



Telecom Regulatory Authority of India

The Indian Telecom Services Performance Indicators October – December, 2018

New Delhi, India
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Snapshot

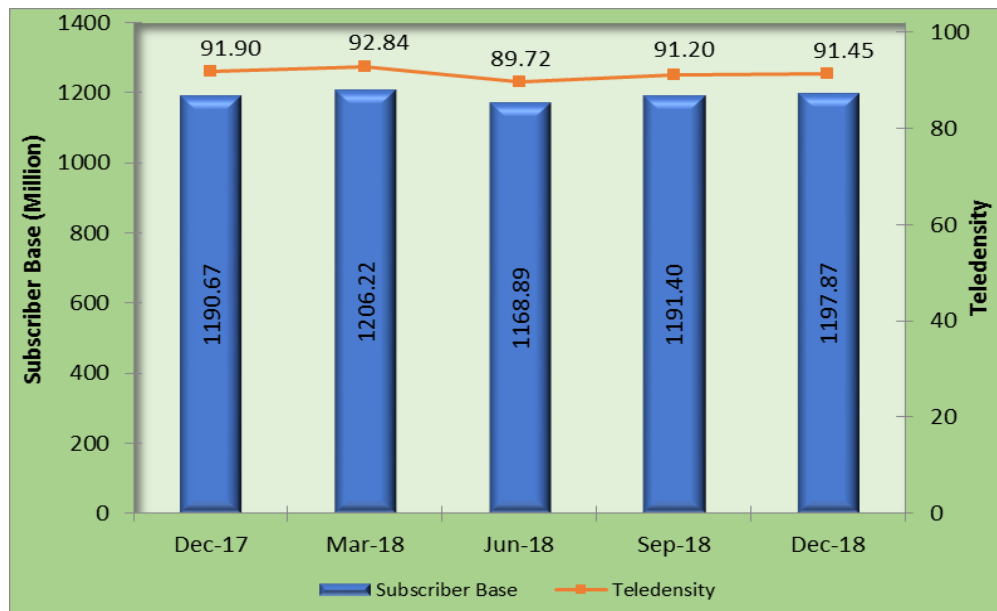
(Data As on Q.E. 31 st December, 2018)	
Telecom Subscribers (Wireless+Wireline)	
Total Subscribers	1,197.87 Million
% change over the previous quarter	0.54%
Urban Subscribers	666.28 Million
Rural Subscribers	531.59 Million
Market share of Private Operators	88.93%
Market share of PSU Operators	11.07%
Teledensity	91.45
Urban Teledensity	159.98
Rural Teledensity	59.50
Wireless Subscribers	
Total Wireless Subscribers	1,176.00 Million
% change over the previous quarter	0.57%
Urban Subscribers	647.52 Million
Rural Subscribers	528.48 Million
Market share of Private Operators	89.98%
Market share of PSU Operators	10.02%
Teledensity	89.78
Urban Teledensity	155.48
Rural Teledensity	59.15
Total Wireless Data Usage during the quarter	14,253,256 TB
No. of total Public Mobile Radio Trunk Services (PMRTS)	57,784
No. of Very Small Aperture Terminals (VSAT)	2,87,424
Wireline Subscribers	
Total Wireline Subscribers	21.87 Million
% change over the previous quarter	-1.11%
Urban Subscribers	18.76 Million
Rural Subscribers	3.11 Million
Market share of Private Operators	32.76%
Market share of PSU Operators	67.24%
Teledensity	1.67
Urban Teledensity	4.50
Rural Teledensity	0.35
No. of Village Public Telephones (VPT)	1,32,403
No. of Public Call Office (PCO)	2,75,032

Telecom Financial Data	
Gross Revenue (GR) during the quarter	₹ 58,991 Crore
% change in GR over the previous quarter	2.01%
Adjusted Gross Revenue (AGR) during the quarter	₹ 36,054 Crore
% change in AGR over the previous quarter	-0.24%
Share of Public sector undertakings in Access AGR	8.33%
Monthly Average Revenue Per User (ARPU) for Access Services	₹ 72.82
Internet/Broadband Subscribers	
Total Internet Subscribers	604.21 Million
% change over previous quarter	7.89%
Narrowband subscribers	78.86 Million
Broadband subscribers	525.36 Million
Wired Internet Subscribers	21.42 Million
Wireless Internet Subscribers	582.79 Million
Urban Internet Subscribers	390.91 Million
Rural Internet Subscribers	213.30 Million
Total Internet Subscribers per 100 population	46.13
Urban Internet Subscribers per 100 population	93.86
Rural Internet Subscribers per 100 population	23.87
Broadcasting & Cable Services	
Number of private satellite TV channels permitted by the Ministry of I&B for uplinking only/downlinking /uplinking	880
Number of Pay TV Channels as reported by broadcasters	330
Number of private FM Radio Stations (excluding All India Radio)	355
Number of Pay Subscribers net Active with Private DTH Operators	70.49 Million
Number of Operational Community Radio Stations	248
Number of pay DTH Operators	5
Revenue & Usage Parameters	
Monthly ARPU of Wireless Service (GSM+CDMA+LTE)	₹ 70.13
Minutes of Usage (MOU) per subscriber per month - Wireless Service (GSM+CDMA+LTE)	667 Minutes
Total Outgoing Minutes of Usage for Internet Telephony	204 Million
Wireless Data Usage	
Average Data Usage per unique data subscriber per month-GSM (2G+3G+4G LTE+CDMA)	8.74 GB
Average outgo(tariff) per GB wireless data during the quarter	₹ 10.52

Executive Summary

1. The number of telephone subscribers in India increased from 1,191.40 million at the end of Sep-18 to 1,197.87 million at the end of Dec-18, registering an increase rate of 0.54% over the previous quarter. This reflects year-on-year (Y-O-Y) increase rate of 0.60% over the same quarter of last year. The overall Teledensity in India increased from 91.20 as on QE Sep-18 to 91.45 as on QE Dec-18.

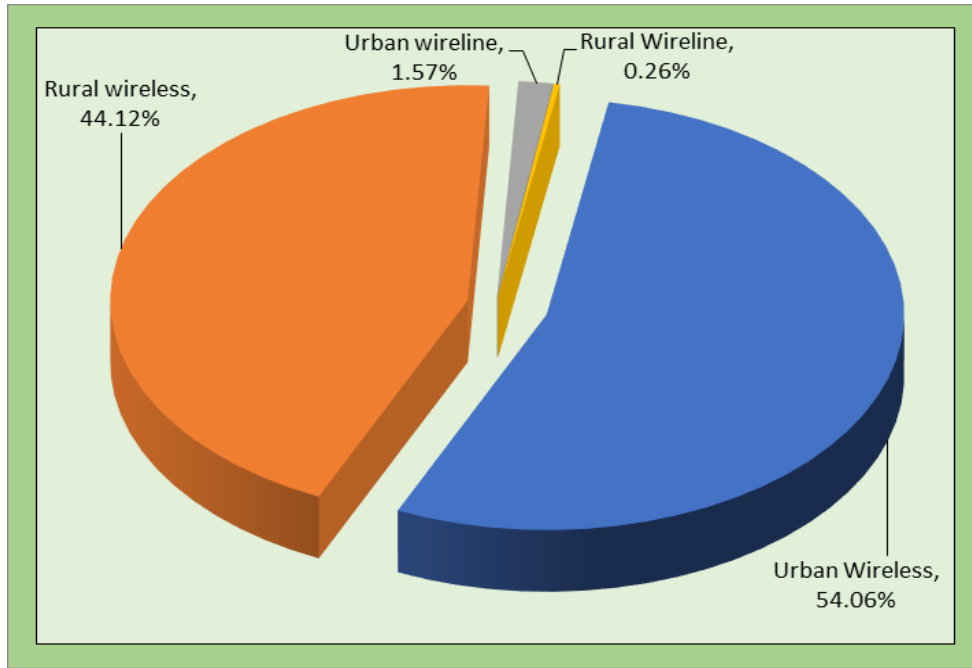
Trends in Telephone subscribers and Teledensity in India



2. Telephone subscription in Urban areas slightly declined from 666.64 million at the end of Sep-18 to 666.28 million at the end of Dec-18 and Urban Teledensity also declined from 160.79 to 159.98 during the same period.
3. Rural telephone subscription increased from 524.76 million at the end of Sep-18 to 531.59 million at the end of Dec-18 and Rural Teledensity also increased from 58.85 at the end of Sep-18 to 59.50 at the end of Dec-18.

4. Out of the total subscription, the share of Rural subscription increased from 44.05% at the end of Sep-18 to 44.38% at the end of Dec-18.

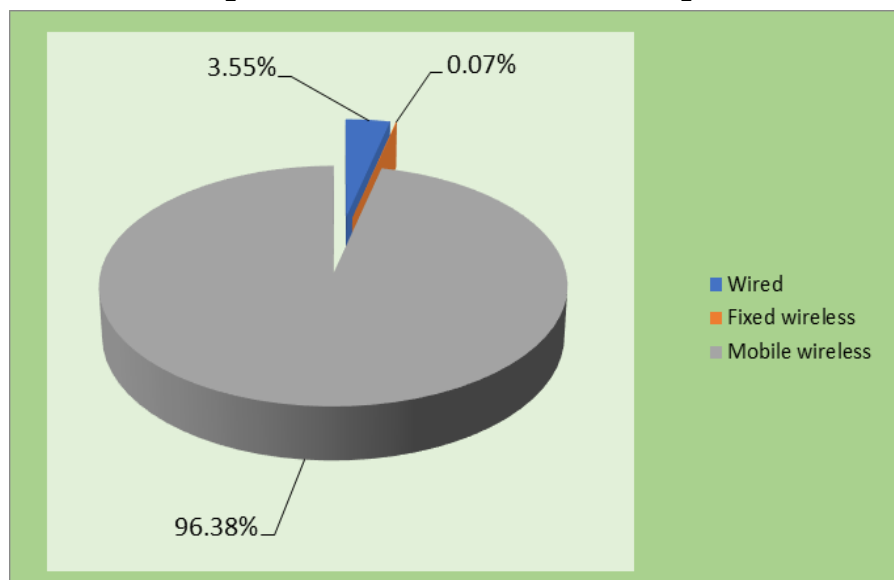
Composition of Telephone Subscribers



5. With a net addition of 6.71 million subscribers during the quarter, total wireless (GSM incl. LTE + CDMA) subscriber base increased from 1,169.29 million at the end of Sep-18 to 1,176.00 million at the end of Dec-18, registering a growth rate of 0.57% over the previous quarter. Wireless subscriptions increased year-on-year (Y-O-Y) at the rate of 0.73% during the quarter.
6. Wireless Tele-density increased from 89.51 at the end of Sep-18 to 89.78 at the end of Dec-18.
7. Wireline subscriber declined from 22.11 million at the end of Sep-18 to 21.87 million at the end of Dec-18 with quarterly decline rate of 1.11%. The year-on-year (Y-O-Y) decline rate in wireline subscribers for Dec-18 is 5.88%.

8. Wireline Teledensity also declined from 1.69 at the end of Sep-18 to 1.67 at the end of Dec-18.
9. Total number of Internet subscribers increased from 560.01 million at the end of Sep-18 to 604.21 million at the end of Dec-18, registering a quarterly growth rate of 7.89%. Out of 604.21 million internet subscribers, Wired Internet subscribers are 21.42 million and Wireless Internet subscribers are 582.79 million.

Composition of internet subscription

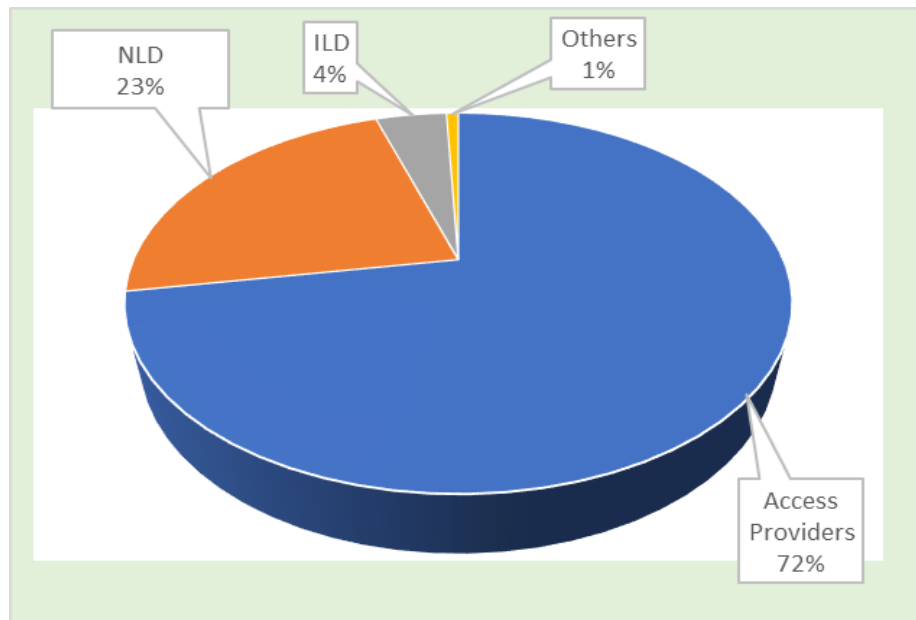


10. The Internet subscriber base is comprised of Broadband Internet subscriber base of 525.36 million and Narrowband Internet subscriber base of 78.86 million.
11. The broadband Internet subscriber base increased by 9.06% from 481.70 million at the end of Sep-18 to 525.36 million at the end of Dec-18. The narrowband Internet subscriber base also increased by 0.70% from 78.30 million at the end of Sep-18 to 78.86 million at the end of Dec-18.

12. Monthly Average Revenue per User (ARPU) for wireless service increased by 4.07%, from ₹67.39 in QE Sep-18 to ₹70.13 in QE Dec-18. Monthly ARPU for wireless service declined by 11.78% on yearly basis (Y-O-Y) in this quarter.
13. Prepaid ARPU per month is ₹60 and Postpaid ARPU per month is ₹296 in QE Dec-18.
14. On an all India average, the overall MOU per subscriber per month for wireless service increased by 6.37% from 627 for QE Sep-18 to 667 in QE Dec-18.
15. Prepaid MOU per subscriber per month is 666 and postpaid MOU per subscriber per month is 711 in QE Dec-18.
16. Gross Revenue (GR) and Adjusted Gross Revenue (AGR) of Telecom Service Sector for the QE Dec-18 has been ₹58,991 Crore and ₹36,054 Crore respectively. GR increased by 2.01%, however AGR declined by 0.24% in QE Dec-18 as compared to previous quarter.
17. The year-on-year (Y-O-Y) growth in GR and AGR in QE Dec-18 over the same quarter in last year has been -3.43% and -6.44% respectively.
18. Pass-through charges increased from ₹21,685 Crore in QE Sep-18 to ₹22,936 Crore in QE Dec-18. The quarterly and the year-on-year (Y-O-Y) growth rates of pass-through charges for QE Dec-18 are 5.77% and 1.70% respectively.

19. The License Fee slightly increased from ₹2,889 Crore for the QE Sep-18 to ₹2,890 Crore for the QE Dec-18. The quarterly and the year-on-year (Y-O-Y) growth rates of license fee are 0.03% and -6.90% respectively in this quarter.
20. Access services contributed 72.31% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee, Spectrum Usage Charges (SUC) and Pass Through Charges increased by 2.98%, 1.33%, 1.54%, 2.04% and 5.84% respectively in QE Dec-18.

Composition of Adjusted Gross Revenue in access services



21. Monthly Average Revenue per User (ARPU) for Access Services based on AGR, increased from ₹72.50 in QE Sep-18 to ₹72.82 in QE Dec-18.

