenue from subscribers (1+2+3+4+5+6+7)</b>	<b>91.28</b>	<b>85.69</b>
9	Net inter-operable settlement charges receivable	-9.89	-15.14
10	<b>Net Revenue (ARPU) (8+9)</b>	<b>81.39</b>	<b>70.55</b>

9. As can be seen in the above table, composition of ARPU declined in all segments except rental revenue and average revenue from data usage in the year 2018 as compare to the year 2017.
10. Per month ARPU for wireless data usage increased from ₹ 27.50 during the year 2017 to ₹ 41.05 during the year 2018. On the other hand, per month ARPU for voice call declined from ₹ 32.08 to ₹ 13.55 during the same period.
11. The following chart presents the comparison of share of Revenue as a percentage of total Revenue during the year 2018.

**Chart 2.4: Composition of Revenue of wireless Service during the year 2018**



12. It may be seen in the above chart that revenue from data usage comprises about 48% of total revenue from wireless services during the year 2018.

## B. Usage Pattern

13. Average Minutes of Usage (MOUs) per subscriber per month increased from 440 during the year 2017 to 622 during the year 2018 with yearly growth rate of 41.44%.
14. The following table presents the Minutes of Usage per subscriber per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

**Table 2.4 : Category-wise Minutes of Usages (MOUs) per subscriber per month**

Segment	MOUs	Year	Circle A	Circle B	Circle C	Metros	All India
Postpaid	Outgoing MOU	2017	440	455	462	418	438
		2018	383	400	549	366	394
	Incoming MOU	2017	388	373	289	336	362
		2018	346	379	404	323	350
	Total MOU	2017	828	827	750	754	800
		2018	729	779	954	689	744
Prepaid	Outgoing MOU	2017	196	199	222	257	207
		2018	281	298	348	398	308
	Incoming MOU	2017	181	229	278	182	216
		2018	260	318	404	286	308
	Total MOU	2017	377	428	501	439	422
		2018	540	616	752	684	617
Blended	Outgoing MOU	2017	210	205	228	279	218
		2018	286	300	353	394	312
	Incoming MOU	2017	192	233	279	202	222
		2018	264	320	404	291	310
	Total MOU	2017	402	437	507	481	440
		2018	550	619	757	685	622

15. Minutes of Usage (MOUs) per subscriber per month for postpaid services declined from 800 during the year 2017 to 744 during the year 2018 however, MoUs for prepaid services increased from 422 to 617 during the same period.
16. Outgoing MoUs per subscriber per month increased from 218 during the year 2017 to 312 during the year 2018 and Incoming MoUs per subscriber per month also increased from 222 to 310 during the same period.

**Table 2.5: Category-wise average number of outgoing SMS per subscriber per month**

Category	Postpaid		Prepaid		Blended	
	2017	2018	2017	2018	2017	2018
Circle A	105	99	18	20	23	24
Circle B	32	38	13	15	14	15
Circle C	22	32	10	15	10	15
Metro	22	20	9	14	11	15
<b>All India</b>	<b>59</b>	<b>57</b>	<b>14</b>	<b>16</b>	<b>16</b>	<b>18</b>

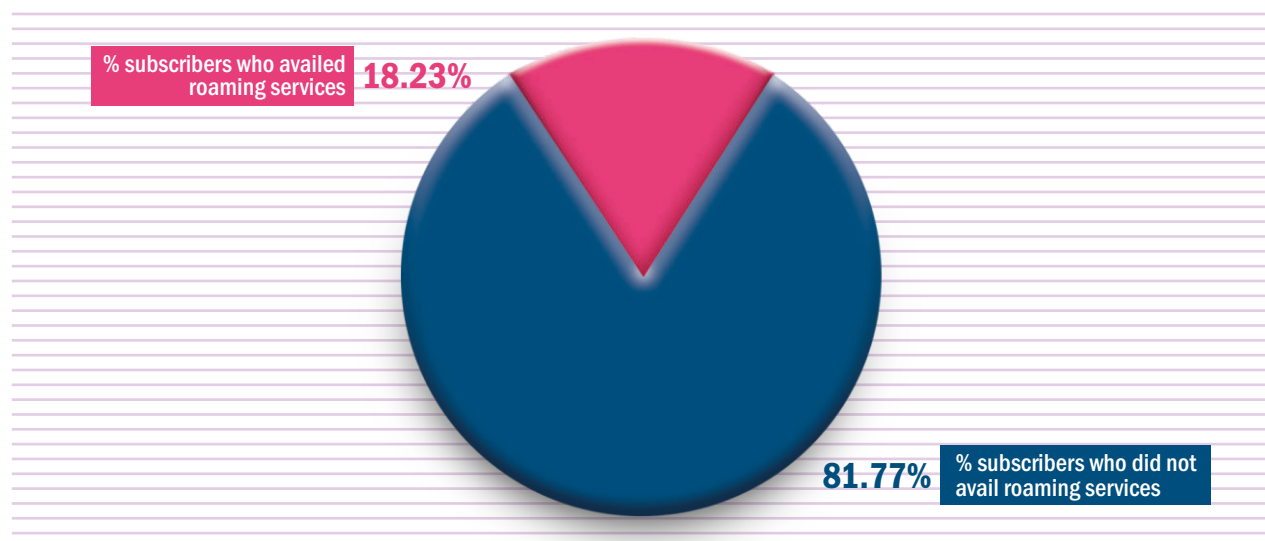
17. Average number of outgoing SMS per subscriber per month increased from 16 during the year 2017 to 18 during the year 2018.
18. The following table presents the percentage break-up of outgoing minutes of usage from home service area to various categories of termination networks.

**Table 2.6: Category-wise % break-up of outgoing minutes from Home Service Areas (HSA) for GSM service during the year 2018**

Category	Intra Circle to Wireline	Intra Circle to Own Wireless	Intra Circle to Other Wireless	Inter Circle to Other Wireless	Inter Circle to Own Wireless	Inter Circle to Wireline	ILD
Circle A	0.80%	32.10%	46.32%	0.27%	6.34%	14.14%	0.04%
Circle B	0.52%	32.48%	46.21%	0.19%	7.12%	13.44%	0.04%
Circle C	0.27%	35.34%	42.83%	0.23%	7.66%	13.66%	0.01%
Metros	1.29%	19.25%	35.55%	0.40%	16.75%	26.66%	0.10%
<b>All India</b>	<b>0.66%</b>	<b>31.24%</b>	<b>44.41%</b>	<b>0.25%</b>	<b>8.11%</b>	<b>15.29%</b>	<b>0.04%</b>

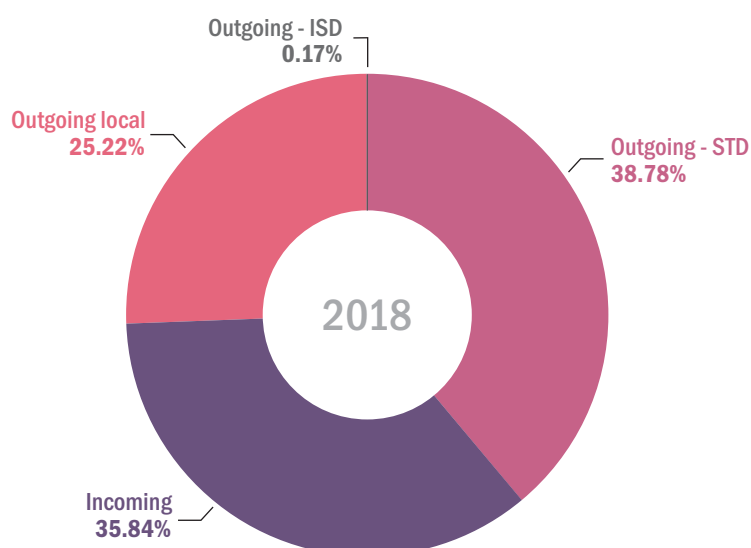
19. Out of total number of wireless subscribers, about 82% wireless subscribers availed roaming service during the year 2018. The chart given below presents the share of wireless subscribers who availed roaming service during the year 2018.

**Chart 2.5: Share of subscribers who availed roaming service during the year 2018**



20. The chart given below presents the composition of roaming MoUs of outroamers (who had availed roaming services) during the year 2018.

**Chart 2.6: Composition of roaming MoUs of outroamers during the year 2018**



## C. Average Subscriber Outgo per outgoing minute for usage from Home Service Area (HSA)

21. The tariff plans are of bundled nature and the trade-off is generally between monthly fixed charges and variable (call) charges. Therefore, average subscriber outgo per outgoing minute for usage from Home Service Area (HSA) as defined below would be a realistic indicator of average tariff levels.

22. Average Subscriber Outgo per Outgoing Minute for usage from HSA

$$= \frac{\text{Rental revenue} + \text{Revenue from outgoing calls from HSA}}{\text{No. of outgoing minutes from HSA}}$$

23. The table below provides the Average Outgo (tariff) per Outgoing Minute for usage from Home Service Area (HSA).

**Table 2.7: Category-wise Average Subscriber Outgo(tariff) per outgoing minute from Home Service Area for wireless Service**

Category	Postpaid		Prepaid		Blended	
	2017	2018	2017	2018	2017	2018
Circle A	0.44	0.37	0.27	0.13	0.29	0.15
Circle B	0.42	0.36	0.23	0.12	0.24	0.13
Circle C	0.36	0.19	0.20	0.10	0.20	0.10
Metros	0.46	0.37	0.19	0.09	0.24	0.13
All India	0.43	0.35	0.23	0.12	0.25	0.13

24. Average subscriber outgo per outgoing minute for wireless service from home service area declined from ₹ 0.25 during the year 2017 to ₹ 0.13 during the year 2018.

## CHAPTER 3

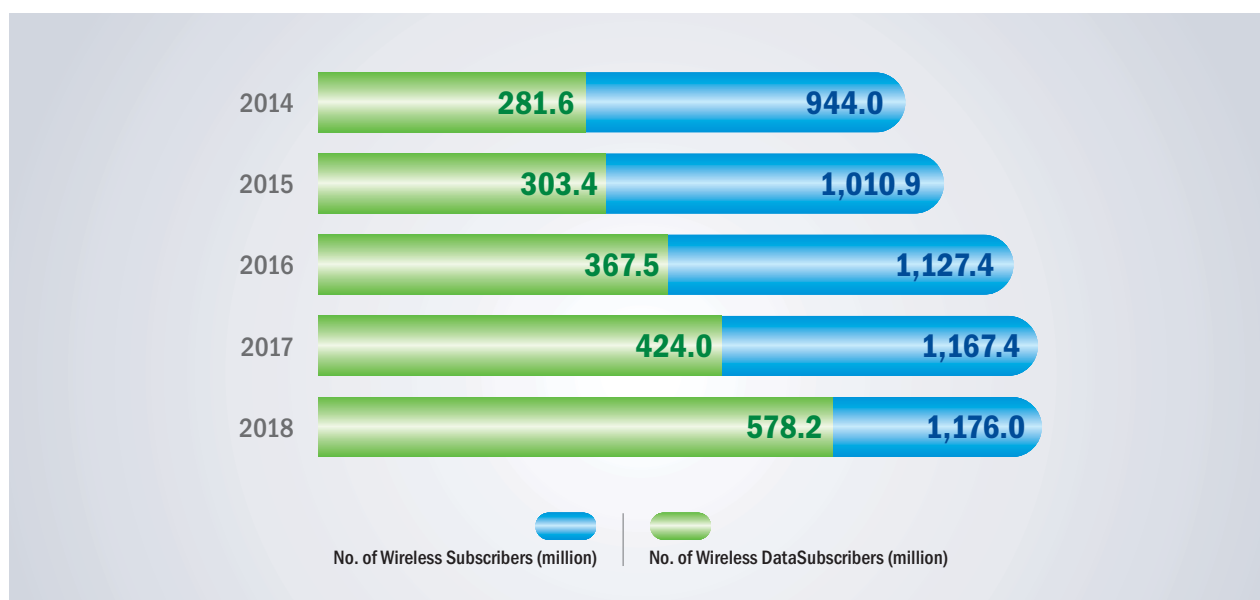
# Wireless Data Service





1. As per information received from the wireless access service providers, number of wireless data subscribers has increased from 424.02 million at the year ending 2017 to 578.20 million at the year ending 2018 with yearly growth rate of 36.36%. The number of wireless data subscribers was 227.91 million at the year ending 2013.
2. Total number of wireless telephone subscribers was 1176.00 million at the year ending 2018. Out of total number of wireless telephone subscribers, the number of wireless data subscriber was 578.20 million at the year ending 2018. Thereby, share of wireless data subscribers was 49.17% of total wireless telephone subscribers the year ending 2018.

**Chart 3.1: Trend of total wireless telephone subscribers and total wireless data subscribers**



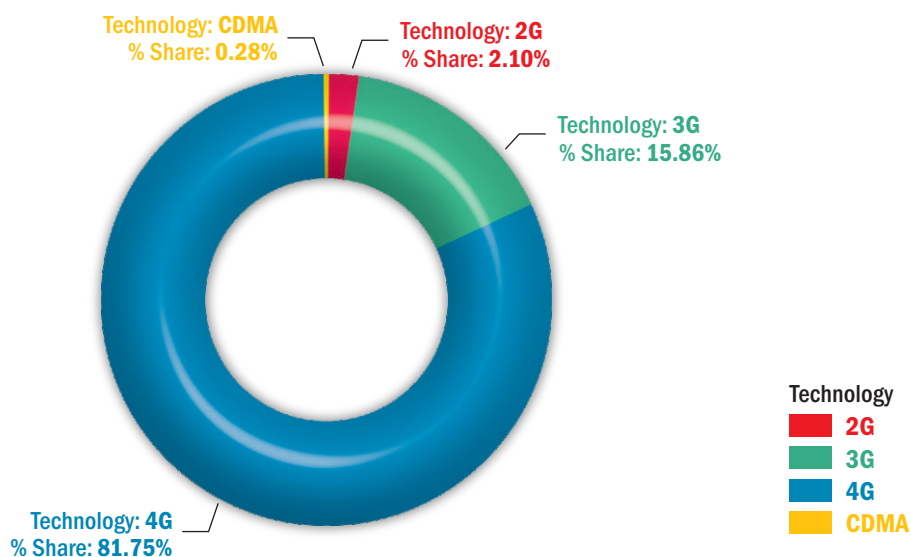
3. Total volume of wireless data usage increased from 20,092 million GB during the year 2017 to 46,404 million GB during the year 2018 with yearly growth of 131%.
4. Total volume of Wireless data usage comprises of data usage by 2G, 3G, 4G and CDMA data subscribers. Technology-wise distribution of volume of wireless data usage is mentioned in the following table.

**Table 3.1 : Wireless data usage (in million GB per year)**

Year Ending	2G Data Usage	3G Data Usage	4G Data Usage	CDMA Data Usage	Total Value of Data Usage
2014	340	349		138	828
2015	479	700		196	1,375
2016	477	1,221	2,775	169	4,642
2017	423	3,187	16,426	56	20,092
2018	443	5,654	40,304	3	46,404

5. 4G technology (LTE – Long Term Technology) was introduced in India during the year 2016. During a short period of time, 4G data technology became the market leader in wireless data usage with total volume of 40,304 million GB during the year 2018.
6. Out of total volume of wireless data usage of 46,404 million GB in the year 2018, 4G (LTE) technology has the major part of 86.85% with volume of 40,304 million GB. Shares of 2G, 3G and CDMA data usage are 0.95%, 12.18% and 0.01% respectively in total volume of wireless data usage in the year 2018.
7. There has been a very sharp decline in CDMA data subscribers and data usage due to verge of closure of CDMA technology by the service providers. The number of customers availing data services from CDMA service providers are less than 0.01% of the total mobile customers during the year 2018.
8. Share of technology-wise data usage during the year 2018 is depicted in the following chart.

