



Telecom Regulatory Authority of India

Yearly Performance Indicators of Indian Telecom Sector (Second Edition) 2017

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Mahanagar Doorsanchar Bhawan,
Jawahar Lal Nehru Marg, New Delhi-110002
Tel: +91-11- 23230752, Fax: +91-11- 23236650
Website: www.trai.gov.in

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Snapshot

(Data As on 31st December, 2017)	
Telecom Subscribers (Wireless +Wireline)	
Total Subscribers	1,190.67 Million
% change over the previous year	3.38%
Urban Subscribers	688.25 Million
Rural Subscribers	502.42 Million
Market share of Private Operators	89.31%
Market share of PSU Operators	10.69%
Teledensity	91.90
Urban Teledensity	168.29
Rural Teledensity	56.66
Wireless Subscribers	
Total Wireless Subscribers	1,167.44 Million
% change over the previous year	3.55%
Urban Subscribers	668.44 Million
Rural Subscribers	499.00 Million
GSM Subscribers	1,162.20 Million
CDMA Subscribers	5.24 Million
Market share of Private Operators	90.45%
Market share of PSU Operators	9.55%
Teledensity	90.11
Urban Teledensity	163.44
Rural Teledensity	56.28
Wireline Subscribers	
Total Wireline Subscribers	23.23 Million
% change over the previous year	-4.79%
Urban Subscribers	19.81 Million
Rural Subscribers	3.42 Million
Market share of Private Operators	31.97%
Market share of PSU Operators	68.03%
Teledensity	1.79
Urban Teledensity	4.84
Rural Teledensity	0.39
No. of Village Public Telephones (VPT)	2,02,395
No. of Public Call Office (PCO)	3,93,483

Internet/Broadband Subscribers	
Total Internet Subscribers	445.96 Million
% change over previous year	13.91%
Narrowband subscribers	83.09 Million
Broadband subscribers	362.87 Million
Wired Internet Subscribers	21.28 Million
Wireless Internet Subscribers	424.67 Million
Urban Internet Subscribers	313.92 Million
Rural Internet Subscribers	132.03 Million
Total Internet Subscribers per 100 population	34.42
Urban Internet Subscribers per 100 population	76.76
Rural Internet Subscribers per 100 population	14.89
Telecom Financial Data for the Calendar Year-2017	
Gross Revenue (GR) during the year 2017	₹ 2,55,655 Crore
% change in GR over the previous year	-8.56%
Adjusted Gross Revenue (AGR) during the year 2017	₹ 1,60,814 Crore
% change in AGR over the previous year	-18.87%
Share of Public sector undertakings in Access AGR	10.23%
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	877
Number of Pay TV Channels	304
Number of private FM Radio Stations (excluding All India Radio)	326
Number of Pay Subscribers Active with Private DTH Operators	67.56 Million
Number of Operational Community Radio Stations	214
Number of pay DTH Operators	6
Revenue & Usage Parameters (for the Calendar Year 2017)	
Monthly ARPU GSM Full Mobility Service	₹ 81
Monthly ARPU CDMA Full Mobility Service	₹ 120
Minutes of Usage (MOU) per subscriber per month - GSM Full Mobility Service	441 Minutes
Minutes of Usage (MOU) per subscriber per month - CDMA Full Mobility Service	226 Minutes
Average Revenue for data per subscribers per month for GSM Service (including LTE)	₹ 27.50
Average Revenue for data per subscribers per month for CDMA Service	₹ 64.46

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the year 2017. It provides a broad perspective on the Telecom Services 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.

2. 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 under the link <http://www.trai.gov.in/release-publication/reports/performance-indicators-reports>). Any suggestion or any clarification pertaining to this report, Pr. Advisor (F&EA), TRAI may be contacted on Tel. +91-11-23221856, Fax. +91-11-23235249 and e-mail: skmishra.trai@nic.in.

Chapter 1 :

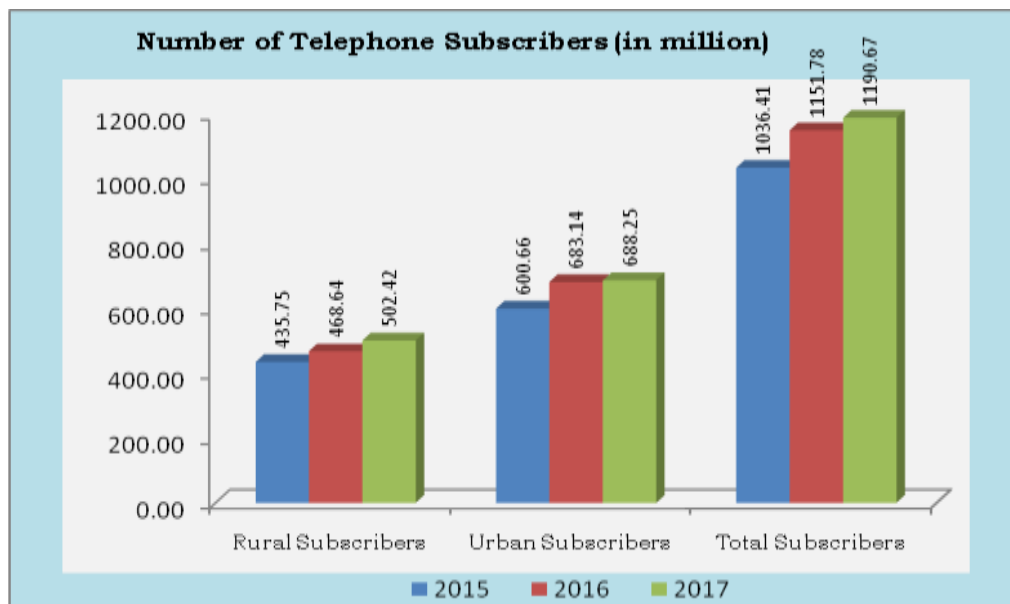
Subscription Data

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- 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

1. The number of telephone subscribers in India increased from 1,151.78 million at the end of Dec-16 to 1,190.67 million at the end of Dec-17, registering a yearly growth rate of 3.38%. The overall Teledensity in India increased from 89.90 at the end of Dec-16 to 91.90 at the end of Dec-17 at the growth rate of 2.22%.

Chart 1.1: Trends of Telephone Subscriptions in India



2. Telephone subscription in Urban Areas increased from 683.14 million at the end of Dec-16 to 688.25 million at the end of Dec-17 at the yearly growth rate of 0.75%. However, Urban Teledensity declined from 170.15 at the end of Dec-16 to 168.29 at the end of Dec-17 with yearly decline rate of 1.10%.
3. Rural telephone subscription increased from 468.64 million at the end of Dec-16 to 502.42 million at the end of Dec-17 at the yearly growth rate of 7.21%. Rural Teledensity also increased from 53.27 at the end of Dec-16 to 56.66 at the end of Dec-17 with yearly growth rate of 6.36%.

Chart 1.2: Trends of Tele-density in India

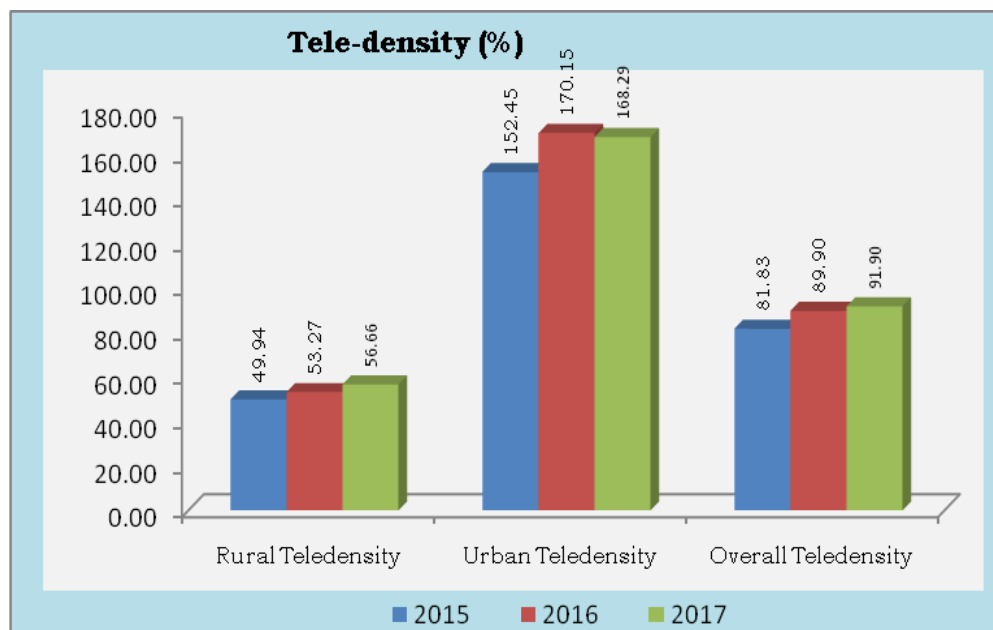
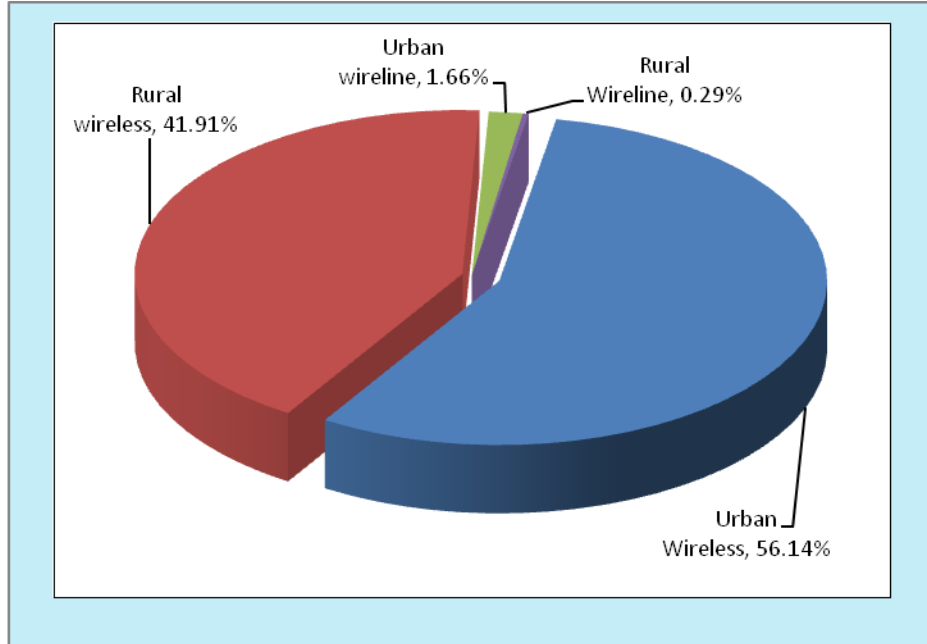


Table 1.1: Subscriber Base & Teledensity - Rural & Urban

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

4. Out of the total telephone subscription, the shares of Rural telephone subscription increased from 40.69% at the end of Dec-16 to 42.20% at the end of Dec-17. However, share of Urban telephone subscription in total telephone subscription, declined from 59.31% at the end of Dec-16 to 57.80% at the end of Dec-17. The following chart depicts the rural-urban market share of telephone subscribers at the end of Dec-17.

Chart 1.3: Composition of Telephone Subscribers



5. Out of 1,190.67 million of total telephone subscriber, the number of Wireless Telephone subscribers is 1,167.44 million and the number of Wireline Telephone subscribers is 23.23 million at the end of Dec-17. The following chart depicts the market share of Wireless and Wireline subscribers in India.

Chart 1.4: Composition of Market Share – Wireless & Wireline Subscribers

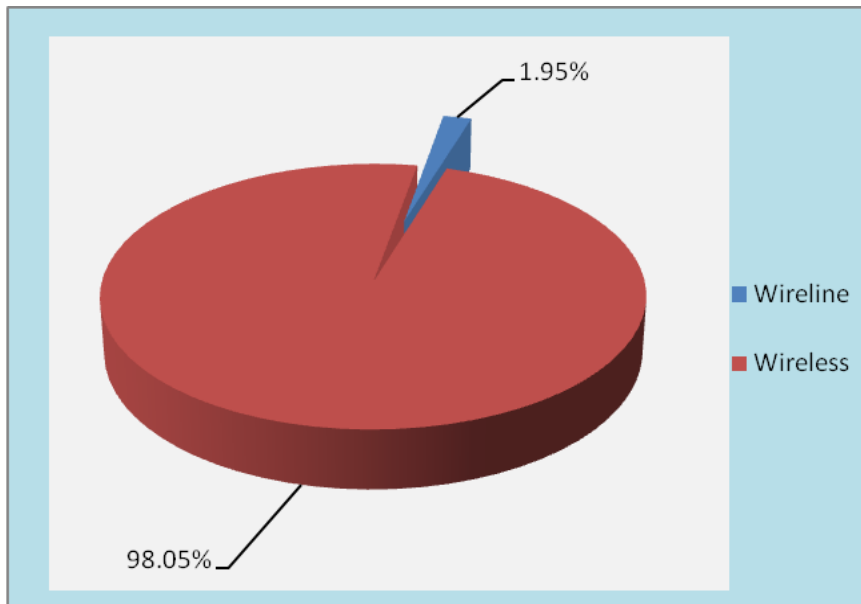


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

Service Area	Subscribers (million)			
	Dec-16	Dec-17	Yeraly Net Additions	Rate of Yearly Growth (%)
Andhra Pradesh	83.29	85.84	2.55	3.07
Assam	21.07	22.74	1.67	7.93
Bihar	82.57	84.56	1.99	2.40
Delhi	54.09	58.77	4.68	8.65
Gujarat	69.73	71.89	2.16	3.09
Haryana	24.29	25.77	1.48	6.11
Himachal Pradesh	10.05	10.70	0.64	6.41
Jammu & Kashmir	11.41	13.24	1.83	16.06
Karnataka	69.35	69.45	0.10	0.15
Kerala	40.02	43.00	2.98	7.45
Madhya Pradesh	67.51	74.08	6.57	9.72
Maharashtra	92.64	95.15	2.50	2.70
Mumbai	37.66	41.35	3.70	9.81
North East	12.41	12.93	0.51	4.12
Orissa	33.08	34.30	1.21	3.66
Punjab	37.40	38.96	1.56	4.16
Rajasthan	65.63	66.42	0.80	1.22
T.N. (incl. Chennai)	89.07	89.41	0.33	0.37
U.P.(E)	102.10	101.26	-0.84	-0.82
U.P.(W)	63.61	62.68	-0.93	-1.46
Kolkata	29.01	29.89	0.88	3.04
West Bengal	55.77	58.29	2.52	4.51
All India	1,151.78	1,190.67	38.89	3.38

6. During the year 2017, Jammu & Kashmir service area has recorded the highest growth rate of 16.06% followed by Mumbai service area (9.81%). However, two service areas, U.P.(East) and U.P.(West) showed decline in telephone subscriber base during the year 2017.

Table 1.3: Service Area wise Rural-Urban Subscribers

Service Area	Subscribers (million) as on 31 st Dec-17			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	85.84	38.39	47.45	44.72
Assam	22.74	14.28	8.46	62.81
Bihar	84.56	49.32	35.24	58.33
Delhi	58.77	2.76	56.01	4.70
Gujarat	71.89	27.26	44.63	37.92
Haryana	25.77	11.25	14.52	43.65
Himachal Pradesh	10.70	7.53	3.17	70.38
Jammu & Kashmir	13.24	6.41	6.83	48.38
Karnataka	69.45	22.75	46.70	32.76
Kerala	43.00	19.73	23.27	45.89
Madhya Pradesh	74.08	33.45	40.63	45.15
Maharashtra	95.15	43.82	51.33	46.06
Mumbai	41.35	1.72	39.63	4.17
North East	12.93	6.61	6.31	51.17
Orissa	34.30	20.52	13.78	59.83
Punjab	38.96	14.06	24.90	36.09
Rajasthan	66.42	33.01	33.41	49.70
T.N. (incl. Chennai)	89.41	26.02	63.39	29.10
U.P.(E)	101.26	53.69	47.57	53.02
U.P.(W)	62.68	27.50	35.18	43.87
Kolkata	29.89	2.91	26.98	9.72
West Bengal	58.29	39.43	18.86	67.64
All India	1,190.67	502.42	688.25	42.20

Table 1.4 : Service Area wise Tele-density

Service Area/ States	As on 31 st December, 2016			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	54.04	195.73	93.66	59.52	189.15	95.82
Assam	46.76	154.78	64.34	51.68	154.74	68.69
Bihar	38.58	189.64	59.46	40.78	181.06	60.22
Delhi	-	-	248.19	-	-	262.14
Gujarat	69.44	162.42	108.63	72.98	161.91	110.74
Haryana	61.66	131.98	87.36	63.41	139.02	91.43
Himachal Pradesh	99.64	447.34	140.79	118.86	367.89	148.66
J&K	61.40	167.25	91.08	70.60	191.27	104.70
Karnataka	55.14	196.39	110.39	59.31	186.89	109.64
Kerala	64.45	250.13	111.41	73.11	255.17	119.08
Madhya Pradesh	40.89	126.02	64.35	43.54	137.83	69.69
Maharashtra (incl. Mumbai)*	66.59	146.81	105.69	71.78	148.38	109.42
North East	58.69	175.31	88.24	62.51	173.66	90.93
Orissa	52.87	189.98	77.38	58.14	176.96	79.61
Punjab	73.42	178.54	119.97	80.90	176.18	123.63
Rajasthan	58.18	185.35	88.97	58.33	184.28	88.89
Tamil Nadu (incl. Chennai)	88.07	148.60	124.76	94.37	143.37	124.55
Uttar Pradesh (incl. UPE & UPW)	44.07	163.53	71.53	44.91	152.25	69.72
West Bengal (incl. Kolkata)*	57.72	165.93	88.85	61.82	165.28	91.65
All India	53.27	170.15	89.90	56.66	168.29	91.90

* 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 118.86 followed by Tamil Nadu service area (94.37) at the end of Dec-17. Bihar service area continues to have the lowest Rural Tele-density of 40.78 in the same period.

Table 1.5 : Service Provider-wise growth in Subscriber base

Service Provider	Subscriber base (in million)			Rate of Growth (%)	Market Share as on Dec-16 (%)	Market Share as on Dec-17 (%)
	Dec-16	Dec-17	Yearly Net Addition/decline			
Bharti	269.68	294.03	24.34	9.03	23.41	24.69
Vodafone	204.82	212.73	7.91	3.86	17.78	17.87
IDEA	190.52	196.50	5.98	3.14	16.54	16.50
Reliance Comm. Group	87.72	34.30*	-59.36	-63.38	7.62	2.88
Sistema	5.94				0.52	
Tata	54.71	38.55	-16.15	-29.53	4.75	3.24
Aircel	90.88	85.00	-5.87	-6.46	7.89	7.14
Quadrant	3.26	0.25	-3.01	-92.32	0.28	0.02
Sistema	5.94	-	-5.94	-	0.52	-
Telenor	54.47	41.91	-12.56	-23.06	4.73	3.52
Reliance Jio	72.16	160.09	87.93	121.86	6.26	13.45
BSNL	110.53	120.35	9.82	8.89	9.60	10.11
MTNL	7.10	6.96	-0.14	-2.01	0.62	0.58
Total	1,151.78	1,190.67	38.89	3.38	100	100

*Note: M/s Sistema Shyam has been merged with M/s Reliance Communications Ltd.

8. M/s Bharti Airtel continued to be the market leader with 24.69% market share of total telephone subscription at the end of Dec-17. M/s Reliance Jio Infocomm Ltd added maximum number of telephone subscribers (87.93 million net addition) during the year.

Table 1.6 : Service provider-wise Market Share of rural subscribers in their total subscribers – as on 31st Dec-17

Service Provider	No. of Total Subscribers (in millions)	No. of Rural Subscribers (in millions)	Percentage of Rural subscribers	Market share of Rural subscribers (%)
Bharti	294.03	147.89	50.30	29.44
Vodafone	212.73	114.88	54.01	22.87
IDEA	196.50	106.05	53.97	21.11
Reliance Comm. Group	34.30	4.89	14.27	0.97
Tata	38.55	6.47	16.78	1.29
Aircel	85.00	30.81	36.25	6.13
Quadrant	0.25	0.06	22.16	0.01
Telenor	41.91	11.93	28.45	2.37
Reliance Jio	160.09	41.08	25.66	8.18
BSNL	120.35	38.31	31.83	7.62
MTNL	6.96	0.05	0.69	0.01
Total	1,190.67	502.42	42.20	100

9. M/s Vodafone is the service provider with highest proportion of rural subscribers (54.01%), followed by Idea Cellular (53.97%) to their total number of telephone subscribers at the end of Dec-17.

Section B : Wireless Service

Table 1.7: List of Cellular Mobile (GSM, CDMA & LTE) Service Providers currently providing service [As on 31st December, 2017]

Sl.No.	Service Provider	Area of Operation
1	Bharti Airtel	All India
2	Aircel Group	All India
3	Reliance Communications	All India (except Assam & NE)
4	Reliance Telecom Ltd	Kolkata, MP, WB, HP, Bihar, Orissa, Assam & NE
5	Vodafone (India) Ltd	All India
6	Tata Teleservices	All India except Assam, NE & J&K
7	IDEA Cellular Ltd	All India
8	BSNL	All India (except Delhi & Mumbai)
9	MTNL	Delhi & Mumbai
10	Telenor Communications (India) Pvt. Ltd.	MH, Gujarat, AP, UP(W), UP(E), Bihar
11	Reliance Jio Infocom Ltd	All India

10. Complete list of licensed Cellular (GSM & CDMA) Service providers as on 31st December, 2017 is at Annexure -1.1.

11. Total Wireless (GSM+CDMA) subscriber base increased from 1,127.37 million at the end of Dec-16 to 1,167.44 million at the end of Dec-17, thereby showing a yearly growth rate of 3.55%. During the year, 2017, net addition of 40.06 million wireless subscribers was recorded.

12. The Rural Wireless subscribers increased from 464.78 million at the end of Dec-16 to 499.00 million at the end of Dec-17 with yearly growth rate of 7.36%

13. The urban wireless subscribers increased from 662.60 million at the end of Dec-16 to 668.44 million at the end of Dec-17 with yearly growth rate of 0.88%.

Chart 1.5: Trend of Wireless Subscriber Base

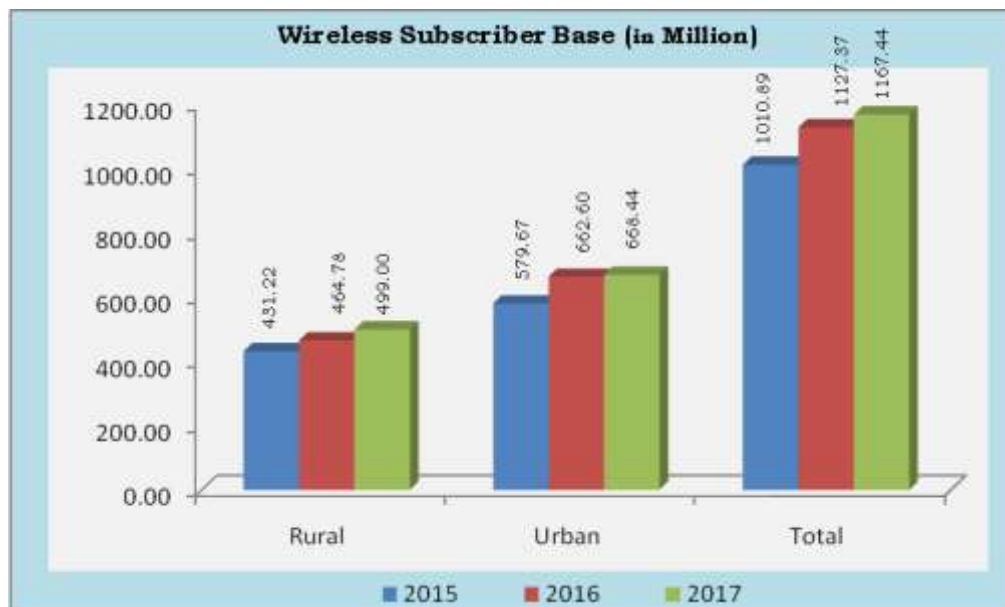


Table 1.8: Wireless Subscriber Base & Teledensity - Rural & Urban

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

14. Wireless Teledensity increased from 88.00 at the end of Dec-16 to 90.11 at the end of Dec-17. Rural wireless Teledensity increased from 52.44 to 56.28, however Urban wireless Teledensity declined from 165.04 to 163.44 during the same period.
15. The share of rural wireless subscription increased from 41.23% at the end of Dec-16 to 42.74% at the end of Dec-17. However, share of urban wireless subscription declined from 58.77% at the end of Dec-16 to 57.26% at the end of Dec-17.

Chart 1.6: Composition of Wireless Market Share – Rural & Urban Subscribers

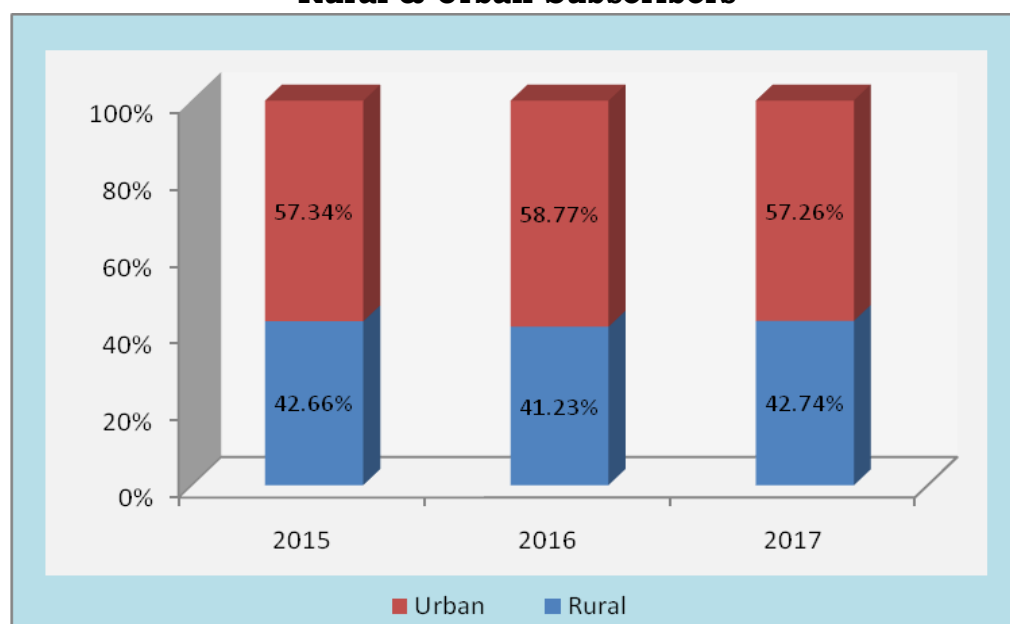


Table 1.9: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share □ Dec-16 (%)	Market Share □ Dec-17 (%)
	Dec-16	Dec-17	Net Additions			
Bharti	265.85	290.11	24.26	9.13	23.58	24.85
Vodafone	204.69	212.53	7.84	3.83	18.16	18.20
IDEA	190.52	196.50	5.98	3.14	16.90	16.83
Reliance Comm. Group	86.54	33.17*	-59.26	-64.11	7.68	2.84
Sistema	5.88				0.52	
Tata	52.98	36.69	-16.28	-30.74	4.70	3.14
Aircel	90.88	84.93	-5.94	-6.54	8.06	7.28
Quadrant	3.00	-	-3.00	-	0.27	0.00
Telenor	54.47	41.91	-12.56	-23.06	4.83	3.59
BSNL	96.79	107.92	11.13	11.50	8.59	9.24
MTNL	3.63	3.58	-0.04	-1.13	0.32	0.31
Reliance Jio	72.16	160.09	87.93	121.86	6.40	13.71
Total	1,127.37	1,167.44	40.06	3.55	100	100

*M/s Sistema Shyam has been merged with M/s Reliance Communications Ltd.