22. The performance of Cellular Mobile service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given as below:

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network) • Network QoS DCR Spatial Distribution Measure [Network_QSD (90,90)] (%age) • Network QoS DCR Temporal Distribution Measure [Network_QTD (97,90)] (%age) • Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter) • Metering and billing credibility- postpaid • %age requests for Termination/Closure of service complied within 7 days • Time taken for refund of deposits after closures 	<ul style="list-style-type: none"> • Metering and billing credibility- prepaid • Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints • %age of calls answered by the operators (voice to voice) within 90 sec

23. The performance of wireline service providers in terms of QoS during the quarter vis-à-vis that in the previous quarter is given below:

Parameters showing improvement in QoS	Parameters showing deterioration in QoS
<ul style="list-style-type: none"> • Resolution of billing/ charging/credit & validity complaints 	<ul style="list-style-type: none"> • Response time to the customer for Assistance – %age of calls answered by the operators (Voice to voice) within 90 seconds • % of request for Termination/Closure of service compiled within 7 days

24. A total number of 880 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking only/uplinking and downlinking both, as on 31st December, 2018.
25. As per the reporting to TRAI, done by broadcaster in pursuance of the Tariff Order (Broadcasting & Cable), dated 3rd March 2017, there are 330 pay channels as on 31st December 2018, which include 231 SD pay TV channels and 99 HD Pay TV channels.
26. Since its introduction in the year 2003, DTH service has displayed a phenomenal growth. During the QE 31st December, 2018, there were 5 pay DTH service providers in the country.
27. DTH has attained net pay active subscriber base of around 70.49 million in QE 31st December, 2018. This is in addition the subscribers of free DTH services of Doordarshan.
28. Apart from the radio stations operated by All India Radio, the public broadcaster, as on 31st December, 2018, there are 355 operational private FM Radio stations in 97 cities with operational 33 Private FM Radio broadcaster as compared to 349 private FM Radio Stations in 94 cities with operational 33 FM Radio broadcasters in the previous quarter.
29. As per data received from MIB, as on 31st December, 2018, 248 Community Radio Stations are operational.

Trends at a Glance

A. Access Service (Wireline + Wireless)

	QE Dec 2017	QE Mar 2018	QE Jun 2018	QE Sep 2018	QE Dec 2018	%age change over Dec-2017	%age change over Mar-2018	%age change over Jun-2018	%age change over Sep-2018
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber Base (in million)									
Wireline	23.23	22.81	22.40	22.11	21.87	-5.88%	-4.13%	-2.35%	-1.11%
Wireless	1167.44	1183.41	1146.49	1169.29	1176.00	0.73%	-0.63%	2.57%	0.57%
Total	1190.67	1206.22	1168.89	1191.40	1197.87	0.60%	-0.69%	2.48%	0.54%
Rural	502.42	524.61	516.13	524.76	531.59	5.81%	1.33%	3.00%	1.30%
Urban	688.25	681.61	652.76	666.64	666.28	-3.19%	-2.25%	2.07%	-0.06%
2) Teledensity									
Wireline	1.79	1.76	1.72	1.69	1.67	-6.90%	-4.91%	-2.88%	-1.37%
Wireless	90.11	91.09	88.00	89.51	89.78	-0.36%	-1.43%	2.02%	0.30%
Total	91.90	92.84	89.72	91.20	91.45	-0.49%	-1.50%	1.92%	0.27%
Rural	56.66	59.05	57.99	58.85	59.50	5.01%	0.76%	2.61%	1.11%
Urban	168.29	165.90	158.16	160.79	159.98	-4.93%	-3.57%	1.15%	-0.50%
3) Service Provider wise Subscribers Base (in Million) (wireless+wireline)									
Bharti	294.03	308.12	348.52	347.52	344.30	2.49%	-0.52%	-1.21%	-0.93%
Telenor	41.91	37.98							
Vodafone	212.73	222.92	222.97	435.22	419.03	2.40%	-3.48%	-5.53%	-3.72%
Idea	196.50	211.21							
Reliance Jio	160.09	186.56	215.26	252.25	280.12	74.97%	50.15%	30.13%	11.05%
BSNL	120.35	123.95	125.00	124.69	125.81	4.54%	1.50%	0.65%	0.90%
Aircel	85.00	74.15	-	-	-	-	-	-	-
Reliance Com.	34.30	1.11	0.96	0.86	0.78	-97.73%	-29.84%	-18.60%	-9.27%
Tata	38.55	33.07	28.50	23.85	20.86	-45.89%	-36.91%	-26.81%	-12.52%
MTNL	6.96	6.90	6.84	6.78	6.74	-3.18%	-2.38%	-1.47%	-0.63%
Quadrant	0.25	0.24	0.24	0.23	0.23	-9.27%	-6.83%	-5.04%	-2.79%
Total	1190.67	1206.22	1168.89	1191.40	1197.87	0.60%	-0.69%	2.48%	0.54%

B. Internet Services

	QE Dec 2017	QE Mar 2018	QE Jun 2018	QE Sep 2018	QE Dec 2018	%age change over Dec-2017	%age change over Mar-2018	%age change over Jun-2018	%age change over Sep-2018
						(12 months)	(9 months)	(6 months)	(3 months)
1) Subscriber's Base (in million)									
A. Wired Internet Subscribers	21.28	21.24	21.16	21.25	21.42	0.66%	0.87%	1.24%	0.82%
B. Wireless Internet Subscribers	424.67	472.72	491.10	538.76	582.79	37.23%	23.28%	18.67%	8.17%
i. Mobile Wireless (Mobile & Dongle)	424.22	472.25	490.66	537.92	582.35	37.28%	23.31%	18.69%	8.26%
ii. Fixed Wireless (Wi-Fi, Wi-Max, Point-to-Point Radio & VSAT)	0.45	0.47	0.44	0.83	0.44	-4.03%	-7.25%	-0.10%	-47.68%
Total Internet Subscribers	445.96	493.96	512.26	560.01	604.21	35.49%	22.32%	17.95%	7.89%
2) No. of Internet Subs per 100 Population	34.42	38.02	39.32	42.87	46.13	34.01%	21.33%	17.31%	7.60%

C. Usage and Revenue for Wireless Services

Traffic(MOU) (minutes of uses/subscriber/month)	494	583	608	627	667	35.11%	14.48%	9.70%	6.45%
ARPU (Rs./sub/month)	80	76	69	67	70	-12.33%	-7.72%	1.41%	4.06%

D. Telecom Financial Data

	QE Dec 2017	QE Mar 2018	QE Jun 2018	QE Sep 2018	QE Dec 2018	%age change over Dec-2017	%age change over Mar-2018	%age change over Jun-2018	%age change over Sep-2018
						(12 months)	(9 months)	(6 months)	(3 months)
1. Telecom Sector									
i) Gross Revenue (₹ in Crores)	61088.65	62198.26	58401.12	57827.24	58990.60	-3.43%	-5.16%	1.01%	2.01%
ii) Adjusted Gross Revenue (₹ in Crores)	38536.22	35697.24	36552.48	36142.44	36054.13	-6.44%	1.00%	-1.36%	-0.24%
2. Access Services									
Adjusted Gross Revenue (₹ in Crores)	28967.93	25448.09	25585.07	25727.79	26070.72	-10.00%	2.45%	1.90%	1.33%
ARPU per month (AGR/ Average subscribers/3)	80.77	71.62	73.34	72.50	72.82	-9.85%	1.67%	-0.71%	0.43%

Introduction

This Report presents the Key Parameters and growth trends for the Telecom Services in India for the quarter ending 31st Decemmmber, 2018. 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) as well as Wireless Data Usage. Chapter-2 covers the key revenue and usage parameters. Chapter-3 gives the financial and accounting data. Chapter-4 covers performance of various telecom service providers in terms of QoS. The information relating to Cable TV, DTH & Radio Broadcast services is provided in Chapter-5.

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.

Section A : Access Service - An Overview

1.1 The number of telephone subscribers in India increased from 1,191.40 million at the end of Sep-18 to 1,197.87 million at the end of Dec-18, registering an increase rate of 0.54% over the previous quarter. This reflects year-on-year (Y-O-Y) growth rate of 0.60% over the same quarter of last year. The overall Teledensity in India increased from 91.20 at the end of Sep-18 to 91.45 at the end of Dec-18.

Chart 1.1: Trends in Telephone Subscribers and Tele-density in India



Table 1.1: Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity	
	Rural	Urban	Rural	Urban
Dec-17	502.42	688.25	56.66	168.29
Mar-18	524.61	681.61	59.05	165.90
Jun-18	516.13	652.76	57.99	158.16
Sep-18	524.76	666.64	58.85	160.79
Dec-18	531.59	666.28	59.50	159.98

- 1.2 Telephone subscription in Urban areas slightly declined from 666.64 million at the end of Sep-18 to 666.28 million at the end of Dec-18, and Urban Tele-density also declined from 160.79 to 159.98 at the end of the quarter.
- 1.3 Rural telephone subscription increased from 524.76 million at the end of Sep-18 to 531.59 million at the end of Dec-18 and Rural Tele-density also increased from 58.85 at the end of Sep-18 to 59.50 at the end of Dec-18.
- 1.4 The year-on-year (Y-O-Y) growth rate of Urban and Rural telephone subscription from Dec-17 to Dec-18 is -3.19% and 5.81% respectively. Year-on-year (Y-o-Y) growth rate of Urban and Rural Tele-density from Dec-17 to Dec-18 is -4.93% and 5.01% respectively.

Chart 1.2: Market Share - Rural & Urban Subscribers



- 1.5 Share of subscription of rural areas in total telephone subscription increased from 44.05% at the end of Sep-18 to 44.38% at the end of Dec-18.

Chart 1.3: Composition of Access subscription - Wireline & Wireless

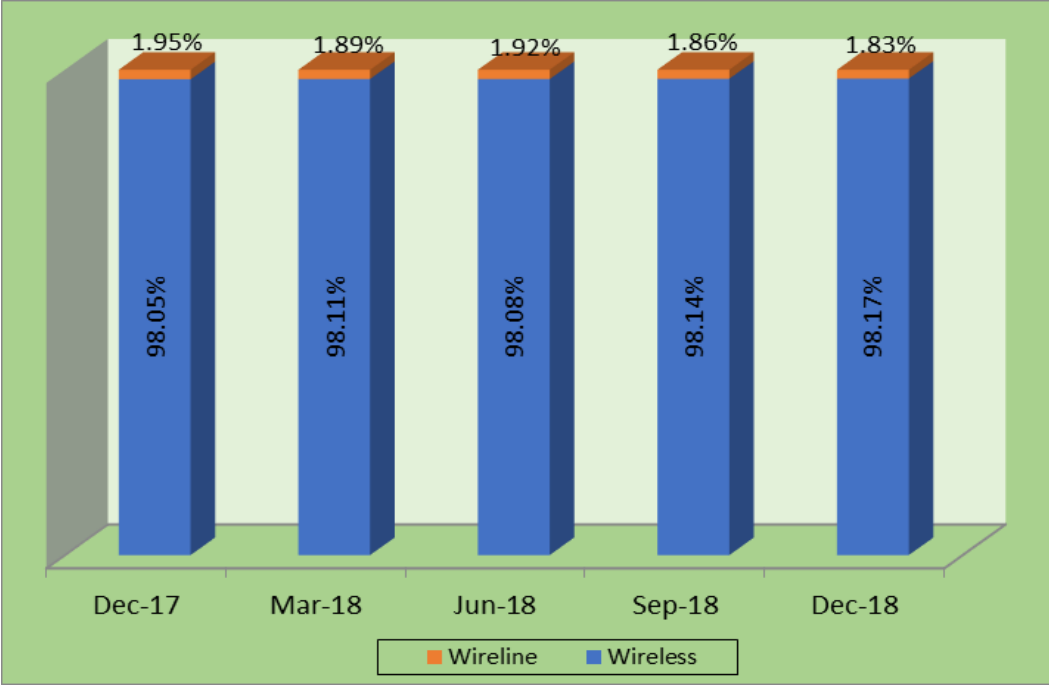


Chart 1.4: Composition of Rural-Urban Telephone Subscription at the end of the quarter

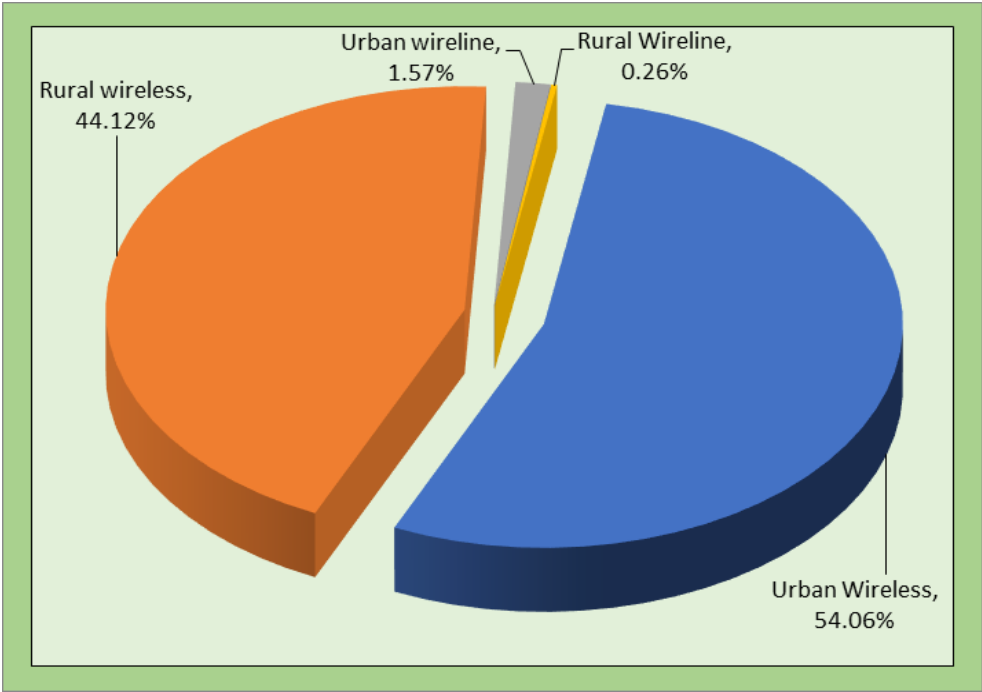


Table 1.2: Service Area wise Access (Wireless+Wireline) Subscriber base

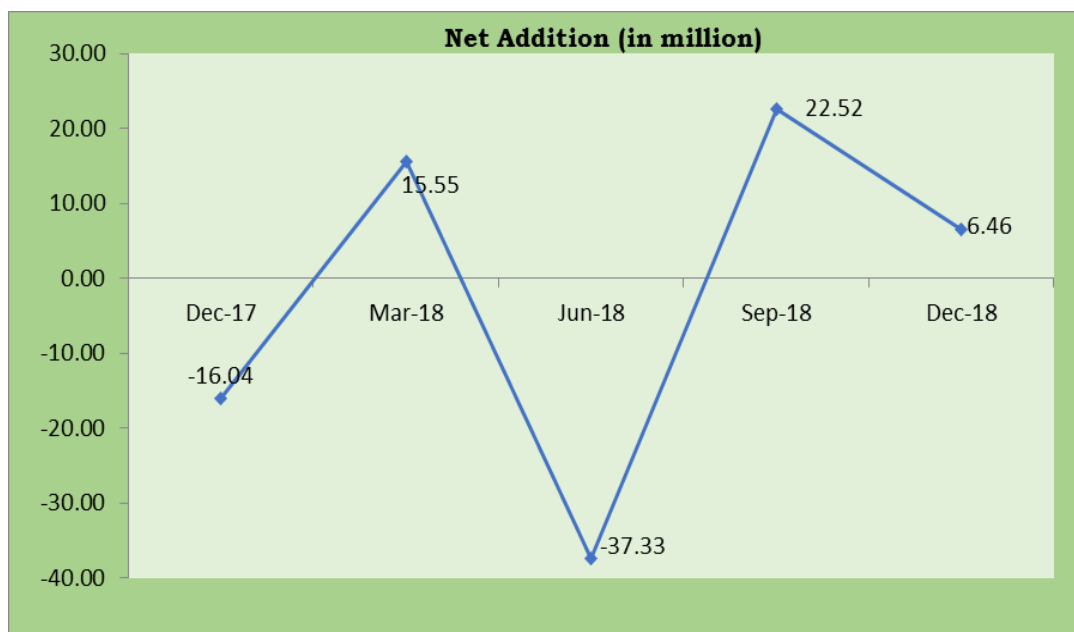
Service Area	Subscribers (million)			
	Sep-18	Dec-18	Net Additions	Rate of Growth(%)
Andhra Pradesh	87.89	88.64	0.75	0.85
Assam	21.69	21.86	0.18	0.82
Bihar	87.77	88.32	0.55	0.63
Delhi	53.80	54.33	0.53	0.99
Gujarat	71.53	71.87	0.35	0.48
Haryana	27.83	27.96	0.14	0.49
Himachal Pradesh	10.50	10.62	0.12	1.15
Jammu & Kashmir	11.44	11.61	0.18	1.53
Karnataka	70.50	70.79	0.29	0.41
Kerala	45.23	45.56	0.32	0.72
Madhya Pradesh	77.52	77.83	0.31	0.40
Maharashtra	96.19	96.58	0.39	0.41
Mumbai	40.04	40.48	0.45	1.12
North East	11.80	11.78	-0.03	-0.21
Orissa	33.37	33.37	0.01	0.02
Punjab	39.91	40.11	0.20	0.51
Rajasthan	66.43	66.93	0.50	0.75
T.N. (incl. Chennai)	84.43	84.97	0.55	0.65
U.P.(E)	102.38	102.24	-0.14	-0.14
U.P.(W)	64.88	65.06	0.18	0.28
Kolkata	27.57	27.79	0.22	0.79
West Bengal	58.73	59.14	0.41	0.70
All India	1,191.40	1,197.87	6.46	0.54