**Chart 3.2 : Share of 2G, 3G, 4G and CDMA data usage during 2018**



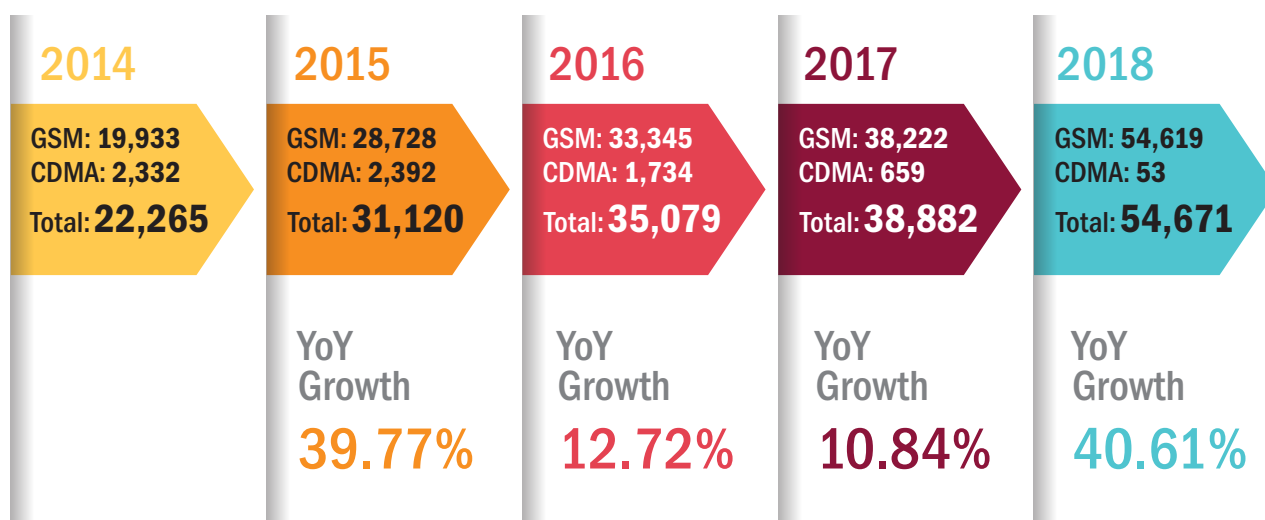
9. The following chart depicts the trend of yearly growth of volume of wireless data usage during last four years.

**Chart 3.3: Trend of yearly growth in volume of wireless data usage (%)**



10. Total volume of wireless data usage increased by 131% in the year 2018 over previous year, as compared to the yearly growth rate of 233% in the year 2017. However, the growth rate in volume of wireless data usage were recorded 66% and 238% in the years 2015 and 2016 respectively over previous year.
11. Total revenue from wireless data usage increased from ₹ 38,882 crore in the year 2017 to ₹ 54,671 crore in the year 2018 with yearly growth rate of 40.61%. The total revenue from wireless data usages was ₹ 22,265 crore in the year 2014.

**Chart 3.4 : Trend of Wireless Data Revenue (in crore ₹) per year**



12. Average Revenue for wireless data usage (Data ARPU) per data subscriber per month increased from ₹ 79.98 in the year 2017 to ₹ 90.02 in the year 2018.
13. Average revenue for data services has been derived on dividing of total yearly revenue of wireless data services by the average number of wireless data subscribers during the year. The following table and chart show the trend of Average Revenue Per Data User (data ARPU) per month for wireless data usage during the year 2014 to 2018.

**Table 3.2 : Average Revenue for wireless data usage per data subscriber per month (in ₹)**

Year	GSM Data ARPU	CDMA Data ARPU	Total Wireless Data ARPU
2014	65.47	290.18	71.25
2015	85.01	309.21	90.03
2016	86.38	236.99	89.18
2017	78.87	430.52	79.98
2018	90.55	364.32	90.02

**Chart 3.5: Trend of Average Wireless Data Revenue per data subscriber per month (Data ARPU in ₹)**



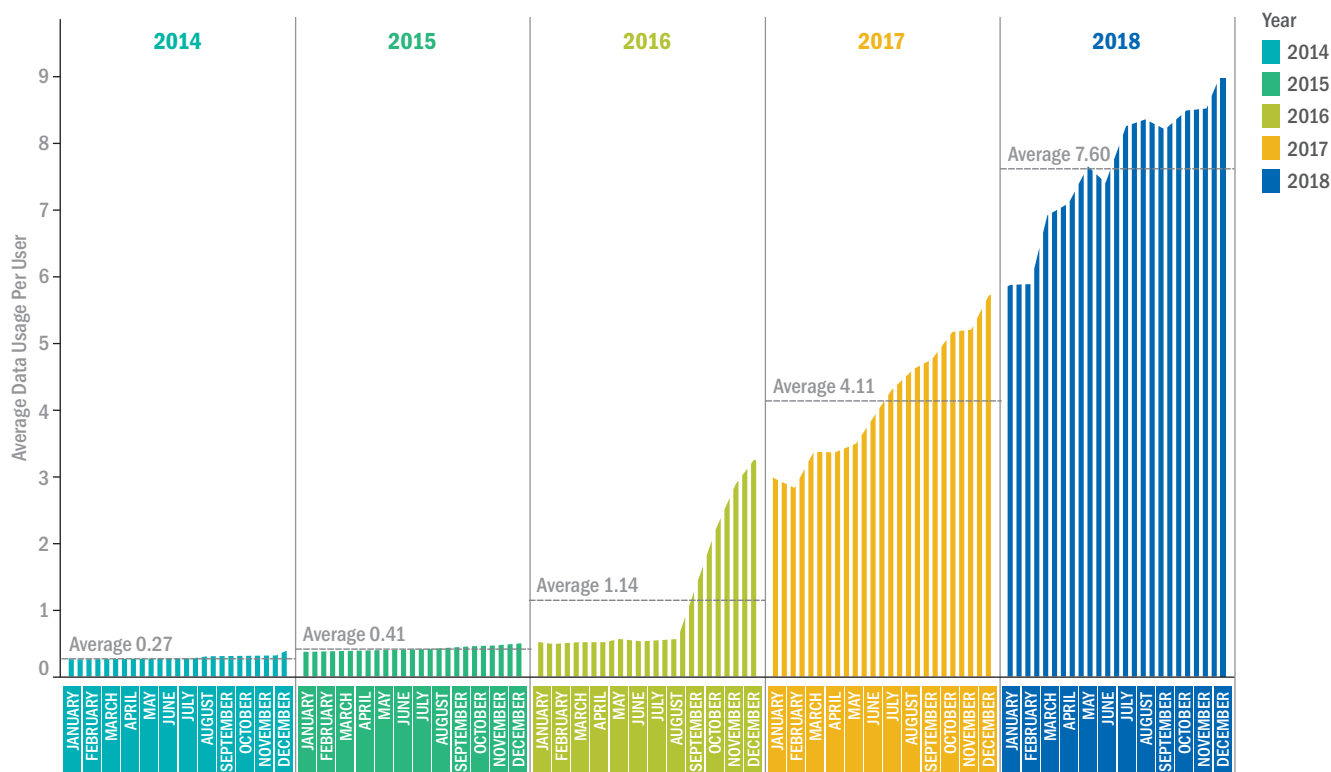
14. The following table and chart show the trend of Average Wireless Data Usage (in GB) per data subscriber per month during the year 2014 to 2018.

**Table 3.3 : Average Wireless Data Usage (in GB) per data user per month**

Year Ending	2G Data Usage	3G Data Usage	4G Data Usage	CDMA Data Usage	GSM Data Usage	Total Wireless Data Usage
2014	0.14	0.62		1.72	0.23	0.27
2015	0.20	0.75		2.53	0.35	0.41
2016	0.23	0.79	12.42	2.31	1.16	1.14
2017	0.30	2.29	7.95	3.67	4.13	4.11
2018	0.54	5.26	9.73	2.15	7.69	7.60

15. Average wireless data usage per wireless data subscriber per month increased from 4.11 GB during the year 2017 to 7.76 GB during the year 2018. The average wireless data usage per wireless data subscribers per month was 0.27 GB per month in the year 2014.

**Chart 3.6 : Trend of Average Wireless Data Usage (in GB) per active data user per month**



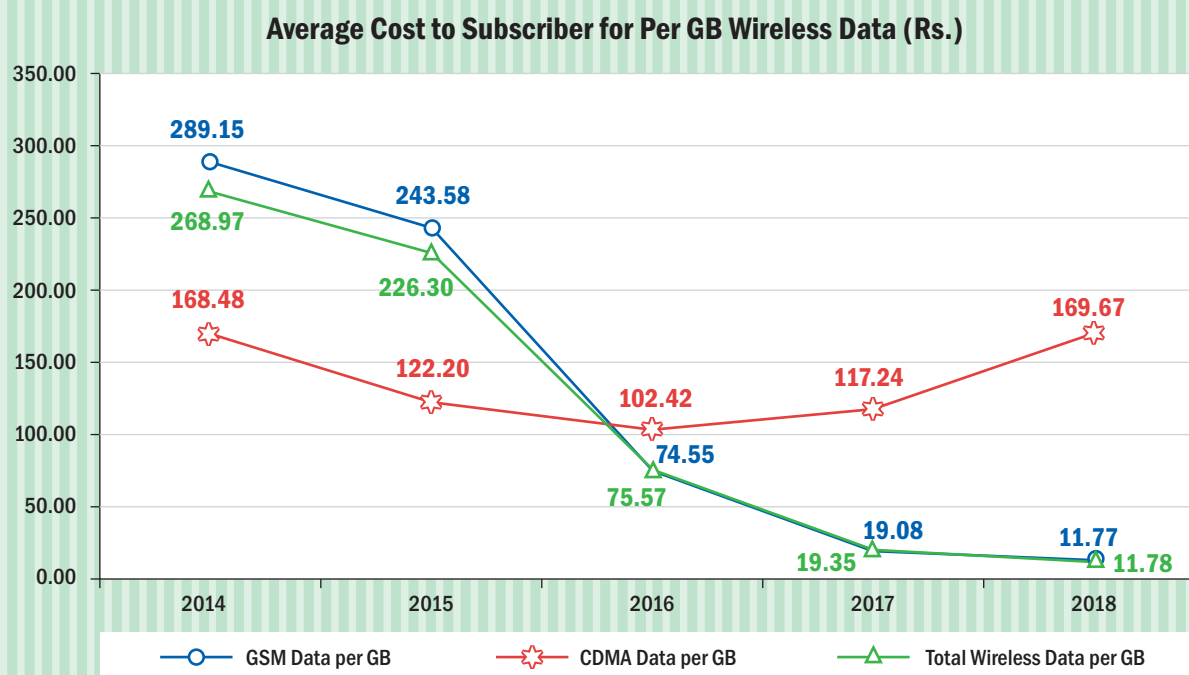
16. The following table depicts the average cost to subscriber for per GB wireless data usage.

**Table 3.4 : Average cost to subscriber for Per GB wireless data (in ₹)**

Year	GSM data cost per GB	CDMA data cost per GB	Total Wireless data cost per GB
2014	289.15	168.48	268.97
2015	243.58	122.20	226.30
2016	74.55	102.42	75.57
2017	19.08	117.24	19.35
2018	11.77	169.67	11.78

17. Average wireless data cost to subscriber has been calculated in respect of total wireless data revenue and volume of total wireless data usage reported by the access service providers.
18. The average cost to subscriber for wireless data in the year 2014 was ₹ 269 per GB and in the year 2015, it was ₹ 226 per GB. On introduction of 4G (LTE) technology in India, average cost to subscriber for wireless data usage sharply declined to ₹ 75.57 per GB during the year 2016. Further, average cost to subscriber for wireless data declined from ₹ 19.35 per GB in the year 2017 to ₹ 11.78 per GB in the year 2018.
19. Average cost to subscriber of GSM data shows declining trend over the last four years and it declined from ₹ 289 per GB in the year 2014 to ₹ 11.78 per GB in the year 2018. CDMA data cost to subscriber shows mixed trend during the same period. However, average cost to subscriber for overall wireless data service shows declining trend over the period.
20. The following chart depicts the trend of average cost to subscriber for per GB wireless data usage during last four years.

**Chart 3.7: Trend of Average cost to subscriber for Per GB wireless data (₹)**



21. Declining trend of cost of data to subscriber shows intense market competition in data services in the telecom market. This has led to a situation where even a person living below poverty line can easily afford mobile data service and avail various kinds of Government and commercial services. This has facilitated the financial inclusion of the masses living on the fringe. Accordingly, the Authority has continued with its policy of 'forbearance' in the Telecom Tariff.

## CHAPTER 4

# Financial Data of Telecom Service Sector





**Table 4.1: Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee (LF) & Spectrum Charges**

(₹ in Crore)

Particulars <sup>#</sup>	Calendar Year, 2017	Calendar Year, 2018	Yearly Growth (%)
Gross Revenue (GR)	2,55,655	2,37,417	-7.13
Adjusted Gross Revenue (AGR)	1,60,814	1,44,446	-10.18
License Fee	12,976	11,641	-10.29
Spectrum Usage Charges	5,089	4,186	-17.74
Pass Through Charges (GR-AGR)	94,841	92,971	-1.97

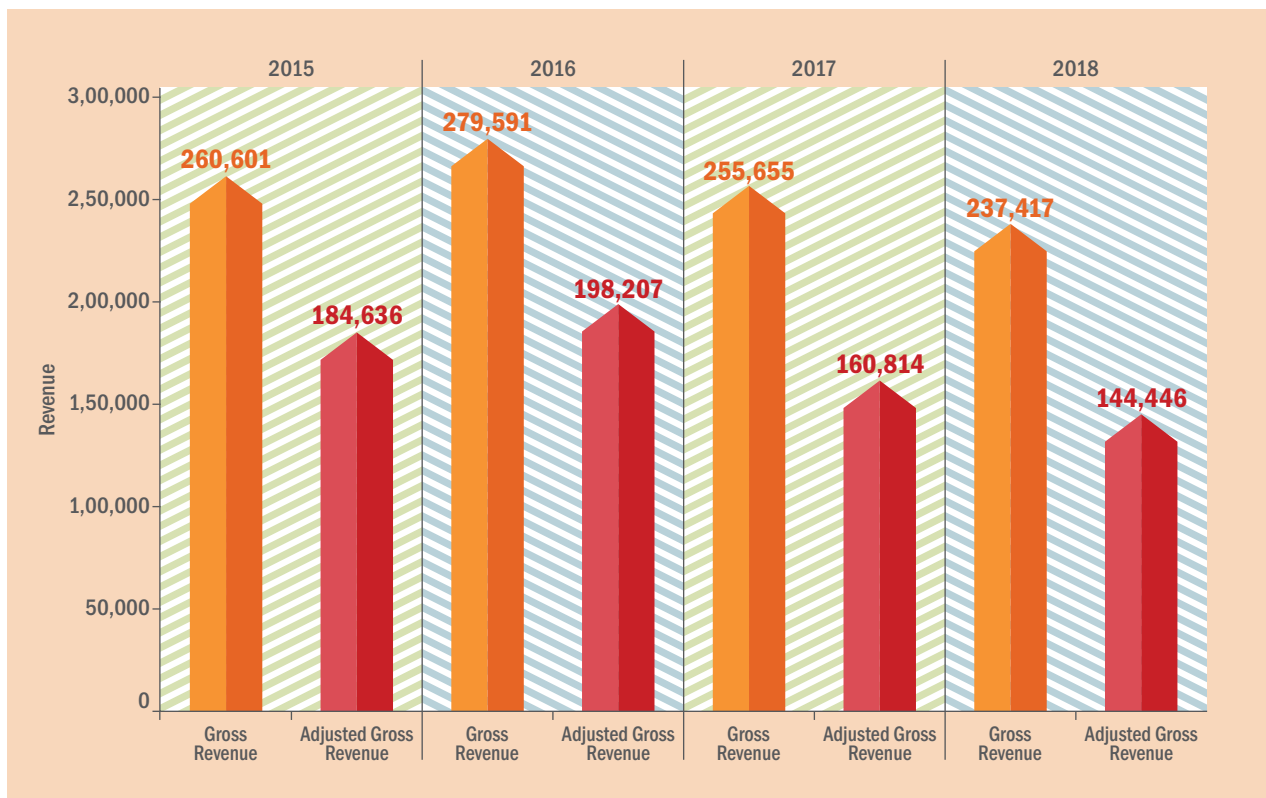
1. Gross Revenue (GR) declined from ₹ 2,55,655 crore in the year 2017 to ₹ 2,37,417 crore in the year 2018 with yearly decline rate of 7.13%. Adjusted Gross Revenue (AGR) also declined from ₹ 1,60,814 crore in the year 2017 to ₹ 1,44,446 crore in the year 2018 with yearly decline rate of 10.18%.
2. Pass through charges declined by 1.97% from ₹ 94,841 crore in the year 2017 to ₹ 92,971 crore in the year 2018. Pass-through charges as a percentage of Gross Revenue are 39.16% in 2018 as against 37.10% in the previous year.