16. Bharti remains the leading service provider with 290.11 million wireless subscribers at the end of Dec-17, followed by Vodafone (212.53 million).

Table 1.10: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Dec-16	Dec-17	Net Additions	Rate of change (%)
Andhra Pradesh	81.65	84.32	2.66	3.26
Assam	20.91	22.60	1.69	8.07
Bihar	82.26	84.29	2.03	2.47
Delhi	50.88	55.55	4.67	9.17
Gujarat	68.38	70.59	2.21	3.23
Haryana	23.94	25.47	1.52	6.37
Himachal Pradesh	9.90	10.57	0.67	6.75
Jammu & Kashmir	11.27	13.12	1.85	16.40
Karnataka	67.13	67.20	0.07	0.11
Kerala	37.91	41.01	3.10	8.19
Madhya Pradesh	66.48	73.10	6.62	9.96
Maharashtra	90.77	93.38	2.62	2.88
Mumbai	34.63	38.33	3.70	10.69
North East	12.29	12.81	0.52	4.23
Orissa	32.79	34.02	1.23	3.75
Punjab	36.38	38.07	1.69	4.64
Rajasthan	64.88	65.81	0.93	1.44
T.N. (incl. Chennai)	86.54	87.03	0.49	0.57
U.P.(E)	101.60	100.77	-0.83	-0.81
U.P.(W)	63.21	62.32	-0.88	-1.39
Kolkata	28.14	29.07	0.92	3.28
West Bengal	55.44	58.00	2.56	4.63
All India	1,127.37	1,167.44	40.06	3.55

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

Table 1.11: Service Area wise Wireless Rural-Urban Subscriber base

Service Area	Subscriber base (in million) – Dec-17			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	84.32	38.13	46.19	45.22
Assam	22.60	14.26	8.34	63.09
Bihar	84.29	49.25	35.04	58.42
Delhi	55.55	2.76	52.79	4.97
Gujarat	70.59	27.07	43.52	38.35
Haryana	25.47	11.19	14.27	43.95
Himachal Pradesh	10.57	7.45	3.12	70.50
Jammu & Kashmir	13.12	6.39	6.73	48.71
Karnataka	67.20	22.59	44.61	33.62
Kerala	41.01	18.53	22.48	45.19
Madhya Pradesh	73.10	33.34	39.76	45.61
Maharashtra	93.38	43.51	49.88	46.59
Mumbai	38.33	1.72	36.60	4.50
North East	12.81	6.59	6.22	51.45
Orissa	34.02	20.46	13.57	60.13
Punjab	38.07	13.85	24.21	36.39
Rajasthan	65.81	32.92	32.89	50.02
T.N. (incl. Chennai)	87.03	25.69	61.34	29.52
U.P.(E)	100.77	53.62	47.15	53.21
U.P.(W)	62.32	27.46	34.86	44.06
Kolkata	29.07	2.91	26.16	10.00
West Bengal	58.00	39.30	18.70	67.76
All India	1,167.44	499.00	668.44	42.74

Table 1.12 : Service Area wise Wireless Tele-density

Service Area	As on 31 st December, 2016			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	53.56	190.40	91.82	59.11	184.12	94.12
Assam	46.66	152.36	63.86	51.59	152.63	68.27
Bihar	38.51	188.42	59.23	40.71	180.05	60.03
Delhi	-	-	233.47	-	-	247.78
Gujarat	68.91	158.17	106.53	72.49	157.89	108.75
Haryana	61.25	129.26	86.11	63.09	136.61	90.34
H.P.	98.13	440.60	138.66	117.64	362.03	146.89
J&K	61.21	163.92	90.01	70.46	188.37	103.77
Karnataka	54.65	188.11	106.85	58.89	178.51	106.08
Kerala	59.57	241.25	105.52	68.65	246.50	113.56
M.P.	40.73	122.86	63.36	43.40	134.88	68.77
Maharashtra (incl. Mumbai)*	66.05	139.21	101.71	71.29	141.07	105.58
North East	58.45	172.61	87.37	62.30	171.18	90.13
Orissa	52.69	187.05	76.71	57.97	174.23	78.98
Punjab	71.96	172.97	116.69	79.72	171.35	120.81
Rajasthan	57.95	181.87	87.95	58.17	181.40	88.07
Tamil Nadu (incl. Chennai)	86.79	143.57	121.21	93.17	138.75	121.24
Uttar Pradesh (incl. UPE&UPW)*	44.01	162.05	71.15	44.85	150.89	69.36
West Bengal (incl. Kolkata)*	57.51	162.10	87.60	61.64	161.74	90.50
All India	52.84	165.04	88.00	56.28	163.44	90.11

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

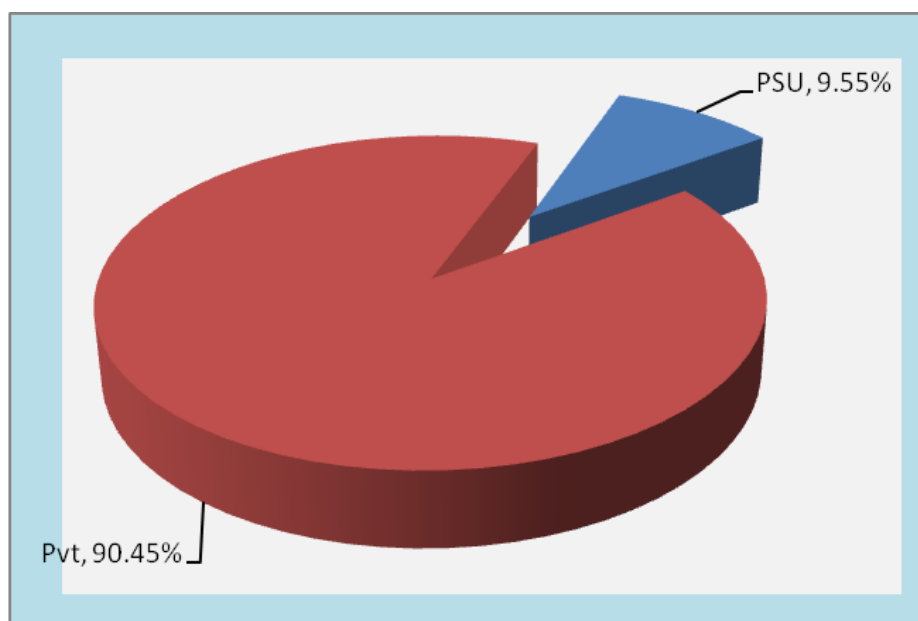
Notes:

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 1.13 : 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 (%)
Bharti	290.11	147.89	50.98	29.64
Vodafone	212.53	114.88	54.06	23.02
IDEA	196.50	106.05	53.97	21.25
Reliance Comm.	33.17	4.89	14.75	0.98
Tata	36.69	6.42	17.48	1.29
Aircel	84.93	30.81	36.28	6.18
Telenor	41.91	11.93	28.45	2.39
BSNL	107.92	35.00	32.43	7.01
MTNL	3.58	0.05	1.34	0.01
Relianc Jio	160.09	41.08	25.66	8.23
Total	1,167.44	499.00	42.74	100

Chart 1.7: Composition of Public (PSUs) and Private sectors in Wireless Subscription as on 31.12.2017



Section C : Wireline Service

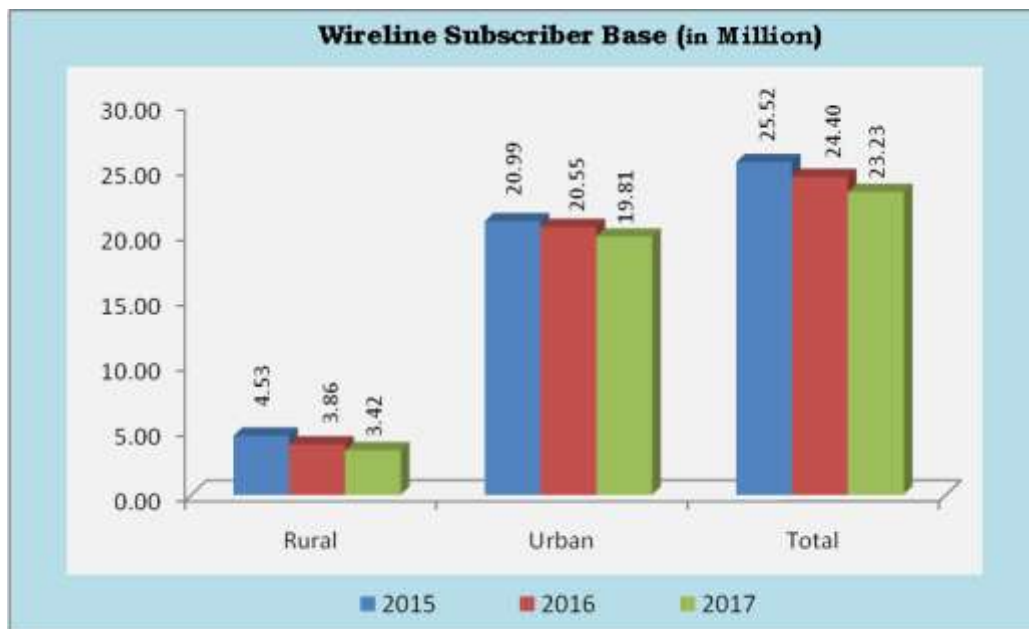
Table 1.14 : Service Providers providing Wireline Service

[As on 31st December, 2017]

Sl. No.	Name of the Service Provider	Area of Operation
1	Aircel	Andhra Pradesh (excluding Telangana), Delhi, Gujarat, Karnataka, Kolkata, Maharashtra (Excluding Mumbai & Goa) Mumbai, Rajasthan, UP-East, UP-West (Excluding Uttarakhand)
2	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).
3	BSNL	All India except Delhi & Mumbai
4	MTNL	Delhi & Mumbai
5	Quadrant Televentures Ltd.	Punjab
6	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)
7	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
8	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)

18. Total Wireline subscriber base declined from 24.40 million at the end of Dec-16 to 23.23 million at the end of Dec-17 with yearly decline rate of 4.79%.
19. Detailed table on service provider wise wireline subscriber base in each service area is at Annexure-1.2
20. Rural wireline subscriber base has shown decline of 11.37%, from 3.86 Million at the end of Dec-16 to 3.42 Million at the end of Dec-17. During the same period, Urban wireline subscription also recorded decline of 3.56%, from 20.55 million to 19.81 million.

Chart 1.8: Wireline Subscriber Base



21. Overall Wireline Teledensity declined from 1.90 at the end of Dec-16 to 1.79 at the end of Dec-17. During the same period Urban wireline teledensity declined from 5.12 to 4.84 and Rural wireline teledensity also declined from 0.44 to 0.39.

Table 1.15 : Wireline Subscriber Base & Teledensity - Rural & Urban

Year ending	Subscriber Base (in million)			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

Chart 1.9: Wireline Tele-density

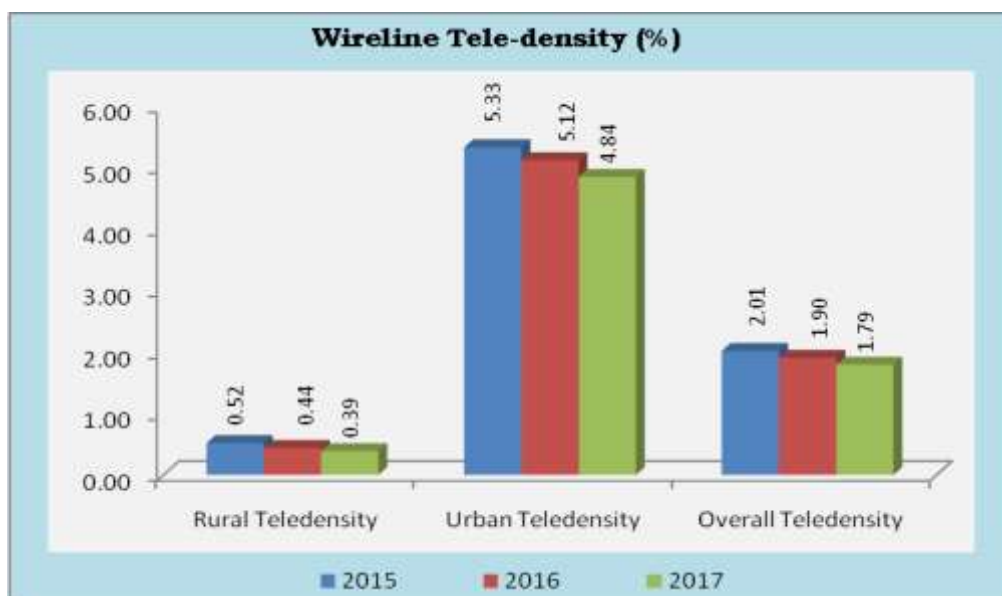


Table 1.16 : Service Provider wise growth in Wireline Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share-Dec-16 (%)	Market share-Dec-17 (%)
	Dec-16	Dec-17	Net Addition			
BSNL	13.74	12.43	-1.31	-9.51	56.29	53.50
Bharti	3.83	3.91	0.08	2.17	15.69	16.84
MTNL	3.48	3.38	-0.10	-2.93	14.25	14.53
Tata	1.73	1.86	0.13	7.60	7.09	8.01
Reliance	1.18	1.14	-0.10	-8.06	4.82	4.90
Sistema	0.06				0.24	
Quadrant	0.26	0.25	-0.01	-4.48	1.07	1.08
Vodafone	0.13	0.20	0.06	48.55	0.54	0.85
Aircel	-	0.07	0.07	-	-	0.29
Total	24.40	23.23	-1.17	-4.79	100	100

22. M/s BSNL is the leading operator in wireline service with 12.43 million subscriber at the end of Dec-17 followed by Bharti with 3.91 million subscribers.
23. In total wireline subscriber base, PSUs hold 68.03% of market share at the end of Dec-17 as against 70.54% at the end of Dec-16. However, both PSUs, BSNL and MTNL showed decline in their wireline subscriber base during the year 2017.

Table 1.17 : Service Provider wise Subscriber base (Rural - Urban)

Service Provider	Subscriber Base (million) Dec-17			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	3.31	9.12	12.43	26.62
Bharti	--	3.91	3.91	--
MTNL	--	3.38	3.38	--
Tata	0.05	1.81	1.86	2.94
Reliance	0.002	1.14	1.14	0.15
Quadrant	0.06	0.19	0.25	22.16
Vodafone	--	0.20	0.20	--
Sistema	--	0.07	0.07	--
Total	3.42	19.81	23.23	14.72

Chart 1.10: Composition of Wireline Subscriber base - Rural & Urban

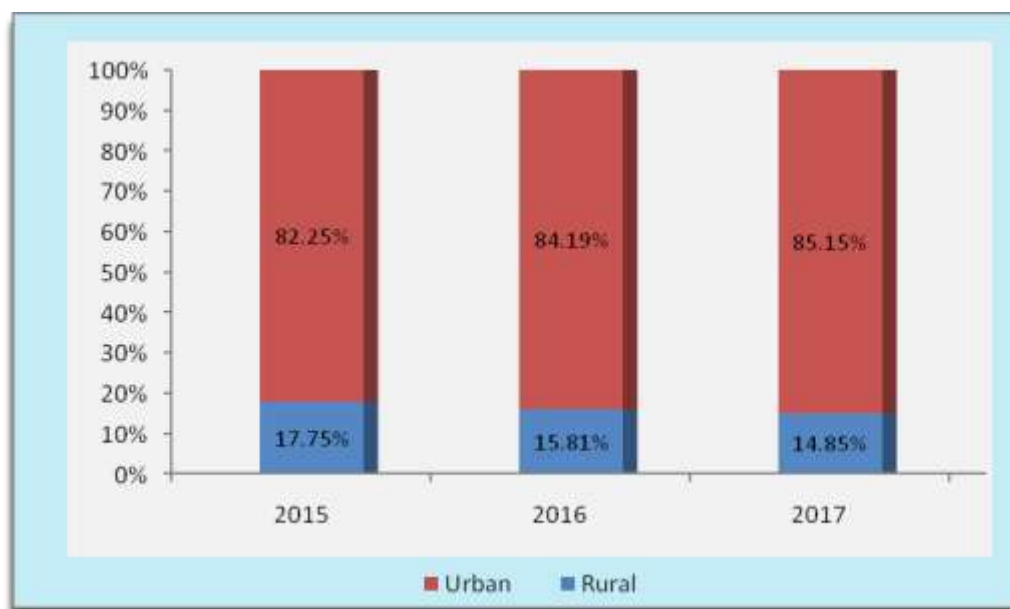


Table 1.18: Service Area wise Wireline Subscriber base & Net Additions (in million)

Service Area	Dec-16	Dec-17	Net Additions	Rate of Change (%)
Andhra Pradesh	1.63	1.52	-0.11	-6.70
Assam	0.16	0.14	-0.02	-10.60
Bihar	0.32	0.27	-0.05	-14.55
Delhi	3.21	3.22	0.01	0.34
Gujarat	1.35	1.29	-0.05	-4.00
Haryana	0.35	0.31	-0.04	-11.77
Himachal Pradesh	0.15	0.13	-0.02	-15.84
Jammu & Kashmir	0.13	0.12	-0.02	-12.94
Karnataka	2.22	2.25	0.03	1.38
Kerala	2.12	1.99	-0.12	-5.84
Madhya Pradesh	1.04	0.98	-0.06	-5.58
Maharashtra	1.88	1.76	-0.11	-5.97
Mumbai	3.03	3.03	-0.01	-0.20
North East	0.12	0.11	-0.01	-7.15
Orissa	0.29	0.27	-0.02	-5.80
Punjab	1.02	0.89	-0.13	-13.00
Rajasthan	0.75	0.62	-0.14	-18.02
T.N. (incl. Chennai)	2.54	2.38	-0.16	-6.27
U.P.(E)	0.50	0.49	-0.01	-2.47
U.P.(W)	0.40	0.36	-0.05	-11.25
Kolkata	0.86	0.82	-0.04	-5.04
West Bengal	0.33	0.28	-0.05	-14.72
All India	24.40	23.23	-1.17	-4.79

24. Delhi and Karnataka service areas showed positive growth in wireline subscriber base during year 2017. All other service areas showed decline rate during the same period.

**Table 1.19: Service Area wise Wireline Rural-Urban Subscriber Base
(in million)**

Service Area	Total Subscribers	Rural Subscribers	Urban Subscribers	% of Rural Subscribers
Andhra Pradesh	1.52	0.26	1.26	17.19
Assam	0.14	0.03	0.12	17.88
Bihar	0.27	0.07	0.20	27.48
Delhi	3.22	0.00	3.22	0.00
Gujarat	1.29	0.18	1.11	14.17
Haryana	0.31	0.06	0.25	18.48
Himachal Pradesh	0.13	0.08	0.05	60.55
Jammu & Kashmir	0.12	0.01	0.10	11.35
Karnataka	2.25	0.16	2.09	7.13
Kerala	1.99	1.20	0.79	60.37
Madhya Pradesh	0.98	0.11	0.87	11.31
Maharashtra	1.76	0.31	1.45	17.74
Mumbai	3.03	0.00	3.03	0.00
North East	0.11	0.02	0.09	20.40
Orissa	0.27	0.06	0.21	22.19
Punjab	0.89	0.21	0.68	23.21
Rajasthan	0.62	0.09	0.52	15.14
T.N. (incl. Chennai)	2.38	0.33	2.05	13.93
U.P.(E)	0.49	0.07	0.42	13.81
U.P.(W)	0.36	0.04	0.32	10.14
Kolkata	0.82	0.00	0.82	0.00
West Bengal	0.28	0.12	0.16	42.88
All India	23.23	3.42	19.81	14.72

25. In the above table, it can be seen that share of rural wireline subscribers in Himachal Pradesh and Kerala service areas was more than 60% of their total wireline subscribers at the end of Dec-17.

Table 1.20: Service Area wise Wireline Teledensity

Service Area	As on 31 st December, 2016			As on 31 st December, 2017		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.48	5.33	1.84	0.41	5.03	1.70
Assam	0.10	2.42	0.48	0.09	2.11	0.43
Bihar	0.07	1.22	0.23	0.06	1.01	0.19
Delhi	-	-	14.73	-	-	14.37
Gujarat	0.53	4.25	2.10	0.49	4.03	1.99
Haryana	0.41	2.72	1.26	0.32	2.40	1.09
Himachal Pradesh	1.51	6.74	2.13	1.22	5.86	1.78
Jammu & Kashmir	0.19	3.33	1.07	0.15	2.90	0.92
Karnataka	0.49	8.28	3.54	0.42	8.38	3.56
Kerala	4.88	8.88	5.89	4.46	8.66	5.52
Madhya Pradesh	0.16	3.16	0.99	0.14	2.94	0.92
Maharashtra (incl. Mumbai)*	0.55	7.60	3.98	0.49	7.30	3.84
North East	0.24	2.70	0.87	0.22	2.48	0.80
Orissa	0.19	2.94	0.68	0.17	2.73	0.63
Punjab	1.46	5.57	3.28	1.19	4.83	2.82
Rajasthan	0.23	3.47	1.02	0.16	2.88	0.82
Tamil Nadu (incl. Chennai)	1.28	5.03	3.55	1.20	4.63	3.31
Uttar Pradesh (incl. UPE & UPW)	0.06	1.48	0.39	0.06	1.36	0.36
West Bengal (incl. Kolkata)*	0.21	3.84	1.25	0.18	3.54	1.15
All India	0.44	5.12	1.90	0.39	4.84	1.79

* Population data/projections are available state-wise only

- Note: 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 Chhathishgarh, 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)

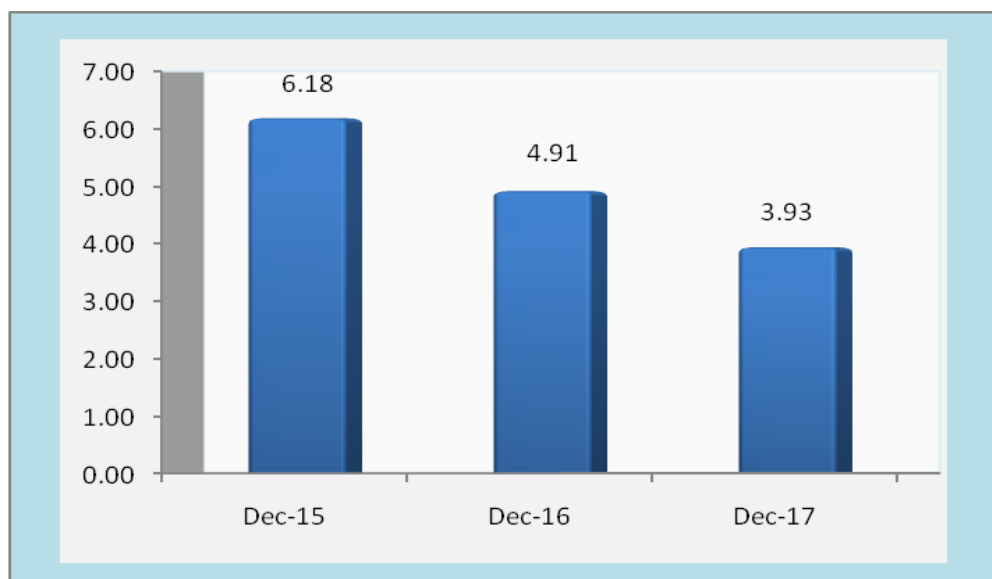
26. Total number of PCOs in the country declined from 4.91 lakh at the end of Dec-16 to 3.93 lakh at the end of Dec-17 with yearly declining rate of 19.89%. Detailed table of service provider wise PCOs is available at Annexure -1.3.

Table 1.21 : Rate of change & Market share of PCOs

Service Provider	Dec-16	Dec-17	Rate of change (%)	Market share (%) (Dec-17)
BSNL	2.96	2.36	-20.08	60.02
MTNL	1.29	1.21	-6.31	30.78
Bharti	0.15	0.13	-17.69	3.21
Quadrant	0.02	0.01	-20.05	0.36
Sistema	0.10	-	-	-
Tata	0.25	0.22	-12.54	5.62
Reliance Com	0.14	-	-	-
Total	4.91	3.93	-19.89	100

27. M/s BSNL is the market leader in term of number of PCOs with 60.02% of total number of PCOs at the end of Dec-17.

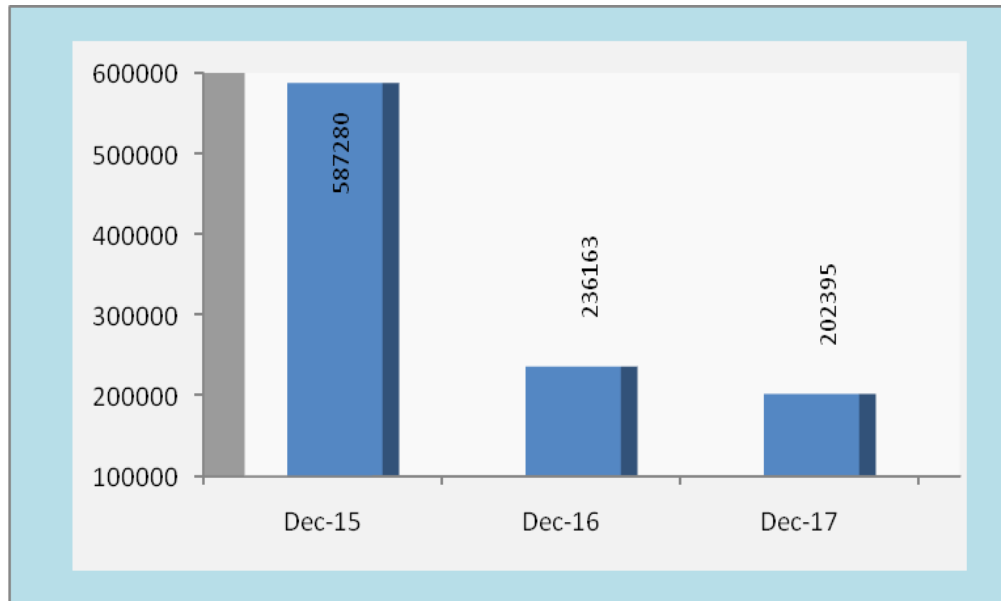
Chart 1.11: Trend of Number of PCOs in India



Village Public Telephones (VPTs)

28. There are 5,93,731 inhabited villages in India as per census 2001. At the end of Dec-17, 34.09% of the total inhabited villages in India have been connected by VPTs.
29. Number of VPTs declined from 2,36,163 at the end of Dec-16 to 2,02,395 at the end of Dec-17 with yearly decline rate of 14.30%.