1.6 All service areas except North East and U.P.(East), showed positive growth in their telephone subscriptions during the quarter ending Dec-18.

Table 1.3: Service Area wise Rural-Urban Subscribers at QE Dec-18

Service Area	Numbr of Subscribers (in million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	88.64	42.44	46.20	47.88
Assam	21.86	12.57	9.29	57.51
Bihar	88.32	55.62	32.70	62.98
Delhi	54.33	2.50	51.83	4.61
Gujarat	71.87	28.19	43.69	39.22
Haryana	27.96	11.99	15.97	42.88
Himachal Pradesh	10.62	7.75	2.88	72.93
Jammu & Kashmir	11.61	5.63	5.99	48.45
Karnataka	70.79	25.77	45.02	36.40
Kerala	45.56	21.15	24.40	46.43
Madhya Pradesh	77.83	35.93	41.90	46.17
Maharashtra	96.58	45.41	51.17	47.02
Mumbai	40.48	2.29	38.19	5.66
North East	11.78	5.26	6.52	44.65
Orissa	33.37	21.89	11.48	65.60
Punjab	40.11	13.90	26.21	34.66
Rajasthan	66.93	36.52	30.41	54.57
T.N. (incl. Chennai)	84.97	24.04	60.93	28.30
U.P.(E)	102.24	59.88	42.37	58.56
U.P.(W)	65.06	30.27	34.79	46.52
Kolkata	27.79	2.94	24.85	10.59
West Bengal	59.14	39.63	19.51	67.02
All India	1,197.87	531.59	666.28	44.38

Chart 1.5: Trend of Net Addition/decline in Telephone Subscription



1.7 The net addition in telephone subscribers is 6.46 million in QE Dec-18 as compared to the net increased of 22.52 million subscribers in QE Sep-18.

Table 1.4 : Service Area wise Teledensity

Service Area/ States	As on 30 th September, 2018			As on 31 st December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	64.87	181.59	97.59	65.38	182.58	98.25
Assam	44.54	167.04	64.99	45.14	165.80	65.35
Bihar	44.86	168.34	62.00	45.52	165.79	62.23
Delhi	-	-	234.97	-	-	235.65
Gujarat	75.03	155.29	109.30	75.07	155.63	109.53
Haryana	66.83	149.33	97.73	67.23	148.79	97.88
Himachal Pradesh	118.73	337.08	145.10	121.57	327.43	146.50
J&K	58.56	168.59	89.82	61.63	164.75	90.99

Service Area/ States	As on 30 th September, 2018			As on 31 st December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Karnataka	66.06	178.32	110.63	67.01	177.25	110.87
Kerala	77.32	265.52	124.78	77.92	266.76	125.52
Madhya Pradesh	45.08	142.51	72.23	46.30	139.42	72.29
Maharashtra (incl. Mumbai)*	74.43	142.84	108.25	74.91	142.94	108.61
North East	49.95	176.05	82.39	49.34	176.07	82.01
Orissa	61.61	146.21	77.02	61.72	144.80	76.90
Punjab	81.71	178.81	125.66	79.99	181.26	125.98
Rajasthan	62.81	166.72	88.06	63.77	165.26	88.45
Tamil Nadu (incl. Chennai)	88.23	134.65	117.16	89.02	134.97	117.77
Uttar Pradesh (incl. UPE & UPW)	48.40	142.99	70.36	49.22	139.13	70.12
West Bengal (incl. Kolkata)*	61.14	158.17	89.15	61.72	158.30	89.62
All India	58.85	160.79	91.20	59.50	159.98	91.45

* 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.

1.8 Himachal Pradesh service area has the highest Rural Tele-density of 121.57 followed by Tamil Nadu service area (89.02). Assam service area has the lowest Rural Tele-density of 45.14 followed by Bihar service area (45.52).

Table 1.5 : State/UT wise subscriber base (wireline+wireless)

Sl.No.	States/UT	Total Telephone Subscription (million)		
		Total	Rural	Urban
1	Andhra Pradesh	46.23	25.24	20.99
2	Arunachal Pradesh	1.32	0.65	0.67
3	Assam	21.86	12.57	9.29
4	Bihar	64.88	43.65	21.24
5	Chhattisgarh	21.15	10.16	10.99
6	Goa	2.83	1.18	1.65
7	Gujarat	70.91	27.92	42.99
8	Haryana	33.94	12.32	21.62
9	Himachal Pradesh	10.62	7.75	2.88
10	Jammu & Kashmir	11.61	5.63	5.99
11	Jharkhand	23.44	11.98	11.46
12	Karnataka	70.79	25.77	45.02
13	Kerala	45.47	21.07	24.40
14	Madhya Pradesh	56.68	25.77	30.90
15	Maharashtra Incl. Mumbai	134.23	46.52	87.71
16	Manipur	2.28	0.76	1.52
17	Meghalaya	2.22	1.18	1.04
18	Mizoram	1.25	0.38	0.87
19	Nagaland	1.63	0.90	0.73
20	Odisha	33.37	21.89	11.48
21	Punjab	37.91	13.82	24.09
22	Rajasthan	66.93	36.52	30.41
23	Sikkim	0.79	0.44	0.35
24	Tamil Nadu (incl. Chennai)	83.55	23.64	59.91
25	Telangana	42.41	17.21	25.21
26	Tripura	3.08	1.39	1.68
27	Uttar Pradesh (UPE + UPW)	162.64	84.29	78.35
28	Uttarakhand	12.98	6.30	6.68
29	West Bengal Incl. Kolkata	85.66	41.90	43.76
Union Territories				
1	Andaman & Nicobar Islands	0.48	0.24	0.24
2	Chandigarh	2.17	0.08	2.09
3	Dadar & Nagar Haweli	0.61	0.20	0.41
4	Daman & Diu	0.35	0.06	0.28
5	Delhi	40.07	1.72	38.34
6	Lakshdweep	0.09	0.08	0.003
7	Puduchery	1.42	0.40	1.02
	Total	1197.87	531.59	666.28

Table 1.6 : State/UT wise total Teledensity

Sl.No.	State/UT	Total Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	51.24	65.38	182.58
2	Arunachal Pradesh	97.72	83.63	116.76
3	Assam	65.35	45.14	165.80
4	Bihar	60.57	45.56	187.61
5	Chhattisgarh	79.13	51.11	160.38
6	Goa	134.25	160.40	120.24
7	Gujarat	109.47	75.24	155.37
8	Haryana	118.80	69.09	201.38
9	Himachal Pradesh	146.50	121.57	327.43
10	Jammu & Kashmir	90.99	61.63	164.75
11	Jharkhand	67.32	45.34	136.39
12	Karnataka	110.87	67.01	177.25
13	Kerala	125.57	77.79	267.35
14	Madhya Pradesh	70.04	44.65	133.23
15	Maharashtra Incl. Mumbai	108.17	73.91	143.45
16	Manipur	85.33	37.80	228.19
17	Meghalaya	77.68	52.64	169.18
18	Mizoram	114.20	77.85	142.90
19	Nagaland	66.65	44.55	172.14
20	Odisha	76.90	61.72	144.80
21	Punjab	127.11	80.45	190.46
22	Rajasthan	88.45	63.77	165.26
23	Sikkim	118.52	77.41	341.91
24	Tamil Nadu (incl. Chennai)	118.85	89.32	136.69
25	Tripura	78.11	44.54	207.58
26	Uttar Pradesh (UPE +UPW)	71.46	48.03	150.38
27	Uttarakhand	118.13	82.60	198.76
28	West Bengal Incl. Kolkata	89.46	61.54	158.22
Union Territories				
1	Andaman & Nicobar Islands	82.25	73.39	93.26
2	Chandigarh	107.83	39.75	115.53
3	Dadar & Nagar Haweli	131.43	142.38	126.76
4	Daman & Diu	93.84	21.84	378.50
5	Delhi	173.77	225.82	171.99
6	Lakshdweep	103.99	134.99	12.20
7	Puduchery	76.75	74.30	77.76
	Total	91.45	59.50	159.98

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Table 1.7 : Service Provider wise Growth/Decline in Subscriber base

Service Provider	Subscriber base (millions)			Rate of Growth (%)	Market Share in QE Sep-18 (%)	Market Share in QE Dec-18 (%)
	Sep-18	Dec-18	Net Additions			
Vodafone Idea Ltd	435.22	419.03	-16.19	-3.72	36.53	34.98
Bharti	347.52	344.30	-3.22	-0.93	29.17	28.74
Reliance Jio	252.25	280.12	27.87	11.05	21.17	23.38
BSNL	124.69	125.81	1.12	0.90	10.47	10.50
Tata Tele.	23.85	20.86	-2.99	-12.52	2.00	1.74
MTNL	6.78	6.74	-0.04	-0.63	0.57	0.56
Reliance Com.	0.86	0.78	-0.08	-9.27	0.07	0.06
Quadrant	0.23	0.23	-0.01	-2.79	0.02	0.02
Total	1,191.40	1,197.87	6.46	0.54	100	100

Note: M/s Vodafone and M/s Idea have been merged during the QE Sep-18.

1.9 After merger of M/s Vodafone Ltd and M/s Idea Cellular during the reported quarter, M/s Vodafone Idea Ltd became the market leader with 34.98% in access segment in terms of number of subscribers with 419.03 million subscribers at the end of Dec-18. M/s Bharti Airtel held the second position with 344.30 million subscribers at the end of Dec-18.

1.10 In term of net addition, only Reliance Jio Infocom Ltd. and BSNL became the gainer with net addition of 27.87 million and 1.12 million telephone subscribers respectively during the QE Dec-18. All other access service providers showed negative growth in their telephone subscriber base during the quarter.

Table 1.8 : Market Share of the service providers in total rural subscriber base

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

Note: M/s Vodafone and M/s Idea have been merged during the QE Sep-18 and now became M/s Vodafone Idea Ltd.

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

Section B : Wireless Service

Table 1.9: List of Cellular Mobile (GSM, LTE & CDMA) Service Providers currently providing service [As on 31st December, 2018]

Sl.No.	Service Provider	Licenced Service Areas
1	Bharti Airtel Ltd	All India
2	Reliance Communications Ltd	All India (except Assam & NE)
3	Reliance Telecom Ltd	Kolkata, MP, WB, HP, Bihar, Odisha, Assam & NE
4	Vodafone Idea Ltd*	All India
5	Tata Teleservices	All India except Assam, NE & J&K
6	BSNL	All India (except Delhi & Mumbai)
7	MTNL	Delhi & Mumbai
8	Reliance Jio Infocom Ltd	All India

Source : DoT website

***Note:** M/s Vodafone and M/s Idea have been merged during the QE September, 2018 and the new name of the company is M/s Vodafone Idea Ltd.

1.12 Total Wireless (GSM including LTE+CDMA) subscriber base increased from 1,169.29 million at the end of Sep-18 to 1,176.00 million at the end of Dec-18, thereby showing a quarterly increase rate of 0.57%. During the quarter, net addition of 6.71 million wireless subscribers was recorded. Total wireless subscriber base showed year-on-year (Y-O-Y) growth rate of 0.73% in QE Dec-18 over same quarter in previous year.

1.13 Wireless Teledensity increased from 89.51 at the end of Sep-18 to 89.78 at the end of Dec-18.

Chart 1.6: Wireless Subscriber Base and Teledensity

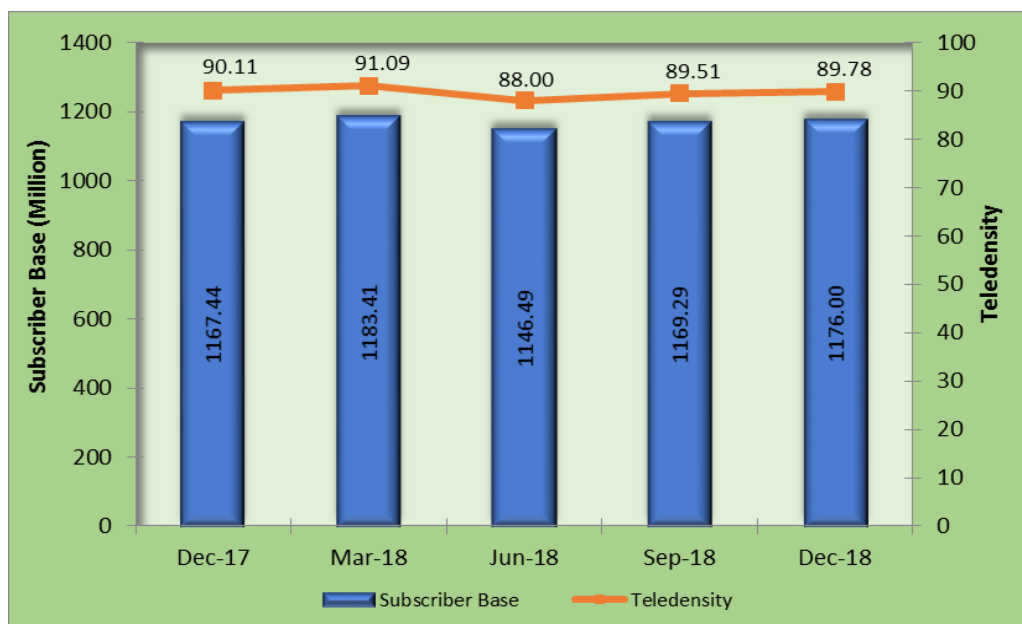


Table 1.10: Wireless Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Tele-density	
	Rural	Urban	Rural	Urban
Dec-17	499.00	668.44	56.28	163.44
Mar-18	521.23	662.18	58.67	161.17
Jun-18	512.89	633.60	57.63	153.52
Sep-18	521.59	647.70	58.49	156.23
Dec-18	528.48	647.52	59.15	155.48

1.14 The Rural Wireless subscribers increased from 521.59 million at the end of Sep-18 to 528.48 million at the end of Dec-18, however the urban wireless subscribers slightly declined from 647.70 million to 647.52 million during the quarter.