- #
1. Gross Revenue is inclusive of installation charges, late fees, sale proceeds of handsets (or any other terminal equipment etc.), revenue on account of interest, dividend, value added services, supplementary services, access or interconnection charges, roaming charges, revenue from permissible sharing of infrastructure and any other miscellaneous revenue, without any set-off for related item of expense etc.
  2. Adjusted Gross Revenue: The following shall be excluded from the Gross Revenue to arrive at the AGR:
    - I. PSTN related call charges (Access Charges) actually paid to other eligible/entitled telecommunication service providers within India;
    - II. Roaming revenues actually passed on to other eligible/entitled telecommunication service providers; and
    - III. Service Tax on provision of service and Sales Tax actually paid to the Government if gross revenue had included as component of Sales Tax and Service Tax
  3. License Fee means a fee payable by Licensee at prescribed intervals and rates for the period of the Licence.
  4. Spectrum Usage Charge is payable by the licensees providing mobile access services, as a percentage of their Adjusted Gross Revenue (AGR).
  5. Pass through charges means the charges excluded from gross revenue to arrive at adjusted gross revenue for the purpose of levying licence fee.

(Source – DoT License Agreement)

3. Spectrum Usage Charges (SUC) yearly declined by 17.74% from ₹ 5,089 crore in the year 2017 to ₹ 4,186 crore in the year 2018. License Fee also yearly declined by 10.29% from ₹ 12,976 crore to ₹ 11,641 crore during the same period.
4. The following charts depicts the trend of GR and AGR of telecom sector during last four years.

**Chart 4.1: Comparison of Gross Revenue and Adjusted Gross Revenue (crore ₹)**



5. The following table depicts the service category wise comparison of GR, AGR, License Fee, SUC and Pass Through Charges for the year 2017 and 2018.

**Table 4.2: Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges**

(₹ in Crore)

Service	Year	Access	NLD	ILD	Other (V-SAT, MNP, ISP)	Total
Gross Revenue	2017	183734	40974	14504	16443	255655
	2018	167415	41117	12914	15971	237417
Adjusted Gross Revenue	2017	122613	31388	5699	1113	160814
	2018	102832	33977	6262	1376	144446
License Fee	2017	9925	2516	456	78	12976
	2018	8317	2719	501	104	11641
Spectrum Usage Charge	2017	5073	0	0	15	5089
	2018	4169	0	0	17	4186
Pass Through Charge	2017	61121	9585	8805	15330	94841
	2018	64583	7141	6652	14596	92971

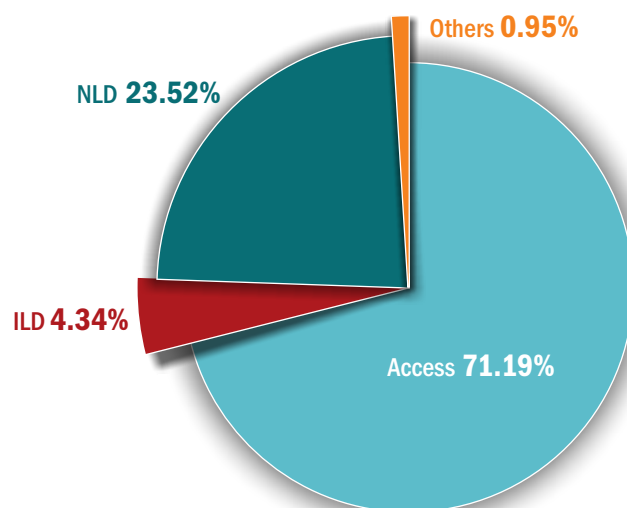
**Table 4.3: Yearly Growth of Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges for the year 2018**

Service**	Gross Revenue	Adjusted Gross Revenue	License Fee	Spectrum Charges	Pass Through Charges
Access	-8.88%	-16.13%	-16.20%	-17.82%	5.66%
NLD	0.35%	8.25%	8.04%	-	-25.50%
ILD	-10.96%	9.87%	9.86%	-	-24.45%
Others (V-SAT, MNP, ISP)	-2.87%	23.61%	33.74%	10.21%	-4.79%
Overall	-7.31%	-10.18%	-10.29%	-17.74%	-1.97%

- \*\* 1. Access service means telecommunication service provided to subscribers by means of a telecommunication system for the conveyance of voice or non-voice messages through wired or wireless telegraphy on the network of the Access Service Provider.
2. National Long Distance (NLD) service refers to the carriage of switched-bearer telecommunication services over a long distance network.
3. International Long Distance (ILD) Service is defined as a network carriage service, providing the NLD Operators in the country, International connectivity to Network facilities operated by foreign carriers in other countries
4. MNP (Mobile Number Portability) means a service which allows subscribers to retain their existing telephone number when they switch from one access service provider to another irrespective of mobile technology or from one technology to another of the same or any other access service provider
5. ISP stands for Internet Service Providers

(Source – DoT License Agreement)

**Chart 4.2: Service wise composition of Adjusted Gross Revenue for the year 2018**



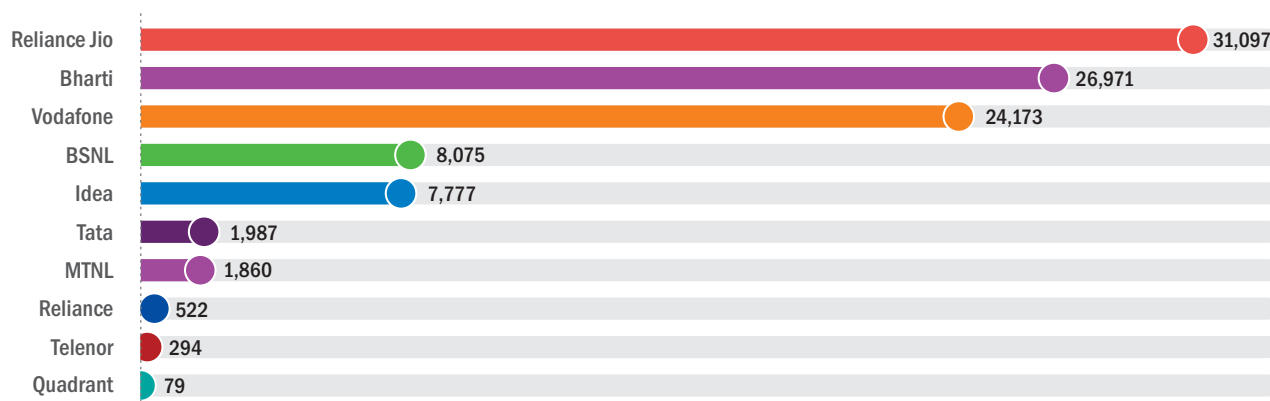
6. Access services contributed 71.19% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee and Spectrum Usage Charges (SUC) declined by 8.88%, 16.13%, 16.20% and 17.82% respectively in the year 2018 over the year 2017. However, Pass Through Charges increased by 5.66% during the same period.

**Table 4.4: Access Service – Service Provider wise Adjusted Gross Revenue**

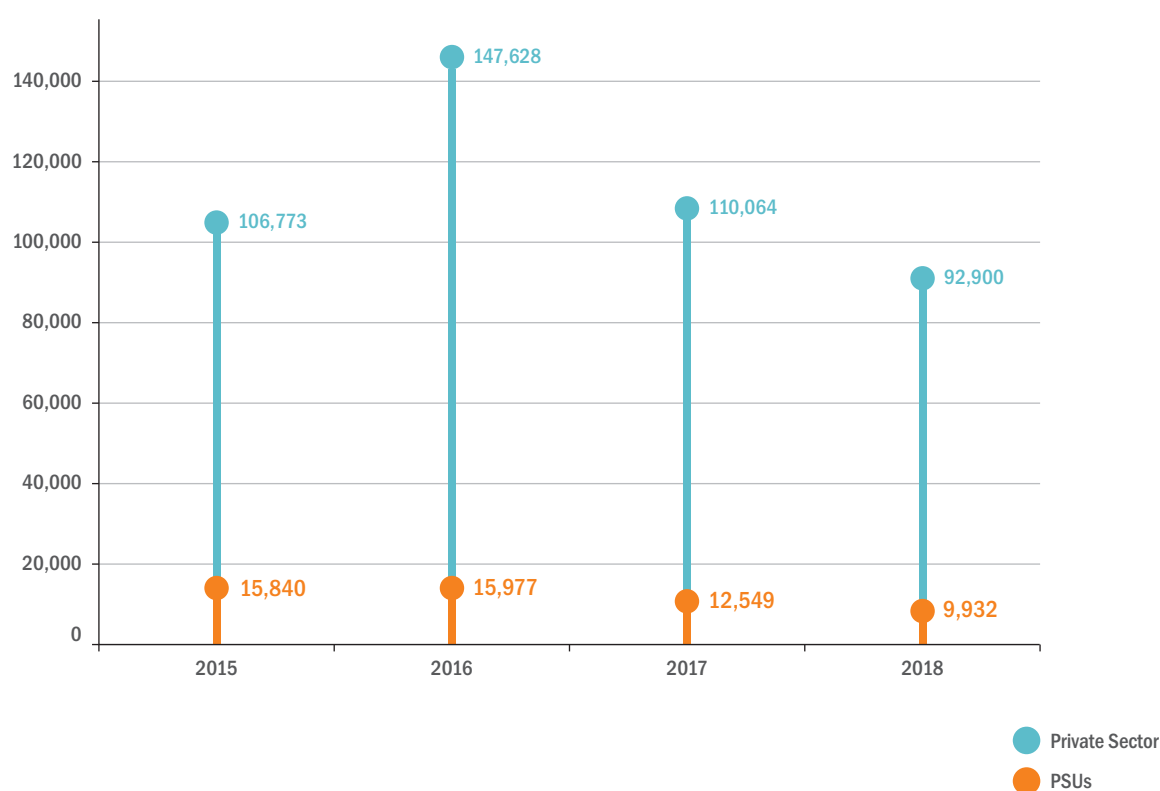
(₹ in Crore)

Sl. No.	Access Service Provider	Calendar Year, 2017	Calendar Year, 2018	Yearly Growth (%)
1	Bharti	36922	26971	-26.95
2	Vodafone	26308	24173	-8.12
3	Idea	22616	7777	-65.61
4	BSNL	10564	8072	-23.59
5	Aircel	5082	0	-
6	Tata	6478	1987	-69.33
7	Reliance	2680	522	-80.53
8	Telenor	2128	294	-86.17
9	MTNL	1985	1860	-6.30
10	Sistema Shyam	381	0	-
11	Quadrant	4	79	1816.30
12	Reliance Jio	7466	31097	316.54
<b>Grand Total (Access)</b>		<b>163605</b>	<b>102832</b>	<b>-37.15</b>

**Chart 4.3: Composition of Adjusted Gross Revenue (in crore ₹)  
of Access Service Providers for the year 2018**



**Chart 4.4: Composition of Public/Private sector of Adjusted Gross Revenue  
(Access Service) (in crore ₹)**



7. Public Sector Undertakings' (PSUs) share in the Access AGR of telecom services is 9.66% for the year 2018 as compared to 10.23% in the previous year. Following table depicts the share of PSUs vs. Private Sector in total access AGR during last four years.

**Table 4.5: Access Service – Share of PSUs and Private Sector in Adjusted Gross Revenue**

(₹ in Crore)

Calendar Year	PSUs	Private Sector	Total	Share of PSUs
2015	15,840	1,06,773	1,22,613	12.92%
2016	15,977	1,47,628	1,63,605	9.77%
2017	12,549	1,10,064	1,22,613	10.23%
2018	9,932	92,900	1,02,832	9.66%

**Table 4.6: Category-wise Adjusted Gross Revenue (AGR) of Access Service**

(₹ in Crore)

Category <sup>##</sup>	Adjusted Gross Revenue (Access)		Yearly Growth (%)
	2017	2018	
<b>Metro</b>	15,814	12,438	-21.35
<b>Circle A</b>	48,402	41,383	-14.50
<b>Circle B</b>	43,360	36,109	-16.72
<b>Circle C</b>	15,036	12,902	-14.20
<b>Total</b>	<b>122,613</b>	<b>102,832</b>	<b>-16.13</b>

## **Category-A circles** – Andhra Pradesh, Gujarat, Karnataka, Maharashtra and Tamilnadu (including Chennai)

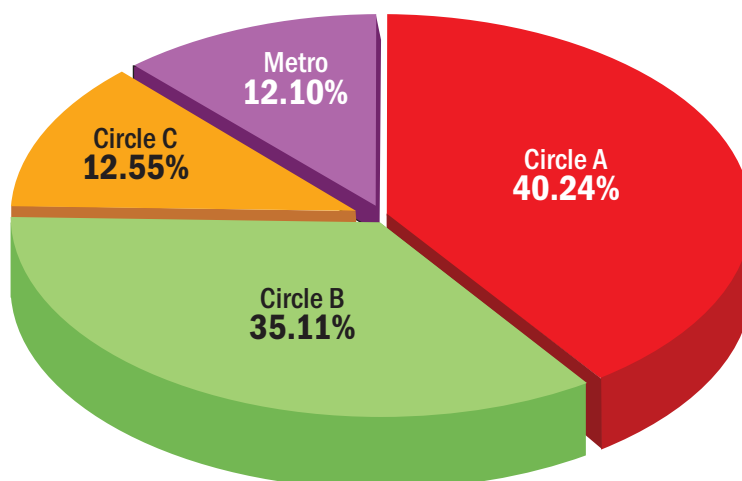
**Category-B circles** – Haryana, Kerala, Madhya Pradesh, Punjab, Rajasthan, Uttar Pradesh (East & West), West Bengal

**Category-C circles** – Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, North East and Orissa

**Metro circles** – Delhi, Mumbai and Kolkata

(Source – DoT License Agreement)

**Chart 4.5: Category wise Share of Adjusted Gross Revenue for the year 2018**



**Notes:**

1. Source: Figures are un-audited and as submitted by the Operators.
2. The figures have been regrouped wherever considered necessary for analysis purpose.
3. The figures are additions of four quarters of the calendar year, i.e. QE March, June, September and December.
3. The Spectrum usage charges (mostly) are now reported on "Payment for the current Quarter to Quarter" basis. However, some operators are reporting on payment basis or on estimate basis on projected AGR for next quarters.
4. Metro area includes Delhi, Mumbai and Kolkata only. Chennai is clubbed with Tamilnadu.
5. Where '2017' stands for year starting from 1st January 2017 to 31st December 2017 and '2018' stands for year starting from 1st January 2018 to 31st December 2018.

## CHAPTER 5

# Performance of Cable TV, DTH and Radio Broadcasting Services





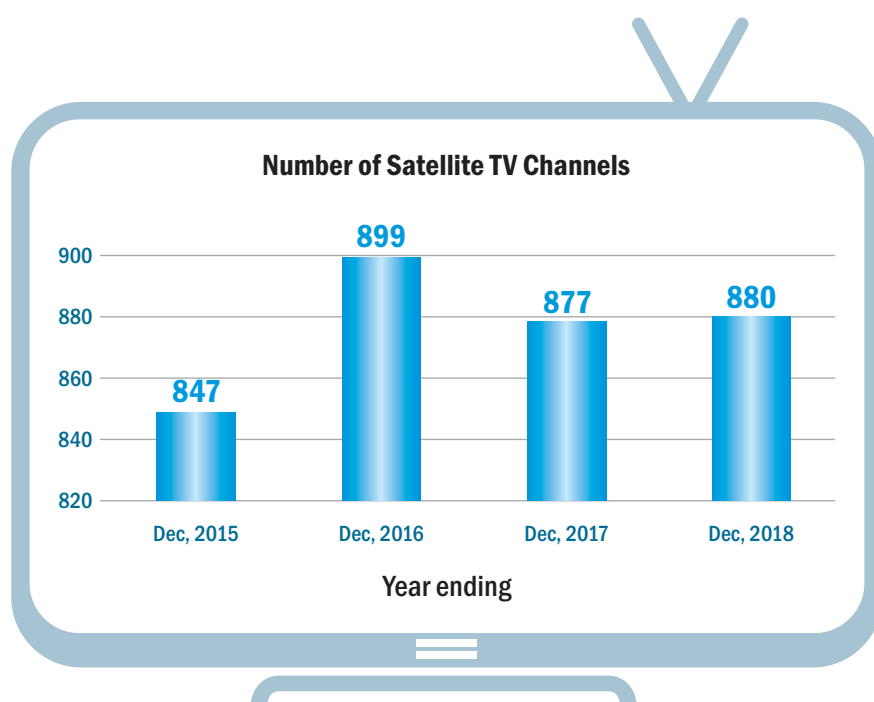
**Table 5.1: Key Parameters - Broadcasting & Cable Services**

Sl. No.	Parameter	As on 31.12.2017	As on 31.12.2018
1	Number of Private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking/uplinking	877	880
2	Number of Pay TV Channels as reported by broadcasters	304	330
3	Number of FM Radio stations (excluding All India Radio)	326	355
4	Number of Private DTH Operators	6	5
5	Number of net Active DTH Subscribers	67.56 Million	70.49 Million
6	Number of Operational Community Radio Stations (CRS)	214	248

## A. Satellite TV Channels

1. A total of 880 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking/uplinking, as on 31<sup>st</sup> December, 2018.