Chart 1.12: Trend of Number of VPTs in India



30. Only two service providers provide VPT service in India at the year ending 2017. They are BSNL (2,01,113) with 99.37% and Tata Teleservices (1,282) with 0.63% at the end of Dec-17. Detailed table of VPT is available at Annexure -1.4.

Section D : Internet Service

31. This section summarizes information submitted by 156 operators for the year ending 2017. **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 + narrowband)

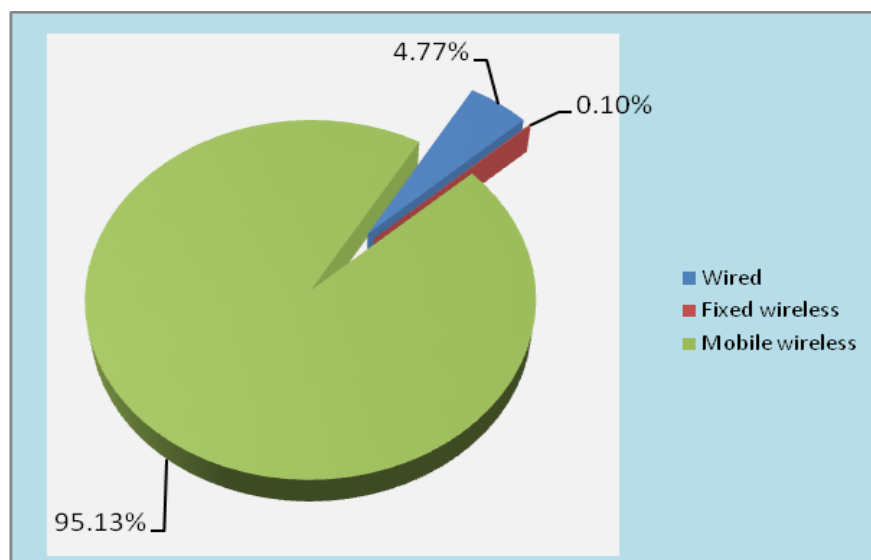
32. As per reports received from operators, total number of internet subscribers increased from 391.50 million at the end of Dec-16 to 445.96 million at the end of Dec-17 with yearly growth rate of 13.91%.
33. Wired Internet subscribers declined from 21.51 million at the end of Dec-16 to 21.28 million at the end of Dec-17 with yearly decline rate of 1.03%. However, Wireless Internet subscribers increased from 370.00 million at the end of Dec-16 to 424.67 million at the end of Dec-17 with yearly growth rate of 14.78%.
34. Number of Broadband subscribers increased from 236.09 million at the end of Dec-16 to 362.87 million at the end of Dec-17. However, the number of Narrowband subscribers declined from 155.41 million at the end of Dec-16 to 83.09 million at the end of Dec-17.

Table 1.22: 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-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17
Broadband	18.14	17.86	0.59	0.44	217.36	344.57	217.95	345.01	236.09	362.87
Narrowband	3.36	3.43	0.02	0.01	152.03	79.65	152.05	79.66	155.41	83.09
Total	21.51	21.28	0.61	0.45	369.39	424.22	370.00	424.67	391.50	445.96

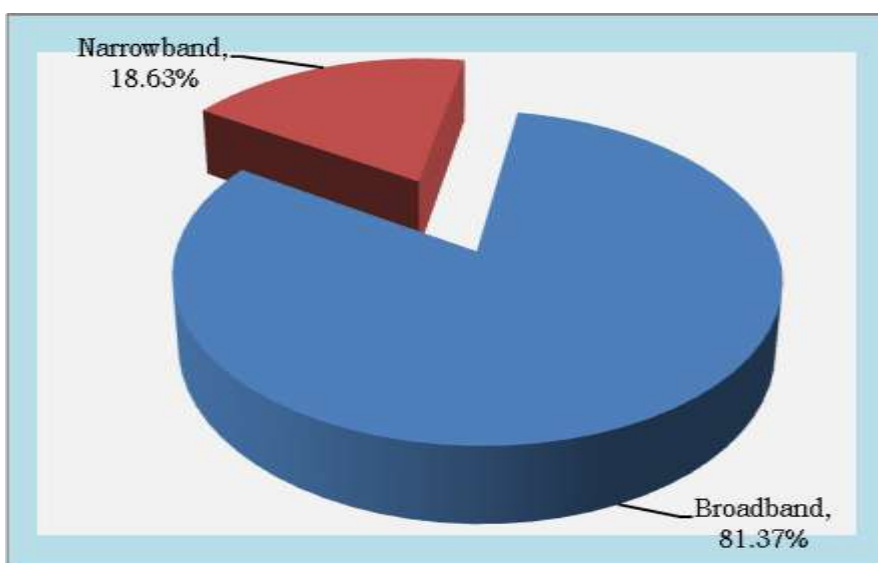
35. The following charts present the composition of Internet Subscribers by mode of access and composition of Broadband & Narrowband subscription.

Chart 1.13: Composition of Internet subscription as on 31st December, 2017



36. More than 95% of total internet subscribers use wireless mobile technology to access internet services.

Chart 1.14 : Composition of Broadband & Narrowband subscription as on 31st December, 2017



37. The urban/rural break up of internet subscribers as on 31st December, 2017 is as per the following table.

Table 1.23: 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	2.66	3.24	9.02	19.38	11.67	22.62
Assam	2.02	0.64	2.51	3.29	4.53	3.94
Bihar	4.29	2.57	6.75	10.01	11.05	12.58
Delhi	0.24	3.50	0.45	24.02	0.69	27.52
Gujarat	1.48	2.28	6.25	18.78	7.73	21.07
Haryana	0.78	0.56	2.81	6.51	3.59	7.06
Himachal Pradesh	0.48	0.32	1.53	1.57	2.01	1.88
Jammu & Kashmir	0.76	0.46	1.00	2.81	1.75	3.27
Karnataka	1.83	2.70	4.59	20.84	6.42	23.54
Kerala	0.95	1.36	6.17	10.45	7.11	11.82
Kolkata	0.12	1.89	0.78	9.43	0.90	11.32
Madhya Pradesh	2.21	2.32	4.03	14.62	6.24	16.94

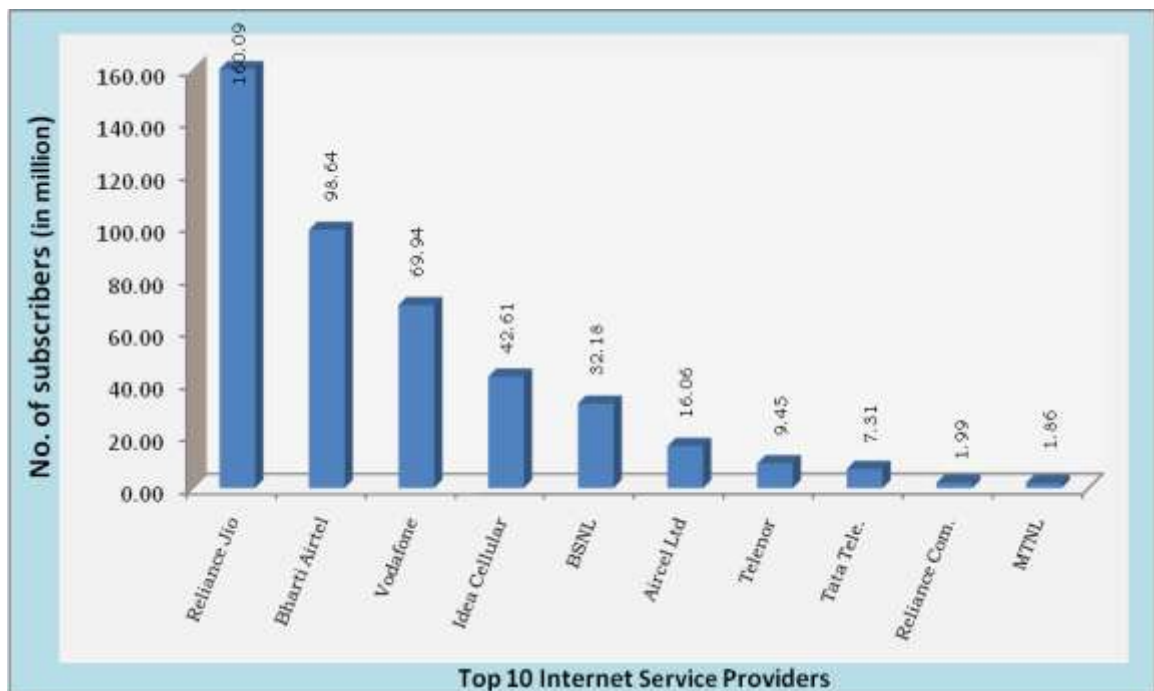
Telecom Service Area	Narrowband		Broadband		Total Internet	
	Rural	Urban	Rural	Urban	Rural	Urban
Maharashtra	2.42	2.95	9.55	22.19	11.98	25.14
Mumbai	0.13	2.90	0.53	17.67	0.65	20.57
North East	0.84	0.53	1.36	2.46	2.20	2.99
Orissa	1.56	1.20	3.10	4.58	4.66	5.78
Punjab	1.19	1.40	3.11	11.58	4.31	12.97
Rajasthan	2.75	2.49	5.48	12.77	8.23	15.26
Tamil Nadu	1.86	4.29	6.40	21.91	8.25	26.20
Uttar Pradesh(East)	5.15	3.13	7.79	14.52	12.94	17.66
Uttar Pradesh(West)	2.43	2.06	4.09	12.96	6.52	15.02
West Bengal	2.85	1.30	5.74	7.49	8.59	8.79
Total	38.99	44.10	93.04	269.82	132.03	313.92

Table 1.24: Internet Subscriber Base and Market Share of top 10 Service Providers – Dec-17

S.No	Service Providers	No. of Internet Subscribers	Share (%)
1	RJIL	160,091,242	35.90
2	Bharti Airtel Limited	98,636,052	22.12
3	Vodafone	69,943,388	15.68
4	Idea Cellular	42,614,713	9.56
5	BSNL	32,178,910	7.22
6	Aircel	16,059,347	3.60
7	Telenor	9,445,086	2.12
8	Tata Teleservices	7,307,710	1.64
9	Reliance Communications	1,988,610	0.45
10	MTNL	1,863,774	0.42
	Total of Top 10 ISPs	440,128,832	98.69
	Others	5,827,975	1.31
	Grand Total	445,956,807	100

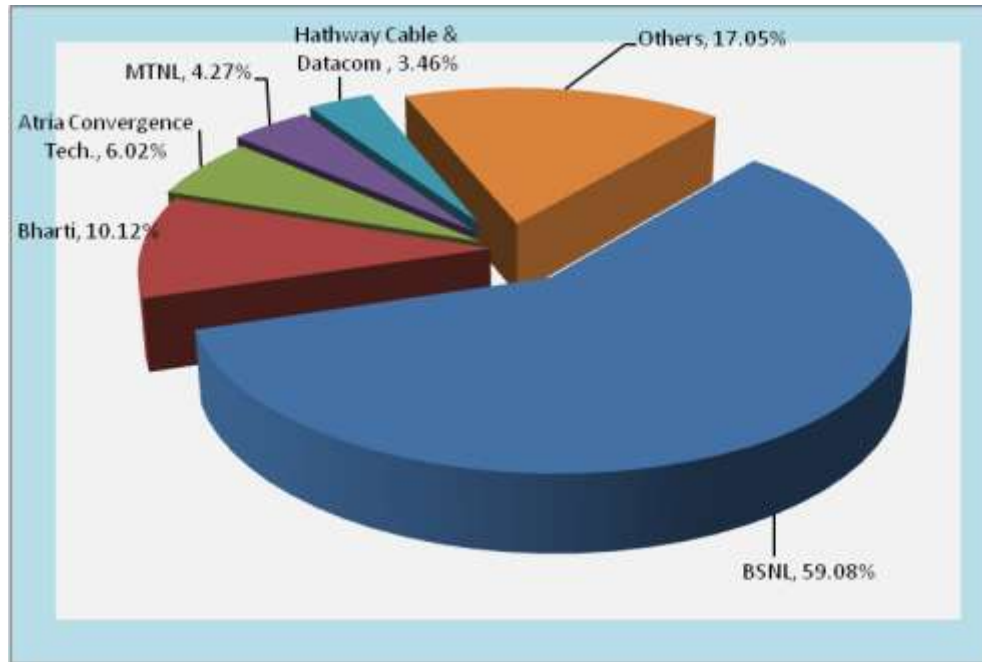
38. Reliance Jio Infocomm Ltd holds the top position with 35.90% market share of total internet subscribers followed by Bharti Airtel Ltd with 22.12%. Top 10 Service Providers together hold 98.69% share of total internet subscriber base at the end of Dec-17.
39. Detailed table of number of subscriber base (Broadband & Narrowband subscribers) of all the service providers is available at Annexure-1.5.
40. The following chart depicts the subscriber base of top ten service providers as on 31st December, 2017.

Chart 1.15 : Subscriber base of top ten Service Providers



- 43 In wired internet segment, BSNL holds 59.08% market share with 12.57 million subscribers, followed by Bharti with 2.15 million subscribers. Total number of wired internet subscriber was 21.28 million at the end of Dec-17.

Chart 1.16 : Composition of Wired Internet subscribers as on 31st December, 2017



44. In wireless internet segment, Reliance Jio holds 37.70% market share with 160.09 million subscribers followed by Bharti Airtel with 96.48 million wireless internet subscribers at the year ending Dec-17.

Chart 1.17 : Composition of Wireless Internet subscription

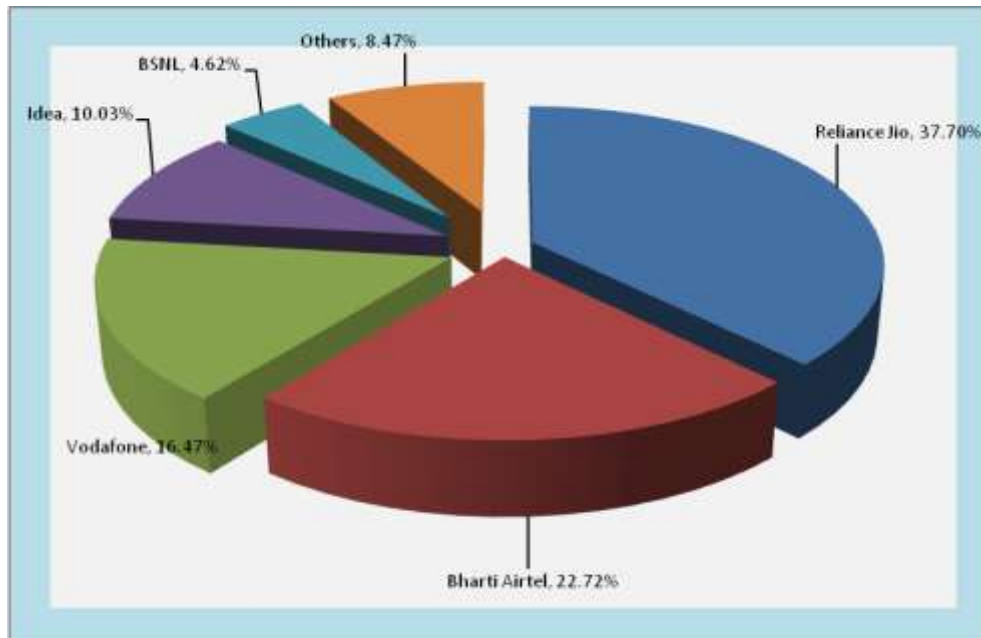


Chart 1.18 : Technology trend for Wireless Internet Access – Dec-17

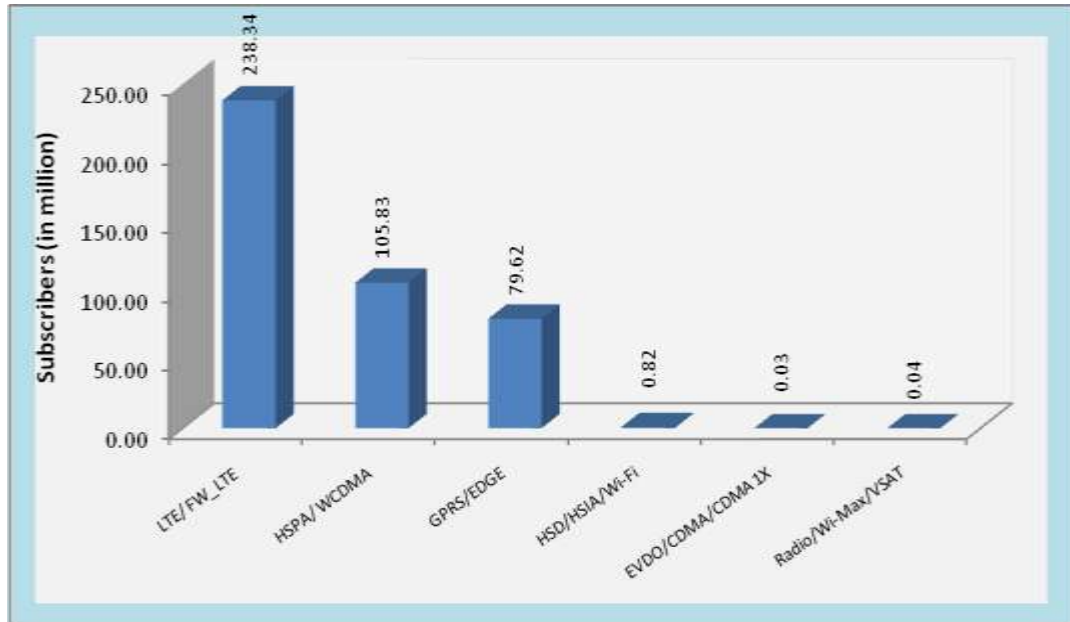
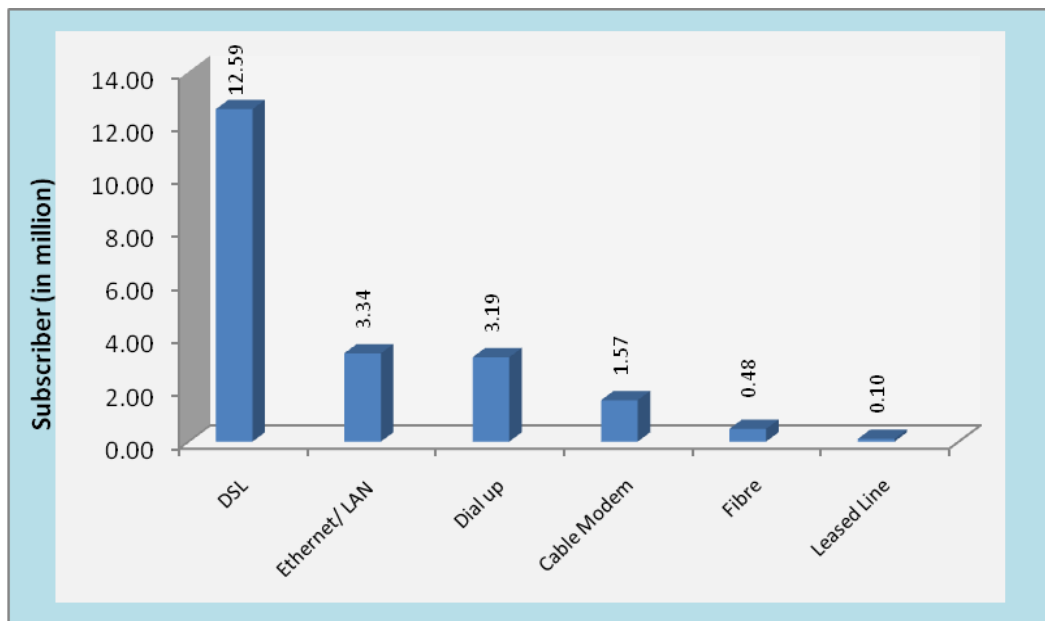


Chart 1.19 : Technology trend for Wired Internet Access – Dec-17



45. Top five service areas in terms of internet subscriptions (wired + wireless) are Maharashtra (37.12 million), Tamil Nadu including Chennai (34.45 million), Andhra Pradesh (34.29 million), U.P.(E) (30.59 million) and Karnataka (29.97 million).

Table 1.25 : Service Area wise number of Internet Subscribers per 100 population at the end of Dec-17

Service Area	Internet Subscribers (in million)			Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	11.67	22.62	34.29	18.10	90.17	38.28
Assam	4.53	3.94	8.47	16.39	72.04	25.58
Bihar	11.05	12.58	23.63	9.13	64.63	16.83
Delhi	-	-	28.22	-	-	125.86
Gujarat	7.73	21.07	28.80	20.69	76.43	44.36
Haryana	3.59	7.06	10.65	20.21	67.58	37.77
Himachal Pradesh	2.01	1.88	3.89	31.73	218.78	54.12
Jammu & Kashmir	1.75	3.27	5.02	19.32	91.47	39.70
Karnataka	6.42	23.54	29.97	16.75	94.20	47.30
Kerala	7.11	11.82	18.93	26.35	129.58	52.42
Madhya Pradesh	6.24	16.94	23.18	8.12	57.46	21.80
Maharashtra	11.98	25.14	37.12	19.91	74.57	46.77
Mumbai	0.65	20.57	21.22			
North East	2.20	2.99	5.19	20.82	82.18	36.51
Orissa	4.66	5.78	10.44	13.21	74.21	24.23
Punjab	4.31	12.97	17.28	24.78	91.81	54.84
Rajasthan	8.23	15.26	23.49	14.55	84.14	31.44
Tamil Nadu	8.25	26.20	34.45	29.93	59.25	47.99
UP (East)	12.94	17.66	30.59	10.76	60.12	22.17
UP (West)	6.52	15.02	21.54			
Kolkata	0.90	11.32	12.22	13.86	72.49	30.76
West Bengal	8.59	8.79	17.38			
Total	132.03	313.92	445.96	14.89	76.76	34.42

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

Notes:

1. 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.
2. Data/information for Andhra Pradesh includes Telengana, Madhya Pradesh includes Chhathishgarh, 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.

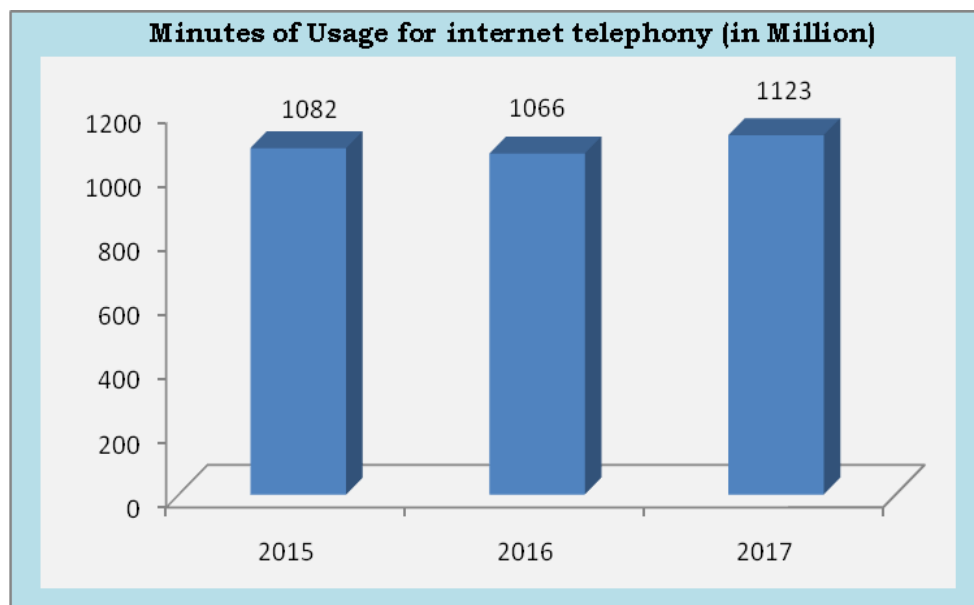
ISP Connectivity

46. The International Internet bandwidth owned by various service providers is reported to be 3,054 Gbps at the year ending Dec-17 as compared to 2,028 Gbps at the year ending Dec-16.

Internet Telephony

47. As per the reports received from 16 service providers, providing Internet Telephony services, the total outgoing minutes of usage (MoU) for internet telephony is 1,123 million during the year 2017 as compare to 1,066 million during the year 2016. List of Internet Telephony Service providers is available at Annexure-1.7.

Chart 1.20 : Trends in MOU for Internet Telephony

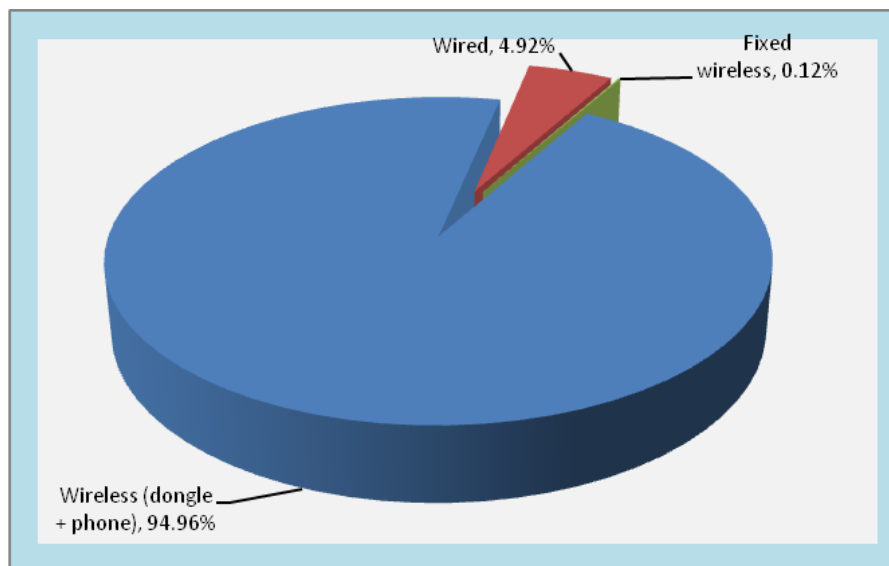


Part-II : Broadband Service (Download Speed \geq 512 Kbps)

48. The total number of broadband subscribers increased from 236.09 million at the end of Dec-16 to 362.87 million at the end of Dec-17. Out of which wired broadband subscribers are 17.86 million and wireless broadband subscribers are 345.01 million.