1.15 Quarterly Growth rates of Rural and Urban wireless subscriptions are 1.32% and -0.03% respectively in QE Dec-18.

1.16 The share of rural wireless subscription increased from 44.61% to 44.94% in total wireless subscription in this quarter.

Chart 1.7: Wireless Market Share - Rural & Urban

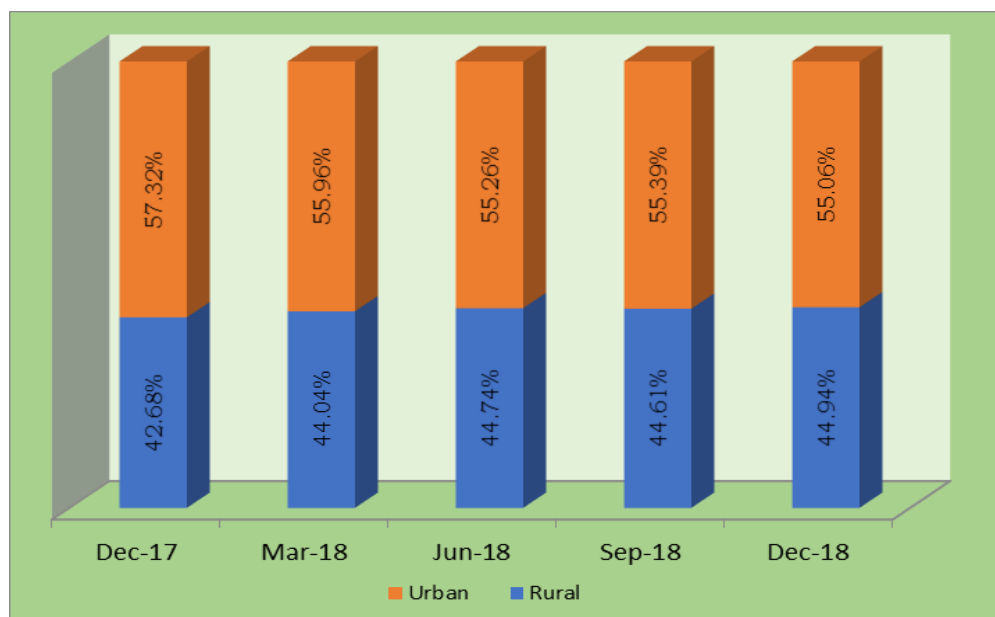


Table 1.11: Growth in Wireless Subscriber base

Service Provider	Subscriber Base (millions)			Rate of Growth (%)	Market Share Sep-18 (%)	Market Share Dec-18 (%)
	Sep-18	Dec-18	Net Additions			
Vodafone Idea Ltd	434.96	418.75	-16.22	-3.73	37.20	35.61
Bharti Airtel	343.52	340.26	-3.26	-0.95	29.38	28.93
Reliance Jio	252.25	280.12	27.87	11.05	21.57	23.82
BSNL	113.05	114.37	1.32	1.17	9.67	9.73
Tata	21.98	19.01	-2.98	-13.54	1.88	1.62
MTNL	3.49	3.47	-0.02	-0.56	0.30	0.30
Reliance Com	0.03	0.02	-0.01	-20.97	0.00	0.00
Total	1,169.29	1,176.00	6.71	0.57	100	100

1.17 M/s Vodafone Idea Ltd (after merger) is still a leading operator with market share of 35.61% in total wireless subscription at the end of Dec-18, despite loosing of 16.22 million wireless subscribers during the quarter. M/s Bharti Airtel held second position with 340.26 million wireless subscribers at the end of Dec-18.

1.18 In terms of net additions during the quarter ending Dec-18, only Reliance Jio and BSNL showed positive growth in their wireless subscriber base. All other service providers showed decline in their subscriber base during the quarter.

Table 1.12: Service Area wise Wireless Subscriber base

Service Area	Subscriber base (in million)			
	Sep-18	Dec-18	Net Additions	Rate of change (%)
Andhra Pradesh	86.45	87.21	0.76	0.88
Assam	21.56	21.74	0.18	0.85
Bihar	87.52	88.08	0.56	0.64
Delhi	50.60	51.13	0.53	1.04
Gujarat	70.30	70.65	0.35	0.50
Haryana	27.54	27.68	0.14	0.51
Himachal Pradesh	10.38	10.50	0.12	1.18
Jammu & Kashmir	11.33	11.51	0.18	1.57
Karnataka	68.32	68.62	0.30	0.44
Kerala	43.32	43.65	0.33	0.76
Madhya Pradesh	76.59	76.90	0.31	0.41
Maharashtra	94.57	95.01	0.44	0.46
Mumbai	37.08	37.54	0.47	1.26
North East	11.69	11.67	-0.02	-0.21
Orissa	33.12	33.14	0.02	0.06
Punjab	39.09	39.32	0.22	0.57
Rajasthan	65.86	66.39	0.52	0.79
T.N. (incl. Chennai)	82.18	82.75	0.57	0.69
U.P.(E)	101.93	101.79	-0.14	-0.13
U.P.(W)	64.55	64.75	0.20	0.31
Kolkata	26.83	27.06	0.24	0.88
West Bengal	58.48	58.89	0.42	0.71
All India	1,169.29	1,176.00	6.71	0.57

Table 1.13: Service Area wise Wireless Rural-Urban Subscriber base

Service Area	Subscriber base (in million)			
	Total	Rural	Urban	% of Rural Subscribers
Andhra Pradesh	87.21	42.21	45.00	48.40
Assam	21.74	12.55	9.19	57.73
Bihar	88.08	55.59	32.49	63.11
Delhi	51.13	2.50	48.63	4.90
Gujarat	70.65	28.01	42.64	39.64
Haryana	27.68	11.94	15.74	43.12
Himachal Pradesh	10.50	7.68	2.82	73.14
Jammu & Kashmir	11.51	5.61	5.89	48.80
Karnataka	68.62	25.62	43.01	37.33
Kerala	43.65	20.00	23.65	45.83
Madhya Pradesh	76.90	35.83	41.08	46.59
Maharashtra	95.01	45.15	49.86	47.52
Mumbai	37.54	2.29	35.25	6.11
North East	11.67	5.24	6.43	44.87
Orissa	33.14	21.84	11.29	65.92
Punjab	39.32	13.73	25.59	34.93
Rajasthan	66.39	36.44	29.94	54.90
T.N. (incl. Chennai)	82.75	23.73	59.02	28.67
U.P.(E)	101.79	59.80	41.99	58.75
U.P.(W)	64.75	30.24	34.52	46.70
Kolkata	27.06	2.94	24.12	10.87
West Bengal	58.89	39.52	19.37	67.11
All India	1,176.00	528.48	647.52	44.94

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

Table 1.14 : Service Area wise Wireless Tele-density

Service Area	As on 30 th September, 2018			As on 31 st December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
A.P.	64.50	176.83	95.99	65.02	177.85	96.66
Assam	44.47	165.16	64.61	45.07	164.03	64.99
Bihar	44.83	167.26	61.83	45.49	164.75	62.06
Delhi	-	-	221.01	-	-	221.76
Gujarat	74.55	151.54	107.42	74.59	151.92	107.67
Haryana	66.53	147.14	96.72	66.93	146.66	96.89
H.P.	117.70	330.85	143.44	120.56	321.30	144.88
J&K	58.43	165.92	88.97	61.51	162.16	90.17
Karnataka	65.66	170.31	107.21	66.62	169.30	107.47
Kerala	73.07	257.19	119.50	73.68	258.48	120.26
M.P.	44.94	139.76	71.37	46.17	136.70	71.43
Maharashtra (incl. Mumbai)*	74.00	135.93	104.61	74.49	136.14	105.03
North East	49.74	173.74	81.64	49.13	173.78	81.27
Orissa	61.45	143.75	76.45	61.58	142.43	76.35
Punjab	80.68	174.39	123.10	79.00	176.96	123.48
Rajasthan	62.67	164.07	87.31	63.64	162.72	87.73
Tamil Nadu (incl. Chennai)	87.06	130.37	114.05	87.85	130.75	114.69
Uttar Pradesh (incl. UPE&UPW)*	48.35	141.75	70.03	49.17	137.94	69.80
West Bengal (incl. Kolkata)*	60.98	154.99	88.12	61.57	155.20	88.61
All India	58.49	156.23	89.51	59.15	155.48	89.78

* 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 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.

Table 1.15 : State/UT wise Wireless Subscriber Base

Sl.No.	States/UT	Wireless Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	45.62	25.06	20.56
2	Arunachal Pradesh	1.30	0.64	0.65
3	Assam	21.74	12.55	9.19
4	Bihar	64.76	43.63	21.14
5	Chhattisgarh	20.97	10.14	10.83
6	Goa	2.73	1.15	1.58
7	Gujarat	69.70	27.75	41.95
8	Haryana	33.60	12.27	21.33
9	Himachal Pradesh	10.50	7.68	2.82
10	Jammu & Kashmir	11.51	5.61	5.89
11	Jharkhand	23.32	11.97	11.36
12	Karnataka	68.62	25.62	43.01
13	Kerala	43.57	19.92	23.65
14	Madhya Pradesh	55.93	25.69	30.24
15	Maharashtra	129.83	46.29	83.53
16	Manipur	2.26	0.75	1.50
17	Meghalaya	2.20	1.18	1.02
18	Mizoram	1.24	0.37	0.86
19	Nagaland	1.62	0.90	0.72
20	Odisha	33.14	21.84	11.29
21	Punjab	37.30	13.65	23.65
22	Rajasthan	66.39	36.44	29.94
23	Sikkim	0.78	0.43	0.35
24	Tamil Nadu	81.38	23.33	58.05
25	Telangana	41.59	17.15	24.44
26	Tripura	3.06	1.39	1.67
27	Uttar Pradesh	161.94	84.20	77.74
28	Uttarakhand	12.88	6.29	6.59
29	West Bengal	84.71	41.80	42.91
	Union Territories			
1	Andaman & Nicobar Islands	0.46	0.23	0.23
2	Chandigarh	1.99	0.08	1.91
3	Dadar & Nagar Haweli	0.61	0.20	0.41
4	Daman & Diu	0.34	0.06	0.28
5	Delhi	36.95	1.72	35.23
6	Lakshdweep	0.08	0.08	-
7	Puduchery	1.37	0.39	0.98
	Total	1176.00	528.48	647.52

Table 1.16 : State/UT wise Wireless Tele-density

Sl.No.	State/UT	Wireless Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh*	96.66	65.02	177.85
2	Arunachal Pradesh	95.95	82.77	113.77
3	Assam	64.99	45.07	164.03
4	Bihar	60.46	45.54	186.74
5	Chhattisgarh	78.46	51.02	158.04
6	Goa	129.24	155.99	114.90
7	Gujarat	107.60	74.77	151.63
8	Haryana	117.62	68.80	198.73
9	Himachal Pradesh	144.88	120.56	321.30
10	Jammu & Kashmir	90.17	61.51	162.16
11	Jharkhand	66.98	45.30	135.13
12	Karnataka	107.47	66.62	169.30
13	Kerala	120.31	73.55	259.08
14	Madhya Pradesh	69.11	44.50	130.39
15	Maharashtra	104.62	73.54	136.62
16	Manipur	84.57	37.55	225.89
17	Meghalaya	77.04	52.54	166.60
18	Mizoram	112.92	77.67	140.75
19	Nagaland	66.23	44.52	169.89
20	Odisha	76.35	61.58	142.43
21	Punjab	125.04	79.46	186.94
22	Rajasthan	87.73	63.64	162.72
23	Sikkim	117.52	77.31	335.95
24	Tamil Nadu	115.77	88.16	132.45
25	Tripura	77.60	44.32	205.90
26	Uttar Pradesh	71.15	47.98	149.22
27	Uttarakhand	117.24	82.46	196.14
28	West Bengal	88.47	61.39	155.15
	Union Territories			
1	Andaman & Nicobar Islands	79.31	71.33	89.20
2	Chandigarh	99.01	38.89	105.80
3	Dadar & Nagar Haweli	130.56	141.26	125.99
4	Daman & Diu	92.27	21.02	373.93
5	Delhi	160.26	225.82	158.01
6	Lakshdweep	98.33	131.55	-
7	Puduchery	73.79	72.77	74.20
	All India Teledensity	89.78	59.15	155.48

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Table 1.17 : Rural Wireless Subscriber base and Market Share as on 31.12.2018

Service Provider	Total number of wireless Subscribers (in millions)	Rural Subscribers (in millions)	% of Rural subscribers in total	Market Share of Rural Subscribers (%)
Vodafone Idea Ltd	418.75	220.71	52.71	41.76
Bharti	340.26	168.63	49.56	31.91
Reliance Jio	280.12	100.47	35.87	19.01
BSNL	114.37	36.04	31.51	6.82
Tata	19.01	2.58	13.56	0.49
MTNL	3.47	0.05	1.34	0.01
Reliance Com.	0.02	0.00	0.00	0.00
Total	1,176.00	528.48	44.94	100

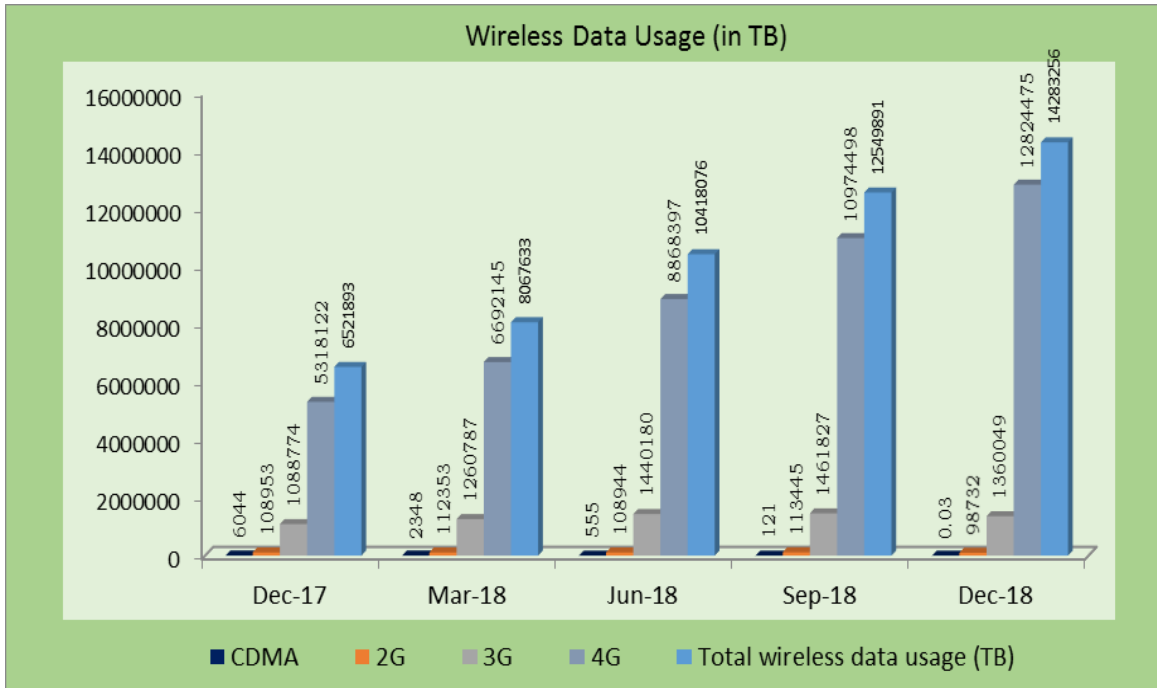
Note: M/s Reliance Com. has not reported number of its rural wireless subscribers and hence its rural wireless subscription has been taken as NIL.