**Chart 5.1: Trend of number of Satellite TV Channels**



## B. PayTV Channels

2. Telecom Regulatory Authority of India (TRAI), in March, 2017, notified the new regulatory framework for Broadcasting and Cable services. The framework comprises of Tariff Order 2017, Interconnection Regulations 2017 and Quality of Service & Consumer Protection Regulations 2017. The framework was duly notified vide press release no.71/2018 dated 3<sup>rd</sup> July 2018 with revised timelines for implementation. All the timelines prescribed in the above-mentioned framework commenced from 3<sup>rd</sup> July 2018. The new regulatory framework has come into effect on 29<sup>th</sup> December 2018.
3. As per the Telecommunication (Broadcasting and Cable) Services (Eighth) (Addressable Systems) Tariff Order, 2017 dated 3<sup>rd</sup> March 2017, every broadcaster has to offer all its channels on a-la-carte basis to all distributors of television channels and declare maximum retail price, per month, payable by a subscriber for each of its pay channel offered on a-la-carte basis. Further, it is also permissible for a broadcaster to offer its pay channels in the form of bouquet and declare the maximum retail price, per month, of such bouquet payable by a subscriber.
4. As per the reporting done by broadcaster in pursuance of the Tariff Order dated 3<sup>rd</sup> March 2017, there are 330 pay channels, as on 31<sup>st</sup> December 2018, which include 231 SD pay TV channels and 99 HD Pay TV channels. A list of Maximum Retail Prices (MRP) of pay channels offered by broadcasters for subscribers as reported to TRAI is attached as Annexure-5.1.

## C. Cable TV Sector

5. Digitization, with addressability, of cable TV sector has been completed. The country achieved 100% digitization of Cable TV network. This is a stupendous achievement making India as the only large country where 100% digital cable has been achieved through mandatory regulations.

## D. Direct-to-Home (DTH) Sector

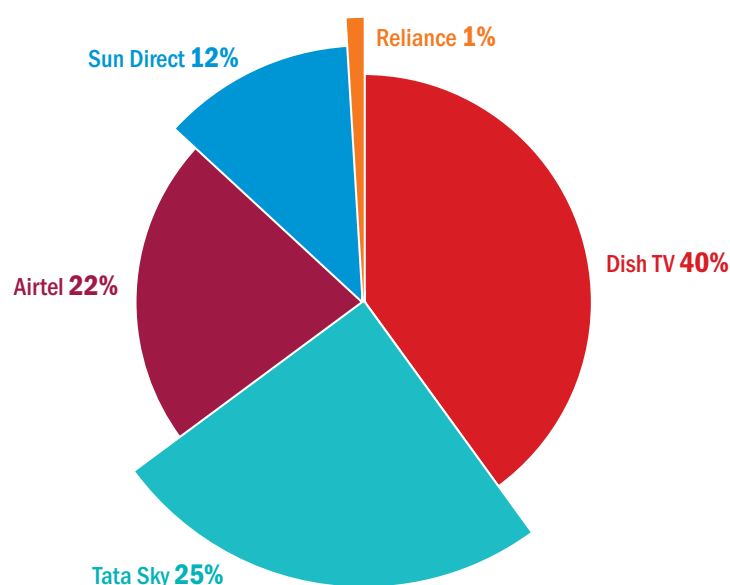
6. Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. During the quarter ending 31<sup>st</sup> December, 2018, there were 5 pay DTH service providers in India. M/s Videocon D2h has been merged with M/s Dish TV during the year 2018. List and details of pay DTH service providers is placed at Annexure-5.2.
7. DTH has attained net pay active subscriber base of around 70.49 million with 5 pay DTH service providers as on 31<sup>st</sup> December, 2018 as compared to 67.56 million subscribers with 6 pay DTH service providers as on 31<sup>st</sup> December, 2017. This is in addition to the subscribers of the free DTH services of Doordarshan. Yearly growth rate of 4.34% has been recorded in pay active subscriber base in the year 2018 as compared to the previous year.
8. The following chart depict the yearly trend of number of pay active subscribers of pay DTH service during last four years.

**Chart 5.2: Trend of Net Active subscribers (in million) of pay DTH service**



9. The following chart depicts the service provider wise composition of market shares of net active subscriber base as on 31.12.2018.

**Chart 5.3: Composition of market share in respect of Net Active subscriber base of Pay DTH Service Providers**

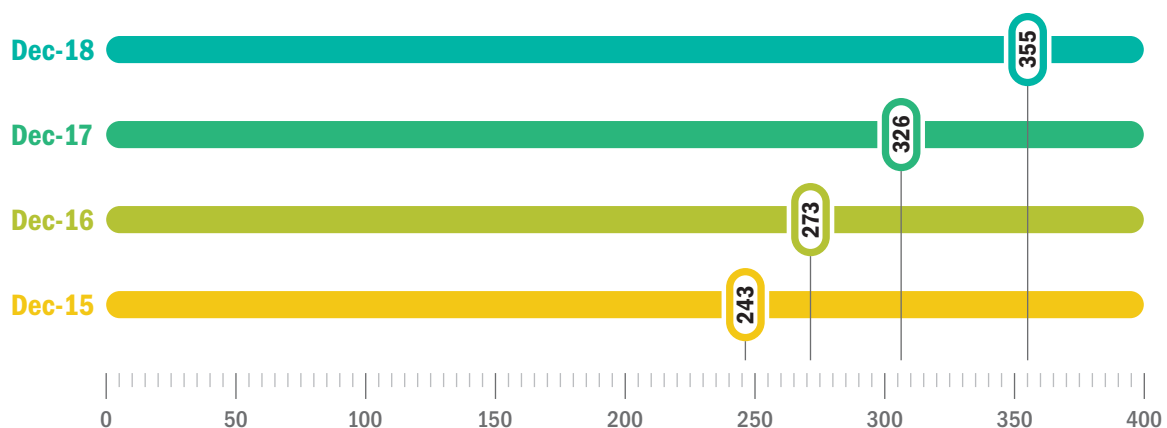


10. M/s Dish TV is the market leader with 40% market share of total net pay active DTH subscribers followed by Tata Sky with 25% as on 31<sup>st</sup> December, 2018.

## E. FM Radio Services

11. Apart from the radio Stations operated by All India Radio, the public broadcaster, as on 31<sup>st</sup> December 2018, there are 355 operational private FM Radio stations in 97 cities with operational 33 Private FM Radio broadcaster as compared to 326 operational private FM Radio stations in 86 existing cities with operational 34 FM Radio broadcaster as on 31<sup>st</sup> December 2017.
12. The following chart depicts the trend of number of operational FM radio stations in India as on year ending 2015 to 2018.

**Chart 5.4: Trend of number of Operational FM Radio Stations**

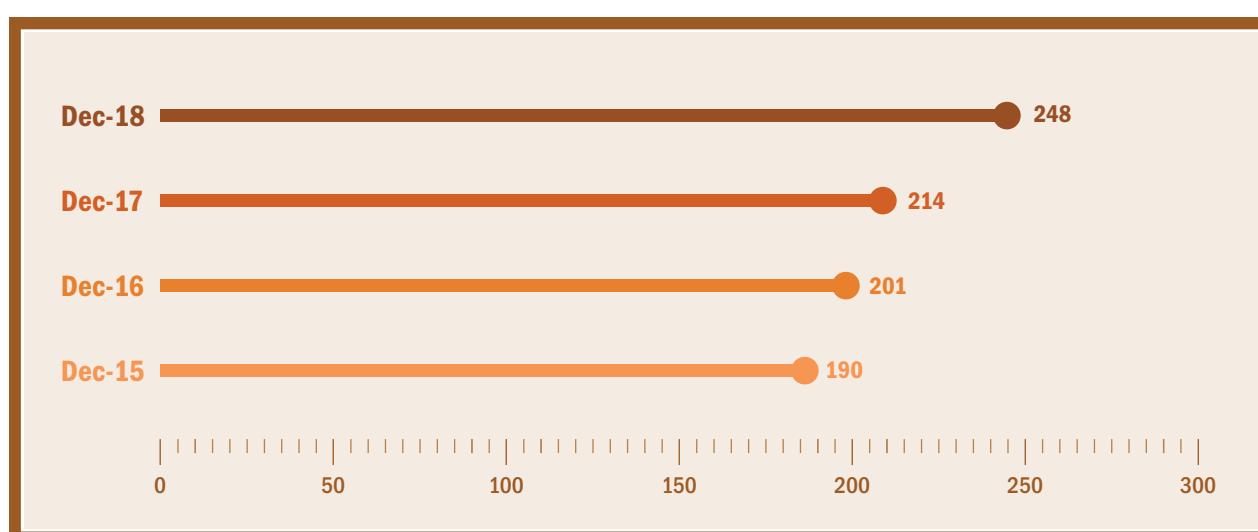


13. A list of 97 existing cities with operational FM radio channels is placed at Annexure 5.3.

## D. Community Radio Stations<sup>##</sup>

14. As on 31<sup>st</sup> December 2018, 248 Community Radio stations are operational as compared to 214 Community Radio station as on 31<sup>st</sup> December, 2017. The yearly trend of the number of operational community radio stations is depicted in the chart below.

**Chart 5.5 : Yearly Growth in number of Operational Community Radio Stations (CRS)**



Source: Ministry of Information & Broadcasting (MIB)

<sup>##</sup> Community radio station usually is a short-range, not-for-profit radio station or channel that caters for the information needs of people living in a particular locality, in the languages and formats that are most adapted to the local context. Community Radio Stations (CRS) are essentially low power radio stations to be set up and operated by the local communities.

(Source - Annual Report of MIB)

# ANNEXURES



## Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone Idea		Bharti		Aircel		Reliance Com.		Tata	
	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18
Andhra Pradesh	23,316,069	23,144,533	27,184,997	29,798,728	2,455,229	-	747,146	2,298	3,043,823	1,700,765
Assam	4,938,227	5,303,241	6,766,210	8,382,180	5,892,499	-	569,804	-	-	-
Bihar	21,597,999	23,417,362	31,181,437	39,346,424	7,549,103	-	1,003,168	129	848,179	310,450
Delhi	18,412,203	19,570,240	12,877,050	15,164,364	6,763,176	-	4,389,205	3,920	1,366,540	62,435
Gujarat	33,915,997	33,947,738	9,652,110	12,322,135	-	-	890,477	314	1,910,192	884,064
Haryana	11,357,609	11,247,676	3,943,506	3,812,942	2,092	-	178,794	90	1,543,240	832,938
Himachal Pradesh	1,473,060	1,371,833	3,361,346	3,615,762	496,715	-	1,031,862	72	22,799	4,291
Jammu & Kashmir	1,435,015	1,339,981	4,084,556	5,642,025	3,422,896	-	726,412	-	-	-
Karnataka	16,967,980	15,923,911	24,251,336	27,186,628	3,051,390	-	1,092,687	3,155	5,317,638	3,150,454
Kerala	19,467,909	20,404,012	4,799,436	5,131,817	292,060	-	180,987	317	911,955	318,184
Madhya Pradesh	32,964,822	32,185,390	15,039,063	15,617,229	552	-	6,144,470	589	3,320,267	1,936,607
Maharashtra	48,626,596	48,916,041	14,700,063	16,404,201	1,404,799	-	415,822	923	3,903,771	1,647,573
Mumbai	14,112,041	15,776,272	7,659,322	8,447,178	2,526,680	-	2,957,240	5,427	2,136,115	850,151
North East	2,045,185	2,067,625	4,426,986	5,335,815	3,292,595	-	148,351	-	-	-
Orissa	6,006,674	5,885,690	11,949,613	13,114,987	4,030,336	-	1,283,869	75	1,219,159	527,842
Punjab	12,360,704	11,494,406	9,767,310	10,362,648	904,542	-	1,144,604	137	1,475,054	891,419
Rajasthan	19,521,797	18,751,708	21,710,763	23,357,048	6,239,272	-	3,587,447	243	467,893	123,990
Tamil Nadu (incl. Chennai)	22,434,667	25,332,666	19,899,546	25,771,495	20,492,085	-	954,122	3,390	2,736,879	1,511,988
U.P. (E)	34,158,667	36,564,291	25,210,561	32,724,449	6,520,776	-	886,914	624	2,378,946	1,765,487
U.P. (W)	28,762,836	29,513,753	9,121,232	13,772,831	566,634	-	682,203	60	2,070,183	1,365,337
Kolkata	8,465,372	9,674,397	5,606,347	6,439,985	4,254,927	-	2,282,737	42	1,878,877	1,083,018
West Bengal	26,685,108	26,912,269	16,920,289	18,508,444	4,776,300	-	1,868,028	333	141,445	38,546
Total	409,026,537	418,745,035	290,113,079	340,259,315	84,934,658	-	33,166,349	22,138	36,692,955	19,005,539

Annexure 1.1 (contd.)

Service Area	BSNL		M TNL		Reliance Jio (LTE)		Telenor		Total	
	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18
Andhra Pradesh	10,068,021	10,145,072			13,276,818	22,422,936	4,223,046	-	84,315,149	87,214,332
Assam	1,630,211	2,418,559			2,804,544	5,639,950			22,601,495	21,743,930
Bihar	4,147,876	4,890,882			10,105,860	20,119,506	7,855,226	-	84,288,848	88,084,753
Delhi	-	-	2,299,685	2,220,516	9,440,273	14,108,953			55,548,132	51,130,428
Gujarat	5,544,792	5,775,864			11,546,414	17,720,545	7,132,006	-	70,591,988	70,650,660
Haryana	4,251,802	4,904,904			4,188,177	6,880,952			25,465,220	27,679,502
Himachal Pradesh	2,469,366	2,767,116			1,715,932	2,744,696			10,571,080	10,503,770
Jammu & Kashmir	1,548,957	1,214,265			1,904,180	3,309,640			13,122,016	11,505,911
Karnataka	7,259,286	7,101,238			9,260,031	15,258,054			67,200,348	68,623,440
Kerala	10,285,323	10,850,884			5,072,047	6,942,760			41,009,717	43,647,974
Madhya Pradesh	5,827,364	6,119,647			9,802,824	21,044,892			73,099,362	76,904,354
Maharashtra	6,996,873	6,907,764			11,594,705	21,132,249	5,741,125	-	93,383,754	95,008,751
Mumbai	-	-	1,285,081	1,254,382	7,651,459	11,209,409			38,327,938	37,542,819
North East	1,517,183	1,642,752			1,382,810	2,622,832			12,813,110	11,669,024
Orissa	5,269,814	5,527,595			4,263,579	8,078,892			34,023,044	33,135,081
Punjab	5,143,003	5,335,427			7,272,098	11,234,533			38,067,315	39,318,570
Rajasthan	5,504,734	5,694,204			8,776,476	18,458,434			65,808,382	66,385,627
Tamil Nadu (incl. Chennai)	9,922,543	11,909,640			10,589,205	18,221,611			87,029,047	82,750,790
U.P. (E)	11,661,212	11,820,748			10,134,487	18,914,302	9,823,240	-	100,774,803	101,789,901
U.P. (W)	5,832,197	5,923,283			8,153,481	14,177,099	7,136,085	-	62,324,851	64,752,363
Kolkata	1,301,293	1,792,484			5,278,886	8,072,806			29,068,439	27,062,732
West Bengal	1,733,481	1,630,129			5,876,955	11,802,717			58,001,606	58,892,438
Total	107,915,331	114,372,457	3,584,766	3,474,898	160,091,241	280,117,768	41,910,728	-	1,167,435,644	1,175,997,150
										8,561,506