49. Top five broadband (wired+wireless) service providers in term of subscribers are Reliance Jio (160.09 million), Bharti (71.09 million), Vodafone (52.44 million), Idea Cellular (34.81 million) and BSNL (21.95 million).
50. In wired broadband segment, BSNL holds 52.53% market share with 9.38 million subscribers followed by Bharti with 2.15 million subscribers.
51. In wireless broadband segment, Reliance Jio holds 37.70% market share with 160.09 million subscribers followed by Bharti (16.23%) with 68.94 million subscribers.
52. Top five service areas in respect of broadband subscriptions are Maharashtra (31.75 million), Andhra Pradesh including Telengana (28.40 million), Tamil Nadu including Chennai (28.30 million), Karnataka (25.43 million) and Gujarat (25.04 million).

Chart 1.21 : Composition of Broadband subscription – Technology wise

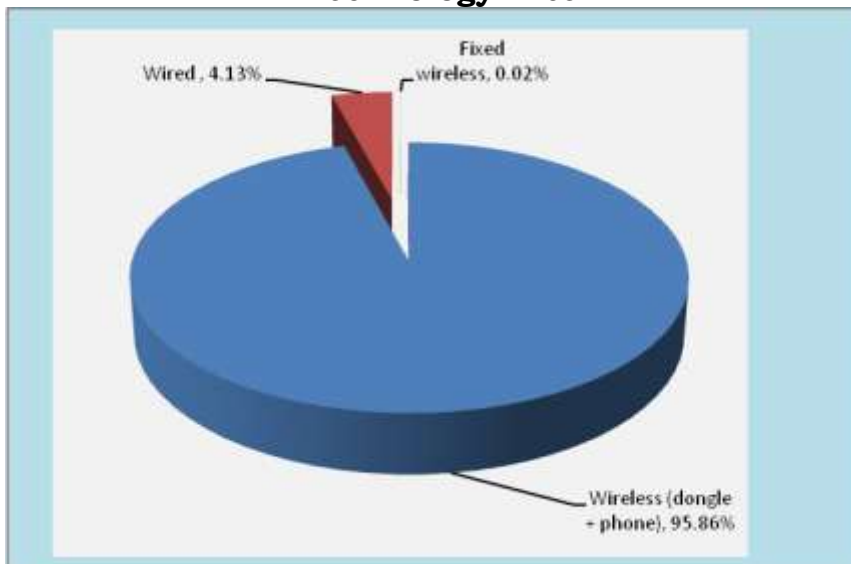


53. Mobile Device Users (dongle+phone) constitute 94.96% of total broadband subscribers at the end of Dec-17.

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

- 54. Total number of narrowband subscribers declined from 155.41 million at the end of Dec-16 to 83.09 million at the end of Dec-17 with the yearly decline rate of 46.53%. Out of 83.09 million narrowband subscribers, Wired Narrowband subscribers are 3.43 million and Wireless Narrowband subscribers are 79.66 million.
- 55. The top five narrowband (wired + wireless) service providers in term of subscriber base are Bharti (27.54 million), Vodafone (17.50 million), BSNL (10.23 million), Aircel Ltd (10.03 million) and Idea Cellular (7.81 million) at the end of Dec-17.
- 56. In wired narrowband segment, BSNL holds 93.18% market share with 3.195 million subscribers followed by You Broadband India Pvt Ltd. with 0.151 million at the year ending Dec-17.
- 57. In wireless narrowband segment, Bharti holds 34.80% market share with 27.54 million subscribers followed by Vodafone (27.54 million) at the end of Dec-17.

Chart 1.22 : Composition of Narrowband subscription – Technology wise



Section E : Other Value Added Services - PMRTS & VSAT

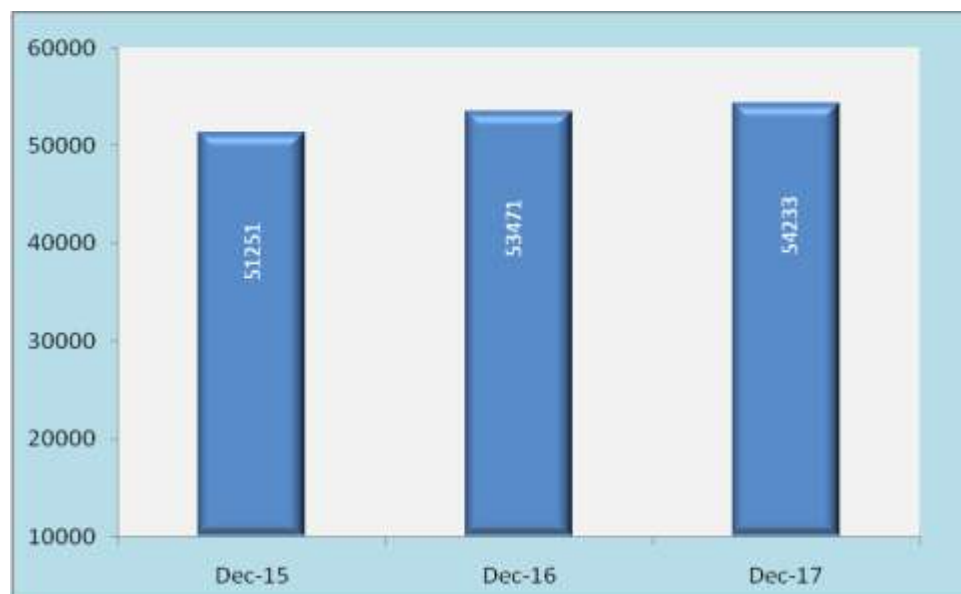
Public Mobile Radio Trunk Services (PMRTS)

58. The subscriber base of PMRTS increased from 53,471 at the end of Dec-16 to 54,233 at the end of Dec-17 with yearly growth rate of 1.43%.

Table 1.26 : PMRTS Subscriber base - Service Provider wise

Sr. No.	Name of the Service Provider	Subscriber Base as on 31.12.2016	Subscriber Base as on 31.12.2017	Net Addition in Subscribers	% Growth in subscribers during the year 2017
1	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	45047	45290	243	0.54
4	Procall Ltd.	2967	3054	87	2.93
2	Inative Networks Pvt Ltd	1820	1820	0	0.00
3	Quick Call	1496	1618	122	8.16
5	Smartlink Pvt Ltd	1023	968	-55	-5.38
6	Bhilwara Telenet Services Pvt Ltd	571	818	247	43.26
7	Wiwonet Solutions Pvt Ltd	273	361	88	32.23
8	Airtalk Solutions & Services Pvt Ltd	274	304	30	10.95
	Total	53471	54233	762	1.43

Chart 1.23 : Trend of number of PMRTS subscribers



59. Detailed table on Service Area wise subscriber base of PMRTS is available at Annexure-1.6.

Very Small Aperture Terminal (VSAT)

60. The total number of VSAT subscribers declined from 2,78,231 at the end of Dec-16 to 2,71,881 at the end of Dec-17. Net decline during the year has been 6,350 at the yearly decline rate of 2.28%.

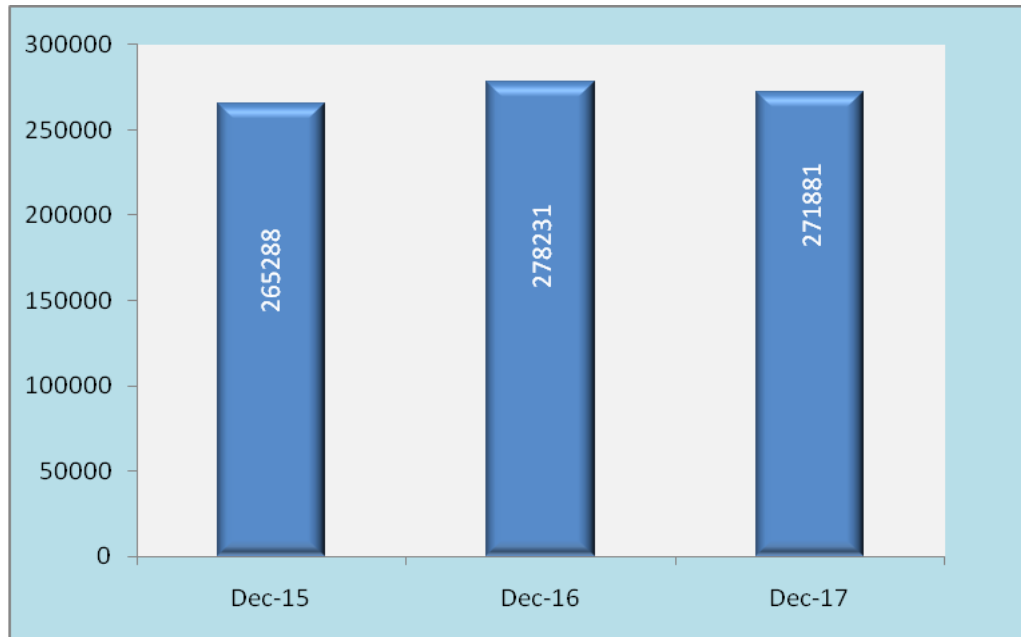
Table 1.27 : VSAT Service Providers currently providing service & their subscriber base

Sr. No	Name of Service Providers	Subscriber base at the Quarter ending		Net Addition during the year	%age Yearly Growth	Market Share (%) Dec-17
		Dec-16	Dec-17			
1	Hughes Communications Ltd.	101125	98995	-2130	-2.11	36.41
2	Bharti Airtel Limited	68314	72933	4619	6.76	26.83
3	Tatanet Services	55115	55973	858	1.56	20.59
4	HCL Comnet	27790	21961	-5829	-20.98	8.08
5	BSNL	20412	19254	-1158	-5.67	7.08
6	National Informatics Centre Services Incorporated	2863	0	-2863	-	-
7	Infotel Satcom	2518	2691	173	6.87	0.99
8	Planetcast Media Services Ltd	94	74	-20	-21.28	0.03
	Total	278231	271881	-6350	-2.28	100

61. Hughes Communication Limited continues to be the market leader with subscriber base of 98,995 followed by Bharti Airtel Ltd (72,933) at the end of Dec-17.

62. M/s Infotel Satcom has recorded maximum growth rate of 6.87% followed by M/s Bharti Airtel Ltd (6.76%) during the year 2017.

Chart 1.24 : Number of VSAT Subscribers & Rate of Growth (%)



Chapter 2 :

Revenue and Usage

-
- 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 1st January, 2017 to 31st December, 2017 in the various service areas.

Section A: GSM Service

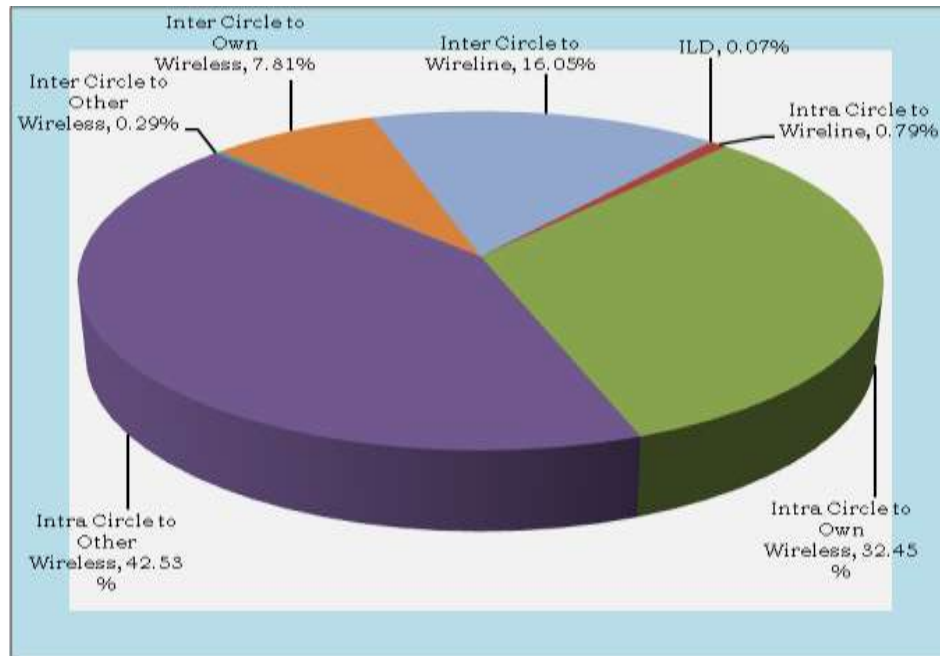
- The following table presents a comparison of Key Indicators of GSM Revenue and Usage for the year 2017, with the previous year 2016.

Table 2.1 : Key Indicators – GSM Service

Parameter	Year 2016	Year 2017	Yearly Changes (%)
GSM Subscriber base (in million)	1010.61	1162.20	15.00%
Share of prepaid subscribers	95.59%	95.53%	-0.06%
Incoming MOUs per subscriber per month	192.51	222.90	15.79%
Outgoing MOUs per subscriber per month	177.88	218.42	22.79%
Total MOUs per subscriber per month	370.40	441.32	19.15%
No. of outgoing SMS per subscriber per month	19.54	16.17	-17.27%
Average Revenue per user (ARPU) per month (Rs.)	118.65	81.39	-31.40%

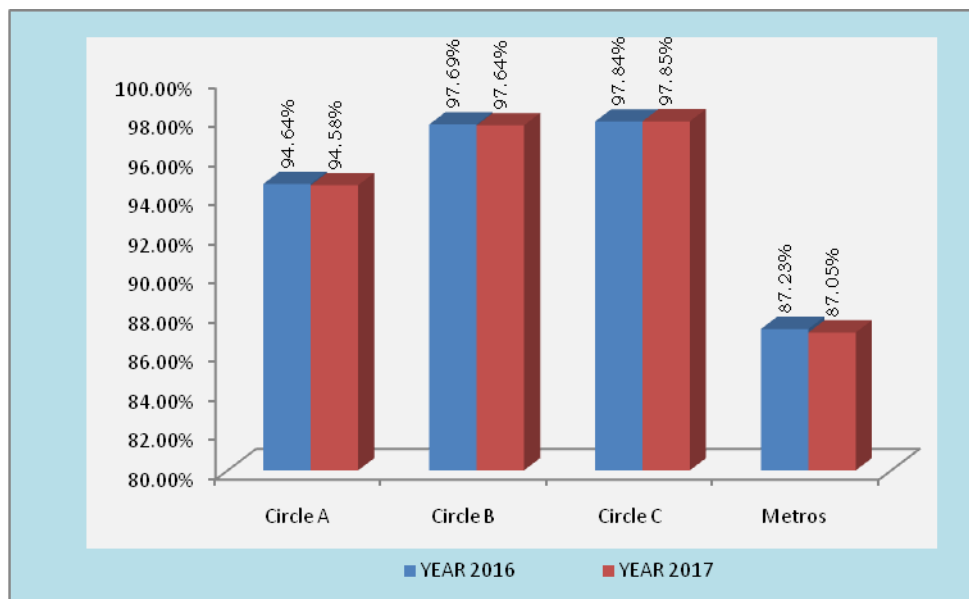
- Average Revenue per user (ARPU) per month declined from Rs.118.65 during the year 2016 to Rs. 81.39 during the year 2017, thereby showed yearly decline of 31.40%.
- Total Minutes of Usage (MOUs) per subscriber per month increased from 370.40 during the year 2016 to 441.32 during the year 2017, thereby showed yearly growth of 19.15%.
- The following chart depicts % break-up of outgoing minutes from Home Service Area:

Chart 2.1: % break-up of outgoing minutes from Home Service Area (HAS) – GSM Service during year 2017



5. The following chart depicts Category-wise share (%) of GSM prepaid subscribers over total GSM subscribers at the end of the year 2017.

Chart 2.2: % Share of Prepaid GSM Subscribers at the end of 2017



6. All India market share of prepaid segment of GSM subscribers has been declined from 95.59% at the end of year 2016 to 95.53% at the end of year 2017.

A. Revenue

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

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

8. 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 (Rs.)
– GSM Service**

Category	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	478.42	400.27	109.57	73.85	131.04	91.71
Circle B	465.63	385.66	95.96	67.60	105.64	75.24
Circle C	448.23	306.41	92.53	66.97	99.55	72.59
Metro	500.89	359.39	100.95	41.47	157.66	83.11
All India	480.11	378.00	100.60	67.27	118.65	81.39

9. Average Revenue Per User (ARPU) per month for postpaid service declined from Rs.480 during the year 2016 to Rs.378 during the year 2017. ARPU per month for prepaid service also declined from Rs.101 during the year 2016 to Rs.67 during the year 2017.
10. The following chart presents the Quarterly trend for ARPU per month during the year 2016 and 2017.

Chart 2.3: Quarterly Trend of ARPU per month of GSM Service during the year 2016 & 2017

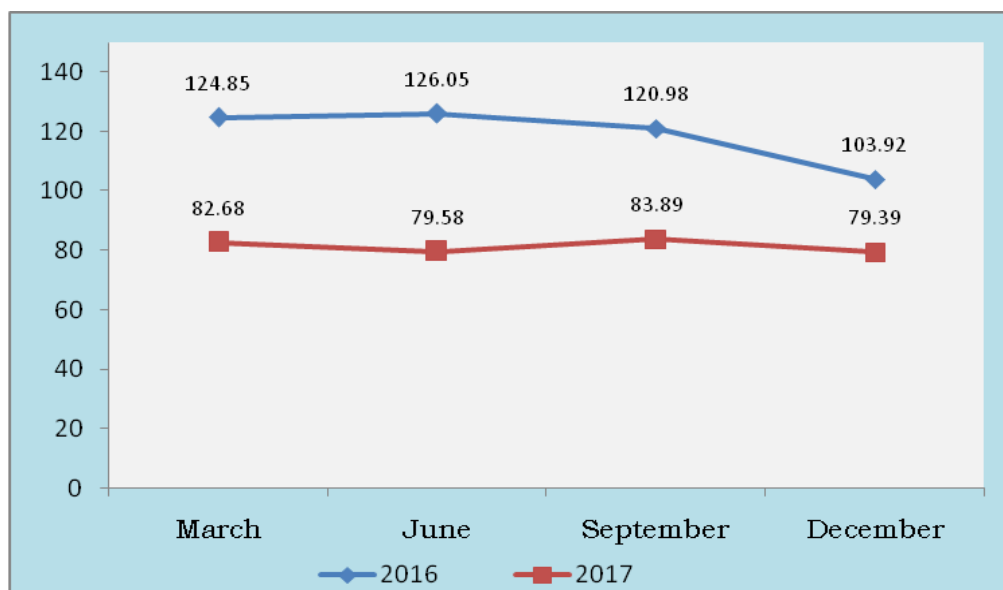
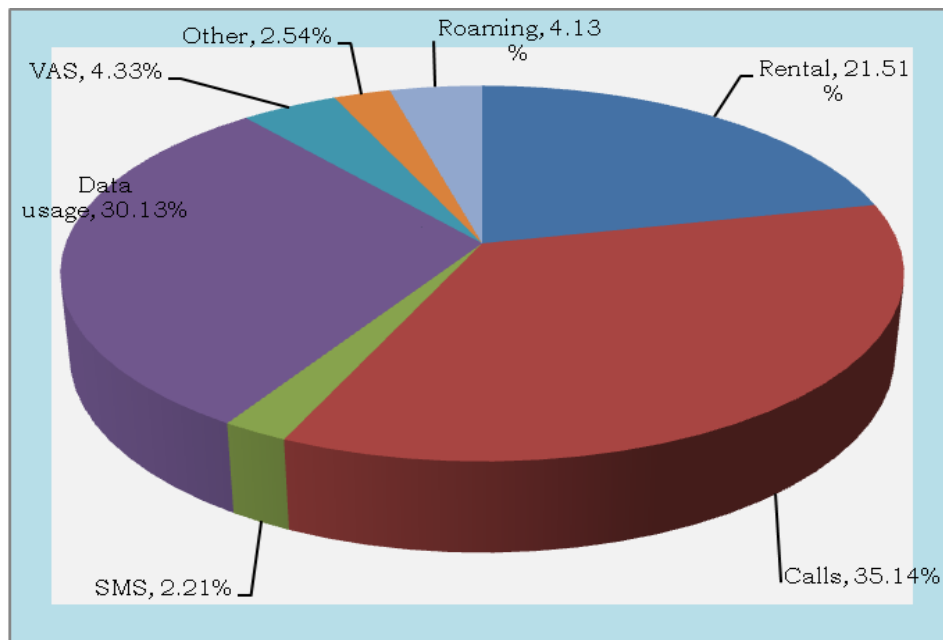


Table 2.3 : Composition of Average Revenue Per User (ARPU) per month (Rs.) – GSM Service

SI. No.	Item	Revenue (excl. service tax) per subscriber per month for the Year 2016	Revenue (excl. service tax) per subscriber per month for the Year 2017
1	Rental Revenue	22.09	19.63
2	Revenue from calls	59.00	32.08
3	Revenue from SMS	2.97	2.02
4	Revenue from data usage	27.50	27.50
5	Revenue from VAS	4.86	3.95
6	Other revenue	3.24	2.32
7	Revenue from Outroamers (outside HAS)	5.99	3.77
8	Total revenue from subscribers (1+2+3+4+5+6+7)	125.65	91.28
9	Net inter-operable settlement charges receivable	-7.00	-9.89
10	Net Revenue (ARPU) (8+9)	118.65	81.39

11. As can be seen in the above table, composition of ARPU declined in all segments except average revenue from data usage in the year 2017 as compare to the year 2016.
12. The following chart presents the comparison of share of Revenue as a percentage of total Revenue.

Chart 2.4: Composition of Revenue of GSM Service during the year 2017



B. Usage Pattern

13. Average Minutes of Usage (MOUs) per subscriber per month increased from 370 during the year 2016 to 441 during the year 2017. 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 for the year 2017 – GSM Service

Segment	MOUs	Year	Circle A	Circle B	Circle C	Metros	All India
Postpaid	Outgoing MOU	2016	518	542	534	489	516
		2017	446	459	464	429	445
	Incoming MOU	2016	384	362	342	333	362
		2017	393	377	290	345	368
	Total MOU	2016	902	904	876	822	878
		2017	840	835	754	774	813
Prepaid	Outgoing MOU	2016	159	156	169	182	161
		2017	197	199	223	261	208
	Incoming MOU	2016	163	192	224	160	184
		2017	181	230	279	183	216
	Total MOU	2016	321	348	393	342	345
		2017	378	429	501	443	424
Blended	Outgoing MOU	2016	180	166	176	225	178
		2017	210	206	228	283	218
	Incoming MOU	2016	176	197	226	185	193
		2017	193	233	279	204	223
	Total MOU	2016	355	362	402	410	370
		2017	403	439	507	487	441

14. Minutes of Usage (MOUs) per subscriber per month for postpaid services declined from 878 during the year 2016 to 813 during the year 2017 however, MoUs for prepaid services increased from 345 to 424 during the same period.

15. Outgoing MoUs per subscriber per month increased from 178 during the year 2016 to 218 during the year 2017 and Incoming MoUs per subscriber per month also increased from 193 to 223 during the same period.

Table 2.5: Category-wise average number of outgoing SMS per subscriber per month during the year 2017

	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	48	107	25	18	26	23
Circle B	41	32	17	14	17	14
Circle C	27	22	12	10	12	10
Metros	34	22	13	9	16	11
All India	41	60	18	14	20	16

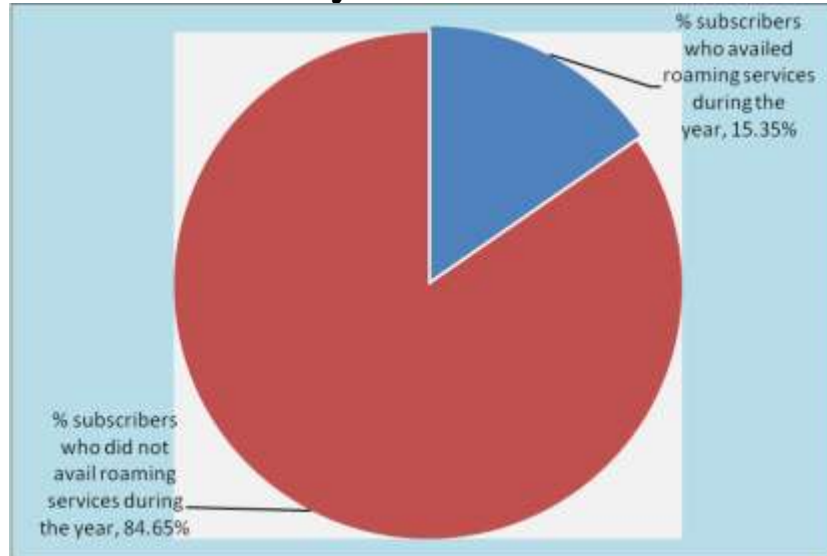
13. Average number of outgoing SMS per subscriber per month declined from 20 during the year 2016 to 16 during the year 2017.
14. The following table presents the percentage break-up of outgoing minutes of usage from home service area to various categories of termination networks.

Table 2.6: Category-wise % break-up of outgoing minutes from Home Service Areas (HSA) for GSM service during the year 2017

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	0.98%	30.70%	45.13%	0.32%	6.45%	16.34%	0.08%
Circle B	0.60%	36.60%	42.59%	0.23%	6.82%	13.11%	0.05%
Circle C	0.33%	38.99%	41.58%	0.20%	6.13%	12.75%	0.02%
Metros	1.45%	16.61%	36.57%	0.51%	16.51%	28.20%	0.15%
All India	0.79%	32.45%	42.53%	0.29%	7.81%	16.05%	0.07%

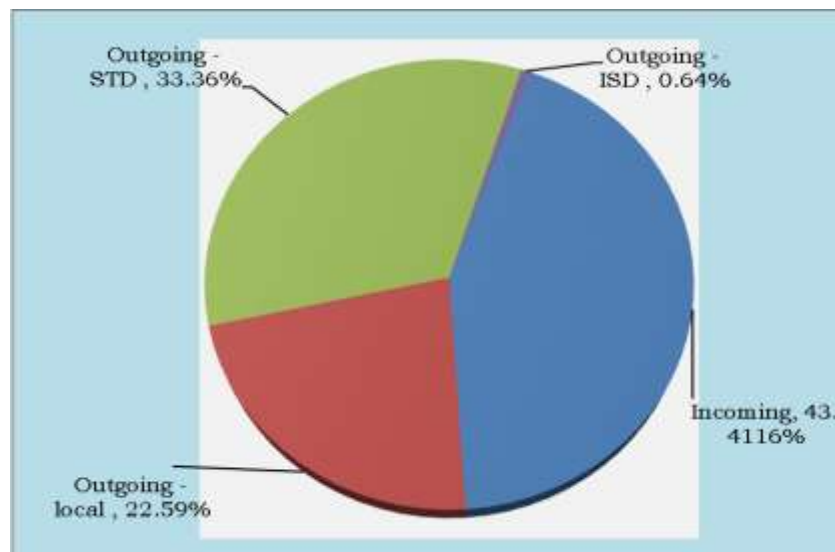
15. The chart given below presents minutes of Usage by Outroamers as a percentage of total Minutes of Usage during the year 2017.