Wireless Data Usage

1.20 Volume of total wireless data usage increased from 12,549,891 terabytes during Q.E. Sep-18 to 14,283,256 terabytes during Q.E. Dec-18. Out of total data wireless usage, 2G data usage was 98,732 terabytes, 3G data usage was 1,360,049 terabyte and 4G data usage was 12,824,475 terabytes during the quarter. CDMA data usage was remained 0.03 terabytes only during the QE Dec-18.

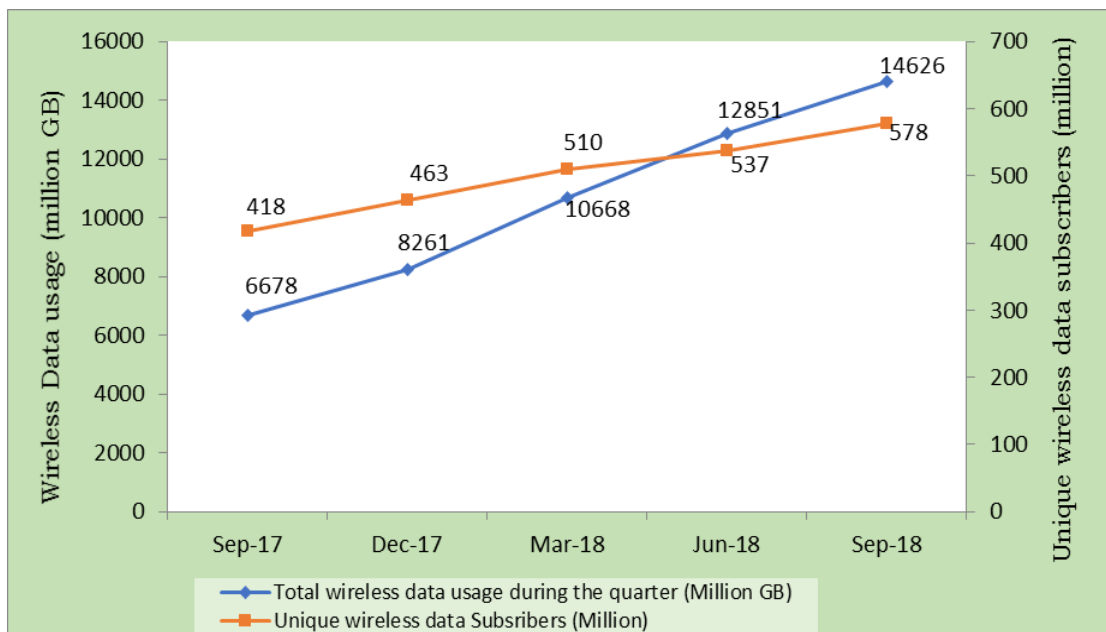
1.21 Total number of unique wireless data subscribers increased from 536.72 million at the end of Sep-18 to 578.20 million at the end of Dec-18. Trends of growth in unique wireless data subscribers and volume of wireless data usage are depicted in the following charts.

Chart 1.8: Trend of technology wise wireless data use (in Terabyte)



1.22 The contribution of 3G and 4G data usage in total volume of wireless data usage are about 9.5% and 89.8% respectively during the Q.E. Dec-18. Share of 2G data usage remained 0.7% during the quarter.

Chart 1.9: Trend of Wireless data subscribers(million) and volume of wireless data usage(million GB)



Section C : Wireline Service

Table 1.18 : Service Providers providing Wireline Service

[As on 31st December, 2018]

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

1.23 Total Wireline subscriber base declined from 22.11 million at the end of Sep-18 to 21.87 at the end of Dec-18 with quarterly decline rate of 1.11%. Overall Wireline Teledensity also declined from 1.69 at the end of Sep-18 to 1.67 at the end of Dec-18.

1.24 Rural subscriber base has shown decline of 1.76%, from 3.17 Million at the end of Sep-18 to 3.11 Million at the end of Dec-18. Urban wireline subscription also recorded decline rate of 1.00%, from 18.95 million to 18.76 million during the same period.

Chart 1.10: Wireline Subscriber Base and Teledensity

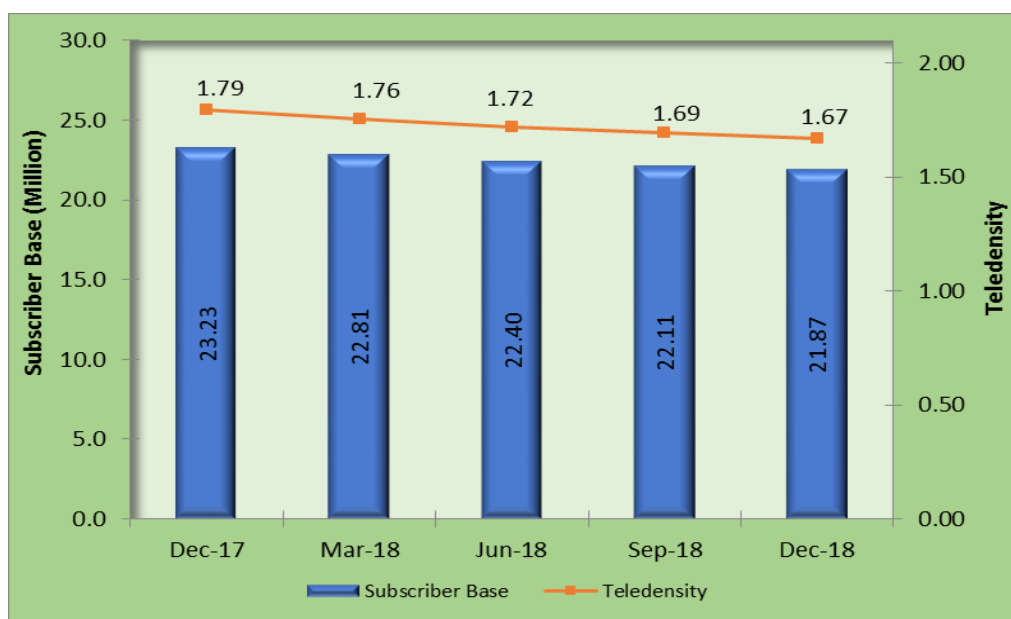


Table 1.19 : Wireline Subscriber Base & Teledensity - Rural & Urban

Quarter ending	Subscriber Base (million)		Teledensity (%)	
	Rural	Urban	Rural	Urban
Dec-17	3.42	19.81	0.39	4.84
Mar-18	3.38	19.43	0.38	4.73
Jun-18	3.24	19.16	0.36	4.64
Sep-18	3.17	18.95	0.36	4.57
Dec-18	3.11	18.76	0.35	4.50

**Table 1.20 : Service Provider wise Subscriber base (Rural - Urban)
- As on 31.12.2018**

Service Provider	Subscriber Base (million)			Share of Rural subscription (%)
	Rural	Urban	Total	
BSNL	3.01	8.43	11.44	26.32
Bharti	-	4.04	4.04	--
MTNL	-	3.26	3.26	--
Tata	0.05	1.80	1.86	2.77
Reliance	0.001	0.75	0.76	0.20
Quadrant	0.05	0.18	0.23	20.64
Vodafone	-	0.28	0.28	--
Total	3.11	18.76	21.87	14.22

1.25 Detailed table on service provider wise subscriber base in each service area is at Annexure-1.2.

Chart 1.11: Composition of Wireline Subscriber base - Rural & Urban

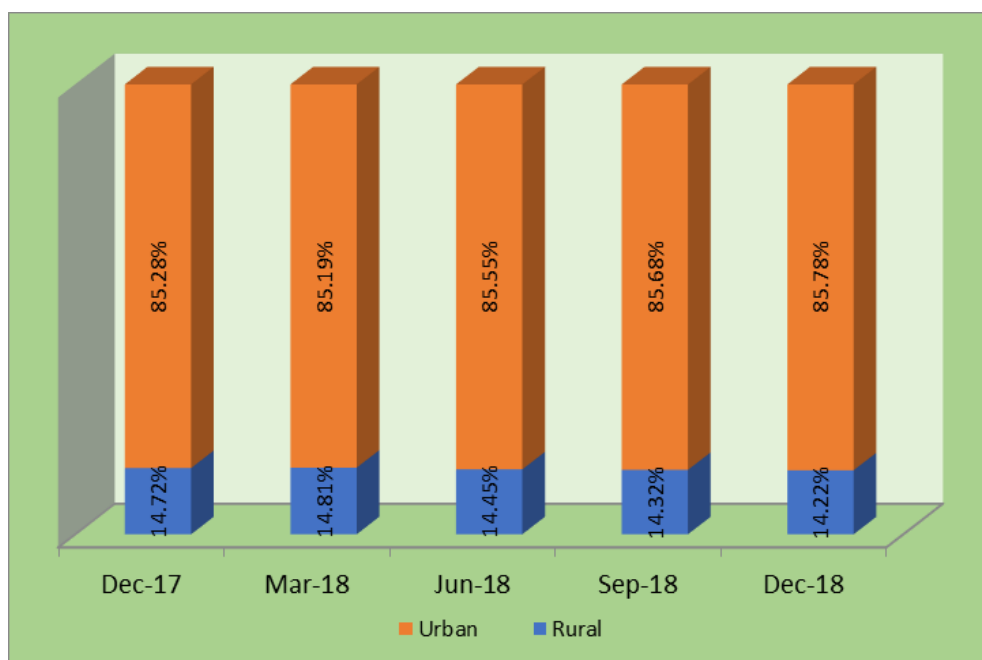


Table 1.21 : Service Provider wise growth in Wireline Subscriber base

Service Provider	Subscriber Base (million)			Rate of change (%)	Market share-Sep-18(%)	Market share-Dec-18(%)
	Sep-18	Dec-18	Net Addition			
BSNL	11.64	11.44	-0.20	-1.73	52.64	52.31
Bharti	4.00	4.04	0.05	1.16	18.07	18.49
MTNL	3.29	3.26	-0.02	-0.70	14.87	14.93
Tata	1.87	1.86	-0.01	-0.62	8.45	8.49
Reliance	0.83	0.76	-0.07	-8.88	3.75	3.46
Quadrant	0.23	0.23	-0.01	-2.79	1.06	1.04
Vodafone	0.26	0.28	0.03	9.94	1.16	1.29
Total	22.11	21.87	-0.24	-1.11	100	100

Table 1.22: Service Area wise Wireline Subscriber base & Net Additions (in million)

Service Area	Sep-18	Dec-18	Net Additions	Rate of Change (%)
Andhra Pradesh	1.44	1.43	-0.009	-0.64
Assam	0.13	0.12	-0.007	-5.63
Bihar	0.25	0.24	-0.009	-3.74
Delhi	3.20	3.20	0.007	0.21
Gujarat	1.23	1.22	-0.004	-0.36
Haryana	0.29	0.28	-0.005	-1.81
Himachal Pradesh	0.12	0.12	-0.002	-1.70
Jammu & Kashmir	0.11	0.11	-0.003	-2.44
Karnataka	2.18	2.17	-0.010	-0.46
Kerala	1.92	1.91	-0.007	-0.37
Madhya Pradesh	0.93	0.93	-0.001	-0.10
Maharashtra	1.62	1.57	-0.049	-3.03
Mumbai	2.96	2.94	-0.018	-0.62
North East	0.11	0.11	-0.001	-0.72
Orissa	0.25	0.24	-0.012	-4.95
Punjab	0.81	0.79	-0.021	-2.54
Rajasthan	0.57	0.55	-0.022	-3.89
T.N. (incl. Chennai)	2.24	2.22	-0.023	-1.00

Service Area	Sep-18	Dec-18	Net Additions	Rate of Change (%)
U.P.(E)	0.46	0.45	-0.007	-1.60
U.P.(W)	0.33	0.31	-0.017	-5.14
Kolkata	0.75	0.73	-0.017	-2.33
West Bengal	0.25	0.25	-0.006	-2.49
All India	22.11	21.87	-0.245	-1.11

1.26 All service areas except Delhi showed decline in their wireline subscriber base during the QE Dec-18.

Table 1.23: Service Area wise Wireline Rural-Urban Subscriber Base (in million) – as on 31.12.2018

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

Table 1.24: Service Area wise Wireline Teledensity

Service Area	As on 30 th September, 2018			As on 31 st December, 2018		
	Rural Teledensity	Urban Teledensity	Total Teledensity	Rural Teledensity	Urban Teledensity	Total Teledensity
Andhra Pradesh	0.37	4.76	1.60	0.36	4.73	1.58
Assam	0.08	1.88	0.38	0.07	1.77	0.36
Bihar	0.03	1.08	0.17	0.03	1.04	0.17
Delhi	-	-	13.96	-	-	13.89
Gujarat	0.48	3.74	1.87	0.48	3.71	1.86
Haryana	0.30	2.19	1.01	0.30	2.14	0.99
Himachal Pradesh	1.03	6.23	1.66	1.01	6.13	1.63
Jammu & Kashmir	0.13	2.66	0.85	0.12	2.59	0.83
Karnataka	0.40	8.00	3.42	0.39	7.94	3.39
Kerala	4.26	8.33	5.28	4.24	8.28	5.26
Madhya Pradesh	0.14	2.74	0.86	0.14	2.73	0.86
Maharashtra (incl. Mumbai)*	0.44	6.91	3.64	0.42	6.79	3.57
North East	0.21	2.31	0.75	0.21	2.28	0.74
Orissa	0.16	2.45	0.58	0.14	2.37	0.55
Punjab	1.03	4.42	2.56	0.99	4.30	2.49
Rajasthan	0.14	2.65	0.75	0.13	2.54	0.72
Tamil Nadu (incl. Chennai)	1.17	4.29	3.12	1.17	4.22	3.08
Uttar Pradesh (incl. UPE & UPW)	0.06	1.23	0.33	0.06	1.19	0.32
West Bengal (incl. Kolkata)*	0.16	3.18	1.03	0.16	3.10	1.01
All India	0.36	4.57	1.69	0.35	4.50	1.67

* 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 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 1.25: State/UT wise Wireline Subscriber base

Sl.No.	States/UT	Wireline Subscribers (in million)		
		Total	Rural	Urban
1	Andhra Pradesh	0.61	0.18	0.43
2	Arunachal Pradesh	0.02	0.01	0.02
3	Assam	0.12	0.02	0.10
4	Bihar	0.12	0.02	0.10
5	Chhattisgarh	0.18	0.02	0.16
6	Goa	0.11	0.03	0.07
7	Gujarat	1.21	0.18	1.04
8	Haryana	0.34	0.05	0.28
9	Himachal Pradesh	0.12	0.06	0.05
10	Jammu & Kashmir	0.11	0.01	0.09
11	Jharkhand	0.12	0.01	0.11
12	Karnataka	2.17	0.15	2.02
13	Kerala	1.90	1.15	0.75
14	Madhya Pradesh	0.75	0.09	0.66
15	Maharashtra Incl. Mumbai	4.40	0.23	4.17
16	Manipur	0.02	0.01	0.02
17	Meghalaya	0.02	0.002	0.02
18	Mizoram	0.01	0.001	0.01
19	Nagaland	0.01	0.001	0.01
20	Odisha	0.24	0.05	0.19
21	Punjab	0.62	0.17	0.45
22	Rajasthan	0.55	0.08	0.47
23	Sikkim	0.01	0.00	0.01
24	Tamil Nadu (incl. Chennai)	2.17	0.31	1.86
25	Telangana	0.82	0.05	0.77
26	Tripura	0.02	0.01	0.01
27	Uttar Pradesh (UPE +UPW)	0.69	0.09	0.60
28	Uttarakhand	0.10	0.01	0.09
29	West Bengal Incl. Kolkata	0.95	0.10	0.85
	Union Territories			
1	Andaman & Nicobar Islands	0.02	0.01	0.01
2	Chandigarh	0.18	0.002	0.18
3	Dadar & Nagar Haweli	0.004	0.002	0.003
4	Daman & Diu	0.01	0.002	0.003
5	Delhi	3.12	-	3.12
6	Lakshdweep	0.005	0.002	0.003
7	Puduchery	0.05	0.01	0.05
	Total	21.87	3.11	18.76