## Annexure 1.2: Wireline Subscriber Base

Service Area	Bharti		Reliance		Quadrant		Tata		MTNL		BSNL		Vodafone		Aircel		Total		Net Additions
	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	Dec-17	Dec-18	
Andhra Pradesh	164,994	174,826	73,284	46,869			174,331	174,471			1,080,608	998,736	26,010	34,580	5,347		1,524,574	1,429,482	-95,092
Assam											138,036	116,309	2,700	2,820			140,736	119,129	-21,607
Bihar			6,246	3,540			12,087	8,410			251,263	222,513	2,010	1,770			271,606	236,233	-35,373
Delhi	1,311,798	1,382,801	162,689	124,216			143,514	154,349	1,555,478	1,490,886			32,070	51,070	14,909		3,220,458	3,203,322	-17,136
Gujarat	78,553	82,520	70,177	20,620			92,421	89,660			1,041,619	1,008,211	9,797	20,539	1,063		1,293,630	1,221,550	-72,080
Haryana	22,559	22,800	3,627	2,894			38,414	36,258			243,298	220,020		150			307,898	282,122	-25,776
Himachal Pradesh			3,889	3,035			2,389	1,831			121,623	113,046	60	60			127,961	117,972	-9,989
Jammu & Kashmir											116,807	105,329					116,807	105,329	-11,478
Karnataka	640,466	671,236	153,214	140,110			270,557	274,109			1,127,253	1,039,637	33,625	42,475	28,622		2,253,737	2,167,567	-86,170
Kerala	58,236	59,997	30,828	17,170			18,799	19,413			1,882,601	1,809,217	2,430	2,550			1,992,894	1,908,347	-84,547
Madhya Pradesh	263,865	242,111	19,335	10,724			15,346	15,770			679,047	656,076	600	870			978,193	925,551	-52,642
Maharashtra	80,552	88,787	76,883	49,324			307,763	289,655			1,283,293	1,123,163	15,395	18,343	585		1,764,471	1,569,272	-195,199
Mumbai	357,551	363,306	248,775	179,535			558,877	571,166	1,820,673	1,773,866			29,582	53,050	11,010		3,026,468	2,940,923	-85,545
North East											113,002	106,397	120	270			113,122	106,667	-6,455
Orissa			3,188	2,520			8,100	7,463			260,470	225,488	1,530	2,160			273,288	237,631	-35,657
Punjab	120,048	128,549	18,956	10,571	250,373	227,164	15,924	14,096			483,142	411,522	1,110	1,620	30		889,583	793,522	-96,061
Rajasthan	49,915	53,518	29,500	20,999			12,652	12,273			514,592	451,088	5,880	7,320	3,551		616,090	545,198	-70,892
Tamil Nadu (incl. Chennai)	555,742	555,593	127,374	72,696			113,535	118,701			1,565,517	1,456,658	14,950	18,675			2,377,118	2,222,323	-154,795
U.P. (E)	64,156	66,088	33,804	6,174			13,570	8,215			365,061	358,611	9,100	11,840	2		485,693	450,928	-34,765
U.P. (W)	22,568	23,323	6,967	3,749			9,593	5,342			313,711	273,129	4,050	3,990			356,889	309,533	-47,356
Kolkata	122,138	126,895	67,394	39,764			50,239	52,749			569,979	500,573	6,420	8,390	2,592		818,762	728,371	-90,391
West Bengal			1,862	1,694			3,051	2,410			279,736	242,995	60	120			284,709	247,219	-37,490
Total	3,913,141	4,042,350	1,137,992	756,204	250,373	227,164	1,861,162	1,856,341	3,376,151	3,264,752	12,430,658	11,438,718	197,499	282,662	67,711	0	23,234,687	21,868,191	-1,366,496

### Annexure 1.3: Service Area and Operator wise details of PCOs

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.12.2018
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	16,362	6,965
	Bharti Group	181	181
	Tata Group	5,223	0
Telangana	Bharat Sanchar Nigam Ltd.		5,188
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	16,362	12,153
	Bharti Group	181	181
	Tata Group	5,223	0
Assam	Bharat Sanchar Nigam Ltd.	5,805	4,877
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,507	1,117
	Tata Group	27	0
Jharkhand	Bharat Sanchar Nigam Ltd.	2,701	2,441
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	4,208	3,558
	Tata Group	27	0
Delhi	Bharti Group	330	330
	Mahanagar Telephone Nigam Ltd./MTNL	48,368	46,349
	Tata Group	1,341	0
Gujarat	Bharat Sanchar Nigam Ltd.	20,120	18,200
	Bharti Group	14	14
	Tata Group	1,232	0
Haryana	Bharat Sanchar Nigam Ltd.	1,663	1,357
	Bharti Group	150	141
	Tata Group	39	0
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	1,240	877
	Tata Group	2	0
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,811	1,056
Karnataka	Bharat Sanchar Nigam Ltd.	21,756	17,527
	Bharti Group	3,737	3,356
	Tata Group	501	0
Kerala	Bharat Sanchar Nigam Ltd.	17,425	15,316
	Bharti Group	465	28
	Tata Group	32	0
Kolkata	Bharat Sanchar Nigam Ltd.	4,468	3,527
	Bharti Group	26	28
	Tata Group	138	0

# Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.12.2018
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	17,761	15,786
	Bharti Group	1,841	1,573
	Tata Group	487	0
Chhattisgarh	Bharat Sanchar Nigam Ltd.	1,371	1,004
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	19,132	16,790
	Bharti Group	1,841	1,573
	Tata Group	487	0
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	44,321	34,172
	Tata Group	8,833	0
Mumbai	Bharti Group	41	50
	Mahanagar Telephone Nigam Ltd./MTNL	72,750	22,230
	Tata Group	3,439	0
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	44,321	34,172
	Bharti Group	41	50
	Mahanagar Telephone Nigam Ltd./MTNL	72,750	22,230
	Tata Group	12,272	0
Arunachal Pradesh	Bharat Sanchar Nigam Ltd.	1,114	1,352
Manipur	Bharat Sanchar Nigam Ltd.	2,406	846
Meghalaya	Bharat Sanchar Nigam Ltd.	0	431
Mizoram	Bharat Sanchar Nigam Ltd.	0	130
Nagaland	Bharat Sanchar Nigam Ltd.	0	118
Tripura	Bharat Sanchar Nigam Ltd.	0	524
Orissa	Bharat Sanchar Nigam Ltd.	2,094	1,707
	Tata Group	26	0
Punjab	Bharat Sanchar Nigam Ltd.	2,168	1,900
	Bharti Group	37	18
Punjab	Quadrant Televentures Ltd.	1,420	1,420
	Tata Group	261	0
Rajasthan	Bharat Sanchar Nigam Ltd.	5,910	3,134
	Bharti Group	209	209
	Tata Group	200	0

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 31.12.2017	Number of PCOs as on 31.12.2018
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	37,301	31,314
	Bharti Group	5,457	4,584
	Tata Group	104	0
Chennai	Bharat Sanchar Nigam Ltd.	9,268	8,307
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	46,569	39,621
	Bharti Group	5,457	4,584
	Tata Group	104	0
Uttar Pradesh - East	Bharat Sanchar Nigam Ltd.	10,185	8,565
	Bharti Group	86	77
	Tata Group	14	0
Uttarakhand	Bharat Sanchar Nigam Ltd.	1,138	921
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,042	1,880
	Bharti Group	50	13
	Tata Group	192	0
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,180	2,801
	Bharti Group	50	13
	Tata Group	192	0
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,109	3,342
	Tata Group	42	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	142	142
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,251	3,484
	Tata Group	42	0
Total		393,483	275,032

## Annexure 1.4: Service Area & Operator wise details of Village Public Telephones

Name of the Circle/Service Area	Service Provider	Number of VPTs as on 31.12.2017	Number of VPTs as on 31.12.2018
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	9,977	2,787
Telangana	Bharat Sanchar Nigam Ltd.	0	1,333
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	9,977	4,120
Assam	Bharat Sanchar Nigam Ltd.	2,810	105
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	6,768	6,368
Jharkhand	Bharat Sanchar Nigam Ltd.	490	489
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	7,258	6,857
Gujarat	Bharat Sanchar Nigam Ltd.	8,750	5,297
Haryana	Bharat Sanchar Nigam Ltd.	1,272	687
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	5,028	2,209
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	2,244	1,060
Karnataka	Bharat Sanchar Nigam Ltd.	7,512	4,075
Kerala	Bharat Sanchar Nigam Ltd.	405	349
Kolkata	Bharat Sanchar Nigam Ltd.	130	130
Madhya Pradesh (excl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	39,692	39,692
Chhattisgarh	Bharat Sanchar Nigam Ltd.	8,391	453
Madhya Pradesh (incl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	48,083	40,145
Maharashtra (incl. Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	22,217	8166
	Tata Group	1,282	0
Orissa	Bharat Sanchar Nigam Ltd.	6,205	1819
Punjab	Bharat Sanchar Nigam Ltd.	5,938	5,104
Rajasthan	Bharat Sanchar Nigam Ltd.	9,329	1,212
Tamilnadu (excl. Chennai)	Bharat Sanchar Nigam Ltd.	11,457	6,086
Chennai	Bharat Sanchar Nigam Ltd.	144	0
Tamil Nadu (incl. Chennai)	Bharat Sanchar Nigam Ltd.	11,601	6,086
Uttar Pradesh - East	Bharat Sanchar Nigam Ltd.	1,119	981
Uttarakhand	Bharat Sanchar Nigam Ltd.	3,473	3,473
Uttar Pradesh – West (excl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,394	1,994
Uttar Pradesh – West (incl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	6867	5,467
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	36958	36,352
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	340	94
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	37,298	36,446
<b>Total</b>		<b>202,395</b>	<b>132,403</b>

### Annexure 1.5 : Internet Service Provider(ISP) wise Internet Subscriber base as on 31.12.2018

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
1	Reliance Jio Infocomm Ltd	0	280117768	280117768
2	Vodafone Idea Limited	42558566	107915569	150474135
3	Bharti Airtel Ltd.	26868538	107073051	133941589
4	Bharat Sanchar Nigam Ltd.	7921284	20553096	28474380
5	Tata Teleservices Limited	1014993	2258611	3273604
6	Mahanagar Telephone Nigam Ltd.	423004	1171350	1594354
7	Atria Convergence Technologies Pvt Ltd	0	1390471	1390471
8	Hathway Cable & Datacom Pvt. Ltd.	13	781778	781791
9	You Broadband India Pvt. Ltd.	14916	709797	724713
10	GTPL Broadband Pvt. Ltd.	0	263694	263694
11	Tikona Infinet Ltd. Infinet Ltd.	413	241976	242389
12	D-Vois Broadband Private Limited	0	234303	234303
13	Asianet Satellite Communications Ltd.	0	205604	205604
14	Excitel Broadband Private Limited	0	199586	199586
15	Alliance Broadband Services Pvt. Ltd.	0	197160	197160
16	Quadrant Televentures Ltd.	156	195436	195592
17	Syscon Infoway Pvt Ltd	0	149855	149855
18	Indinet Service Pvt Ltd	0	134788	134788
19	DEN Networks Ltd	0	113848	113848
20	Planet E-Shop Holdings India Ltd.	0	112084	112084
21	RailTel Corporation of India Ltd.	0	104161	104161
22	Airlink Communications Pvt. Ltd	0	68547	68547
23	Five Network Solution (India) Ltd.	0	62322	62322
24	Nextra Teleservices Pvt. Ltd.	0	53182	53182
25	Honesty Net Solutions (I) Pvt. Ltd.	1153	49482	50635
26	Intech Online Pvt. Ltd.	0	48787	48787
27	Wish Net Pvt. Ltd.	0	41445	41445
28	Limras Eronet Broadband Service Pvt. Ltd.	6132	30966	37098
29	ANI network Pvt. Ltd.	0	34525	34525
30	Citycom Networks Pvt. Ltd.	0	32171	32171
31	Wan and Lan Internet Pvt. Ltd.	0	31731	31731
32	Airnet Cable and Datacom Pvt. Ltd.	0	30622	30622
33	Ishan Netsol Pvt. Ltd.	0	26723	26723
34	SITI Broadband Services Pvt. Ltd.	0	24862	24862
35	K NET Solutions. Pvt. Ltd.	0	24074	24074
36	Fusionnet Web Services Pvt. Ltd.	0	23600	23600

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
37	Microscan Computers Pvt Ltd	15230	7268	22498
38	DNA Infotel Pvt Ltd	0	21130	21130
39	Vasai Cable Pvt. Ltd.	0	20352	20352
40	Ortel Communication Ltd.	0	20301	20301
41	City Online Services Ltd	0	19567	19567
42	Reliance Communications Ltd.	0	16908	16908
43	Rajesh Digital Datacom Pvt Ltd	32	16421	16453
44	Sampark Infotainment Pvt. Ltd.	0	15731	15731
45	Geocity Network Solutions Pvt. Ltd.	0	15466	15466
46	Quest Consultancy Pvt. Ltd.	0	14888	14888
47	IKF Technologies Ltd.	0	12965	12965
48	Digital Network Associates Pvt. Ltd.	0	12500	12500
49	Broadband Pacenet (I) Pvt. Ltd.	0	12017	12017
50	Meghbela Cable & Broadband Servies (P) Ltd.	0	11382	11382
51	Digital Satellite Connect Pvt. Ltd.	0	11204	11204
52	Sai Prasad Internet Pvt. Ltd.	0	10811	10811
53	Sikka Broadband (P) Ltd. (Gomti Cable Network Pvt. Ltd.)	0	10795	10795
54	Yashash Cable Network Pvt. Ltd.	0	10541	10541
55	World Phone Internet Services Pvt. Ltd.	0	10209	10209
56	Tata Sky Broadband Private Limited	0	9597	9597
57	North East Dataa Network Pvt Ltd.	0	9523	9523
58	Reliance Communications Limited	0	9345	9345
59	RI Networks Pvt Ltd	0	9072	9072
60	Pioneerelabs Pvt. Ltd.	0	8553	8553
61	Candor Infosolution Pvt. Ltd.	8496	0	8496
62	Digital Cloud Technologies Pvt. Ltd.	0	8289	8289
63	Sifi Online Pvt. Ltd.	0	8212	8212
64	Smartlink Broadband Services	0	8125	8125
65	United Telecoms Ltd.	181	7794	7975
66	Apna Telelink Ltd.	0	7757	7757
67	Foxtel Telecommunications Pvt. Ltd.	7325	0	7325
68	Jetway Broadband India Pvt. Ltd.	0	7309	7309
69	Net 9 Online Hathway Private Limited	0	7237	7237
70	Kappa Internet Services Pvt. Ltd.	0	6932	6932
71	Netplus Broadband Services Pvt. Ltd	0	6664	6664
72	Readylink Internet Services Pvt. Ltd.	114	6529	6643

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
73	Ethernet Xpress India Pvt. Ltd.	0	6564	6564
74	GBPS Networks Pvt. Ltd.	0	6186	6186
75	Cityzone Infonet Pvt. Ltd.	0	6145	6145
76	L S Fibernet Pvt. Ltd.	0	6127	6127
77	WOW Solutions & System Pvt. Ltd.	0	6094	6094
78	Swiftmail Communications Ltd.	1941	3995	5936
79	SSCN Pvt Ltd	0	5882	5882
80	Multicraft Digital Technologies Private Limited	0	5881	5881
81	Shri Omkar Infocom Pvt. Ltd.	0	5855	5855
82	DL GTPL Broadband Pvt. Ltd.	0	5854	5854
83	Swiftnet Broadband Pvt. Ltd.	0	5545	5545
84	Intermedia Cable Communication Pvt. Ltd.	0	5394	5394
85	Five Net Service Provider Pvt. Ltd.	0	5044	5044
86	Narmada Cyberzone Pvt. Ltd.	1858	3097	4955
87	IAXN Telecom Pvt. Ltd.	0	4766	4766
88	Multinet (Udaipur) Pvt. Ltd.	0	4503	4503
89	Siliguri Internet & Cable TV Pvt. Ltd.	0	4385	4385
90	Southern Online Bio Technologies Ltd.	7	4355	4362
91	Bittel Telecom Pvt. Ltd	0	4333	4333
92	Gigatel Networks Pvt. Ltd.	0	4269	4269
93	Powernet Communication Pvt. Ltd.	2086	2086	4172
94	Mukand Infotel Pvt. Ltd.	4061	0	4061
95	Blazenet Ltd.	0	4017	4017
96	Zoram Business Enterprise Private Limited	0	3624	3624
97	Vision Smartlink Networking Pvt. Ltd.	0	3616	3616
98	CSC e-Governance Services India Ltd.	0	3596	3596
99	Aerocast Networks Pvt. Ltd.	0	3582	3582
100	Sonali Internet Services Pvt. Ltd.	0	3582	3582
101	Spacenet Internet Services Pvt. Ltd.	0	3534	3534
102	Airgenie Communications Pvt. Ltd.	0	3112	3112
103	Star Broadband Services (I) Pvt. Ltd.	0	3076	3076
104	LM Energy & Software Pvt. Ltd.	0	3058	3058
105	Wnet Telecom Private Limited	9	3043	3052
106	Spiderlink Networks Pvt. Ltd.	0	3042	3042
107	TGN Networks Pvt. Ltd.	0	2679	2679
108	F/X Wireless Technology Services Pvt. Ltd.	0	2634	2634



## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
109	NISS Internet Services Pvt. Ltd.	0	2622	2622
110	Kaizen Infonet Pvt Ltd	0	2526	2526
111	Transmedia Technologies (AP) Pvt. Ltd.	0	2525	2525
112	Chandra Net Pvt. Limited	0	2435	2435
113	Speed Online.net Pvt. Ltd.	0	2369	2369
114	S.S. Netcom Pvt. Ltd.	0	2155	2155
115	Rainbow Internet Teleservices Pvt. Ltd.	35	2004	2039
116	Smartlink Solutions Pvt. Ltd.	0	1965	1965
117	WSNS Pvt. Ltd.	0	1935	1935
118	SCUD Communication Pvt.Ltd.	0	1922	1922
119	Capture Network Systems Pvt. Ltd.	288	1517	1805
120	Jetspot Networks Pvt. Ltd.	0	1751	1751
121	Assistive Networks & Technologie Pvt. Ltd.	0	1701	1701
122	Galaxynet Connections Pvt. Ltd.	0	1694	1694
123	Touch Net India Pvt. Ltd.	0	1643	1643
124	Nettlinx Ltd.	0	1609	1609
125	Ultraneet Infotech Solution Private Limited	0	1600	1600
126	Rajesh Patel Net Services Pvt. Ltd.	23	1547	1570
127	Sanchit Infocomm Pvt Ltd	0	1502	1502
128	Symbois Creations Pvt. Ltd.	0	1458	1458
129	Sphier Infotech Pvt. Ltd.	0	1438	1438
130	CJ Online Pvt. Ltd.	0	1428	1428
131	Craze It Solutions Pvt Ltd	0	1394	1394
132	Netfirre Communications Pvt Ltd	0	1393	1393
133	Harisree Cablenet Pvt. Ltd.	0	1333	1333
134	Imperium Digital Network Pvt. Ltd.	0	1322	1322
135	Hughes Communications India Ltd.	428	893	1321
136	Guru Netcomm Pvt. Ltd.	0	1301	1301
137	Shree Balaji Infoway Pvt. Ltd.	0	1281	1281
138	Fiberzone Communications Pvt. Ltd.	0	1280	1280
139	Fiberzone Communication (P) Ltd	0	1270	1270
140	Gorakhpur Net Services Pvt. Ltd.	0	1259	1259
141	Maks Communications Pvt. Ltd.	0	1248	1248
142	Deldsl Internet Pvt. Ltd.	0	1192	1192
143	Inet Fiber India Pvt. Ltd.	0	1165	1165
144	Elyzium Technologies Pvt. Ltd.	0	1148	1148

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
145	Aeroway Networks Pvt. Ltd.	0	1142	1142
146	Hardwork Cable & Internet Services Pvt. Ltd.	0	1122	1122
147	Gigacast Network Pvt. Ltd.	0	924	924
148	SS Fiber Net Optical Communication Pvt. Ltd.	0	918	918
149	Touchnet Broadband Services Pvt. Ltd.	0	893	893
150	Sky Online Technosystem Pvt. Ltd.	0	863	863
151	Dreamlink Technologies Pvt. Ltd.	0	848	848
152	Click4net Internet Services Pvt. Ltd.	0	843	843
153	Netmagic Solutions (P) Ltd.	0	833	833
154	ESTO Boradnad Pvt Ltd./ESTO Internet Pvt. Ltd.	0	824	824
155	Japra Tele Link Pvt. Ltd.	0	816	816
156	Antariksh Broadband & Wireless Solutions P. Ltd.	800	0	800
157	Smart Net India Pvt. Ltd.	0	798	798
158	Viva Communications Pvt. Ltd.	0	780	780
159	Sify Technologies Ltd.	415	363	778
160	Correl IT Services Pvt. Ltd.	0	775	775
161	Ani Broadband Service Pvt. Ltd.	0	763	763
162	Datawave It Solutions Pvt. Ltd.	0	761	761
163	STN Communication & Advertising Pvt. Ltd.	3	733	736
164	Suncity Broadband Pvt. Ltd.	0	732	732
165	Daksh Broadband Services Pvt. Ltd.	0	732	732
166	NGC Broadband Pvt. Ltd.	731	0	731
167	Barani Data Solutions Private Limited	410	304	714
168	Cloudnet Communications Pvt. Ltd.	0	714	714
169	SVD Digital Networks Pvt. Ltd.	0	684	684
170	HPS Digital Broadband Pvt. Ltd.	0	672	672
171	Grace Teleinfra Pvt. Ltd.	0	663	663
172	Hostaxis Networks Pvt. Ltd.	0	637	637
173	Primenet Global Ltd.	0	628	628
174	Wi-Link Network Pvt. Ltd.	0	614	614
175	Panav Network And Communications Pvt. Ltd.	0	604	604
176	Fastnet Communication Pvt. Ltd.	200	401	601
177	Webridors Internet Pvt. Ltd.	0	594	594
178	Cyber Crazy Infocom Pvt. Ltd.	0	574	574
179	Alphanet Broadband Pvt. Ltd.	0	571	571
180	Alegra Communication Pvt. Ltd.	0	552	552

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
181	Digital2Virtual ISP Pvt. Ltd.	0	549	549
182	Shree Manoranjan Broadband Pvt. Ltd.	0	532	532
183	Datamax Technology Pvt. Ltd.	39	482	521
184	Infinity Wireless Services Pvt. Ltd.	0	520	520
185	Rida Communication Pvt. Ltd.	0	515	515
186	Laironet Communication Pvt. Ltd.	0	507	507
187	Varesha Air World Networks Pvt. Ltd.	483	0	483
188	HELM Consultants Pvt. Ltd.	193	274	467
189	Elecon Infotmation Technology Ltd.	0	466	466
190	Light Air Transmission Pvt. Ltd.	232	232	464
191	Data Infosys Ltd.	0	457	457
192	Oasis Cable Pvt. Ltd.	0	445	445
193	Power Grid Corporation of India Ltd.	0	437	437
194	Airmax Internet Pvt. Ltd.	0	432	432
195	Packenet Solutions Pvt. Ltd.	0	422	422
196	Speedmaxx Digital Networks Pvt. Ltd.	0	412	412
197	Reticule Infotech Pvt. Ltd.	0	407	407
198	Tamana Winet Pvt. Ltd.	0	406	406
199	ADRI Infocom Pvt. Ltd.	0	400	400
200	Gleam Worldwide Services Pvt. Ltd.	0	398	398
201	Packnet Solutions Pvt. Ltd.	0	397	397
202	Cns Infotel Services Pvt. Ltd.	0	392	392
203	Spirenet Digital Communication Pvt. Ltd.	0	382	382
204	Spider Broadband and Cable Pvt. Ltd.	0	375	375
205	Windsor Internet Pvt. Ltd.	0	374	374
206	Bass Jokernet Private Limited	0	359	359
207	Pulse Telesystems Pvt. Ltd.	0	334	334
208	Sai Akshay Internet Services Pvt. Ltd.	0	332	332
209	Catla IT & Engg. Co. Pvt. Ltd.	0	327	327
210	Revolution Broadband Pvt. Ltd.	0	327	327
211	Twincity Communication Pvt. Ltd.	0	325	325
212	Development Logics Solutions Pvt. Ltd.	0	322	322
213	Panchsheel Broadband Services's Pvt. Ltd.	0	321	321
214	Bhiwani Communications Pvt. Ltd.	73	233	306
215	Moradabad Internet Services Pvt. Ltd.	0	279	279
216	SG IT Infotech Pvt. Ltd.	0	276	276

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
217	Nextgen Compusoft Pvt. Ltd.	0	275	275
218	Singh Internet Services Pvt. Ltd.	0	260	260
219	Cityline Networks Pvt. Ltd.	0	251	251
220	Alwar Online Pvt. Ltd.	250	0	250
221	Auspice Infratal Pvt. Ltd.	142	105	247
222	Faiconet Internet Pvt. Ltd.	0	245	245
223	Wi5 Internet Services P. Limited	0	241	241
224	Sefaro Networks Private Ltd	0	233	233
225	Anushree Digital Network Pvt Ltd	0	229	229
226	Khetan Cable Network (P) Ltd	0	228	228
227	VM0 Broadband Pvt. Ltd.	225	0	225
228	Super Sonic Broadband Pvt. Ltd.	0	223	223
229	Nettech Infovision Pvt. Ltd.	0	220	220
230	Acebrowse Pvt. Ltd.	0	219	219
231	Wavetree Networks Pvt. Ltd.	0	218	218
232	CIT Solutions Pvt. Ltd.	0	217	217
233	Srinagar Technology Consultants Ltd.	213	0	213
234	Saibaba Broadband Pvt. Ltd.	0	206	206
235	Oistel Telecom Pvt. Ltd.	0	198	198
236	Ceralink Communication Pvt. Ltd.	0	196	196
237	Kartik Network Pvt. Ltd.	0	188	188
238	Rajdhani Telecom Pvt. Ltd.	4	182	186
239	Gazillio Technologies Pvt. Ltd.	0	182	182
240	Airfiber It Solutions Pvt. Ltd.	2	178	180
241	ERNET India	108	70	178
242	Netwire Internet Solutions Pvt. Ltd.	0	178	178
243	STN Infotech Pvt. Ltd	0	175	175
244	Microsense Pvt. Ltd.	0	174	174
245	Kataria Net Solutions Pvt. Ltd.	0	163	163
246	Southnet Broadband Pvt. Ltd.	0	154	154
247	Conjoinix Technologies Pvt. Ltd.	0	153	153
248	Netvision Awadh Networks Pvt. Ltd.	0	153	153
249	Unitel Media Pvt. Ltd.	0	142	142
250	Invensys Networks Pvt. Ltd.	27	112	139
251	Shineplus Networks Pvt. Ltd.	0	137	137
252	Royal Wireless Services Pvt. Ltd.	0	129	129

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
253	MLC Internet Pvt. Ltd.	0	126	126
254	Airtechzone Services India Pvt. Ltd.	78	47	125
255	Skynetzone WiFi Services Pvt. Ltd.	5	114	119
256	Shreepad Communication Pvt. Ltd.	0	116	116
257	Global India Tele Infra Pvt. Ltd.	27	85	112
258	Optisky Fiber Pvt. Ltd.	0	112	112
259	Shri Ram Braoadband Services Pvt. Ltd.	0	112	112
260	Proline Datatech Services Pvt. Ltd.	0	111	111
261	Verizon Communications India Pvt. Ltd.	0	109	109
262	Achiever Communication And Services Pvt. Ltd.	0	109	109
263	Pronoc Technologies Pvt. Ltd.	0	107	107
264	Shri Vinayagaa Internet Pvt. Ltd.	0	102	102
265	Airmesh Communications Limited	0	96	96
266	QBC Infotech Pvt. Ltd.	0	94	94
267	Cheetah Networks Pvt. Ltd.	0	94	94
268	AT&T Global Network Services India (P.) Ltd.	0	92	92
269	Sheen Telecom Consultants Pvt. Ltd.	91	0	91
270	Angel Air Network Solutions Pvt. Ltd.	0	89	89
271	Micronova Network Solutions Ltd.	89	0	89
272	Sath Technologies Pvt. Ltd.	0	87	87
273	Triple Link Pvt. Ltd.	0	86	86
274	Getway Broadband Pvt. Ltd.	0	85	85
275	Vidarbha Wi-Fi & Network Services Pvt. Ltd.	84	0	84
276	Dream Plus Multi Services Pvt. Ltd.	0	82	82
277	Classic Internet And Cable Services Pvt. Ltd.	80	0	80
278	Digistar Info Solutions Pvt. Ltd.	40	40	80
279	ARP Infonet Pvt. Ltd.	0	78	78
280	PMG Networkd Pvt. Ltd.	0	77	77
281	Telestra Telecommunications Pvt. Ltd.	0	75	75
282	NR Data Service Pvt. Ltd.	0	75	75
283	Satpar Infotech Pvt. Ltd.	0	66	66
284	Malang Solutions Pvt. Ltd.	0	65	65
285	Airlink Broadband Pvt. Ltd.	0	64	64
286	S A Internet Solution Pvt. Ltd.	0	61	61
287	Edge Telecommunications Pvt. Ltd.	0	59	59
288	Dronagiri Infotech Pvt. Ltd.	0	57	57
289	Infiber Broadnet Pvt. Ltd.	0	56	56
290	City Broadband Pvt. Ltd.	0	52	52

## Annexure 1.5 (contd.)

Sl. No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
291	Pimoonny Broadband Serives Pvt. Ltd.	0	50	50
292	V Net Networks Pvt. Ltd.	0	48	48
293	Trans Virtual Pvt. Ltd.	0	47	47
294	Pacific Internet India Pvt. Ltd.	0	40	40
295	IWAVE Telecommunications Pvt. Ltd.	0	38	38
296	Navariya Satellite Services Pvt. Ltd.	33	0	33
297	Dreamnet Pvt. Ltd.	0	30	30
298	West Bengal Electronics Industry Development Corp. Ltd.	0	30	30
299	Sanyog Networks Pvt. Ltd.	0	29	29
300	Divine Broadband Services Pvt. Ltd.	0	28	28
301	Jai Mata Di Telectronix Pvt Ltd	0	27	27
302	HCL Comnet Systems & Services Ltd.	11	14	25
303	WE Internet Limited	0	25	25
304	Orange Business Services India Network Pvt. Ltd.	0	22	22
305	Adya Tech One Services Pvt. Ltd.	0	21	21
306	Mastek Infosystems OPC Pvt. Ltd.	0	19	19
307	Fasthook Networks Pvt. Ltd.	0	18	18
308	Ubercore Data Labs Pvt. Ltd.	0	16	16
309	Jetfirenet Telelink Pvt. Ltd.	0	16	16
310	Sun Boardband and Data Services Pvt. Ltd.	0	15	15
311	Microtel Internet Network Pvt. Ltd.	0	15	15
312	Novanet India Ltd.	0	14	14
313	Texas Connect Private Limited	0	14	14
314	Marutham Networks Pvt. Ltd.	0	13	13
315	A to Z Infolink Pvt. Ltd.	0	12	12
316	Financial Technologies Communications Ltd.	10	0	10
317	Reliance Telecom Limited	0	8	8
318	Essel Shyam Communications Limited	0	7	7
319	Clear Beam Communication Pvt. Ltd.	0	6	6
320	ABT Ltd.	3	2	5
321	Angrow Netcomm Pvt. Ltd.	5	0	5
322	Nelco Ltd.	0	4	4
323	Tatanet Services Ltd.	0	4	4
324	Aristo Telenet Pvt. Ltd.	0	3	3
325	Kiirus Infonet Pvt. Ltd.	0	2	2
326	Sabse Internet Services Provider Pvt. Ltd.	0	2	2
<b>Total</b>		<b>78856388</b>	<b>525357875</b>	<b>604214263</b>

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

## Annexure 1.6: List of Service Providers which reported IP Telephony Minutes as on 31.12.2018

Sl. No.	Name of Service Providers which reported IP Telephony Minutes
1	Alliance Broadband Services Pvt. Ltd.
2	Asianet Satellite Communications Ltd.
3	Blazenet Ltd.
4	City Online Services Ltd.
5	Citycom Networks Pvt. Ltd.
6	Data Infosys Ltd.
7	deIDSL Internet Pvt Ltd
8	Novanet Ltd.
9	Pipetel Communications Pvt. Ltd.
10	Pulse Telesystems Pvt. Ltd.
11	Sify Technologies Ltd.
12	Tata Communications Limited
13	Trikon Electronics Pvt. Ltd.
14	VIVA Communications Pvt. Ltd.
15	World Phone Internet Services Pvt. Ltd.
16	You Broadband & Cable India Pvt. Ltd.
17	Warmconnect Internet Services Pvt. Ltd.