Chart 2.5: Share of subscribers who availed roaming service during the year 2017



16. The chart given below presents the composition of roaming MoUs of outroamers (who had availed roaming services) during the year 2017.

Chart 2.6: Composition of roaming MoUs of outroamers during the year 2017



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

17. 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.

18. Average Subscriber Outgo per Outgoing Minute for usage from HSA
 = $\frac{\text{Rental revenue} + \text{Revenue from outgoing calls from HSA}}{\text{No. of outgoing minutes from HSA}}$

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

Table 2.7: Category-wise Average Subscriber Outgo per outgoing minute from Home Service Area for GSM Service

Category	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	0.51	0.44	0.51	0.27	0.51	0.29
Circle B	0.49	0.42	0.44	0.23	0.44	0.24
Circle C	0.54	0.36	0.40	0.20	0.41	0.20
Metros	0.59	0.45	0.50	0.19	0.53	0.24
All India	0.53	0.43	0.46	0.23	0.47	0.25

20. Average subscriber outgo per outgoing minute from home service area declined from Rs.0.47 during the year 2016 to Rs.0.25 during the year 2017.

Section B: CDMA - Full Mobility Service

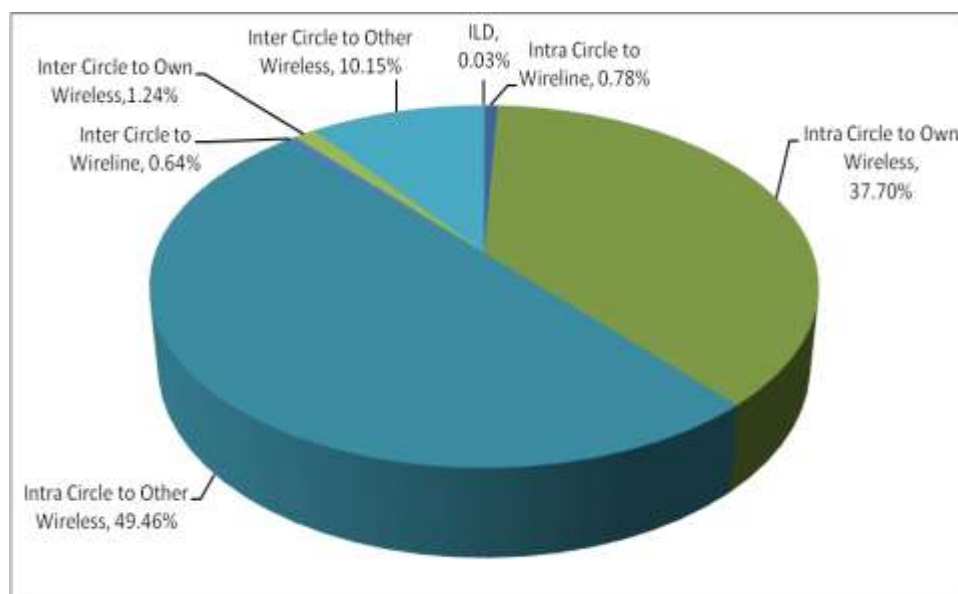
21. The following table presents a comparison of Key Indicators of CDMA Revenue & Usage for the year 2017, with the previous year 2016.

Table 2.8 : Key Indicators - CDMA Full Mobility Service

Parameters	Year 2016	Year 2017	Change (%)
Subscribers Base (in Millions)	24.04	5.24	-78.20%
Share of Prepaid (%)	87.86%	42.89%	-0.51%
Incoming MOUs per subscriber (per month)	109.98	81.75	-0.26%
Outgoing MOUs per subscriber (per month)	139.81	95.77	-0.31%
Outgoing SMS per subscriber (per month)	6.11	2.11	-0.65%
Average Revenue Per Usage (per month)	114.04	120	0.05%

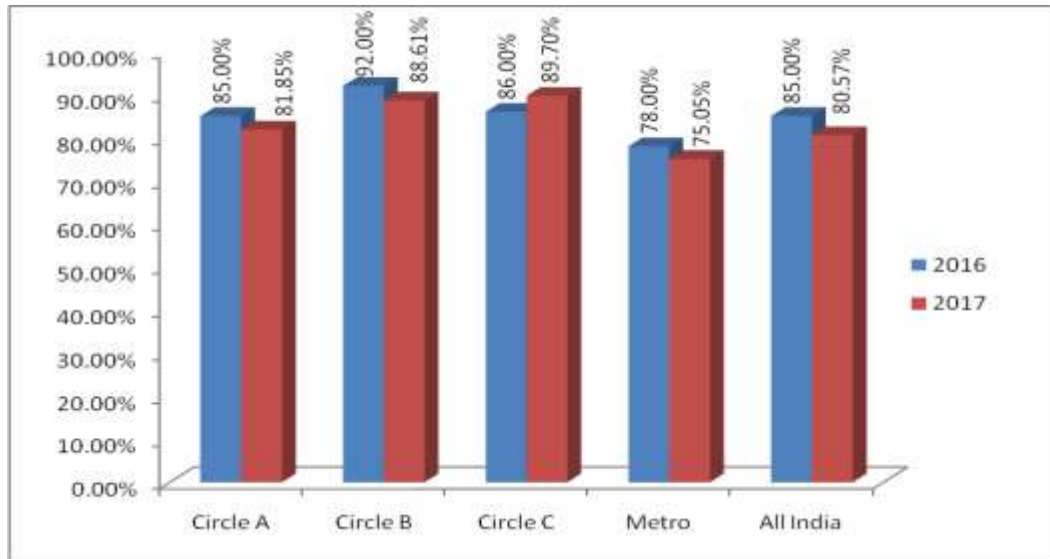
22. The following chart depicts % break-up of outgoing minutes from Home Service Area:

Chart 2.7: % break-up of outgoing minutes from HSA



23. The following chart depicts prepaid subscribers as a % of total subscribers as on last day of the respective quarters for various categories of circles.

Chart 2.8: Share of prepaid subscribers in total CDMA Subscribers at the end of the year 2016 and 2017



24. All India market share of prepaid segment has been decreased from 85.00% at the end of year 2016 to 80.57% at the end of year 2017.

A. Revenue

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

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

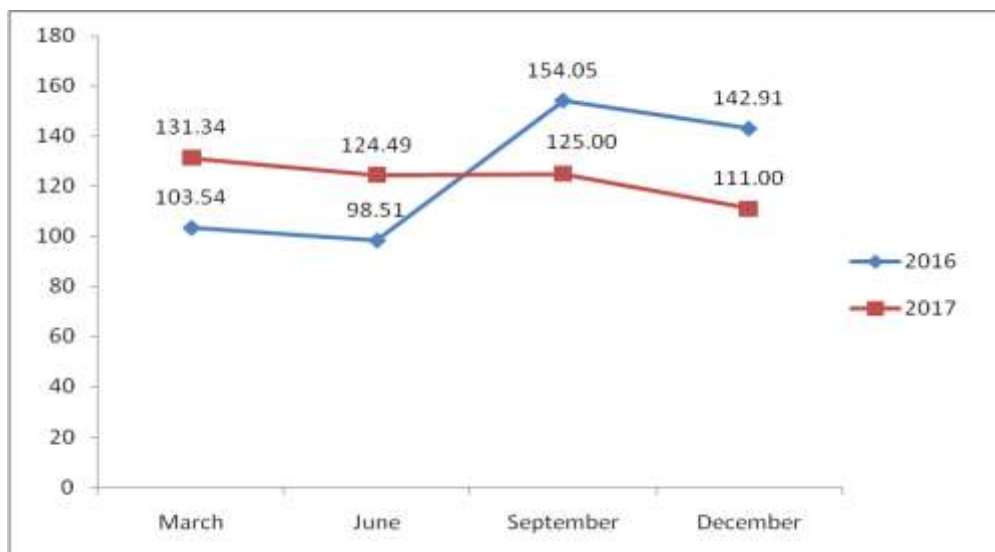
26. The following table presents the ARPU per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

Table 2.9 : Average Monthly ARPU - CDMA Full Mobility Service

Category	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	502	590	70	65	137	139
Circle B	492	488	53	57	80	78
Circle C	477	511	34	56	63	106
Metro	564	519	54	50	144	148
All India	526	536	57	57	114	120

27. The following chart presents the Quarterly trend for Average Revenue Per User per month for CDMA service during the year 2017.

Chart 2.9 : Quarterly Trend of ARPU per month of CDMA Full Mobility Service



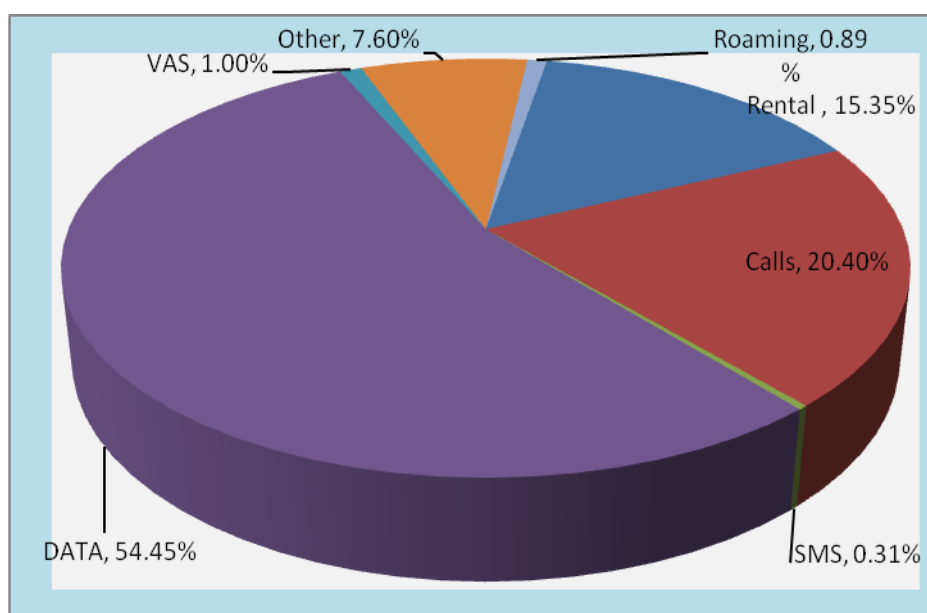
28. The All India Average Revenue per User (ARPU) per month has witnessed an increased from Rs.114 during the year 2016 to Rs. 120 during the year 2017.

**Table 2.10 : Composition of ARPU per month –
CDMA Full Mobility Service**

SI. No.	Item	Revenue (excl. service tax) per subscriber per month Year 2016	Revenue (excl. service tax) per subscriber per month Year 2017
1	Rental Revenue	21.31	18.17
2	Revenue from Calls	32.20	24.14
3	Revenue from SMS	0.60	0.37
4	Revenue from data usage	60.09	64.46
5	Revenue from VAS	1.93	1.18
6	Other Revenue	4.80	8.99
7	Revenue from Out roamers (outside HSA)	1.92	1.06
8	Total Revenue from subscribers (1+2+3+4+5+6+7)	122.85	118.37
9	Net inter-operator settlement charges receivable	-8.81	1.13
10	Net Revenue (ARPU) (8+9)	114.04	119.50

29. The following charts present the composition of % share of Revenue over total Revenue during the year 2017.

Chart 2.10 : Share of different services in total ARPU during the year 2017



B. Usage Pattern

30. 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 2.11 : Average Minute of Usage per subscriber per month -
CDMA Full Mobility Service**

Segment	MoUs	Year	Circle A	Circle B	Circle C	Metro	All India
Postpaid	Outgoing MOU	2016	172	358	623	178	222
		2017	105	281	183	141	147
	Incoming MOU	2016	109	193	294	116	133
		2017	64	140	98	109	99
	Total MOU	2016	282	551	917	294	355
		2017	169	421	281	250	246
Prepaid	Outgoing MOU	2016	95	149	228	112	128
		2017	70	76	77	96	82
	Incoming MOU	2016	90	121	150	95	107
		2017	101	133	155	152	132
	Total MOU	2016	185	269	377	207	235
		2017	170	210	232	248	214
Blended	Outgoing MOU	2016	107	161	254	124	140
		2017	78	106	89	102	96
	Incoming MOU	2016	93	125	159	99	110
		2017	106	146	149	133	130
	Total MOU	2016	200	286	414	223	250
		2017	185	252	237	235	226

31. Minutes of Usage (MOUs) per subscriber per month for postpaid services declined from 355 during the year 2016 to 246 during the year 2017 and MoUs for prepaid services also declined from 235 to 214 during the same period.
32. Outgoing MoUs per subscriber per month declined from 140 during the year 2016 to 96 during the year 2017, however Incoming MoUs per subscriber per month increased from 110 to 130 during the same period.
33. The total MOU (Blended) per subscriber per month has decreased by 3.66%, from 250 in the year 2016 to 226 in the year 2017.

Table 2.12 : Average Outgoing SMS per subscriber per month – CDMA Full Mobility Service

Category	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	5	1	7	3	6	2
Circle B	5	2	7	2	7	2
Circle C	8	6	10	2	10	3
Metro	4	2	4	2	4	2
All India	4	2	6	2	6	2

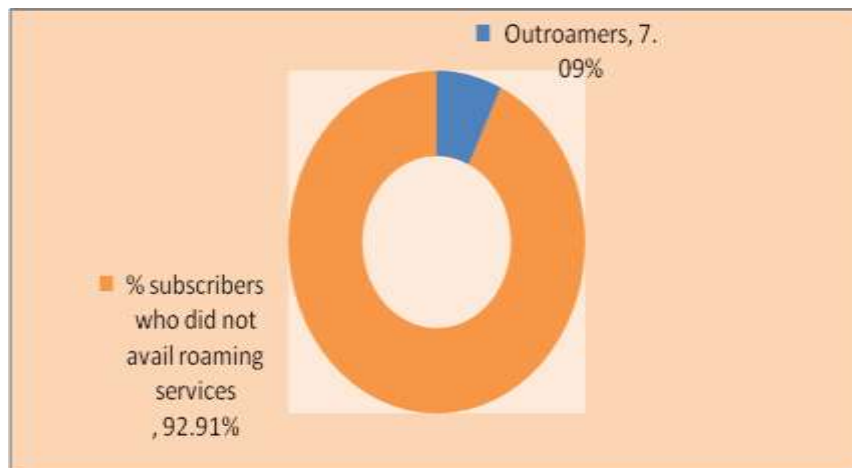
34. Average outgoing SMS per subscriber per month declined from 6 during the year 2016 to 2 during the year 2017.
32. The following table presents the percentage break-up of outgoing minutes of usage from home service area to various categories of termination networks.

Table 2.13 : Category wise % Break-up of Outgoing minutes from Home Service Area (HSA) for CDMA Full Mobility Service during the year 2017

Category	Intra Circle to Wireline	Intra Circle to Own Wireless	Intra Circle to Other Wireless	Inter Circle to Other Wireline	Inter Circle to own Wireless	Inter Circle to Other Wireless	ILD
Circle A	1.13%	44.30%	49.93%	1.06%	0.34%	3.23%	0.02%
Circle B	0.37%	38.61%	54.47%	0.46%	0.55%	5.54%	0.01%
Circle C	0.43%	38.56%	48.55%	0.75%	1.32%	10.37%	0.02%
Metro	1.16%	31.64%	41.90%	0.61%	2.88%	21.74%	0.07%
All India	0.78%	37.70%	49.46%	0.64%	1.24%	10.15%	0.03%

33. The chart given below presents the share of outroamers (who had availed roaming services) as a percentage of total subscribers during the year 2017.

Chart 2.11 : Percentage of Subscriber who availed roaming service during the year 2017



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

34. 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.

$$\text{Average Subscriber Outgo per Outgoing Minute for usage from HSA} = \frac{\text{Rental revenue} + \text{Revenue from outgoing calls from HSA}}{\text{No. of outgoing minutes from HSA}}$$

35. The table below provides the Average Outgo per Outgoing Minute for usage from HSA.

Table 2.14 : Average subscriber outgo per outgoing minute from HSA for CDMA Full Mobility Service

Category	Postpaid		Prepaid		Blended	
	2016	2017	2016	2017	2016	2017
Circle A	0.91	1.39	0.36	0.49	0.49	0.52
Circle B	0.49	0.61	0.24	0.34	0.27	0.31
Circle C	0.47	1.10	0.20	0.41	0.25	0.56
Metro	1.10	1.05	0.36	0.40	0.54	0.54
All India	0.82	1.04	0.29	0.41	0.39	0.45

Section C : Wireless Data Usage

36 After introduction of 4G technology, volume of data usage showed tremendous growth in wireless data services. Total wireless data usage increased from 4,642 million GB during the year 2016 to 20,092 million GB during the year 2017.

37 Wireless telecom service providers started reporting of volume of 4G data usage during the year 2016 only. During a short period of last one year, the volume of 4G data usage increased 2,775 million GB during the year 2016 to 16,424 million GB during the year 2017.

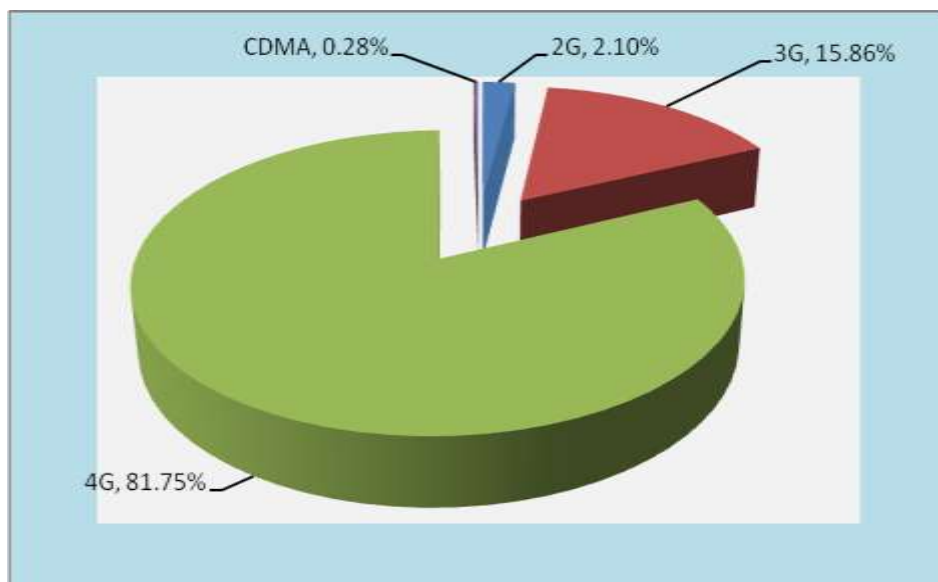
Table 2.15 : Wireless data usage (in million GB per year)

Calendar Year	GSM data usage				CDMA data usage	Total data usage
	2G data usage	3G data usage	4G data usage	Total GSM data usage		
2014	340	349	-	689	138	828
2015	479	700	-	1,179	196	1,375
2016	477	1,221	2,775	4,473	169	4,642
2017	423	3,187	16,426	20,036	56	20,092

38 GSM data usage includes 2G, 3G and 4G (LTE) data usage. The contribution of 3G data usage in total wireless data usage is 15.86% in the year 2017 and the contribution of 4G data usage in total wireless data usage is 81.75% during the same period.

39 Share of technology-wise data usage during the year 2017 is depicted in the following chart.

Chart 2.12 : Share of 2G, 3G, 4G and CDMA data usage in QE Sep-17



40 As can be seen in above chart, 4G technology became the market leader in data usage with 81.75% of total wireless data usage in the year 2017. CDMA technology held only 0.28% of total data usage the same period.

41 Total revenue from wireless data usage increased from Rs.350,789 million in the year 2016 to Rs.388,817 million in the year 2017. The following table depicts yearly wireless data revenue for GSM and CDMA data usage.

Table 2.16 : Wireless Data Revenue (in million rupees) per year

Calender Year	GSM Data Revenue	CDMA Data Revenue	Total Data Revenue
2014	199,327	23,325	222,652
2015	287,279	23,921	311,199
2016	333,453	17,336	350,789
2017	382,225	6,592	388,817

42 Average Revenue for wireless data usage (Data ARPU) per unique data user per month declined from Rs.89.18 in the year 2016 to Rs.79.98 in the year 2017. 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 2017.

Table 2.17 : Average Revenue for wireless data usage per unique data user per month (in rupees) for the year 2017

Period Ending	GSM Data ARPU(Rs.)	CDMA Data ARPU (Rs.)	Total wireless Data ARPU (Rs.)
Dec-14	65.47	290.18	71.25
Dec-15	85.01	309.21	90.03
Dec-16	86.38	236.99	89.18
Dec-17	78.87	430.52	79.98

Chart 2.13: Trend of Average Wireless Data Revenue per unique data user per month (Data ARPU in Rs.)

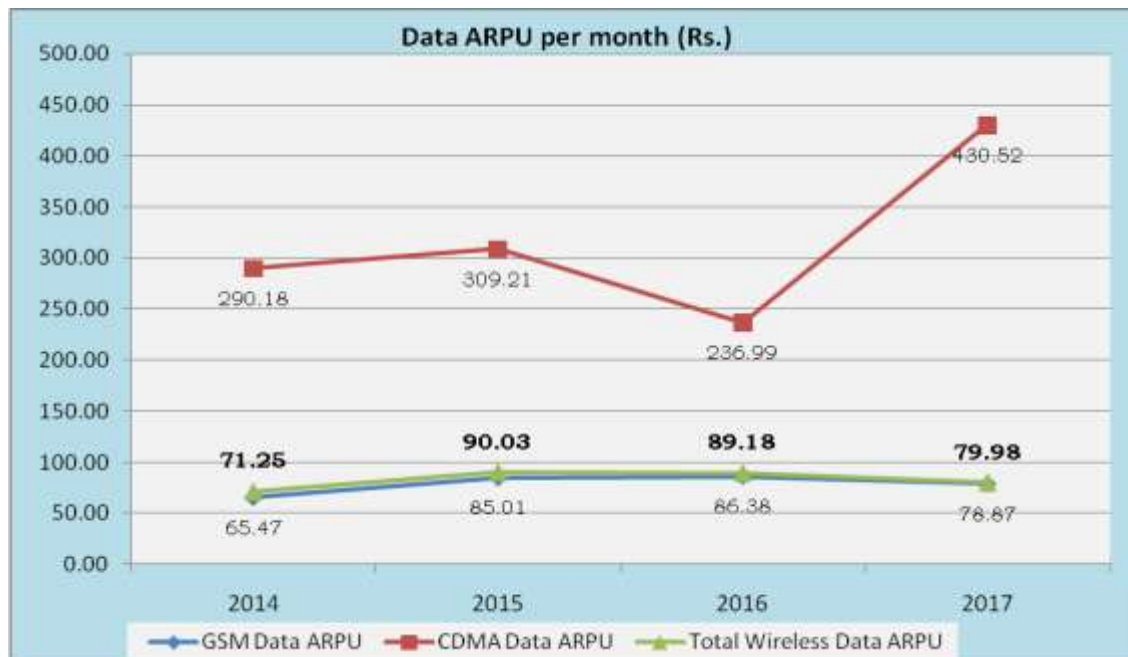
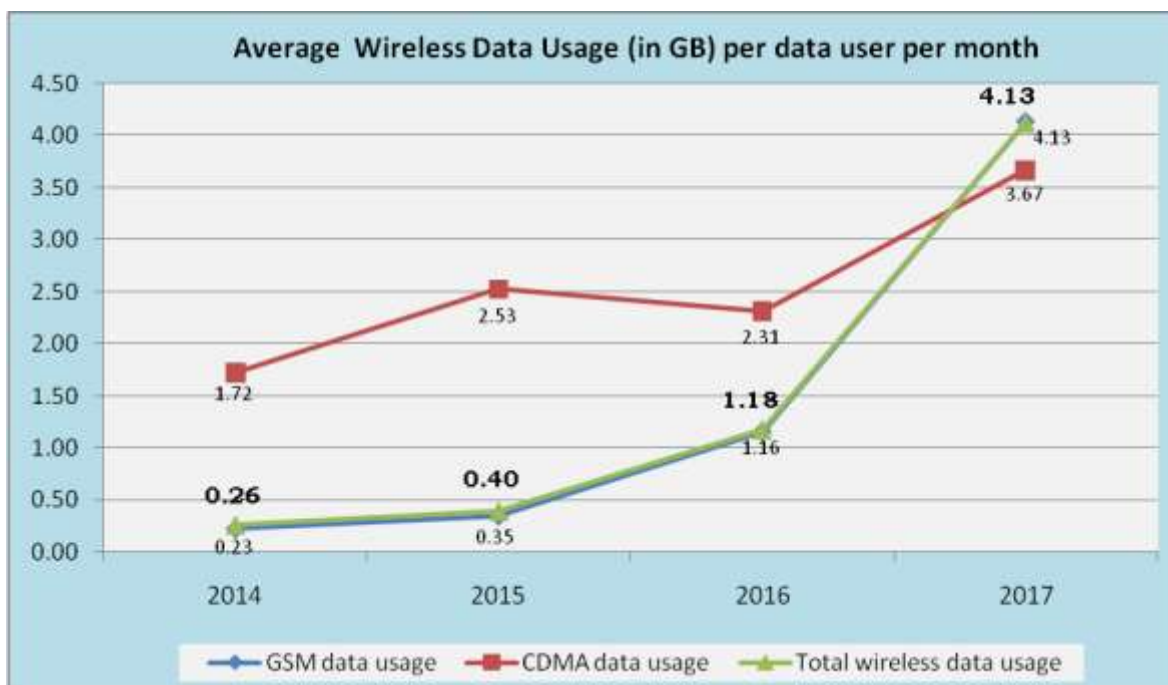


Table 2.18 : Average Wireless Data Usage (in GB) per active data user per month

Calender Year	GSM data usage (in GB)				CDMA data usage	Total data usage
	2G data usage	3G data usage	4G data usage	Total GSM data usage		
2014	0.14	0.62	-	0.23	1.72	0.26
2015	0.20	0.75	-	0.35	2.53	0.40
2016	0.23	0.79	12.42	1.16	2.31	1.18
2017	0.30	2.29	7.95	4.13	3.67	4.13

43 Average wireless data usage per active data user sharply increased from 1.18 GB per month during the year 2016 to 4.13 GB per month during the year 2017.