Table 1.26: State/UT wise Wireline Teledensity

Sl.No.	State/UT	Wireline Teledensity		
		Total	Rural	Urban
1	Andhra Pradesh	1.58	0.36	4.73
2	Arunachal Pradesh	1.76	0.86	2.99
3	Assam	0.36	0.07	1.77
4	Bihar	0.11	0.02	0.88
5	Chhattisgarh	0.67	0.10	2.34
6	Goa	5.02	4.41	5.34
7	Gujarat	1.87	0.48	3.74
8	Haryana	1.18	0.30	2.65
9	Himachal Pradesh	1.63	1.01	6.13
10	Jammu & Kashmir	0.83	0.12	2.59
11	Jharkhand	0.34	0.04	1.26
12	Karnataka	3.39	0.39	7.94
13	Kerala	5.26	4.24	8.27
14	Madhya Pradesh	0.92	0.15	2.84
15	Maharashtra Incl. Mumbai	3.55	0.37	6.82
16	Manipur	0.76	0.25	2.29
17	Meghalaya	0.63	0.10	2.57
18	Mizoram	1.28	0.19	2.14
19	Nagaland	0.41	0.03	2.25
20	Odisha	0.55	0.14	2.37
21	Punjab	2.06	0.99	3.53
22	Rajasthan	0.72	0.13	2.54
23	Sikkim	1.01	0.10	5.95
24	Tamil Nadu (incl. Chennai)	3.08	1.17	4.24
25	Tripura	0.51	0.21	1.68
26	Uttar Pradesh (UPE + UPW)	0.30	0.05	1.16
27	Uttarakhand	0.90	0.14	2.62
28	West Bengal incl. Kolkata	0.99	0.15	3.08
	Union Territories			
1	Andaman & Nicobar Islands	2.95	2.06	4.05
2	Chandigarh	8.82	0.87	9.72
3	Dadar & Nagar Haweli	0.87	1.12	0.77
4	Daman & Diu	1.57	0.82	4.56
5	Delhi	13.52	0.00	13.98
6	Lakshdweep	5.66	3.45	12.20
7	Puduchery	2.96	1.52	3.55
	Total	1.67	0.35	4.50

*Data of Telengana is included in A.P. State as separate projected population data of Telengana is not available.

Public Call Offices (PCO)

1.27 Total number of PCOs in the country declined from 3,05,395 at the end of Sep-18 to 2,75,032 at the end of Dec-18. Detailed table of service provider wise PCOs is available at Annexure -1.3.

Chart 1.12: Trend of Number of PCOs



Table 1.27 : Rate of change & Market share of PCOs

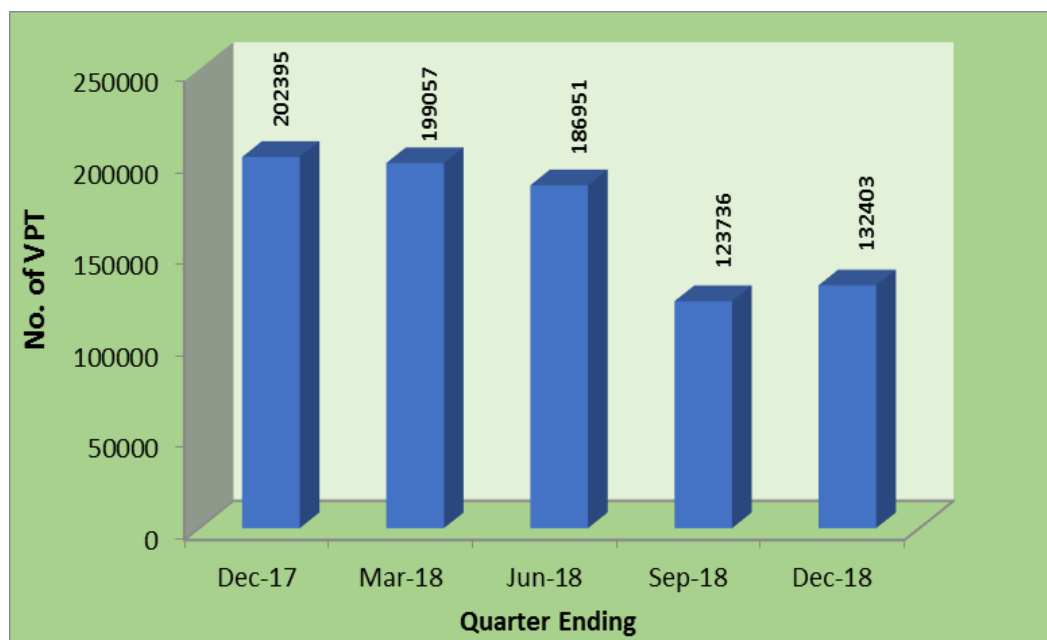
Service Provider	Sep-18	Dec-18	Rate of change (%)	Market share (%) (Dec-18)
BSNL	201320	194023	-3.62	70.55
MTNL	79716	68579	-13.97	24.93
Bharti	11166	11010	-1.40	4.00
Quadrant	1420	1420	0.00	0.52
Tata	11773	0	-	-
Total	305395	275032	-9.94	100

1.28 Number of PCOs continued shows declining trend At the Q.E. Dec-18, it has recorded a overall decline of 9.94%. The year-on-year (Y-O-Y) decline rate is 30.10% at the QE Dec-18 over the same quarter of the last year.

Village Public Telephones (VPTs)

- 1.29 There are 5,93,731 inhabited villages in India as per census 2001. At the end of the quarter, only 22.30% of the total inhabited villages in India have been connected by VPTs.
- 1.30 Number of VPTs increased from 1,23,736 at the end of Sep-18 to 1,32,403 at the end of Dec-18 with quarterly growth rate of 7.00%. However, it shows yearly decline of 34.58% in QE Dec-18 over same quarter in previous year.
- 1.31 As per the information received in TRAI, at the end of Dec-18, only M/s BSNL was providing VPT in the country. Service area wise detailed table of VPT is available at Annexure -1.4.

Chart 1.8: Trend of number of VPTs



Section D: Internet Service

1.32 This section summarizes information submitted by 326 internet service providers for the quarter ending Dec-18. **Part-I** consists of information of Internet service (narrowband+broadband), **Part-II** consists of broadband service and **Part-III** covers narrowband service.

Part-I : Internet Service (broadband + narrowband)

1.33 As per reports received from 326 operators, total number of internet subscribers increased from 560.01 million at the end of Sep-18 to 604.21 million at the end of Dec-18 with quarterly growth rate of 7.89%. Out of total 604.21 million internet subscribers, 525.36 million were broadband subscribers and 78.86 million were narrowband subscribers.

1.34 Wired Internet subscribers increased from 21.25 million at the end of Sep-18 to 21.42 million at the end of Dec-18 with quarterly growth rate of 0.82%. Wireless Internet subscribers increased from 538.76 million at the end of Sep-18 to 582.79 million at the end of Dec-18 with quarterly growth rate of 8.17%.

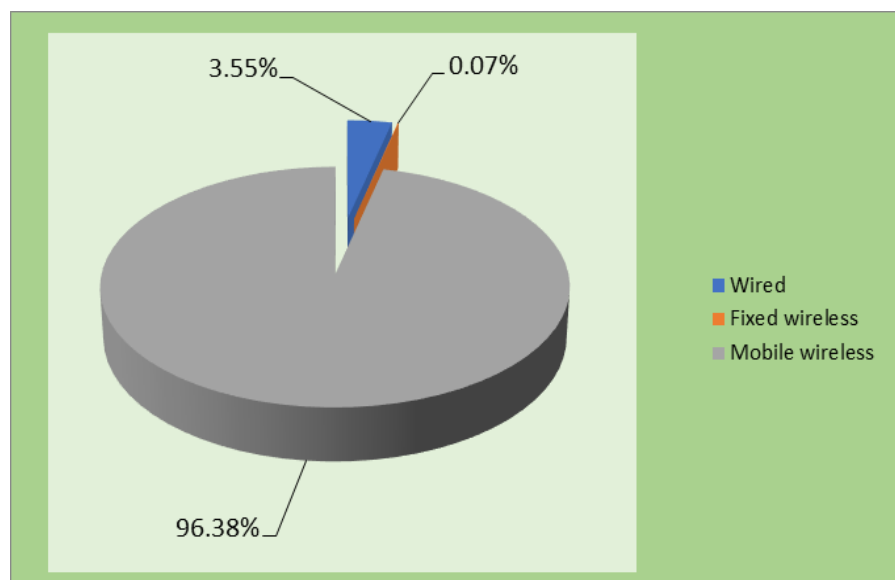
1.35 Number of Broadband subscribers increased from 481.70 million at the end of Sep-18 to 525.36 million at the end of Dec-18 with quarterly growth rate of 9.06%. The number of Narrowband subscribers increased from 78.30 million at the end of Sep-18 to 78.86 million at the end of Dec-18 with quarterly growth rate of 0.70%.

Table 1.28: 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			
	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18
Broadband	17.99	18.17	0.82	0.43	462.89	506.76	463.71	507.19	481.70	525.36
Narrowband	3.26	3.26	0.01	0.01	75.03	75.59	75.04	75.60	78.30	78.86
Total	21.25	21.42	0.83	0.44	537.92	582.35	538.75	582.79	560.01	604.21

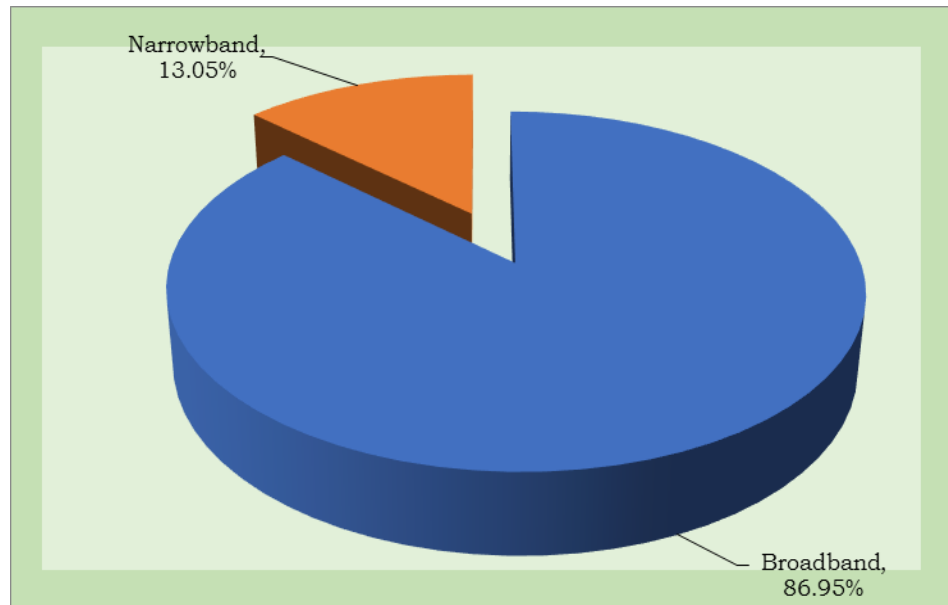
1.36 The following charts present the composition of Internet Subscribers by mode of access and composition of Broadband & Narrowband subscription as on 31st December, 2018.

Chart 1.9: Composition of Internet subscription



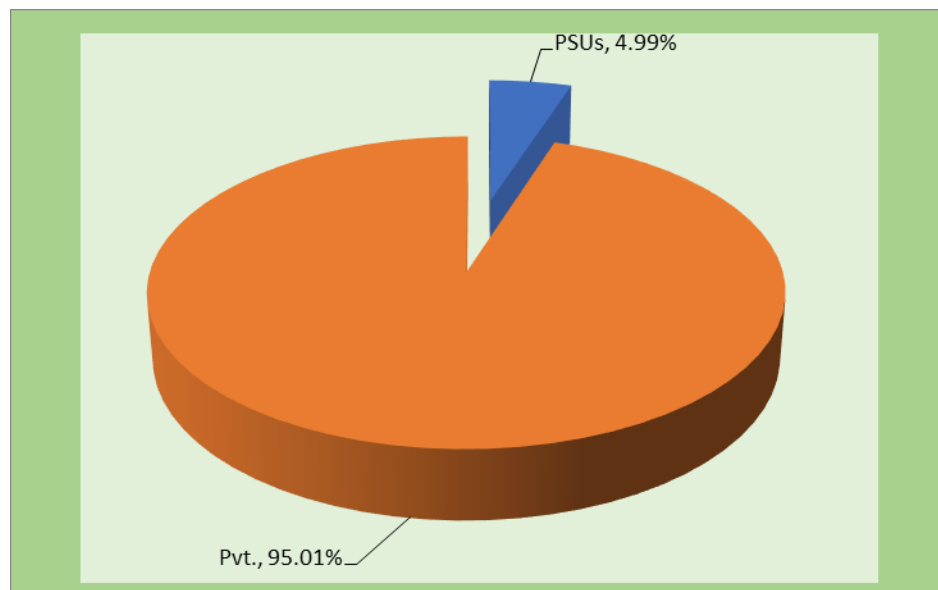
1.37 Out of total internet subscribers, 96.38% subscribers are using Mobile device for access of internet service.

Chart 1.10 : Composition of Broadband & Narrowband subscription



1.38 Share of private internet service providers in respect of subscriber base, increased from 94.51% at QE Sep-18 to 95.01% at QE Dec-18. The following charts present the composition of market share of PSUs and Private Internet service providers.