## Annexure 1.7: Service Area wise PMRTS subscriber Base

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			31.12.2017	31.12.2018
1	Delhi (Faridabad/Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	5817	6015
		Procall(Delhi)	2768	2938
		Procall (Faridabad)		
		Procall (Gurgaon)		
		<b>Total</b>	<b>8585</b>	<b>8953</b>
2	Mumbai (Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	7755	8375
		Smartalk (Mumbai)	526	526
		Bhilwara Telenet(Mumbai)	818	870
		Airtalk Solutions & Services Pvt. Ltd	304	361
		<b>Total</b>	<b>9403</b>	<b>10132</b>
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	2388	2467
		<b>Total</b>	<b>2388</b>	<b>2467</b>
4	TN (Chennai)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	7058	7177
		Quick Calls	408	592
		<b>Total</b>	<b>7466</b>	<b>7769</b>
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	6795	7231
		Quick Calls	506	602
		<b>Total</b>	<b>7301</b>	<b>7833</b>
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	5130	5408
		Quick Calls (Hyderabad Urban)	704	871
		<b>Total</b>	<b>5834</b>	<b>6279</b>
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1302	1363
		<b>Total</b>	<b>1302</b>	<b>1363</b>



# Annexure - 1.7 (Contd.)

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			31.12.2017	31.12.2018
8	Rajasthan (Jaipur)	Procall	286	280
		Arya Omnitalk Radio Trunking Services Pvt. Ltd.	448	531
		Total	734	811
9	Gujarat (Ahmedabad/ Surat/Vadodara/ Bharuch/Dahej/ Kutch/ Amrela/ Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt. Ltd. (Ahmedabad/ Surat/Vadodara/ Bharuch/ Dahej)	6196	6811
		Inative Network Pvt. Ltd. (Ahmedabad/ Surat/Vadodara/ Bharuch/ Kutch/ Amrela / Jamnagar)	1820	1820
		Total	8016	8630
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	1615	1904
		Smartalk	442	442
		Total	2057	2346
11	Kerala (Cochin City & Quilon)	Wiwanet Solutions Pvt. Ltd.	361	361
		Arya Omnitalk Radio Trunking Services Pvt. Ltd.	786	839
		Total	1147	1200
Grand Total			54233	57784

### Annexure 5.1: MRP (in ₹) of pay channels, offered by broadcasters to subscriber as reported to TRAI (New Regulatory Framework)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
1	ABP News Network Pvt. Limited	1	ABP Ananda	News	Bengali	0.50	SD
		2	ABP Majha	News	Marathi	0.50	SD
2	AETN 18 Media Pvt. Limited	3	The History Channel	Infotainment	Hindi	3.00	SD
		4	FY1 TV18	Infotainment	English	0.25	SD
		5	FY1 TV18 (HD)	Infotainment	English	1.00	HD
		6	History TV 18 HD	Infotainment	Hindi	7.00	HD
3	Asianet Communications Limited	7	Asianet	GEC	Malayalam	19.00	SD
		8	Asianet Plus	GEC	Malayalam	5.00	SD
		9	Asianet Movies	Movies	Malayalam	15.00	SD
		10	Suvarna Plus	Movies	Kannada	5.00	SD
		11	Star Suvarna HD	GEC	Kannada	19.00	HD
		12	Asianet HD	GEC	Malayalam	19.00	HD
		13	Star Suvarna	GEC	Kannada	19.00	SD
4	Bangla Entertainment Private Limited	14	AATH	GEC	Bangla	4.00	SD
		15	SONY Marathi	GEC	Marathi	4.00	SD
5	BBC Global News India Private Limited	16	BBC World News	News	English	1.00	SD
6	Bennett, Coleman & Company Limited	17	Zoom	GEC	Hindi	0.50	SD
		18	Romedy Now	Movies	English	6.00	SD
		19	MN +	Movies	English	10.00	HD
		20	Mirror Now	News	English/ Hindi	2.00	SD
		21	ET NOW	News	English/ Hindi	3.00	SD
		22	Times Now	News	English/ Hindi	3.00	SD
		23	Romedy Now HD	Movies	English	9.00	HD
		24	Movies Now HD	Movies	English	12.00	HD
		25	MNX HD	Movies	English	9.00	HD
		26	MNX	Movies	English	6.00	SD
		27	Times Now HD	News	English	5.00	HD
7	Celebrities Management Pvt. Limited	28	Travel XP HD	Lifestyle	English	9.00	HD
		29	Travel XP Tamil	Lifestyle	Tamil	1.50	SD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
8	CSL Info Media Private Limited	30	JAN TV PLUS	News	Hindi	50.00	SD
9	Discovery Communications India	31	Animal Planet	Infotainment	English/ Hindi	2.00	SD
		32	Discovery Channel	Infotainment	English/ Hindi	4.00	SD
		33	Discovery Channel – Tamil	Infotainment	Tamil	4.00	SD
		34	Discovery Kids Channel	Kids	English	3.00	SD
		35	Discovery Science	Infotainment	English/ Hindi	1.00	SD
		36	Discovery Turbo	Infotainment	English/ Hindi	1.00	SD
		37	Discovery Jeet	GEC	Hindi	1.00	SD
		38	Discovery HD World	Infotainment	English	6.00	HD
		39	Animal Planet HD World	Infotainment	English/ Hindi	3.00	HD
		40	TLC HD world	Infotainment	English/ Hindi	3.00	HD
		41	Discovery Jeet HD	GEC	Hindi	2.00	HD
		42	TLC	Infotainment	English/ Hindi	2.00	SD
		43	Dsport	Sports	English	4.00	SD
10	Disney Broadcasting (India) Limited	44	Disney Junior	Kids	English	4.00	SD
		45	UTV Movies	Movies	Hindi	2.00	SD
		46	Marvel HQ (Disney XD)	Kids	English/ Hindi	4.00	SD
		47	Disney International HD	GEC	English	12.00	HD
		48	Hungama TV	Kids	English/ Hindi	6.00	SD
		49	The Disney Channel	Kids	English/ Hindi	8.00	SD
		50	UTV HD	Movies	Hindi	8.00	HD
11	Eenadu Television Private Limited	51	ETV	GEC	Telugu	17.00	SD
		52	ETV Andhra Pradesh	News	Telugu	1.00	SD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		53	ETV - Telangana	News	Telugu	1.00	SD
		54	ETV Cinema	Movies	Telugu	6.00	SD
		55	ETV Life	GEC	Telugu	1.00	SD
		56	ETV Plus	GEC	Telugu	7.00	SD
		57	ETV Abhiruchi	GEC	Telugu	2.00	SD
		58	ETV HD	GEC	Telugu	19.00	HD
		59	ETV Plus HD	GEC	Telugu	9.00	HD
		60	ETV Cinema HD	Movies	Telugu	8.00	HD
		61	ETV Abhiruchi HD	GEC	Telugu	3.00	HD
		62	ETV Life HD	GEC	Telugu	2.00	HD
12	EPIC Television Networks Pvt Limited	63	EPIC TV	Infotainment	English/ Hindi	2.00	SD
13	Genx Entertainment Limited	64	UTV Bindass	GEC	Hindi	1.00	SD
		65	UTV Action	Movies	Hindi	2.00	SD
14	Greycells18 Media Ltd	66	Topper TV	Miscellaneous	English	59.32	SD
15	IBN Lokmat News P. Ltd	67	News 18 Lokmat	News	Hindi	0.25	SD
16	Living Entertainment Enterprises Private Ltd	68	Living Foodz HD	Infotainment	Hindi	10.00	HD
		69	Living Travelz	Infotainment	Hindi	0.10	SD
17	Mavis Satcom Limited	70	J Movies	Movies	Tamil	3.75	SD
		71	Jaya Max	Music	Tamil	3.75	SD
		72	Jaya Plus	News	Tamil	1.00	SD
		73	Jaya TV HD	GEC	Tamil	19.00	HD
18	MSM World Wide Factual Media P. Ltd.	74	SONY BBC EARTH	Infotainment	English/ Hindi	4.00	SD
		75	SONY BBC EARTH HD	Infotainment	English/ Hindi	10.00	HD
19	Media World Wide Ltd.	76	Travel XP	Lifestyle	English	3.00	SD
20	Lifestyle and Media Broadcasting Ltd	77	Good Times	Lifestyle	English	1.50	SD
21	New Delhi Television Limited	78	NDTV 24x7	News	English	3.00	SD
		79	NDTV India	News	Hindi	1.00	SD
		80	NDTV Profit	News	English	1.00	SD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
22	NGC Network (India) Pvt Limited	81	Fox Life	Lifestyle	English/ Hindi	1.00	SD
		82	National Geographic Channel (NGC)	Infotainment	English/ Hindi	2.00	SD
		83	Fox Life HD	Lifestyle	English/ Hindi	1.00	HD
		84	Nat Geo Wild	Infotainment	English/ Hindi	1.00	SD
		85	National Geographic HD	Infotainment	English /Hindi	10.00	HD
		86	Nat Geo Music HD	Music	English/ Hindi	1.00	HD
		87	Nat Geo Wild HD	Infotainment	English/ Hindi	5.00	HD
		88	Nat Geo People HD	Infotainment	English/ Hindi	1.00	HD
		89	Baby TV HD	Kids	English/ Hindi	1.00	HD
23	NOIDA Software Technology Park Ltd.	90	NHK World Premium (HD Distribution)	Infotainment	Japanese	1800.00	HD
24	Odisha Television Limited	91	Prarthana	Devotional	Odia	2.00	SD
		92	Tarang	GEC	Odia	10.00	SD
		93	Tarang Music	Music	Odia	2.00	SD
		94	Alankar	Movies	Odia	4.00	SD
25	Panorama Television Private Limited	95	News 18 Bihar Jharkhand	News	Hindi	0.25	SD
		96	News 18 Madhya Pradesh/ Chattisgarh	News	Hindi	0.25	SD
		97	News 18 Rajasthan	News	Hindi	0.25	SD
		98	News 18 Uttar Pradesh/ Uttarakhand	News	Hindi	0.25	SD
		99	News 18 Urdu	News	Urdu	0.25	SD
		100	News 18 Kannada	News	Kannada	0.25	SD
		101	News 18 Bangla	News	Bangla	0.25	SD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		102	News 18 Punjab / Haryana / Himanchal Pradesh	News	Punjabi	0.25	SD
		103	News 18 Gujarati	News	Gujarati	0.25	SD
		104	News 18 Odia	News	Odia	0.25	SD
26	Raj Television Network Limited	105	Raj Musix Kannada	Music	Kannada	0.25	SD
		106	Raj Digital Plus	Movies	Tamil	1.50	SD
		107	Raj Musix	Music	Tamil	1.00	SD
		108	Raj News	News	Tamil	0.25	SD
		109	Raj TV	GEC	Tamil	3.00	SD
		110	Vissa TV	GEC	Telugu	0.50	SD
27	Sarthak Entertainment Pvt. Limited	111	Sarthak TV	GEC	Odia	19.00	SD
28	Silverstar Communications Limited	112	Mega 24	GEC	Tamil	1.00	SD
		113	Mega Musiq	Music	Tamil	2.00	SD
		114	Mega TV	GEC	Tamil	3.00	SD
29	Sony Pictures Networks India Private Limited	115	Sony YAY!	Kids	English	2.00	SD
		116	AXN	GEC	English	5.00	SD
		117	SET MAX	Movies	Hindi	15.00	SD
		118	MIX	Music	Hindi	1.00	SD
		119	SAB	GEC	Hindi	19.00	SD
		120	Sony Entertainment Channel (SET)	GEC	Hindi	19.00	SD
		121	PIX	Movies	English	10.00	SD
		122	SIX	Sports	English/Hindi	15.00	SD
		123	MAX 2	Movies	Hindi	1.00	SD
		124	PAL	GEC	Hindi	1.00	SD
		125	SET HD	GEC	Hindi	19.00	HD
		126	SIX HD	Sports	English/ Hindi	19.00	HD
		127	PIX HD	Movies	English	15.00	HD
		128	MAX HD	Movies	Hindi	17.00	HD
		129	SONY ESPN HD	Sports	English/ Hindi	7.00	HD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		130	Ten 2 HD	Sports	English/Hindi	17.00	HD
		131	Ten 3 HD	Sports	English/Hindi	17.00	HD
		132	SONY ESPN	Sports	English Hindi	5.00	SD
		133	AXN HD	GEC	English	7.00	HD
		134	Ten 2	Sports	English/Hindi	15.00	SD
		135	Ten 1	Sports	English	19.00	SD
		136	Ten 3	Sports	English/Hindi	17.00	SD
		137	Ten 1 HD	Sports	English	19.00	HD
		138	SONY Wah	Movies	Hindi	1.00	SD
		139	SAB HD	GEC	Hindi	19.00	HD
30	Star India Private Limited	140	Star Sports 3	Sports	English/Hindi	4.00	SD
		141	Star Sports 1 Tamil	Sports	Tamil	17.00	SD
		142	Star Sports Select 2	Sports	English/Hindi	7.00	SD
		143	Star Bharat	GEC	Hindi	10.00	SD
		144	Movies OK	Movies	Hindi	1.00	SD
		145	Star Sports 1 Hindi	Sports	Hindi	19.00	SD
		146	Star Gold	Movies	Hindi	8.00	SD
		147	Star Jalsha	GEC	Bangla	19.00	SD
		148	Star Movies	Movies	English	12.00	SD
		149	Star Gold Select	Movies	Hindi	7.00	SD
		150	Star Plus	GEC	Hindi	19.00	SD
		151	Star Pravah	GEC	Marathi	9.00	SD
		152	Star Sports 1	Sports	English/Hindi	19.00	SD
		153	Star Sports 2	Sports	English/Hindi	6.00	SD
		154	Star World	GEC	English	8.00	SD
		155	Jalsha Movies	Movies	Bangla	6.00	SD
		156	Star Sports HD 2	Sports	English/Hindi	19.00	HD
		157	Star Sports HD 1	Sports	English/Hindi	19.00	HD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		158	Star Bharat HD	GEC	Hindi	19.00	HD
		159	Star Gold HD	Movies	Hindi	10.00	HD
		160	Star Movies HD	Movies	English	19.00	HD
		161	Star Plus HD	GEC	Hindi	19.00	HD
		162	Star World Pmiere HD	GEC	English	9.00	HD
		163	Star Sports 1 HD Hindi	Sports	Hindi	19.00	HD
		164	Star Sports Select 1	Sports	English/Hindi	19.00	SD
		165	Star Movies Select HD	Movies	English	10.00	HD
		166	Star World HD	GEC	English	9.00	HD
		167	Star Sports First	Sports	English/ Hindi	1.00	SD
		168	MAA Gold	Movies	Telugu	2.00	SD
		169	MAA Movies	Movies	Telugu	10.00	SD
		170	MAA Music	Music	Telugu	1.00	SD
		171	MAA TV	GEC	Telugu	19.00	SD
		172	Star Pravah HD	GEC	Marathi	15.00	HD
		173	Star Jalsha HD	GEC	Bangla	19.00	HD
		174	Jalsha Movies HD	Movies	Bangla	19.00	HD
		175	Star Sports Select HD1	Sports	English/Hindi	19.00	HD
		176	Star Sports Select HD2	Sports	English/Hindi	10.00	HD
		177	MAA HD	GEC	Telugu	19.00	HD
		178	Star Gold Select HD	Movies	Hindi	10.00	HD
		179	MAA Movies HD	Movies	Telugu	19.00	HD
		180	Star Sport 1 Telugu	Sports	Telugu	19.00	SD
		181	Star Sport 1 Kannada	Sports	Kannada	19.00	SD
		182	Star Utsav	GEC	Hindi	1.00	SD
		183	Star Utsav Movies	Movies	Hindi	1.00	SD



# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
31	SUN TV Network Limited	184	Adithya TV	Movies	Tamil	9.00	SD
		185	Chintu TV	Kids	Kannada	6.00	SD
		186	Chutti TV	Kids	Tamil	6.00	SD
		187	Gemini Comedy	Movies	Telugu	5.00	SD
		188	Gemini Life	GEC	Telugu	5.00	SD
		189	Gemini Movies	Movies	Telugu	17.00	SD
		190	Gemini Music	Music	Telugu	4.00	SD
		191	Gemini News	News	Telugu	0.10	SD
		192	Gemini TV	GEC	Telugu	19.00	SD
		193	KTV	Movies	Tamil	19.00	SD
		194	Surya Movies	Movies	Malayalam	11.00	SD
		195	Kushi TV	Kids	Telugu	4.00	SD
		196	SUN Life	GEC	Tamil	9.00	SD
		197	Sun Music	Music	Tamil	6.00	SD
		198	Sun News	News	Tamil	1.00	SD
		199	Surya Music	Music	Malayalam	4.00	SD
		200	SUN TV	GEC	Tamil	19.00	SD
		201	Surya Comedy	Movies	Malayalam	4.00	SD
		202	Surya TV	GEC	Malayalam	12.00	SD
		203	Udaya Comedy	Movies	Kannada	6.00	SD
		204	Udaya Movies	Movies	Kannada	16.00	SD
		205	Udaya Music	Music	Kannada	6.00	SD
		206	Udaya News	News	Kannada	0.10	SD
		207	Udaya TV	GEC	Kannada	17.00	SD
		208	Kochu TV	Kids	Malayalam	5.00	SD
		209	Sun TV HD	GEC	Tamil	19.00	HD
		210	KTV HD	Movies	Tamil	19.00	HD
		211	Sun Music HD	Music	Tamil	19.00	HD
		212	Gemini TV HD	GEC	Telugu	19.00	HD
		213	Gemini Music HD	Music	Telugu	19.00	HD
		214	Gemini Movies HD	Movies	Telugu	19.00	HD
		215	Surya TV HD	GEC	Malayalam	19.00	HD
		216	Udaya TV HD	GEC	Kannada	19.00	HD
32	Turmeric Vision P. Ltd.	217	Food Food TV	Infotainment	Hindi	1.00	SD
33	Turner International India Pvt. Ltd.	218	Cartoon Network	Kids	Hindi	4.25	SD
		219	CNN International	News	English	0.50	SD

Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		220	HBO	Movies	English	10.00	SD
		221	POGO	Kids	Hindi	4.25	SD
		222	Cartoon Network HD+	Kids	Hindi	10.00	HD
		223	WB	Movies	English	1.00	SD
		224	HBO HD	Movies	English	15.00	HD
34	TV 18 Broadcast Limited	225	CNN News 18	News	English	0.50	SD
		226	CNBC Bazaar	News	Gujarati	1.00	SD
		227	CNBC TV 18 Prime HD	News	English	1.00	HD
		228	CNBC Awaaz	News	Hindi	1.00	SD
		229	News 18 Tamil Nadu	News	Tamil	0.25	SD
		230	News 18 Kerala	News	Malayalam	0.25	SD
		231	News 18 Assam/North East	News	Assamese	0.25	SD
		232	News 18 India	News	Hindi	1.00	SD
		233	CNBC TV 18	News	English	4.00	SD
35	TV Today Network Limited	234	Aaj Tak	News	Hindi	0.75	SD
		235	India Today	News	English	1.00	SD
		236	AAJ Tak HD	News	Hindi	1.50	HD
		237	Aaj Tak Tez	News	Hindi	0.25	SD
36	Viacom 18 Media Private Limited	238	Colors	GEC	Hindi	19.00	SD
		239	Comedy Central (HD)	GEC	English	9.00	HD
		240	MTV	Music	Hindi	3.00	SD
		241	NICK	Kids	Hindi	6.00	SD
		242	NICK JR	Kids	English	1.00	SD
		243	SONIC	Kids	Hindi	2.00	SD
		244	VH 1 (HD Distribution)	Music	English	2.00	HD
		245	Colors Infinity HD	GEC	English	9.00	HD
		246	Colors Infinity	GEC	English	7.00	SD
		247	Colors HD	GEC	Hindi	19.00	HD
		248	NICKS HD+	Kids	Hindi	10.00	HD
		249	Rishtey Cineplex	Movies	Hindi	3.00	SD
		250	MTV Beats	Music	Hindi	0.50	SD
		251	Colors Kannada HD	GEC	Kannada	19.00	HD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		252	Colors Marathi HD	GEC	Marathi	17.00	HD
		253	Colors Bangla HD	GEC	Bangla	14.00	HD
		254	Colors Super	GEC	Kannada	3.00	SD
		255	Colors Bangla	GEC	Bangla	7.00	SD
		256	Colors Gujarati	GEC	Gujarati	5.00	SD
		257	Colors Kannada	GEC	Kannada	19.00	SD
		258	Colors Marathi	GEC	Marathi	10.00	SD
		259	Colors Oriya	GEC	Oriya	6.00	SD
		260	MTV Beats HD	Music	Hindi	1.00	HD
		261	Colors Tamil	GEC	Tamil	3.00	SD
		262	Cineplex HD	Movies	Hindi	5.00	HD
		263	VH 1	Music	English	1.00	SD
		264	Colors Tamil HD	GEC	Tamil	7.00	HD
		265	MTV HD+	Music	Hindi	5.00	HD
		266	Rishtey	GEC	Hindi	1.00	SD
		267	Colors Kannada Cinema	Movies	Kannada	2.00	SD
		268	Comedy Gujarati Cinema	Movies	Gujarati	1.00	SD
		269	Comedy Central	GEC	English	7.00	SD
		270	The office	Movies	Bangla	1.00	SD
37	Vijay Television Pvt. Limited	271	Vijay TV	GEC	Tamil	17.00	SD
		272	Vijay Super	GEC	Tamil	2.00	SD
		273	Vijay HD	GEC	Tamil	19.00	HD
38	Zee Akaash News P. Ltd.	274	24 Ghanta	News	Bangla	0.50	SD
39	Zee Entertainment Enterprises Limited	275	Zee Bollywood	Movies	Hindi	2.00	SD
		276	Zee Action	Movies	Hindi	1.00	SD
		277	Zee Bangla Cinema	Movies	Bangla	8.00	SD
		278	Zee Café HD	GEC	English	19.00	HD
		279	Zee Café	GEC	English	15.00	SD
		280	Zee Cinema	Movies	Hindi	19.00	SD
		281	Zee Talkies	Movies	Marathi	17.00	SD
		282	Zee TV	GEC	Hindi	19.00	SD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
		283	Zing	Music	Hindi	1.00	SD
		284	& Picture	Movies	Hindi	10.00	SD
		285	Zee Bangla	GEC	Bangla	19.00	SD
		286	Zee Marathi	GEC	Marathi	19.00	SD
		287	Living Foodz	Infotainment	English/ Hindi	1.00	SD
		288	Zee TV HD	GEC	Hindi	19.00	HD
		289	Zee Cinema HD	Movies	Hindi	19.00	HD
		290	& TV	GEC	Hindi	12.00	SD
		291	& TV HD	GEC	Hindi	19.00	HD
		292	Zee Kannada	GEC	Kannada	19.00	SD
		293	Zee Telugu	GEC	Telugu	19.00	SD
		294	& Pictures HD	Movies	English/ Hindi	19.00	HD
		295	Zee Cinemalu	Movies	Telugu	10.00	SD
		296	Zee Yuva	GEC	Marathi	10.00	SD
		297	Zee Marathi HD	GEC	Marathi	19.00	HD
		298	Living Zen	Infotainment	Hindi	0.10	SD
		299	& Prive HD	Movies	English	19.00	HD
		300	Zee Bangla HD	GEC	Bangla	19.00	HD
		301	Zee Tamil HD	GEC	Tamil	19.00	HD
		302	Zee Cinemalu HD	Movies	Telugu	16.00	HD
		303	Zee Telugu HD	GEC	Telugu	19.00	HD
		304	Zee Tamil	GEC	Tamil	12.00	SD
		305	Zee Kannada HD	GEC	Kannada	19.00	HD
		306	Zee Anmol Cinema	Movies	Hindi	1.00	SD
		307	& Flix HD	Movies	English	19.00	HD
		308	& Flix	Movies	English	15.00	SD
		309	Zee Keralam HD	GEC	Malayalam	8.00	HD
		310	Zee Keralam	GEC	Malayalam	0.10	SD
		311	Zee ETC	Music	Hindi	1.00	SD
		312	Zee Anmol	GEC	Hindi	1.00	SD
		313	Big Magic	GEC	Hindi	1.00	SD
		314	Big Ganga	GEC	Bhojpuri	2.00	SD
		315	Zee Talkies HD	Movies	Marathi	19.00	HD

# Annexure 5.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per New Regulatory Framework	Reported Language	MRP as per New Regulatory Framework	Declared as SD or HD
40	Zee Media Corporation Limited	316	Zee 24 Taas	News	Marathi	0.50	SD
		317	Zee Kalinga	News	Odia	0.50	SD
		318	Zee Business	News	Hindi	0.50	SD
		319	Zee Punjab Haryana Himachal	News	Hindi	0.50	SD
		320	Zee Madhya Pradesh Chattisgarh	News	Hindi	0.50	SD
		321	Zee Salaam	News	Urdu	1.00	SD
		322	Zee 24 Kalak	News	Hindi	0.50	SD
		323	WION	News	Hindi	1.00	SD
		324	Zee Uttar Pradesh Uttarakhand	News	Hindi	0.50	SD
		325	Zee Hindustan	News	Hindi	0.50	SD
		326	Ezmall.com	Miscellaneous	Hindi	0.10	SD
		327	Zee Bihar Jharkhand	News	Hindi	0.50	SD
		328	Zee News	News	Hindi	0.50	SD
		329	Zee Rajasthan News	News	Hindi	0.50	SD
41	Zoom Entertainment Network Limited	330	Movies Now	Movies	English	10.00	SD

## Annexure 5.2 : List of pay DTH Operators

1	<p><b>M/s. Tata Sky Ltd.,</b>  Tata Communications Complex,  Mandi Road, PO Chattarpur, New Delhi – 110 074  Tel: 011-6616 3000 Fax-022-6616 3030  Website: <a href="http://www.tatasky.com">www.tatasky.com</a></p>
2	<p><b>M/s Dish TV India Ltd.</b>  FC-19, Sector-16A, Film City, Noida-201301  Tel: 91-120-2467005 / 2467000  Fax: 91-120-4357082  Website: <a href="http://www.dishtv.in">www.dishtv.in</a></p>
3	<p><b>SUN Direct TV(P) Ltd.</b>  Murasoli Maran Towers, 73, MRC Nagar,  Main Road, MRC Nagar, Chennai – 28  PH: 044-44676767, Fax No 044-40679191  Website: <a href="http://www.sundirect.in">www.sundirect.in</a></p>
4	<p><b>Bharti Telemedia Ltd.</b>  Airtel Centre, Plot No 16,  Udyog Vihar Phase IV, Gurgaon – 122 015  Ph: 0124-4222222 Fax : 0124-4248063  Website: <a href="http://www.airtel.in">www.airtel.in</a></p>
5	<p><b>Independent TV Limited.</b>  H-67, Sector – 63, NOIDA  Ph: 0120-6270100, Fax : 0120-4315999  Website: <a href="http://www.rcom.co.in">www.rcom.co.in</a></p>

### Annexure 5.3: List of 97 existing cities with operational FM Radio Channels in India as on 31.12.2018

Sl. No.	Name of City	Category	Number of operational channels
1	Agra	B	4
2	Agartala	D	1
3	Ahmedabad	A	7
4	Ahmednagar	C	3
5	Aizwal	D	2
6	Ajmer	C	4
7	Akola	C	4
8	Aligarh	C	3
9	Allahabad	B	4
10	Amritsar	B	4
11	Asansol	B	2
12	Aurangabad	C	4
13	Bareilly	C	4
14	Bengaluru	A	8
15	Bharuch	D	1
16	Bhopal	B	4
17	Bhubaneshwar	C	4
18	Bikaner	C	4
19	Bilaspur	C	3
20	Chandigarh	C	4
21	Chennai	A+	8
22	Cochin	B	4
23	Coimbatore	B	4
24	Delhi	A+	9
25	Dehradun	C	1
26	Dhule	C	3
27	Erode	C	2
28	Gangtok	D	2
29	Gorakhpur	C	4
30	Gulbarga	C	1
31	Guwahati	C	4
32	Gwalior	C	4
33	Hissar	D	4
34	Hubli - Dharwad	C	2
35	Hyderabad	A	8

### Annexure 5.3 (Contd.)

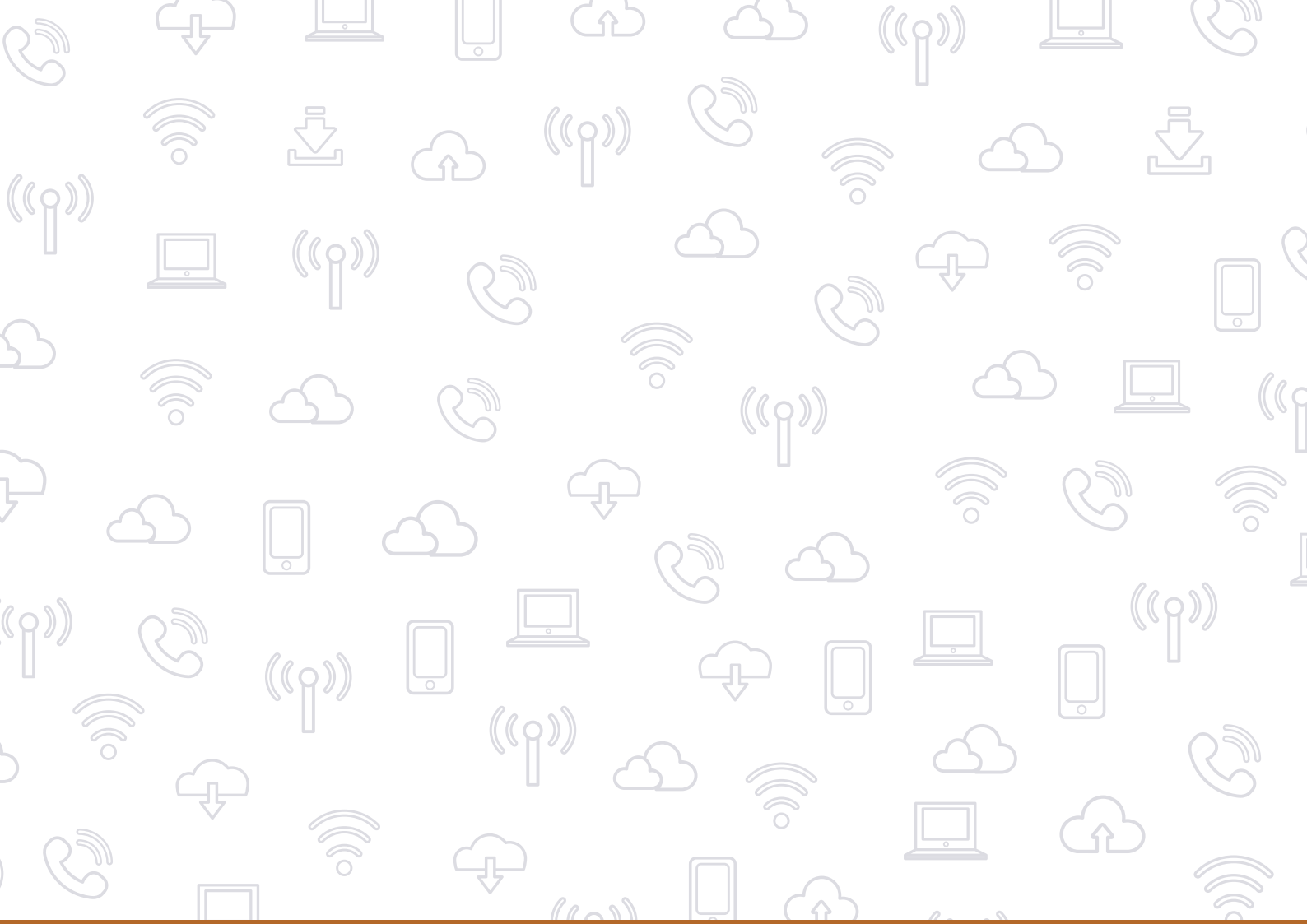
Sl. No.	Name of City	Category	Number of operational channels
36	Itanagar	D	1
37	Indore	B	4
38	Jabalpur	B	4
39	Jaipur	A	6
40	Jalandhar	C	4
41	Jalgaon	C	4
42	Jammu	C	3
43	Jamshedpur	B	4
44	Jhansi	C	4
45	Jodhpur	C	4
46	Junagarh	D	1
47	Kannur	C	3
48	Kanpur	A	6
49	Karnal	D	3
50	Kolhapur	C	4
51	Kolkata	A+	8
52	Kota	C	4
53	Kozhikode	C	4
54	Lucknow	A	6
55	Madurai	B	4
56	Mangalore	C	3
57	Mumbai	A+	9
58	Muzaffarpur	C	4
59	Mysore	C	2
60	Nagpur	A	6
61	Nanded	C	3
62	Nasik	C	4
63	Nellore	C	1
64	Panaji	D	2
65	Patiala	C	4
66	Patna	B	4
67	Puducherry	C	4
68	Pune	A	6
69	Raipur	C	3
70	Rajahmundry	C	2
71	Rajkot	B	4
72	Ranchi	C	4



# Annexure 5.3 (Contd.)

Sl. No.	Name of City	Category	Number of operational channels
73	Rourkela	C	3
74	Sangli	C	5
75	Salem	C	2
76	Shillong	D	3
77	Shimla	D	3
78	Sholapur	C	4
79	Siliguri	C	3
80	Srinagar	C	4
81	Surat	A	6
82	Thiruvananthapuram	C	4
83	Thrissur	C	3
84	Tiruchy	C	3
85	Tirunelveli	C	3
86	Tirupati	C	2
87	Tuticorin	C	2
88	Udaipur	C	4
89	Vadodra	B	4
90	Varanasi	B	5
91	Vellore	C	2
92	Vijayawada	B	2
93	Vishakapatnam	B	3
94	Warrangal	C	2
95	Jamnagar	C	1
96	Mehsana	D	1
97	Palampur	D	1
Total Number of Channels			355

Source:: As reported by Private FM Radio Service Providers to TRAI



## **Telecom Regulatory Authority of India**

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