Chart 2.14 : Trend of Average Wireless Data Usage (in GB) per active data user per month



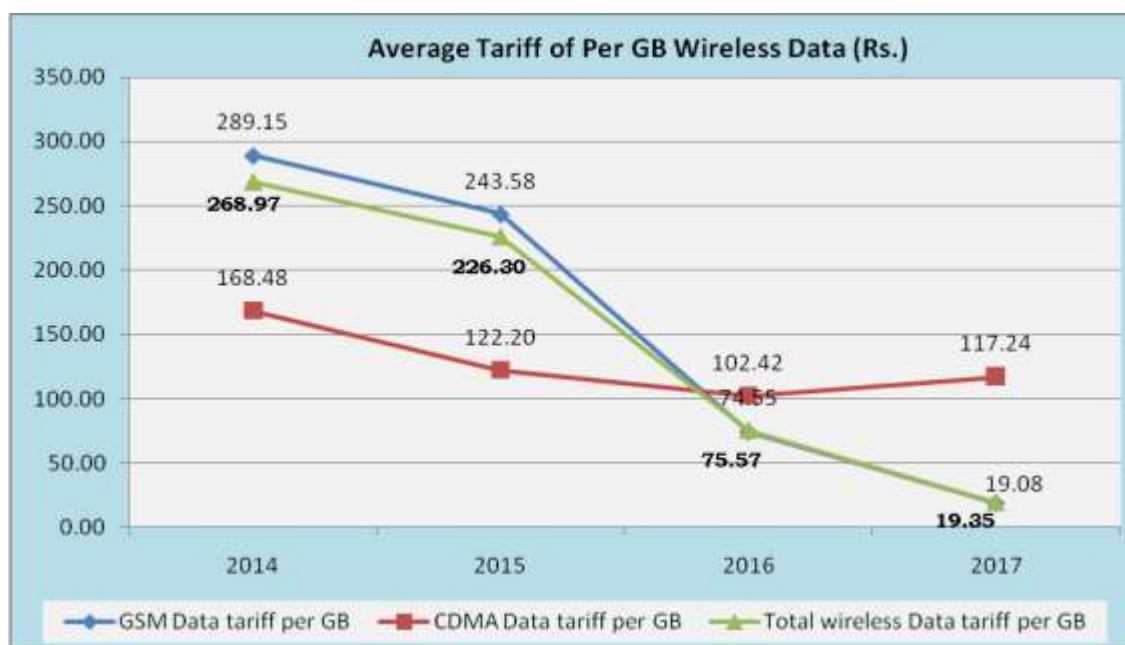
44 The following chart depicts the average tariff (outgo) for per GB wireless data usage.

Table 2.19 : Average Tariff (outgo) for Per GB wireless data (in Rs.)

Year	GSM Data tariff per GB	CDMA Data tariff per GB	Total wireless Data tariff 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

- 45 Average wireless data tariff (outgo) has been calculated in respect of total wireless data revenue and volume of total wireless data usage reported by the access service providers.
- 46 Average wireless data tariff (outgo) was Rs.226.30 per GB during the year 2015. After introduction of 4G/LTE technology, the average wireless data tariff (outgo) declined sharply to Rs.75.57 per GB in the year 2016 and it declined further to Rs.19.35 per GB in the year 2017.

Chart 2.15: Trend of Average Tariff for Per GB wireless data (Rs.)



Chapter 3 :
Financial Data of
Telecom Service
Sector

Table 3.1: Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee (LF) & Spectrum Charges

(₹ in Crore)

Particulars	Calender Year, 2016	Calender Year, 2017	Yearly Growth (%)
Gross Revenue (GR)	279591	255655	-8.56%
Adjusted Gross Revenue (AGR)	198207	160814	-18.87%
License Fee	15975	12976	-18.78%
Spectrum Usage Charges	7574	5089	-32.81%
Pass Through Charges (GR-AGR)	81384	94841	16.54%

- 1 Gross Revenue (GR) declined from Rs.2,79,591 crore in the year 2016 to Rs. 2,55,655 crore in the year 2017 with yearly decline rate of 8.56%. Adjusted Gross Revenue (AGR) declined from Rs.1,98,207 crore in the year 2016 to Rs. 1,60,814 crore in the year 2017 with yearly decline rate of 18.87%.

- 2 Pass through charges increased by 16.54% from Rs.81384 crore in the year 2016 to 94841 crore in the year 2017. Pass-through charges as a percentage of Gross Revenue are 37.10% in 2017 as against 29.11% in the previous year.

- 3 Spectrum Usage Charges (SUC) and License Fee yearly declined by 32.81% and 18.78% respectively in the year 2017 against the previous year.

Chart 3.1 Comparison of Gross Revenue and Adjusted Gross Revenue

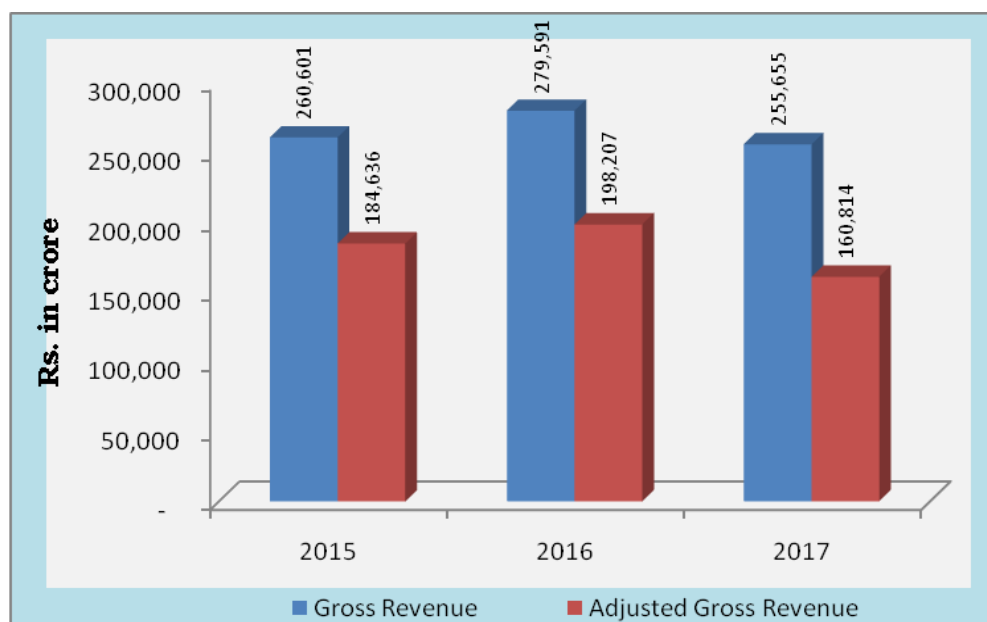


Table 3.2: Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges

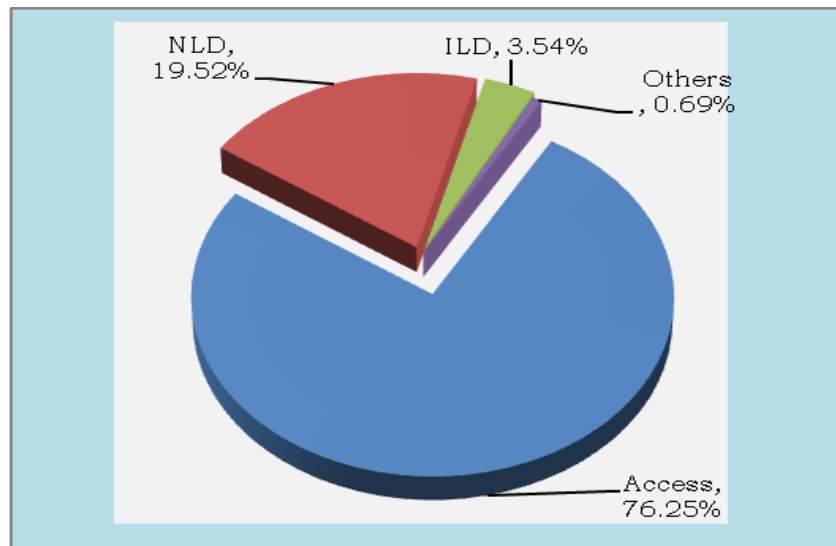
(₹ in Crore Rupees)

Service	Year	Access	NLD	ILD	Others (V-SAT, MNP, ISP)	Total
Gross Revenue	2016	2,12,077	34,123	16,369	17,022	2,79,591
	2017	1,83,734	40,974	14,504	16,443	2,55,655
Adjusted Gross Revenue	2016	1,63,605	26,854	5,856	1,892	1,98,207
	2017	1,22,613	31,388	5,699	1,113	1,60,814
License Fee	2016	13,205	2,149	469	152	15,975
	2017	9,925	2,516	456	78	12,976
Spectrum Usage Charge	2016	7,485	24	-	65	7,574
	2017	5,073	0	0	15	5,089
Pass Through Charge	2016	48,473	7,269	10,513	15,129	81,384
	2017	61,121	9,585	8,805	15,330	94,841

Table 3.3: Yearly Growth of Service-wise Gross Revenue, Adjusted Gross Revenue, License Fee and Spectrum Charges for the year 2017

Service	Gross Revenue	Adjusted Gross Revenue	License Fee	Spectrum Charges	Pass Through Charges
Access	-13.36%	-25.06%	-24.84%	-32.22%	26.09%
NLD	20.08%	16.89%	17.10%	-99.39%	31.86%
ILD	-11.39%	-2.68%	-2.75%	-	-16.25%
Others (V-SAT, MNP,ISP)	-3.40%	-41.18%	-48.88%	-76.39%	1.33%
Overall	-8.56%	-18.87%	-18.78%	-32.81%	16.54%

Chart 3.2: Service wise composition of Adjusted Gross Revenue for the year 2017



- 4 Access services contributed 76.25% 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 13.36%, 25.06%, 24.84% and 32.22% respectively in the year 2017 over the year 2016. However, Pass Through Charges increased by 16.54% during the same period.

Table 3.4: Access Service – Service Provider wise Adjusted Gross Revenue
(₹ in Crore)

Sl.No.	Access Service Provider	Calender Year 2016	Calender Year 2017	Change (%)
1	Bharti	48,880	36,922	-24.46
2	Vodafone	34,680	26,308	-24.14
3	Idea	29,436	22,616	-23.17
4	BSNL	13,110	10,564	-19.42
5	Reliance Jio	-303	7,466	2563.90
6	Tata	9,957	6,478	-34.94
7	Aircel	11,164	5,082	-54.48
8	Reliance	4,734	2,680	-43.39
9	Telenor	3,137	2,128	-32.17
10	MTNL	2,867	1,985	-30.76
11	Sistema Shyam	1,091	381	-65.11
12	Quadrant	140	4	-97.04
13	Videocon	4,712	0	-
	Grand Total (Access)	1,63,605	1,22,613	-25.06

Chart 3.3: Composition of Adjusted Gross Revenue of Access Service Providers for the year 2017

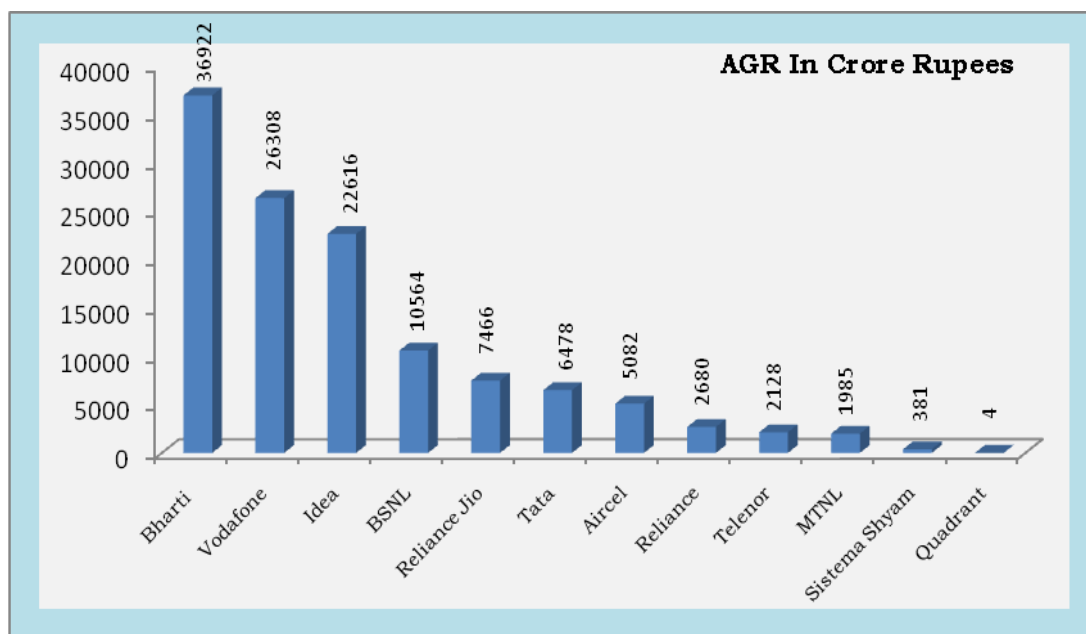
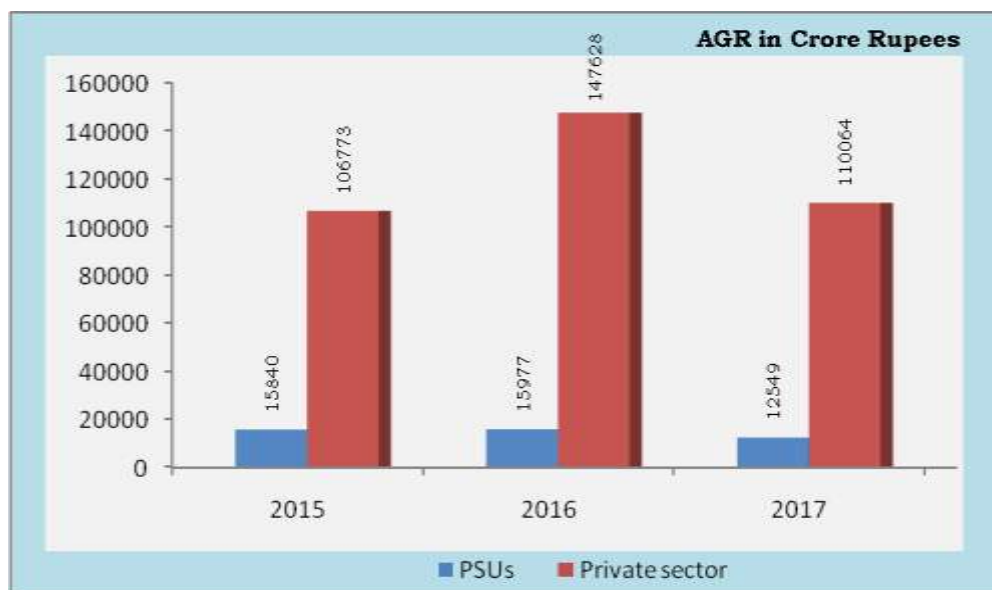


Chart 3.4: Composition of Public/Private sector of Adjusted Gross Revenue (Access Service)



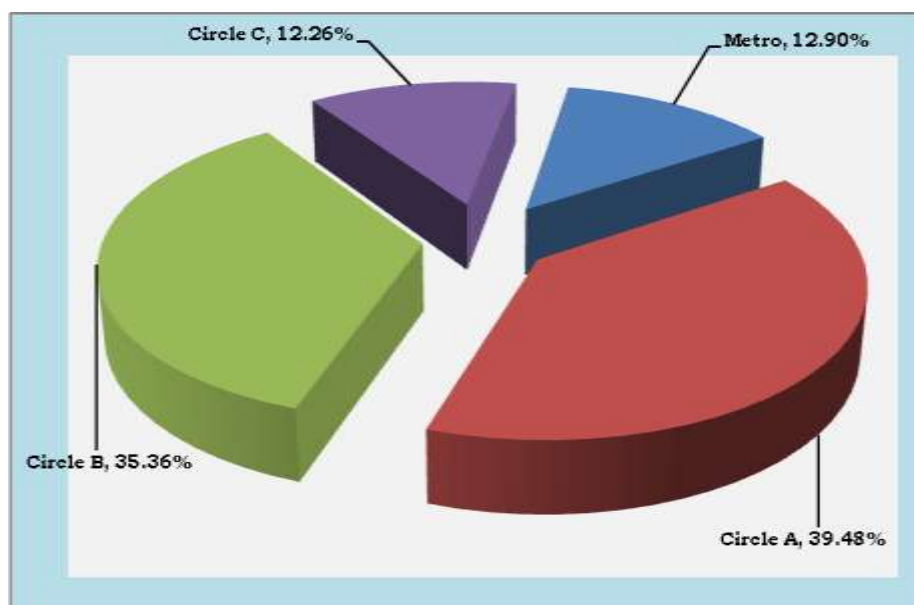
5. Public Sector Undertakings' (PSUs) share in the Access AGR of telecom services is 10.23% for the year 2017 as compared to 9.77% in the previous year.

Table 3.5: Category-wise Adjusted Gross Revenue (AGR) of Access Service

(₹ in Crore)

Category	Adjusted Gross Revenue (Access)		Yearly Growth (%)
	2016	2017	
Metro	23,724	15,814	-33.34%
Circle A	65,282	48,402	-25.86%
Circle B	56,017	43,360	-22.59%
Circle C	18,582	15,036	-19.08%
Total	163,605	122,613	-25.06%

Chart 3.5: Category wise Share of Adjusted Gross Revenue for the year 2017



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 ‘2016’ stands for year starting from 1st January 2016 to 31st December 2016 and ‘2017’ stands for year starting from 1st January 2017 to 31st December 2017.

Chapter 4 :

Performance of Cable TV, DTH and Radio Broadcasting Services

Table 4.1: Key Parameters - Broadcasting & Cable Services

S.No	Parameter	As on 31.12.2016	As on 31.12.2017
1	Number of Private satellite TV channels permitted by the Ministry of I&B for uplinking only/ downlinking / uplinking	899	877
2	Number of Pay TV Channels	287	304
3	Private FM Radio stations in operation	273	326
4	Private DTH Operators	6	6
6	Number of Active DTH Subscribers	62.65 Million	67.56 Million
8	Operational community radio stations	201	214

- 1 A total of 877 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking/uplinking, as on 31st December, 2017.
- 2 As on 31st December, 2017, there were 304 pay channels as reported by broadcasters as compared to 287 pay channels reported in the previous year. These 304 pay channels include 216 SD pay TV channels and 88 HD Pay TV channels. A list of 287 Pay TV Channels is placed at Annexure-4.1.

A. Cable TV Sector

- 3 Digitization, with addressability, of cable TV sector has been executed. As reported by MSOs providing Cable TV services through Digital Addressable System (DAS), details about number of reported channels being carried by the MSOs in areas served by Digital addressable system as on 31.12.2017 are as under:-

Table 4.2 : Areas served by Digital Addressable Systems (DAS)

Particulars	MSO	Number
Maximum number of TV channels (FTA+Pay+Local) carried	GTPL Kolkata Cable & Broadband Pariseva Limited & Siti Cable Network Limited	437
Minimum of TV channels (FTA+Pay+Local) carried	Digicable Network India Private Limited	261
Maximum number of FTA channels carried	Siti Cable Network Limited	198
Maximum number of Pay channels carried	Kal Cable Private Limited	254
Maximum number of Local channels carried	Hathway Sukhamrit Cable & Datacom Private Limited & Fastway Transmissions Private Limited	87

B. Direct-to-Home (DTH) Sector

- 4 Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. DTH has attained net pay active subscriber base of around 67.56 million at the end of December, 2017 as compare to 66.09 million subscriber at the end of December, 2016. This is in addition the viewership of the free DTH services of Doordarshan.
- 5 As on December 2017, there are 6 pay DTH service providers in the country. The list of private DTH service providers is placed at Annexure 3.2.
- 6 Yearly growth of Pay DTH Sector and market share of the Pay DTH operators in terms of net active subscriber base are depicted in the following charts.

Chart 4.1: Trend of Net Active subscribers (in million) of pay DTH service

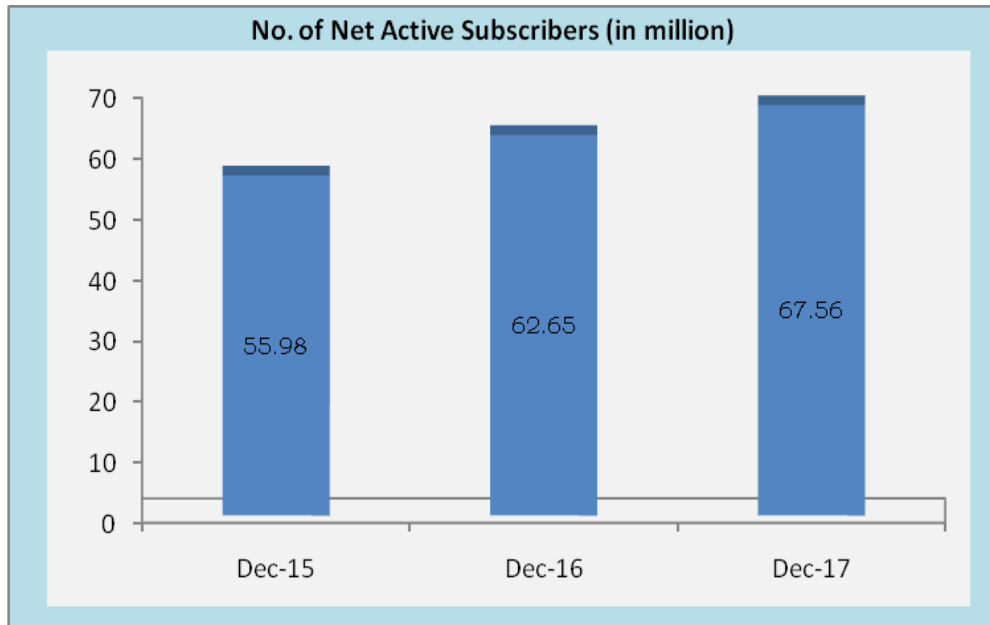
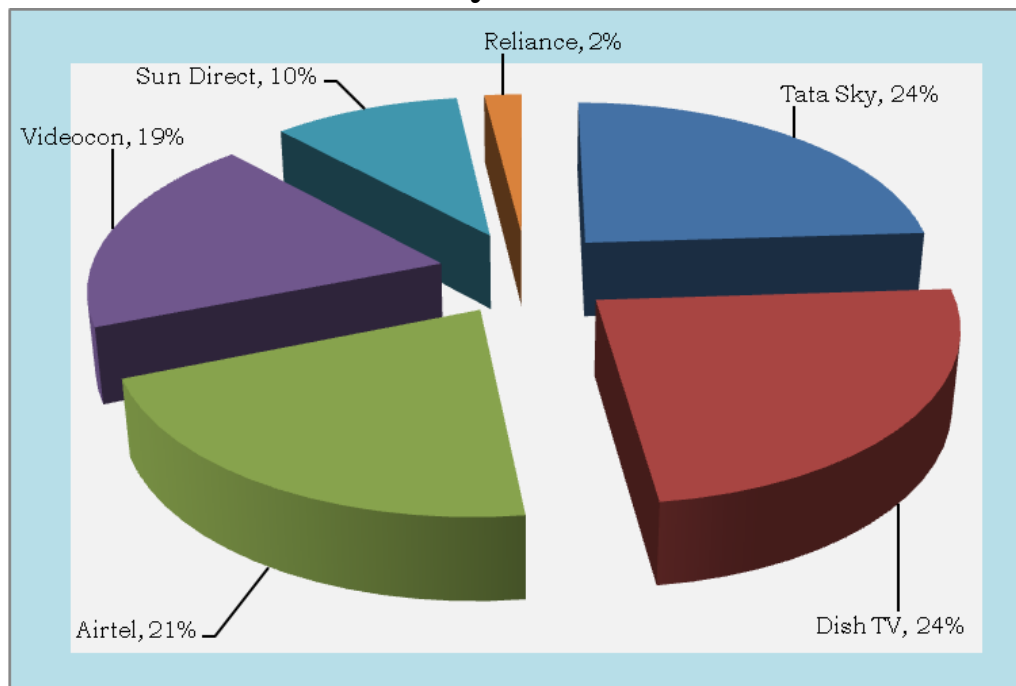


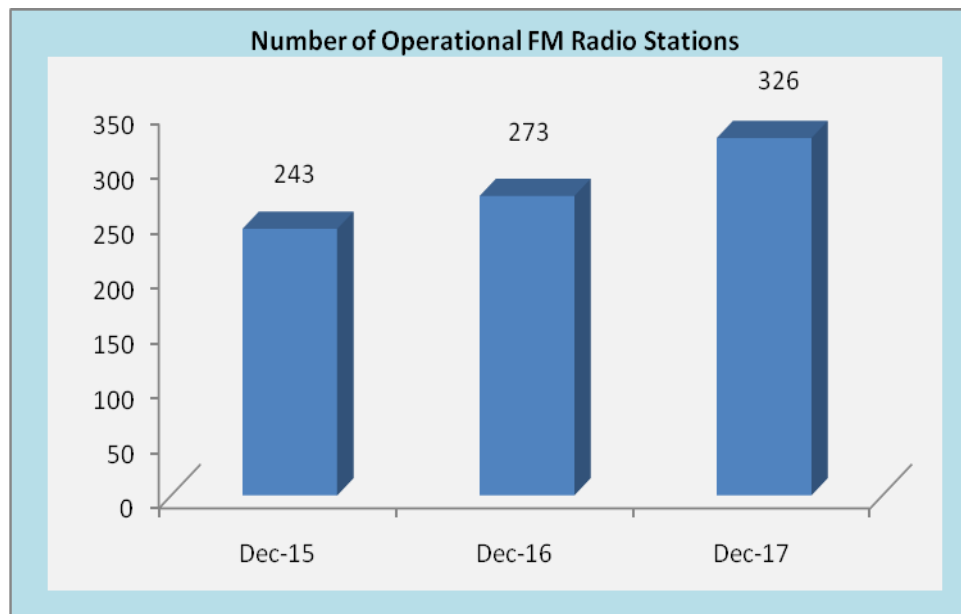
Chart 4.2: Composition of market share in respect of Net Active subscriber base of Pay DTH Service Providers



C. FM Radio Services

- 7 Apart from the radio Stations operated by All India Radio, the public broadcaster, as on 31st December 2017, there are 326 operational private FM Radio stations in 86 existing cities with operational 34 FM Radio broadcaster as compared to 273 private FM Radio Stations in 84 cities at the year ending December, 2016.
- 8 A list of 84 existing cities with operational FM radio channels is placed at Annexure 3.3.

Chart 4.3: Trend of number of Operational FM Radio Stations



D. Community Radio

- 9 As on December 2017, 214 Community Radio stations are operational. The yearly growth in the number of operational community radio stations is depicted in the chart below.