Chart 1.11 : Market share of PSUs and Private Internet Service Providers



1.39 The urban/rural break up of internet subscribers are as per the following table.

Table 1.29: Break up of Rural-Urban internet subscriber base (million)

Telecom Service Area	Narrowband		Broadband		Total Internet	
	Rural	Urban	Rural	Urban	Rural	Urban
Andhra Pradesh	4.64	4.64	16.09	25.37	20.72	30.01
Assam	0.93	0.67	4.65	4.51	5.59	5.18
Bihar	4.26	1.89	16.24	13.50	20.50	15.38
Delhi	0.22	2.73	0.51	31.15	0.73	33.88
Gujarat	1.55	1.91	9.14	25.26	10.68	27.17
Haryana	0.83	0.61	4.28	8.24	5.11	8.85
Himachal Pradesh	0.32	0.18	2.79	1.66	3.11	1.84
Jammu & Kashmir	0.44	0.31	2.29	3.44	2.74	3.75
Karnataka	1.94	2.00	9.51	24.99	11.45	26.99
Kerala	1.15	1.27	8.62	12.77	9.77	14.03
Kolkata	0.15	1.60	1.17	12.15	1.32	13.75
Madhya Pradesh	3.39	2.52	10.30	22.36	13.69	24.88
Maharashtra	3.33	2.93	15.50	28.74	18.83	31.67
Mumbai	0.12	2.63	1.04	21.94	1.16	24.57
North East	0.41	0.42	2.30	3.24	2.71	3.65
Orissa	1.64	0.68	6.99	5.16	8.64	5.84
Punjab	0.91	1.10	6.02	14.41	6.94	15.50
Rajasthan	2.40	1.78	12.35	17.48	14.75	19.25
Tamil Nadu	1.77	3.12	9.64	29.49	11.41	32.62
Uttar Pradesh(East)	4.60	2.41	15.60	18.24	20.19	20.66
Uttar Pradesh(West)	2.62	1.90	8.32	17.04	10.94	18.94
West Bengal	2.38	1.55	9.94	10.94	12.33	12.50
Total	40.00	38.85	173.30	352.06	213.30	390.91

Table 1.30: Internet Subscriber Base and Market Share of top 10 Service Providers

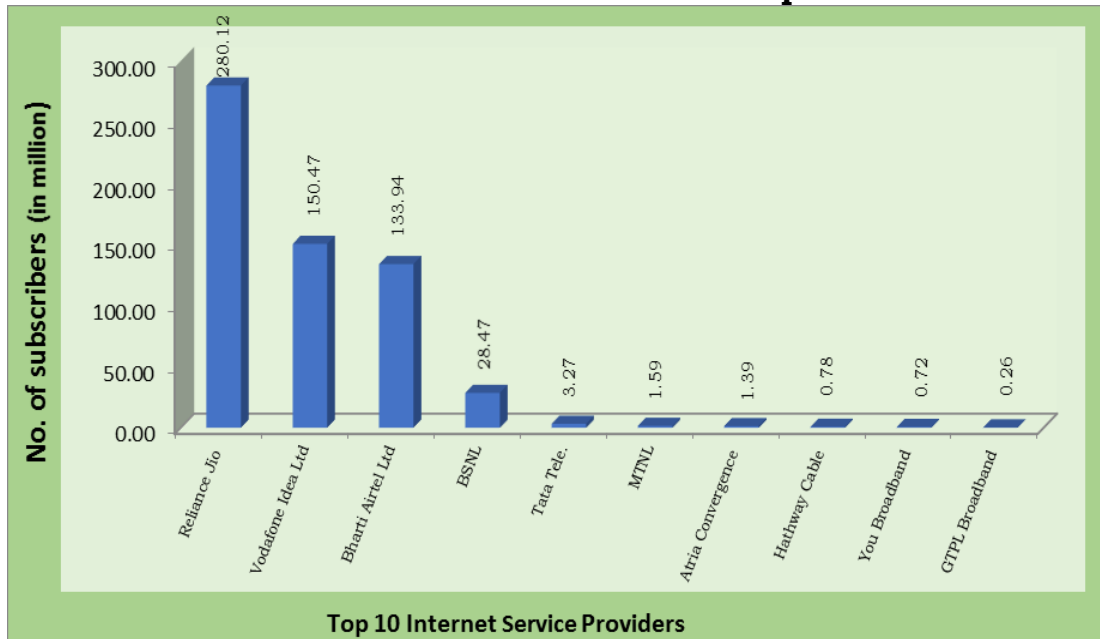
S.No	ISP	No. of Subscribers	Share (%)
1	Reliance Jio Infocomm Ltd	280117768	46.36
2	Vodafone Idea Limited	150474135	24.90
3	Bharti Airtel Ltd.	133941589	22.17
4	Bharat Sanchar Nigam Ltd.	28474380	4.71
5	Tata Teleservices Limited	3273604	0.54
6	Mahanagar Telephone Nigam Ltd.	1594354	0.26
7	Atria Convergence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

1.40 Reliance Jio holds the top position with 46.36% of market share of internet subscribers followed by Vodafone Idea Ltd with 24.90% at the QE Dec-18. After merger of M/s Vodafone and M/s Idea during the quarter, M/s Bharti Airtel slipped down at third position in respect of internet subscribers with market share of 22.17%.

1.41 Out of total 326 internet service providers, top 10 Service Providers together hold 99.47% of total internet subscriber base at the QE Dec-18. Detailed table of number of internet subscriber base (broadband and narrowband) of all the service providers is available at **Annexure-1.5**.

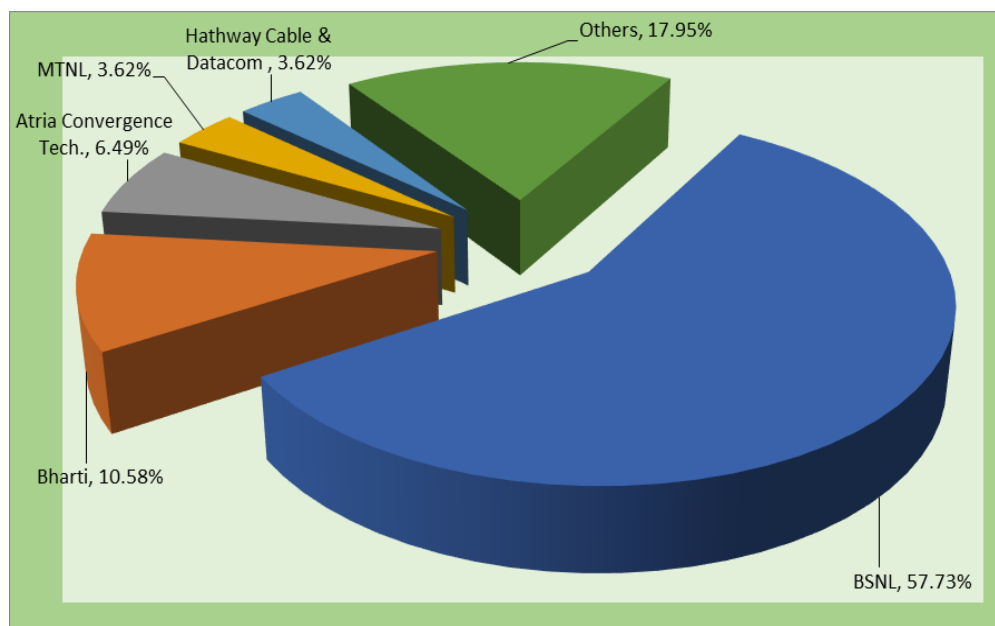
1.42 The following chart depicts the internet subscriber base of top ten Internet Service Providers (ISPs) in the QE Dec-18.

Chart 1.17 : Subscriber base of top ten ISPs



1.43 Out of total 21.42 million wired internet subscribers, BSNL holds 57.73% market share with 12.37 million subscribers, followed by Bharti with 2.27 million subscribers.

Chart 1.18 : Composition of Wired Internet subscribers



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

Chart 1.19 : Composition of Wireless Internet subscription

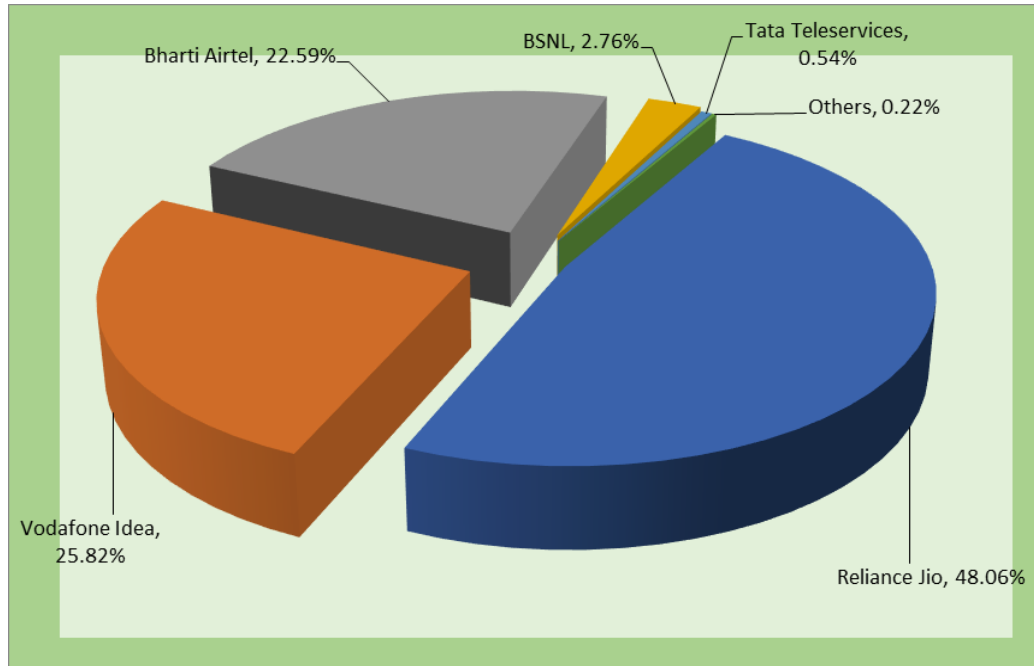


Chart 1.20 : Technology trend for Wireless Internet Access

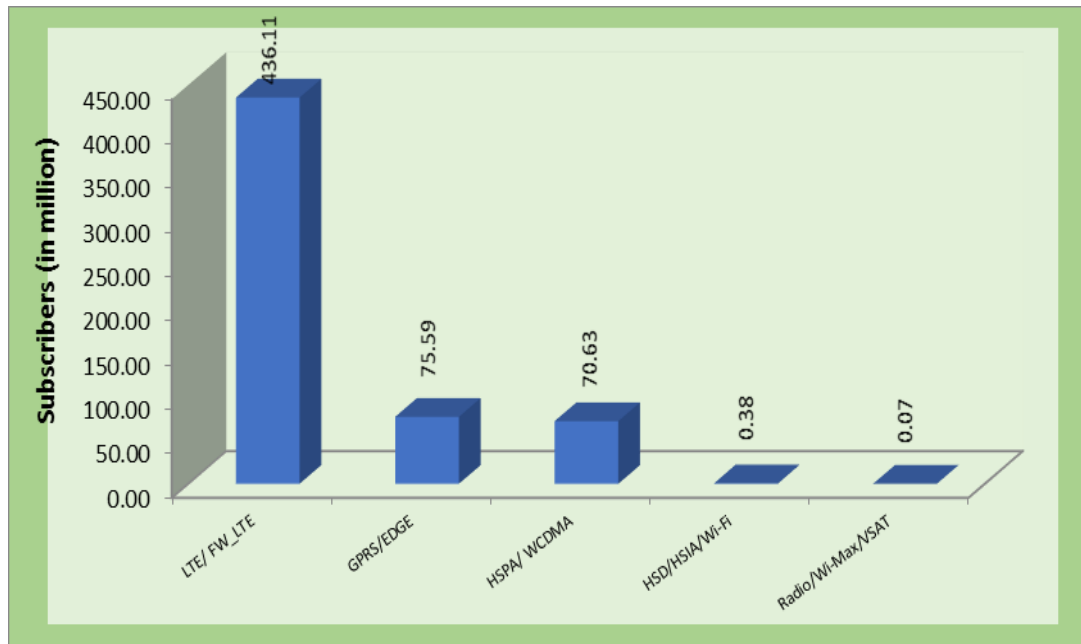
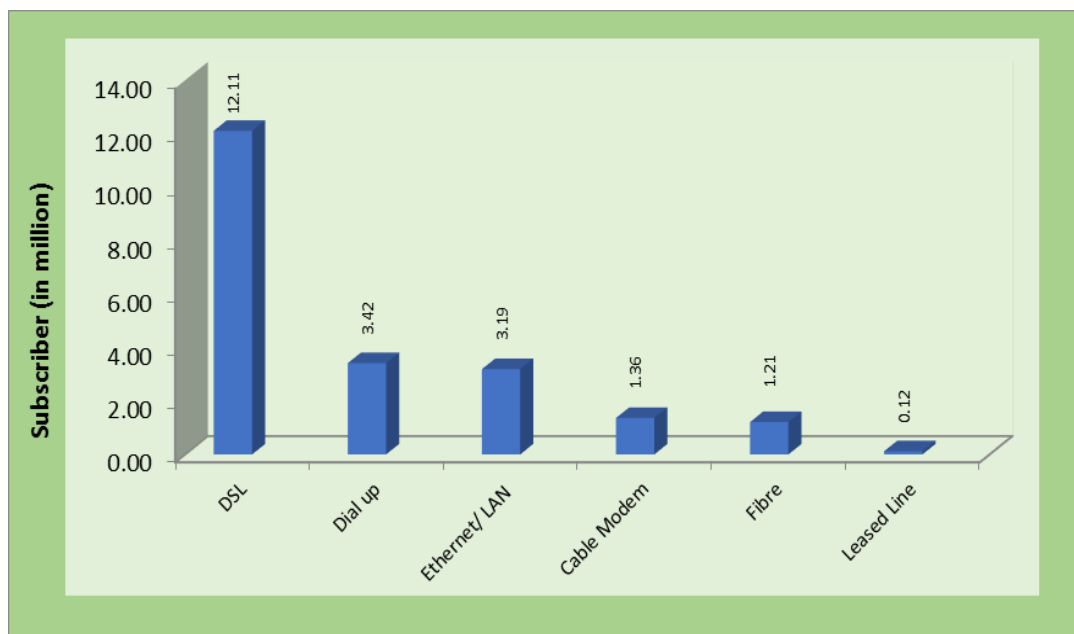


Chart 1.21 : Technology trend for Wired Internet Access



1.45 Top five service areas in terms of internet subscriptions (wired+ wireless) are Andhra Pradesh (50.73 million), Maharashtra (50.50 million), Tamil Nadu including Chennai (44.03 million), U.P.(East) (40.85 million) and Madhya Pradesh (38.57 million).

Table 1.31 : Service Area wise number of Internet Subscribers per 100 population at the end of Dec-18

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Andhra Pradesh	20.72	30.01	50.73	31.92	118.60	56.23
Assam	5.59	5.18	10.77	20.06	92.42	32.18
Bihar	20.50	15.38	35.88	16.77	78.01	25.28
Delhi	0.73	33.88	34.60	95.28	151.96	150.08
Gujarat	10.68	27.17	37.85	28.46	96.79	57.69
Haryana	5.11	8.85	13.97	28.67	82.48	48.89
Himachal Pradesh	3.11	1.84	4.96	48.88	209.65	68.35
Jammu & Kashmir	2.74	3.75	6.48	29.97	103.19	50.82
Karnataka	11.45	26.99	38.44	29.79	106.25	60.20

Service Area	Internet Subscribers (in million)			No. of Internet subscribers per 100 population		
	Rural	Urban	Total	Rural	Urban	Total
Kerala	9.77	14.03	23.80	35.97	153.41	65.57
Madhya Pradesh	13.69	24.88	38.57	17.64	82.79	35.82
Maharashtra	18.83	31.67	50.50	31.39	89.97	60.41
Mumbai	1.16	24.57	25.73			
North East	2.71	3.65	6.36	25.43	98.67	44.31
Orissa	8.64	5.84	14.47	24.35	73.61	33.35
Punjab	6.94	15.50	22.44	39.90	107.22	70.47
Rajasthan	14.75	19.25	34.00	25.75	104.63	44.93
Tamil Nadu	11.41	32.62	44.03	42.26	72.25	61.03
UP (East)	20.19	20.66	40.85	17.00	71.40	29.64
UP (West)	10.94	18.94	29.88			
Kolkata	1.32	13.75	15.07	19.78	93.68	41.13
West Bengal	12.33	12.50	24.82			
Total	213.30	390.91	604.21	23.87	93.86	46.13

* 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 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.