Chart 4.4 : Yearly Growth in number of Operational Community Radio Stations (CRS)

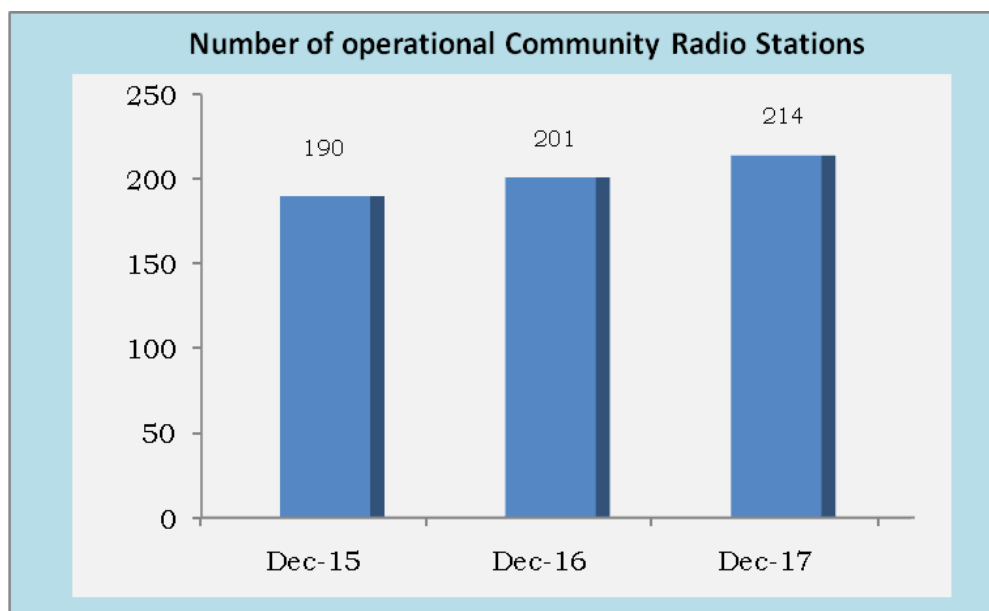


Table 4.3 : Number of application received/Letters of Intent issued/ Licenses issued in respect of Community Radio Stations

Sl. No.	Items	As on 31.12.2017
1	Total No. of Applications Received	2,141
2	No. of Letters of Intent (LOIs) issued	562
3	No. of Applications rejected	1,130
4	No. of Licenses issued (GOPA signed)	294
5	No. of Stations Operational	214

Source: Ministry of Information & Broadcasting (MIB)

Annexures

Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone (GSM)		Bharti (GSM)		Idea (GSM)		Aircel (GSM)		Reliance (GSM)	
	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17
Andhra Pradesh	7,030,425	6,689,828	25,112,612	27,184,997	17,448,973	16,626,241	2,544,880	2,455,229	3,681,215	747,146
Assam	3,920,440	3,787,049	6,281,027	6,766,210	1,293,198	1,151,178	5,663,035	5,892,499	1,358,951	569,804
Bihar	9,706,144	9,550,764	30,102,995	31,181,437	12,040,995	12,047,235	7,436,130	7,549,103	3,269,964	1,003,168
Delhi	10,516,019	11,617,410	11,366,485	12,877,050	6,368,028	6,794,793	6,731,212	6,763,176	5,815,374	4,389,205
Gujarat	19,750,344	20,537,804	8,754,131	9,652,110	12,850,449	13,378,193	17,063	-	5,925,364	890,477
Haryana	5,791,557	6,272,831	3,382,750	3,943,506	5,042,697	5,084,778	3,092	2,092	1,574,039	178,794
Himachal Pradesh	745,499	592,849	2,932,704	3,361,346	815,885	880,211	1,119,545	496,715	1,580,165	1,031,862
Jammu & Kashmir	980,533	862,593	3,505,002	4,084,556	623,267	572,422	2,867,502	3,422,896	949,459	726,412
Karnataka	7,911,034	7,667,041	22,001,544	24,251,336	9,630,391	9,300,939	3,365,649	3,051,390	5,218,438	1,092,687
Kerala	7,692,872	7,877,602	4,567,433	4,799,436	11,018,971	11,590,307	378,558	292,060	1,492,938	180,987
Madhya Pradesh	6,749,495	6,544,311	13,665,329	15,039,063	23,496,338	26,420,511	20,694	552	9,370,161	6,144,470
Maharashtra	18,894,289	20,120,081	13,998,508	14,700,063	25,488,200	28,506,515	2,773,255	1,404,799	4,393,692	415,822
Mumbai	8,983,030	9,639,460	6,164,308	7,659,322	4,428,983	4,472,581	2,970,326	2,526,680	4,707,876	2,957,240
North East	1,606,835	1,570,490	4,102,960	4,426,986	610,574	474,695	3,384,813	3,292,595	368,596	148,351
Orissa	4,352,964	4,293,210	10,981,096	11,949,613	2,042,172	1,713,464	4,664,702	4,030,336	2,121,470	1,283,869
Punjab	5,260,726	4,943,452	8,408,589	9,767,310	6,609,685	7,417,252	1,151,413	904,542	1,712,133	1,144,604
Rajasthan	12,082,927	11,709,525	20,423,230	21,710,763	8,074,084	7,812,272	6,663,523	6,239,272	5,965,928	3,587,447
Tamil Nadu (incl. Chennai)	16,348,225	16,531,883	18,317,695	19,899,546	6,422,898	5,902,784	21,705,386	20,492,085	5,354,554	954,122
UP(E)	19,716,657	22,422,483	22,524,622	25,210,561	11,778,588	11,736,184	7,158,862	6,520,776	8,380,772	886,914
UP(W)	11,851,566	12,295,907	8,696,883	9,121,232	15,679,475	16,466,929	844,454	566,634	5,466,988	682,203
Kolkata	5,589,894	6,021,446	4,909,018	5,606,347	2,541,949	2,443,926	4,314,664	4,254,927	4,318,179	2,282,737
West Bengal	19,205,455	20,980,344	15,653,684	16,920,289	6,212,076	5,704,764	5,096,795	4,776,300	3,518,673	1,868,028
Total	204,686,930	212,528,363	265,852,605	290,113,079	190,517,876	196,498,174	90,875,553	84,934,658	86,544,929	33,166,349

Annexure 1.1 (contd.)

Service Area	Tata (GSM)		Tata (CDMA)		BSNL (GSM)		BSNL (CDMA)		MTNL (GSM)		Sistema (CDMA)	
	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17
Andhra Pradesh	3,499,384	2,661,109	523,849	382,714	9,802,001	10,056,216	18,985	11,805				
Assam		-	-	-	1,351,522	1,567,658	66,212	62,553				
Bihar	1,086,671	662,247	390,504	185,932	4,024,249	4,147,876	0	0				
Delhi		-	1,687,228	1,366,540	-	-	-	-	2,327,549	2,299,685	699,544	
Gujarat	2,353,051	1,746,703	231,025	163,489	4,284,250	5,515,259	40,649	29,533			155,976	
Haryana	2,361,141	1,464,887	287,972	78,353	3,574,496	4,251,802	4,221					
Himachal Pradesh	30,562	11,713	22,429	11,086	1,979,552	2,463,075	10,586	6,291				
Jammu & Kashmir		-	-	-	1,444,470	1,528,195	26,635	20,762				
Karnataka	6,460,007	5,190,732	289,215	126,906	6,827,116	7,219,725	49,189	39,561			853,274	
Kerala	1,307,509	853,994	85,522	57,961	8,591,605	10,216,449	95,156	68,874			261,063	
Madhya Pradesh	4,089,549	3,228,218	326,513	92,049	4,668,613	5,762,169	76,951	65,195				
Maharashtra	4,110,077	3,109,019	1,570,967	794,752	6,398,885	6,965,299	46,264	31,574				
Mumbai	2,070,031	1,636,910	688,729	499,205	-	-	-	-	1,298,346	1,285,081		
North East		-	-	-	1,485,828	1,358,347	162,028	158,836				
Orissa	1,890,510	1,156,241	91,893	62,918	4,773,897	5,258,673	34,039	11,141				
Punjab	2,123,294	1,393,540	360,240	81,514	4,468,872	5,143,003	0	0				
Rajasthan	558,851	268,603	759,014	199,290	5,066,833	5,458,187	59,729	46,547			1,625,425	
Tamil Nadu (incl. Chennai)	3,960,154	2,658,747	140,193	78,132	8,847,625	9,894,687	38,337	27,856			555,764	
UP(E)	3,322,481	2,322,511	277,646	56,435	10,496,496	11,654,457	14,388	6,755				
UP(W)	2,724,418	1,926,644	352,016	143,539	5,325,719	5,832,197	-	-			112,436	
Kolkata	2,319,592	1,702,295	260,651	176,582	855,426	1,300,590	703	703			430,489	
West Bengal	331,063	120,777	33,835	20,668	1,705,061	1,660,882	71,292	72,599			1,183,642	
Total	44,598,345	32,114,890	8,379,441	4,578,065	95,972,516	107,254,746	815,364	660,585	3,625,895	3,584,766	5,877,613	-

Annexure 1.1 (contd.)

Service Area	Quadrant (GSM)		Reliance Jio (LTE)		Telenor (GSM)		Total		Net Additions
	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	
Andhra Pradesh			6,356,061	13,276,818	5,634,582	4,223,046	81,652,967	84,315,149	2,662,182
Assam			979,779	2,804,544			20,914,164	22,601,495	1,687,331
Bihar			4,060,254	10,105,860	10,138,958	7,855,226	82,256,864	84,288,848	2,031,984
Delhi			5,370,396	9,440,273			50,881,835	55,548,132	4,666,297
Gujarat			5,593,057	11,546,414	8,424,971	7,132,006	68,380,330	70,591,988	2,211,658
Haryana			1,918,855	4,188,177			23,940,820	25,465,220	1,524,400
Himachal Pradesh			665,843	1,715,932			9,902,770	10,571,080	668,310
Jammu & Kashmir			875,883	1,904,180			11,272,751	13,122,016	1,849,265
Karnataka			4,521,864	9,260,031			67,127,721	67,200,348	72,627
Kerala			2,414,402	5,072,047			37,906,029	41,009,717	3,103,688
Madhya Pradesh			4,012,836	9,802,824			66,476,479	73,099,362	6,622,883
Maharashtra			4,994,893	11,594,705	8,098,638	5,741,125	90,767,668	93,383,754	2,616,086
Mumbai			3,314,694	7,651,459			34,626,323	38,327,938	3,701,615
North East			571,525	1,382,810			12,293,159	12,813,110	519,951
Orissa			1,841,478	4,263,579			32,794,221	34,023,044	1,228,823
Punjab	2,999,158		3284525	7272099			36,378,635	38,067,316	1,688,681
Rajasthan			3,595,620	8,776,476			64,875,164	65,808,382	933,218
Tamil Nadu (incl. Chennai)			4,846,319	10,589,205			86,537,150	87,029,047	491,897
UP(E)			4,212,075	10,134,487	13,718,269	9,823,240	101,600,856	100,774,803	(826,053)
UP(W)			3,697,898	8,153,481	8,454,081	7,136,085	63,205,934	62,324,851	(881,083)
Kolkata			2,603,998	5,278,886			28,144,563	29,068,439	923,876
West Bengal			2,425,388	5,876,955			55,436,964	58,001,606	2,564,642
Total	2,999,158	-	72,157,643	160,091,242	54,469,499	41,910,728	1,127,373,367	1,167,435,645	40,062,278

Annexure 1.2: Wireline Subscriber Base as on 31st December, 2017

Service Area	Bharti		Reliance		Quadrant		Sistema		Tata		MTNL		BSNL		Vodafone		Aircel		Total		Net Additions
	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	Dec-16	Dec-17	
Andhra Pradesh	158,654	164,994	75,656	73,284	-	-	-	-	172,538	174,331	-	-	1,215,896	1,080,608	11,250	26,010		5,347	1,633,994	1,524,574	-109,420
Assam					-	-	-	-			-	-	155,325	138,036	2,100	2,700			157,425	140,736	-16,689
Bihar			6,436	6,246	-	-	-	-	12,761	12,087	-	-	297,401	251,263	1,260	2,010			317,858	271,606	-46,252
Delhi	1,263,413	1,311,798	173,965	162,689	-	-	-	-	136,059	143,514	1,608,461	1,555,478			27,750	32,070		14,909	3,209,648	3,220,458	10,810
Gujarat	76,086	78,553	73,016	70,177	-	-	-	-	88,015	92,421	-	-	1,103,146	1,041,619	7,200	9,797		1,063	1,347,463	1,293,630	-53,833
Haryana	22,779	22,559	4,043	3,627	-	-	-	-	36,942	38,414	-	-	285,213	243,298					348,977	307,898	-41,079
Himachal Pradesh			4,014	3,889	-	-	-	-	2,589	2,389	-	-	145,415	121,623	30	60			152,048	127,961	-24,087
Jammu & Kashmir					-	-	-	-			-	-	134,171	116,807					134,171	116,807	-17,364
Karnataka	618,389	640,466	155,757	153,214	-	-	-	-	208,921	270,557	-	-	1,216,834	1,127,253	23,190	33,625		28,622	2,223,091	2,253,737	30,646
Kerala	57,915	58,236	33,096	30,828	-	-	-	-	18,723	18,799	-	-	2,005,095	1,882,601	1,680	2,430			2,116,509	1,992,894	-123,615
Madhya Pradesh	272,988	263,865	19,755	19,335	-	-	-	-	16,098	15,346	-	-	726,773	679,047	420	600			1,036,034	978,193	-57,841
Maharashtra	77,520	80,552	82,090	76,883	-	-	-	-	282,870	307,763	-	-	1,420,475	1,283,293	13,501	15,395		585	1,876,456	1,764,471	-111,985
Mumbai	354,879	357,551	256,548	248,775	-	-	-	-	529,968	558,877	1,869,600	1,820,673			21,467	29,582		11,010	3,032,462	3,026,468	-5,994
North East					-	-	-	-			-	-	121,685	113,002	150	120			121,835	113,122	-8,713
Orissa			3,281	3,188	-	-	-	-	8,130	8,100	-	-	277,579	260,470	1,110	1,530			290,100	273,288	-16,812
Punjab	119,526	120,048	20,789	18,956	262,114	250,373	-	-	16,402	15,924	-	-	602,669	483,142	1,020	1,110		30	1,022,520	889,583	-132,937
Rajasthan	48,496	49,915	19,866	29,500	-	-	58,305	-	11,796	12,652	-	-	610,665	514,592	2,370	5,880		3,551	751,498	616,090	-135,408
Tamil Nadu (incl. Chennai)	551,834	555,742	133,968	127,374	-	-	-	-	109,238	113,535	-	-	1,730,644	1,565,517	10,350	14,950			2,536,034	2,377,118	-158,916
U.P.(E)	63,942	64,156	34,767	33,804	-	-	-	-	15,564	13,570	-	-	382,226	365,061	1,500	9,100		2	497,999	485,693	-12,306
U.P.(W)	23,115	22,568	7,127	6,967	-	-	-	-	9,958	9,593	-	-	360,830	313,711	1,080	4,050			402,110	356,889	-45,221
Kolkata	120,571	122,138	69,154	67,394	-	-	-	-	49,330	50,239	-	-	617,718	569,979	5,460	6,420		2,592	862,233	818,762	-43,471
West Bengal			2,048	1,862	-	-	-	-	3,827	3,051	-	-	327,936	279,736	60	60			333,871	284,709	-49,162
Total	3,830,107	3,913,141	1,175,376	1,137,992	262,114	250,373	58,305	0	1,729,729	1,861,162	3,478,061	3,376,151	13,737,696	12,430,658	132,948	197,499	0	67,711	24,404,336	23,234,687	-1,169,649

Annexure 1.3: Service Area and Operator wise details of PCOs

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/decrease as on 31.12.2017	Growth/Decline as on 31.12.2017 (%)
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	17,356	16,362	-994	-5.73
	Bharti Group	368	181	-187	-50.82
	Tata Group	4,092	5,223	1,131	27.64
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	17,356	16,362	-994	-5.73
	Bharti Group	368	181	-187	-50.82
	Tata Group	4,092	5,223	1,131	27.64
Assam	Bharat Sanchar Nigam Ltd.	5,841	5,805	-36	-0.62
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,641	1,507	-134	-8.17
	Tata Group	6	27	21	350.00
Jharkhand	Bharat Sanchar Nigam Ltd.	2,691	2,701	10	0.37
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	4,332	4,208	-124	-2.86
	Tata Group	6	27	21	350.00
Delhi	Bharti Group	660	330	-330	-50.00
	Mahanagar Telephone Nigam Ltd./MTNL	49,564	48,368	-1,196	-2.41
	Tata Group	1,516	1,341	-175	-11.54
Gujarat	Bharat Sanchar Nigam Ltd.	21,055	20,120	-935	-4.44
	Bharti Group	28	14	-14	-50.00
	Tata Group	1,556	1,232	-324	-20.82
Haryana	Bharat Sanchar Nigam Ltd.	1,751	1,663	-88	-5.03
	Bharti Group	310	150	-160	-51.61
	Tata Group	43	39	-4	-9.30
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	1,345	1,240	-105	-7.81
	Tata Group	2	2	0	0
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,935	1,811	-124	-6.41
Karnataka	Bharat Sanchar Nigam Ltd.	23,060	21,756	-1,304	-5.65
	Bharti Group	7,772	3,737	-4,035	-51.92
	Tata Group	613	501	-112	-18.27
Kerala	Bharat Sanchar Nigam Ltd.	17,785	17,425	-360	-2.02

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/ decrease as on 31.12.2017	Growth/ Decline as on 31.12.2017 (%)
Kerala	Bharti Group	956	465	-491	-51.36
	Tata Group	29	32	3	10.34
Kolkata	Bharat Sanchar Nigam Ltd.	4,612	4,468	-144	-3.12
	Bharti Group	52	26	-26	-50.00
	Tata Group	168	138	-30	-17.86
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	18,596	17,761	-835	-4.49
	Bharti Group	3,856	1,841	-2,015	-52.26
	Tata Group	547	487	-60	-10.97
Chhattisgarh	Bharat Sanchar Nigam Ltd.	1,543	1,371	-172	-11.15
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	20,139	19,132	-1,007	-5.00
	Bharti Group	3,856	1,841	-2,015	-52.26
	Tata Group	547	487	-60	-10.97
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	45,760	44,321	-1,439	-3.14
	Tata Group	6,682	8,833	2,151	32.19
Mumbai	Bharti Group	80	41	-39	-48.75
	Mahanagar Telephone Nigam Ltd./MTNL	73,377	72,750	-627	-0.85
	Tata Group	3,796	3,439	-357	-9.40
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	45,760	44,321	-1,439	-3.14
	Bharti Group	80	41	-39	-48.75
	Mahanagar Telephone Nigam Ltd./MTNL	73,377	72,750	-627	-0.85
	Tata Group	10,478	12,272	1,794	17.12
Arunachal Pradesh	Bharat Sanchar Nigam Ltd.	1,124	1,114	-10	-0.89
Mizoram	Bharat Sanchar Nigam Ltd.	0	2,406	2,406	0
Nagaland	Bharat Sanchar Nigam Ltd.	2,409	0	-2,409	-100.00
Orissa	Bharat Sanchar Nigam Ltd.	2,161	2,094	-67	-3.10
	Tata Group	59	26	-33	-55.93
Punjab	Bharat Sanchar Nigam Ltd.	2,568	2,168	-400	-15.58
	Bharti Group	94	37	-57	-60.64

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2017	Number of PCOs as on 31.12.2017	Net PCO increase/decrease as on 31.12.2017	Growth/Decline as on 31.12.2017 (%)
Punjab	Quadrant Televentures Ltd.	1,513	1,420	-93	-6.15
	Tata Group	226	261	35	15.49
Rajasthan	Bharat Sanchar Nigam Ltd.	6,446	5,910	-536	-8.32
	Bharti Group	418	209	-209	-50.00
	Tata Group	223	200	-23	-10.31
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	39,170	37,301	-1,869	-4.77
	Bharti Group	11,896	5,457	-6,439	-54.13
	Tata Group	121	104	-17	-14.05
Chennai	Bharat Sanchar Nigam Ltd.	9,562	9,268	-294	-3.07
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	48,732	46,569	-2,163	-4.44
	Bharti Group	11,896	5,457	-6,439	-54.13
	Tata Group	121	104	-17	-14.05
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	10,154	10,185	31	0.31
	Bharti Group	172	86	-86	-50.00
	Tata Group	7	14	7	100.00
Uttarakhand	Bharat Sanchar Nigam Ltd.	1,191	1,138	-53	-4.45
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,205	2,042	-163	-7.39
	Bharti Group	118	50	-68	-57.63
	Tata Group	154	192	38	24.68
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,396	3,180	-216	-6.36
	Bharti Group	118	50	-68	-57.63
	Tata Group	154	192	38	24.68
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,034	4,109	75	1.86
	Tata Group	45	42	-3	-6.67
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	142	142	0	0
West Bengal (incl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	4,176	4,251	75	1.80
	Tata Group	45	42	-3	-6.67
Total		417,256	393,483	-23,773	-5.70

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

Name of Circle/Service Area	Service Provider	Number of VPTs as on 30.9.2017	Number of VPTs as on 31.12.2017	Net VPTs increase/ decreased as on 31.12.2017	Percentage Growth/ Decline as on 31.12.2017
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	10,113	9,977	-136	-0.01
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	10,113	9,977	-136	-0.01
Assam	Bharat Sanchar Nigam Ltd.	2,810	2,810	0	0
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	6,768	6,768	0	0
Jharkhand	Bharat Sanchar Nigam Ltd.	490	490	0	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	7,258	7,258	0	0
Gujarat	Bharat Sanchar Nigam Ltd.	10,035	8,750	-1,285	-0.13
Haryana	Bharat Sanchar Nigam Ltd.	1,440	1,272	-168	-0.12
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	6,368	5,028	-1,340	-0.21
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	2,248	2,244	-4	-0.00
Karnataka	Bharat Sanchar Nigam Ltd.	7,586	7,512	-74	-0.01
Kerala	Bharat Sanchar Nigam Ltd.	415	405	-10	-0.02
Kolkata	Bharat Sanchar Nigam Ltd.	130	130	0	0
Madhya Pradesh (excl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	39,528	39,692	164	0.00
Chhattisgarh	Bharat Sanchar Nigam Ltd.	8,394	8,391	-3	-0.00
Madhya Pradesh (incl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	47,922	48,083	161	0.00
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	23,827	22,217	-1,610	-0.07
	Tata Group	0	1,282	1,282	0
Maharashtra (incl. Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	23,827	22,217	-1,610	-0.07
	Tata Group	0	1,282	1,282	0
Orissa	Bharat Sanchar Nigam Ltd.	6,205	6,205	0	0
Punjab	Bharat Sanchar Nigam Ltd.	6,001	5,938	-63	-0.01

Annexure 1.4 (contd.)

Name of Circle/Service Area	Service Provider	Number of VPTs as on 30.9.2017	Number of VPTs as on 31.12.2017	Net VPTs increase/decreased as on 31.12.2017	Percentage Growth/Decline as on 31.12.2017
Rajasthan	Bharat Sanchar Nigam Ltd.	10,728	9,329	-1,399	-0.13
Tamilnadu (excluding Chennai)	Bharat Sanchar Nigam Ltd.	11,542	11,457	-85	-0.01
Chennai	Bharat Sanchar Nigam Ltd.	165	144	-21	-0.13
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	11,707	11,601	-106	-0.01
Uttar Pradesh- East	Bharat Sanchar Nigam Ltd.	1,217	1,119	-98	-0.08
Uttarakhand	Bharat Sanchar Nigam Ltd.	3,462	3,473	11	0.00
Uttar Pradesh – West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	3,394	3,394	0	0
Total	Bharat Sanchar Nigam Ltd.	6856	6867	11	0.002
Total(in Lakhs)	Bharat Sanchar Nigam Ltd.	36958	36958	0	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	340	340	0	0
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	37,298	37,298	0	0
Total		207,632	202,395	-5,237	-2.52

**Annexure 1.5 : Internet Service Provider(ISP) wise Internet Subscriber base
as on 31.12.2017**

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
1	Reliance Jio Infocomm Ltd (Infotel Broadband Services Limited)	0	160091242	160091242
2	Bharti Airtel Limited	27544982	71091070	98636052
3	Vodafone	17503782	52439606	69943388
4	Idea Cellular	7806266	34808447	42614713
5	Bharat Sanchar Nigam Ltd.	10229609	21949301	32178910
6	Aircel	10034993	6024354	16059347
7	Telenor	6256415	3188671	9445086
8	Tata	2989749	4317961	7307710
9	Reliance Communications	15782	1972828	1988610
10	Mahanagar Telephone Nigam Ltd.	492031	1371743	1863774
11	Atria Convergence Technologies Pvt. Ltd.	0	1282127	1282127
12	Hathway Cable & Datacom Pvt. Ltd.	13727	731497	745224
13	You Broadband India Pvt. Ltd.	151159	566546	717705
14	Tikona	1614	256879	258493
15	GTPL Broadband Pvt. Ltd.	3	254792	254795
16	D-Vois Broadband Private Limited	0	227808	227808
17	Quadrant Televentures Ltd.	254	208289	208543
18	Excitel Broadband Private Limited	0	191999	191999
19	Syscon Infoway Pvt Ltd	14073	174887	188960
20	Asianet Satellite Communications Ltd.	0	187447	187447
21	Alliance Broadband Services Pvt. Ltd.	0	184558	184558
22	Indinet Service Pvt Ltd	0	136227	136227
23	DEN Networks Ltd	2	106625	106627
24	RailTel Corporation of India Ltd.	0	98907	98907
25	Planet E-Shop Holdings India Ltd.	1060	75989	77049
26	Airlink Communications Pvt. Ltd	0	66153	66153
27	Five Network Solution (India) Ltd.	0	65932	65932
28	Honesty Net Solutions (I) Pvt Ltd	139	61391	61530
29	Ortel Communication Ltd.	0	55393	55393
30	Nextra Teleservices Pvt. Ltd.	0	49350	49350
31	SITI Broadband Services Pvt. Ltd.	0	43857	43857
32	Wish Net Pvt. Ltd.	0	37524	37524
33	Wan and Lan Internet Pvt. Ltd.	0	36051	36051
34	Citycom Networks Pvt. Ltd.	0	34923	34923

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
35	Limras Eronet Broadband Service Pvt Ltd	7197	25751	32948
36	Vasai Cable Pvt. Ltd.	0	26521	26521
37	DNA Infotel Pvt Ltd	0	22627	22627
38	Ishan Netsol Pvt Ltd	17364	4739	22103
39	Chandra Net Pvt. Limited	0	20426	20426
40	Broadband Pacenet (I) Pvt. Ltd.	0	17698	17698
41	IKF Technologies Ltd	0	17169	17169
42	Geocity Network Solutions Pvt. Ltd.	0	15621	15621
43	Quest Consultancy Pvt. Ltd.	0	13852	13852
44	City Online Services Ltd	0	13162	13162
45	Apna Telelink Ltd.	0	12566	12566
46	Rajesh Multi Channel Pvt. Ltd.	108	12172	12280
47	CSC e-Governance Services India Ltd.	0	11985	11985
48	Fusionnet Web Services Pvt. Ltd.	0	11969	11969
49	Meghbela Cable & Broadband Servies(P)Ltd	0	10206	10206
50	Yashash Cable Network Pvt Ltd	0	10191	10191
51	SmartLink Broadband Services	0	9462	9462
52	GBPS Networks Pvt. Ltd.	0	9319	9319
53	Pioneerelabs	301	8905	9206
54	World Phone Internet Services Pvt Ltd	0	8978	8978
55	Digital Cloud Technologies Pvt. Ltd.	0	8876	8876
56	Kappa Internet Services Pvt Ltd.	0	8794	8794
57	Sampark Infotainment Pvt Ltd	0	8157	8157
58	North East Dataa Network Pvt Ltd.	0	7907	7907
59	RI Networks Pvt Ltd	0	7713	7713
60	Swiftnet Broadband Pvt Ltd	0	7000	7000
61	Southern Online Bio Technologies Ltd.	71	6711	6782
62	Digital Network associates Pvt. Ltd	276	6439	6715
63	Lotus Broadband Pvt Ltd	0	6642	6642
64	United Telecoms Ltd.	187	6061	6248
65	Sifi OnlinePvt. Ltd.	0	6137	6137
66	Readylink Internet Services Pvt Ltd	339	5488	5827
67	Shri Omkar Infocom Pvt. Ltd.	0	5527	5527
68	Intermedia Cable Communication Pvt Ltd	0	5049	5049
69	Swiftmail Communications Ltd.	1369	3595	4964

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
70	Narmada Cyberzone Pvt Ltd	1858	3097	4955
71	Netplus Broadband Services Pvt. Ltd	0	4810	4810
72	CJM Consultancy Services Pvt. Ltd.	0	4698	4698
73	Siliguri Internet & Cable TV Pvt. Ltd.	0	4527	4527
74	Spacenet Internet Services Pvt Ltd	0	4472	4472
75	Sikka Broadband(P) Ltd.(Gomti Cable Network Pvt. Ltd.)	0	4175	4175
76	Cityzone Infonet Pvt. Ltd	0	4091	4091
77	Blazenet Ltd.	0	3977	3977
78	Multinet (Udaipur) Pvt. Ltd.	0	3649	3649
79	Airgenie Communications Pvt. Ltd.	0	3639	3639
80	F/X Wireless Technology Services Pvt. Ltd.	0	2870	2870
81	Star Broadband Services (I) Pvt Ltd	0	2816	2816
82	CJ Online Pvt. Ltd.	0	2743	2743
83	Kaizen Infonet Pvt Ltd	7	2526	2533
84	Speed Online.net Pvt. Ltd.	0	2483	2483
85	Nettlinx Ltd.	26	2343	2369
86	Aerocast Networks Pvt Ltd.	0	2352	2352
87	Rajesh Patel Net Services Pvt. Ltd.	79	2079	2158
88	VIVA Communications Pvt Ltd(Mylai Karpagambal Information Systems (P) Ltd)	0	2158	2158
89	S.S.Netcom Pvt Ltd	0	2019	2019
90	Capture Network Systems Pvt. Ltd.	286	1519	1805
91	Jetspot Networks Pvt. Ltd.	0	1805	1805
92	Wnet Telecom Private Limited	0	1804	1804
93	Sphier Infotech Pvt. Ltd.	0	1750	1750
94	Hughes Communications India Ltd.	519	1035	1554
95	Touch Net India Pvt. Ltd.	0	1547	1547
96	Aeroway Networks Pvt Ltd.	0	1287	1287
97	Sify Technologies Ltd.	675	581	1256
98	Harisree CableNet Pvt. Ltd.	0	1234	1234
99	Symbois Creations Pvt. Ltd.	6	1167	1173
100	delDSL Internet Pvt Ltd	0	1058	1058
101	Correl IT Services Pvt. Ltd.	0	948	948
102	Elyzium Technologies Pvt. Ltd.	0	847	847
103	STN Communication & Advertising Pvt Ltd.	8	839	847

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
104	Daksh Broadband Services Pvt Ltd	0	801	801
105	NetMagic Solutions(P) Ltd.	0	783	783
106	Japra Tele Link Pvt. Ltd.	0	713	713
107	Data Infosys Ltd.	0	640	640
108	Barani Data Solutions Private Limited	372	246	618
109	Tata Sky Broadband Private Limited	0	594	594
110	Gorakhpur Net Services Pvt. Ltd.	0	575	575
111	Primenet Global Ltd.	0	575	575
112	Digital2Virtual ISP Pvt. Ltd.	0	549	549
113	Datawave IT solutions Pvt. Ltd.	0	544	544
114	Suncity Broadband Pvt Ltd.	0	536	536
115	Rajdhani Telecom Pvt. Ltd.	33	471	504
116	Rida Communication Pvt. Ltd.	0	493	493
117	Oasis Cable Pvt Ltd.	0	434	434
118	Tamana Winet Pvt. Ltd.	0	418	418
119	Oistel Telecom Pvt. Ltd.	207	207	414
120	Power Grid Corporation of India Ltd.	0	405	405
121	WE INTERNET LIMITED (Nivyah Infrastructure & Telecom Services Ltd.)	0	403	403
122	Conjoinix Technologies Pvt Ltd	0	378	378
123	Singh Internet Services Pvt. Ltd.	0	359	359
124	Gleam Worldwide Services Pvt. Ltd.	0	286	286
125	Reticule Infotech Pvt. Ltd.	0	269	269
126	Pulse Telesystems Pvt. Ltd.	0	254	254
127	Khetan Cable Network (P) Ltd	0	208	208
128	Sistema Shyam	0	202	202
129	Bhiwani Communications Pvt. Ltd.	89	106	195
130	Microsense Pvt. Ltd.	0	168	168
131	ERNET India	92	56	148
132	QBC Infotech Pvt. Ltd.	0	134	134
133	Sab Infotech (Sab Industries)	0	132	132
134	Shri Vinayagaa Internet Pvt Ltd	26	78	104
135	Angel Air Network Solutions Private Limited	0	90	90
136	Trans Virtual Pvt. Ltd.	16	72	88
137	Dream Plus Multi Services Pvt. Ltd.	0	80	80
138	Telestra Telecommunications Pvt. Ltd.	0	73	73

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Subscribers
139	Sanyog Networks Pvt Ltd	0	66	66
140	Edge Telecommunications Pvt. Ltd.	0	65	65
141	Verizon Communications India Pvt. Ltd. (Worldcom Communications)	0	65	65
142	Airmesh Communications Limited	0	61	61
143	Pacific Internet India Pvt. Ltd.	0	60	60
144	AT&T Global Network Services India Pvt Ltd	0	59	59
145	HCL Comnet Systems & Services Ltd.	22	14	36
146	West Bengal Electronics Industry Development Corp. Ltd.	0	33	33
147	Dreamnet Pvt.Ltd.	0	30	30
148	Adya Tech One Services Pvt Ltd	0	28	28
149	Orange Business Services India Network Pvt. Ltd.	0	22	22
150	Novanet India Ltd.	0	16	16
151	Vcare Call Centres India Pvt. Ltd.	0	12	12
152	Financial Technologies Communications Ltd	10	0	10
153	Essel Shyam Communications Limited	3	6	9
154	Nelco Ltd.	1	6	7
155	Tatanet Services Ltd	0	6	6
156	ABT Ltd.	3	2	5
	Total	83087190	362869617	445956807

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 for Q.E. Dec-17**

S. 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	delDSL 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.

Annexure 1.7: Service Area wise PMRTS subscriber Base

SNo.	Operative Area	Service Provider	Subscriber Base	
			30.09.2017	31.12.2017
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5112	5817
		Procall(Delhi)	2711	2768
		Procall (Faridabad)		
		Procall (Gurgaon)		
		Total	7823	8585
2	Mumbai (Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7729	7755
		Smartalk (Mumbai)	517	526
		Bhilwara Telenet(Mumbai)	811	818
		Airtalk Solutions & Services Pvt. Ltd	314	304
		Total	9371	9403
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2429	2388
		Total	2429	2388
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6711	7058
		Quick Calls	371	408
		Total	7082	7466
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	6874	6795
		Quick Calls	415	506
		Total	7289	7301
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	4968	5130
		Quick Calls (Hyderabad Urban)	704	704
		Total	5672	5834
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1255	1302
		Total	1255	1302

Annexure- 1.7 (Contd.)

SNo.	Operative Area	Service Provider	Subscriber Base	
			30.09.2017	31.12.2017
8	Rajasthan (Jaipur)	Procall	294	286
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	431	448
		Total	725	734
9	Gujarat (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej/ Kutch/Amrela / Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/Dahej)	6249	6196
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		Total	8069	8016
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1607	1615
		Smartalk	469	442
		Total	2076	2057
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	345	361
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	674	786
		Total	1019	1147
Grand Total			52810	54233

Annexure 4.1: List of Broadcasters and their Pay TV Channels as reported to TRAI as on 31.12.2017

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
1	9X Media Private Limited	1	9XM	SD
2	ABP News Network Pvt Limited	2	ABP Ananda	SD
		3	ABP Majha	SD
3	AETN 18 Media Pvt Limited	4	The History Channel	SD
		5	FY1 TV18	HD
		6	Histry TV 18 HD	HD
4	Asianet Communications Limited	7	Asianet	SD
		8	Asianet Plus	SD
		9	Asianet Movies	SD
		10	Suvarna Plus	SD
		11	Star Suvarna	HD
		12	Asianet HD	HD
5	AXN Networks India Private Limited	13	Star Suvarna (Earlier name "Suvarna")	SD
		14	SONY ESPN (Earlier name "SONY KIX")	SD
6	Bangla Entertainment Pvt Ltd	15	AXN HD	HD
		16	AATH	SD
7	BBC Global News India Pvt Ltd	17	BBC World News	SD
8	Bennett, Coleman & Company Limited	18	Zoom	SD
		19	Romedy Now	SD
		20	MN +(Earlier name "Movies Now +")	HD
		21	Mirror Now (Earlier name "Magicbricks Now")	SD
		22	ET NOW	SD
		23	Times Now	SD
		24	Romedy Now HD	HD
		25	Movies Now HD	HD
		26	MNX HD (Earlier name "Movies Now 2 HD")	HD
		27	MNX (Earlier name "Movies Now 2")	SD
9	Business Broadcast News Private Limited	28	Times Now HD	HD
		29	BTVi (Earlier name "Bloomberg TV India")	SD
10	Celebrities Management Pvt Limited	30	Travel XP HD (Earlier name "Travel XP")	HD
		31	Travel XP Tamil	SD
11	CLS Info Media Private Ltd	32	JAN TV PLUS	SD
12	Discovery Communications India	33	Animal Planet	SD
		34	Discovery Channel	SD
		35	Discovery Channel – Tamil	SD
		36	Discovery Kids Channel	SD
		37	Discovery Science	SD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		38	Discovery Turbo	SD
		39	ID Investigation Discovery	SD
		40	Discovery HD World (earlier name "Discovery HD")	HD
		41	Animal Planet HD World (earlier name "Discovery Home and Health")	HD
		42	TLC HD world (earlier name "Military Channel")	HD
		43	TLC	SD
		44	Dsport	SD
13	Disney Broadcasting (India) Limited	45	Disney Junior (Earlier name "UTV Comedy")	SD
		46	UTV Movies	SD
		47	Disney XD (Earlier name "UTV World Movies")	SD
		48	Disney International HD (Earlier name "Bindass Play")	HD
		49	The Disney Channel	SD
14	E-24 Glamour Limited	50	E 24	SD
15	Eenadu Televisoin Private Limited	51	ETV Telugu	SD
		52	ETV Andhra Pradesh (earlier name "ETV-2")	SD
		53	ETV - Telangana (earlier name "ETV-3")	SD
		54	ETV Cinema	SD
		55	ETV Life	SD
		56	ETV Plus	SD
		57	ETV Abhiruchi	SD
		58	ETV HD	HD
16	EPIC Television Networks Pvt Limited	59	EPIC TV (HD Distribution)	HD
17	Genx Entertainment Limited	60	UTV Bindass	SD
		61	UTV Action	SD
18	Greycells18 Media Limited	62	Topper TV (#)	SD
19	IBN Lokmat News Private Ltd	63	News 18 Lokmat (earlier name "IBN Lokmat")	SD
20	Living Entertainment Enterprises Private Ltd	64	Living Foodz HD	HD
21	Mavis Satcom Limited	65	J Movies	SD
		66	Jaya Max	SD
		67	Jaya Plus	SD
		68	Jaya TV HD	HD
22	MSM World Wide Factual Media Private Limited	69	SONY BBC EARTH	SD
		70	SONY BBC EARTH HD	HD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
23	NDTV Life style Limited	71	NDTV Good Times	SD
24	Neo Sports Broadcast Pvt Limited	72	NEO Prime (Earlier name "Neo Cricket")	SD
		73	Neo Sports	SD
25	New Delhi Television Limited	74	NDTV 24*7	SD
		75	Granada TV (HD)	HD
		76	Trace Sports HD	HD
		77	NDTV Profit	SD
26	NGC Network (India) Pvt Limited	78	Fox Life	SD
		79	National Geographic Channel(NGC)	SD
		80	Fox Life HD	HD
		81	Nat Geo Wild	SD
		82	National Geographic HD	HD
		83	Nat Geo Music HD	HD
		84	Nat Geo Wild HD	HD
		85	Nat Geo People HD	HD
86	Baby TV HD	HD		
27	NOIDA Software Technology Park Limited	87	NHK World Premium (HD Distribution)	HD
28	Odisha Television Limited	88	Prarthana	SD
		89	Tarang	SD
		90	Tarang Music	SD
		91	Alankar	SD
29	Panorama Television Private Limited	92	ETV Bihar Jharkhand	SD
		93	ETV MP Chattisgarh	SD
		94	ETV Rajasthan	SD
		95	ETV Uttar Pradesh Uttarachal	SD
		96	ETV Urdu	SD
		97	News 18 Kannada (earlier name "ETV News Kannada")	SD
		98	ETV News Bangla	SD
		99	News 18 Punjab / Haryana / Himanchal Pradesh (Earlier name "ETV Haryana / Himanchal Pradesh")	SD
		100	ETV News Gujarati	SD
		101	ETV News Odia	SD
30	Paul Entertainments Pvt Limited	102	9X Tashan (Earlier name "Purvaiya")	SD
31	Raj Television Network Limited	103	Raj Musix Kannada	SD
		104	Raj Digital Plus	SD
		105	Raj Musix	SD
		106	Raj News	SD
		107	Raj TV	SD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		108	Vissa TV	SD
32	Sahara India Commercial Corporation Ltd	109	Sahara Filmy	SD
		110	Sahara One	SD
33	Sarthak Entertainment Pvt Limited	111	Sarthak TV	SD
34	Silverstar Communications Limited	112	Mega 24	SD
		113	Mega Musiq	SD
		114	Mega TV	SD
35	Sony Pictures Networks India Private Limited	115	Sony YAY! (Earlier name "Animax")	SD
		116	AXN	SD
		117	SET MAX	SD
		118	MIX	SD
		119	SAB	SD
		120	SONY ENTERTAINMENT CHANNEL (SET)	SD
		121	PIX	SD
		122	SIX	SD
		123	MAX 2 (Earlier name "MAX HD")	SD
		124	PAL (Earlier Name "SAB HD")	SD
		125	SET HD	HD
		126	SIX HD	HD
		127	PIX HD	HD
		128	MAX HD	HD
		129	SONY ESPN HD	HD
		130	Le PLEX HD	HD
		36	Star India Private Limited	131
132	Ten 3 HD			HD
133	SAB HD			HD
134	SONY ROX HD			HD
135	Channel (V)			SD
136	Star Sports 1 Tamil (Earlier name "Star Sports 4")			SD
137	Star Sports Select 2 (Earlier name "FX")			SD
138	Star Bharat (earlier name "Life Ok")			SD
139	Movies OK (earlier name "Gold Action")			SD
140	Star Sports 1 Hindi (Earlier name "Star Sports 3")			SD
141	Star Gold			SD
142	Star Jalsha			SD
143	Star Movies			SD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		144	Star Gold Select (Earlier name "Star Movies Action")	SD
		145	Star Plus	SD
		146	Star Pravah	SD
		147	Star Sports 1	SD
		148	Star Sports 2	SD
		149	Star World	SD
		150	Jalsha Movies (Earlier name "Star Bengali")	SD
		151	Star Sports HD 2	HD
		152	Star Sports HD 1	HD
		153	Star Bharat HD (earlier name "Life Ok HD")	HD
		154	Star Gold HD	HD
		155	Star Movies HD	HD
		156	Star Plus HD	HD
		157	Star World Prmiere HD	HD
		158	Star Sports 1 HD Hindi (Earlier name "Star Sports HD 3")	HD
		159	Star Sports Select 1 (Earlier name "Star Sports HD 4")	SD
		160	Star Movies Select HD	HD
		161	Star World HD	HD
		162	Star Sports First (Earlier Name "FX HD")	SD
		163	MAA Gold	SD
		164	MAA Movies	SD
		165	MAA Music	SD
		166	MAA TV	SD
		167	Star Pravah HD	HD
		168	Star Jalsha HD	HD
		169	Jalsha Movies HD	HD
		170	Star Sports Select HD 1	HD
		171	Star Sports Select HD 2	HD
		172	MAA HD	HD
		173	Star Gold Select HD	HD
		174	MAA Movies HD	HD
37	SUN TV Network Limited	175	Adithya TV	SD
		176	Chintu TV	SD
		177	Chutti TV	SD
		178	Gemini Comedy	SD
		179	Gemini Life	SD
		180	Gemini Movies	SD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		181	Gemini Music	SD
		182	Gemini News	SD
		183	Gemini TV	SD
		184	KTV	SD
		185	Kiran TV	SD
		186	Kushi TV	SD
		187	SUN Life	SD
		188	Sun Music	SD
		189	Sun News	SD
		190	Surya Music (Earlier name "Sun News English")	SD
		191	SUN TV	SD
		192	SUN TV RI	SD
		193	Surya TV	SD
		194	Udaya Comedy	SD
		195	Udaya Movies	SD
		196	Udaya Music	SD
		197	Udaya News	SD
		198	Udaya TV	SD
		199	Kochu TV	SD
		200	Sun TV HD	HD
		201	KTV HD	HD
		202	Sun Music HD	HD
		203	Gemini TV HD	HD
		204	Sun Action (#)	SD
		205	Gemini Action (#)	SD
		206	Surya Action (#)	SD
		207	Suriyan TV (#)	SD
38	Taj Television India Private Limited	208	Ten 2 (earlier name 'Ten Action')	SD
		209	Ten 1 (earlier name 'Ten Sports')	SD
		210	Ten 3	SD
		211	Ten Golf HD	HD
		212	Ten 1 HD (earlier name 'Ten HD')	HD
39	Turmeric Vision Private Ltd	213	Food Food TV	SD
40	Turner International India Pvt Ltd	214	Cartoon Network	SD
		215	CNN International	SD
		216	HBO	SD
		217	POGO	SD
		218	Toonami (Earlier name Boomerang)	SD
		219	WB	SD
		220	HBO HD (Earlier name "HBO Hits HD")	HD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
41	TV 18 Broadcast Limited	221	CNN News 18 (earlier name "CNN-IBN")	SD
		222	CNBC Bazaar	SD
		223	CNBC TV 18 Prime HD	HD
		224	CNBC Awaaz	SD
		225	CNBC TV 18	SD
42	TV Today Network Limited	226	Aaj Tak	SD
		227	Delhi Aaj Tak	SD
		228	India Today (Earlier name "Headlines Today")	SD
		229	Aaj Tak Tez	SD
43	United Home Entertainment Pvt Limited	230	Hungama TV	SD
44	Viacom 18 Media Private Limited	231	Colors	SD
		232	Comedy Central (HD Distribution)	HD
		233	MTV	SD
		234	NICK	SD
		235	NICK JR (Earlier name "Nick Jr / Teen Nick")	SD
		236	SONIC	SD
		237	VH 1 (HD Distribution)	HD
		238	Colors Infinity HD	HD
		239	Colors Infinity	SD
		240	Colors HD	HD
		241	NICKS HD+	HD
		242	MTV Indies (HD Distribution)	HD
		243	Rishtey Cineplex	SD
		244	MTV Beats (Earlier name "X Zone")	SD
		245	Colors Kannada HD	HD
		246	Colors Marathi HD	HD
		247	Colors Bangla HD	HD
		248	Colors Super	SD
		249	Colors Bangla (Earlier name "ETV Bangla")	SD
		250	Colors Gujarati (Earlier name "ETV Gujarati")	SD
		251	Colors Kannada (Earlier name "ETV Kannada")	SD
		252	Colors Marathi (Earlier name "ETV Marathi")	SD
		253	Colors Oriya (Earlier name "ETV Oriya")	SD
		254	MTV Beats HD	HD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
		255	NXT	SD
		256	Cineplex HD	HD
		257	VH 1	SD
		258	Comedy Central	SD
45	Vijay Television Pvt Limited	259	Vijay TV (except Tamil Nadu)	SD
		260	Vijay Super	SD
		261	Vijay HD	HD
46	Zee Akaash News Pvt Ltd	262	24 Ghanta	SD
47	Zee Entertainment Enterprises Limited	263	Zee ETC Bollywood (Earlier name "Zee Bollywood")	SD
		264	Action Cinema	SD
		265	Zee Bangla Cinema	SD
		266	Zee Café HD	HD
		267	Zee Café	SD
		268	Zee Cinema	SD
		269	Classic Cinema	SD
		270	Zee Studio	SD
		271	Zee Talkies	SD
		272	Zee TV	SD
		273	Zing	SD
		274	& Picture	SD
		275	Zee Bangla	SD
		276	Zee Marathi	SD
		277	Living Foodz (earlier name "Zee Khana Khazana")	SD
		278	Zee TV HD	HD
		279	Zee Cinema HD	HD
		280	Zee Studio HD	HD
		281	& TV	SD
		282	& TV HD	HD
		283	Zee Kannada	SD
		284	Zee Telugu	SD
		285	& Pictures HD	HD
		286	Zee Cinemalu	SD
		287	Zee Yuva	SD
		288	Zee Marathi HD	HD
		289	Living Zen	SD
		290	& Prive HD	HD
		291	Zee Bangla HD	HD
		292	Zee Tamil HD	HD
		293	Zee Talkies HD	HD

Annexure 4.1(Contd.)

Sl. No	Name of the broadcaster	Sl. No	Name of the channel	Declared as SD or HD
48	Zee Media Corporation Limited	294	Zee 24 Taas	SD
		295	Zee Kalinga (Earlier name "Zee 24 Ghantalu)	SD
		296	Zee Business	SD
		297	Zee Punjab Haryana Himachal (Earlier name "Zee Punjabi")	SD
		298	Zee Madhya Pradesh Chattisgarh	SD
		299	Zee Salaam	SD
		300	Zee 24 Kalak	SD
		301	WION	SD
		302	Zee Uttar Pradesh Uttrakhand	SD
		303	Zee Rajasthan News (Earliner name "Zee Marudhara" and "Zee Rajasthan Plus")	SD
49	Zoom Entertainment Network Limited	304	Movies Now	SD

(A) List of Pay channels are for information of the stakeholders.

(B) # Advertisement free channels

(C) The reporting of pay channels by the broadcasaters in accordance with the Telecommunication (Broadcasting and Cable) Services (Fourth) (Addressable Systems) Tariff Order, 2010 dated 21.07.2010 as amended from time to time.

Annexure 4.2 : List of pay DTH Operators

- 1. M/s. Tata Sky Ltd.,**
3rd Floor, C-1, Wadia International Centre (Bombay Dyeing)
Pandurang Budhkar Marg, Worli,
Mumbai – 400 025
Tel: 022-6613 3000
Fax-022-6613 3030
Website : www.tatasky.com
- 2. M/s Dish TV India Ltd.**
FC-19, Sector-16A, Film City,
Noida-201301
Tel: 91-120-2467005 / 2467000
Fax: 91-120-4357082
Website : www.dishtv.in
- 3. SUN Direct TV(P) Ltd.**
Murasoli Maran Towers, 73, MRC Nagar,
Main Road, MRC Nagar, Chennai – 28
PH: 044-44676767, Fax No 044-40679191
Website : www.sundirect.in
- 4. Bharti Telemedia Ltd.**
Airtel Centre, Plot No 16,
Udyog Vihar Phase IV,
Gurgaon – 122 015
Ph: 0124-4222222
Fax : 0124-4248063
Website : www.airtel.in
- 5. Reliance Big TV Pvt. Ltd.**
3rd Floor, A-Wing,
Reliance Centre, Maharaja Ranjit Singh Marg,
New Delhi – 110 002
Ph: 011-30331012
Fax : 011-30331781
Website : www.rcom.co.in
- 6. M/s Videocon d2h Limited
(Formerly Bharat Business Channel Limited)**
Plot No 1D, Udyog Vihar Industrial Area,
Surajpur, Greater NOIDA,
Distt, Gautam Budh Nagar - 201 306
Ph: 0120-6141000
Fax : 0120-6141250
Website : www.vedeocond2h.com

Annexure 4.3: List of 86 existing cities with operational FM Radio Channels in India as on 31.12.2017

S.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	3
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	Bhopal	B	4
16	Bhubaneshwar	C	4
17	Bikaner	C	4
18	Bilaspur	C	3
19	Chandigarh	C	4
20	Chennai	A+	8
21	Cochin	B	4
22	Coimbatore	B	4
23	Delhi	A+	9
24	Dhule	C	2
25	Gangtok	D	2
26	Gorakhpur	C	4
27	Gulbarga	C	1
28	Guwahati	C	4
29	Gwalior	C	4
30	Hissar	D	4
31	Hyderabad	A	7
32	Itanagar	D	1

Annexure 4.3 (Contd.)

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

Annexure 4.3 (Contd.)

S.No.	Name of City	Category	Number of operational channels
66	Ranchi	C	4
67	Rourkela	C	2
68	Sangli	C	3
69	Shillong	D	3
70	Shimla	D	3
71	Sholapur	C	4
72	Siliguri	C	3
73	Srinagar	C	1
74	Surat	A	6
75	Thiruvananthapuram	C	4
76	Thrissur	C	4
77	Tiruchy	C	2
78	Tirunelveli	C	2
79	Tirupati	C	2
80	Tuticorin	C	2
81	Udaipur	C	4
82	Vadodra	B	4
83	Varanasi	B	5
84	Vijayawada	B	2
85	Vishakapatnam	B	4
86	Warrangal	C	1
Total			326

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