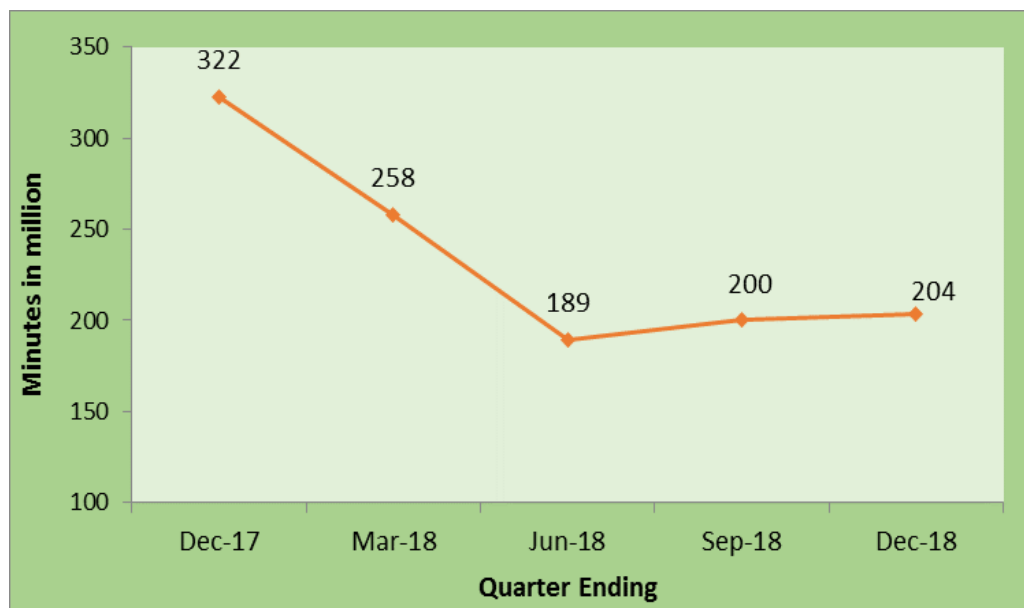
ISP Connectivity

1.46 The International Internet bandwidth owned by various service providers is reported to be 7,840 Gbps during the quarter ending Dec-18 as compared to 7,204 Gbps during the previous quarter.

Internet Telephony

1.47 As per the reports received from 17 service providers, providing Internet Telephony services, the total outgoing minutes of usage for internet telephony is 204 million during the Q.E. Dec-18 as compare to 200 million in previous quarter. List of Internet Telephony Service providers is available at Annexure-1.6.

Chart 1.22 : Trends in MOU for Internet Telephony



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

1.48 The total number of broadband subscribers increased from 481.70 million at the end of Sep-18 to 525.36 million at the end of Dec-18. Out of which number of wired broadband subscribers are 18.17 million and wireless broadband subscribers are 507.19 million.

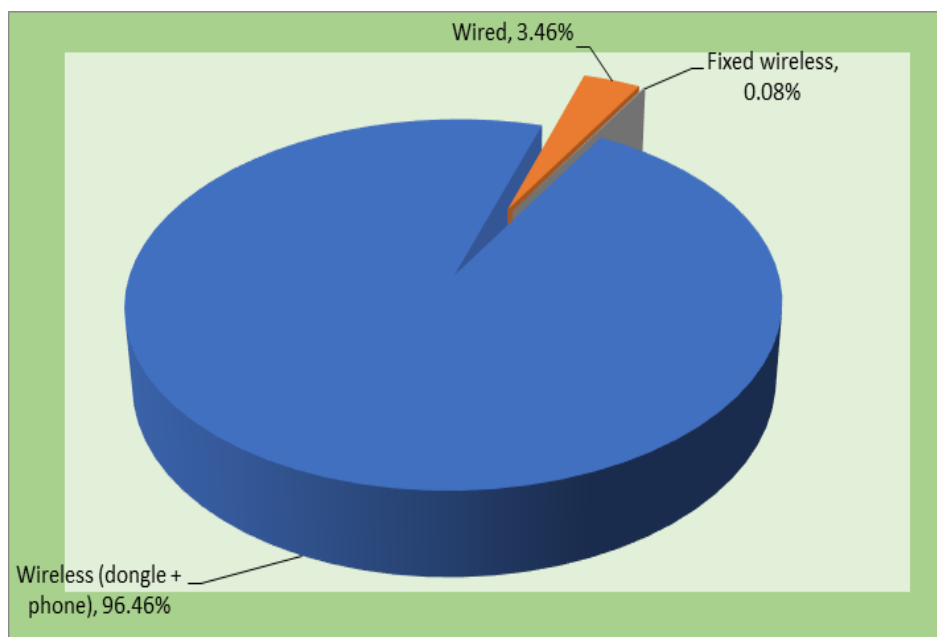
1.49 Top five broadband (wired+wireless) service providers in term of subscribers are Reliance Jio (280.12 million), Vodafone Idea Ltd (107.92 million), Bharti Airtel (107.07 million), BSNL (20.55 million) and Tata Teleservices (2.26 million).

1.50 In wired broadband segment, BSNL holds 50.50% market share with 9.17 million subscribers followed by Bharti with 2.27 million subscribers.

1.51 In wireless broadband segment, Reliance Jio holds 55.23% market share with 280.12 million subscribers followed by Vodafone Idea Ltd (21.27%) with 107.90 million subscribers.

1.52 Top five service areas in respect of broadband subscriptions at QE Dec-18 are Maharashtra (44.24 million), Andhra Pradesh including Telengana (41.45 million), Tamil Nadu including Chennai (39.14 million), Karnataka (34.50 million) and Gujarat (34.40 million).

Chart 1.23 : Composition of Broadband subscription – Technology wise

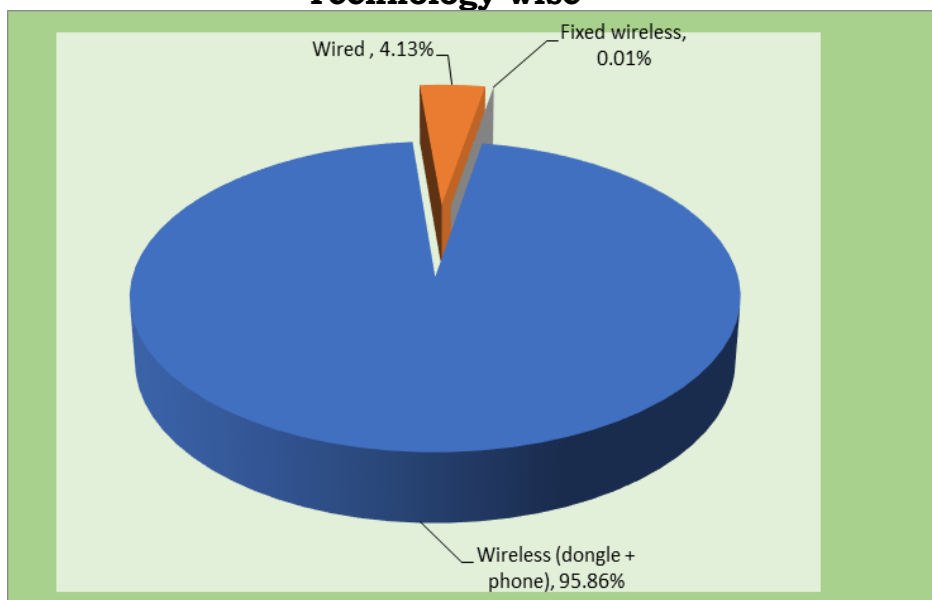


1.53 Mobile Device Users (dongle+phone) constitute 96.46% of total broadband subscribers at the end of Dec-18.

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

- 1.54 Total number of narrowband subscribers increased from 78.30 million at the end of Sep-18 to 78.86 million at the end of Dec-18 with the quarterly growth rate of 0.70%. Out of 78.86 million narrowband subscribers, Wired Narrowband subscribers are 3.27 million and Wireless Narrowband subscribers are 75.59 million.
- 1.55 The top five narrowband (wired + wireless) service providers in term of subscriber base are Vodafone Idea Ltd (42.56 million), Bharti Airtel (26.87 million), BSNL (7.92 million), Tata Teleservices (1.01 million) and MTNL (0.42 million).
- 1.56 In wired narrowband segment, BSNL holds 98.10% market share with 3.195 million subscribers followed by Microscan Computers Pvt Ltd with 0.015 million.
- 1.57 In wireless narrowband segment, Vodafone Idea Ltd holds 56.30% market share with 42.56 million subscribers followed by Bharti Airtel with 26.87 million subscribers.

Chart 1.24 : Composition of Narrowband subscription – Technology wise



Section E : Other Value Added Services - PMRTS & VSAT

Public Mobile Radio Trunk Services (PMRTS)

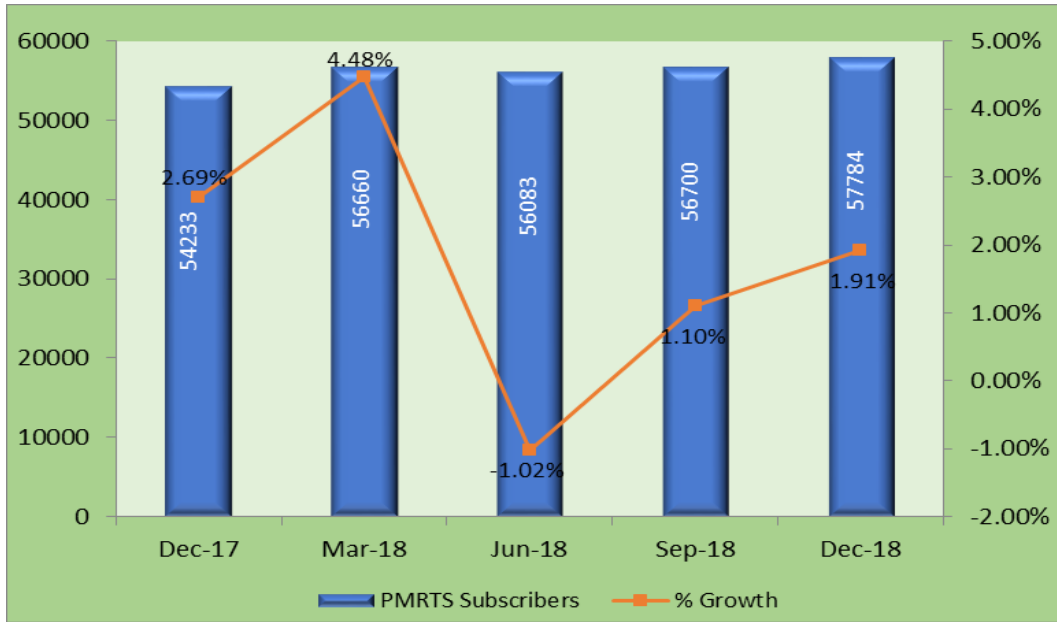
1.58 The subscriber base of PMRTS increased from 56,700 at the end of Sep-18 to 57,784 at the end of Dec-18 with quarterly growth rate of 1.91%.

Table 1.32 : PMRTS Subscriber base - Service Provider wise

Sl. No	Name of the Service Provider	Subscriber Base as on 30.09.2018	Subscriber Base as on 31.12.2018	Growth in Subscribers	% Growth in subscribers in QE Dec-18
1	Arya Omnitalk Radio Trunking Services Pvt. Ltd.	47086	48121	1035	2.20
4	Procall Ltd.	3178	3218	40	1.26
2	Quick Call	2057	2065	8	0.39
3	Inative Networks Pvt Ltd	1820	1820	0	0.00
5	Smartlink Pvt Ltd	1004	968	-36	-3.59
6	Bhilwara Telenet Services Pvt Ltd	855	870	15	1.75
7	Wiwonet Solutions Pvt Ltd	361	361	0	0.00
8	Airtalk Solutions & Services Pvt Ltd	339	361	22	6.49
	Total	56700	57784	1084	1.91

1.59 Detailed table on Service Area wise subscriber base of PMRTS as on 31st December, 2018 is available at **Annexure-1.7**.

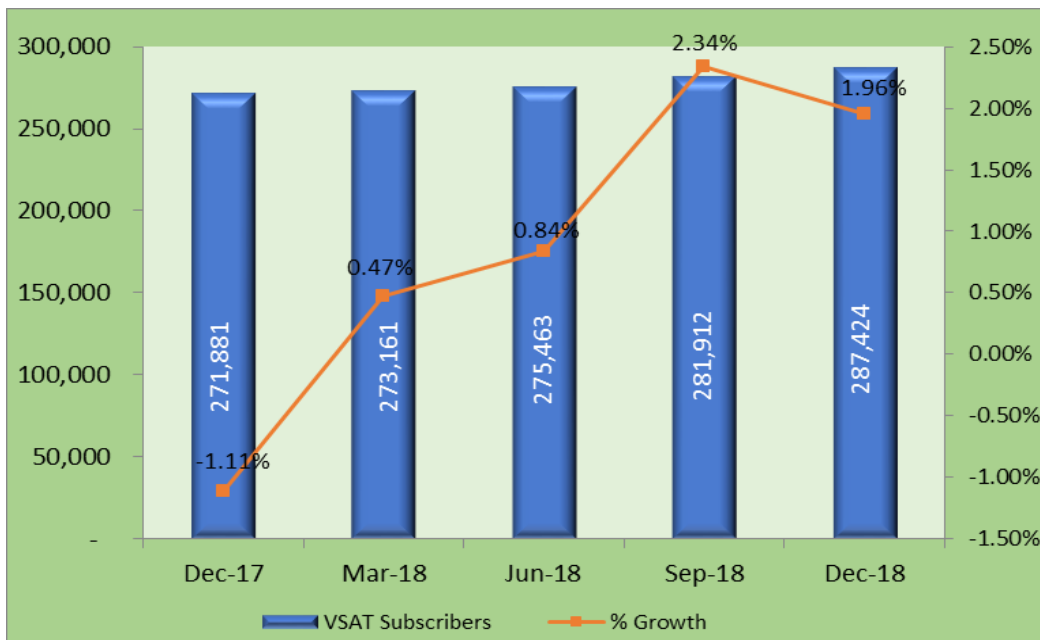
Chart 1.25 : Number of PMRTS subscribers & Rate of Growth (%)



Very Small Aperture Terminal (VSAT)

1.60 The total number of VSAT subscribers increased from 2,81,912 at the end of Sep-18 to 2,87,424 at the end of Dec-18. Net addition during the quarter has been 5,512 at the growth rate of 1.96%.

Chart 1.26 : Number of VSAT Subscribers & Rate of Growth (%)



**Table 1.33 : VSAT Service Providers currently providing service
& their subscriber base**

Sr. No	Name of Service Providers	Subscriber base at the Quarter ending		Net Addition	%age Growth	Market Share (%) Dec-18
		Sep-18	Dec-18			
1	Hughes Communications Ltd.	1,01,299	1,03,168	1,869	1.85	35.89
2	Bharti Airtel Limited	77,399	79,604	2,205	2.85	27.70
3	Tatanet Services	65,298	67,584	2,286	3.50	23.51
4	HCL Comnet	18,613	18,154	-459	-2.47	6.32
5	BSNL	16,732	16,307	-425	-2.54	5.67
6	Infotel Satcom	2,497	2,533	36	1.44	0.88
7	Cloudcast Digital Ltd (eartwhile Planetcast Media Services Ltd)	74	74	0	0.00	0.03
	Total	2,81,912	2,87,424	5,512	1.96	100

1.61 Hughes Communication Limited continues to be the market leader in VSAT with subscriber base of 1,03,168 followed by Bharti Airtel Ltd (79,604) at the end of Dec-18.

1.62 M/s Tatanet Services added maximum number of VSAT i.e. 2,286 subscribers in QE Dec-18, with maximum growth rate of 3.50% in its VSAT subscribers. M/s HCL Comnet and M/s BSNL showed decline of VSAT subscribers during the quarter.

Chapter 2 :

Revenue and Usage

Wireless Services

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

Table 2.1: Key Indicators – Wireless Services (GSM, LTE & CDMA)

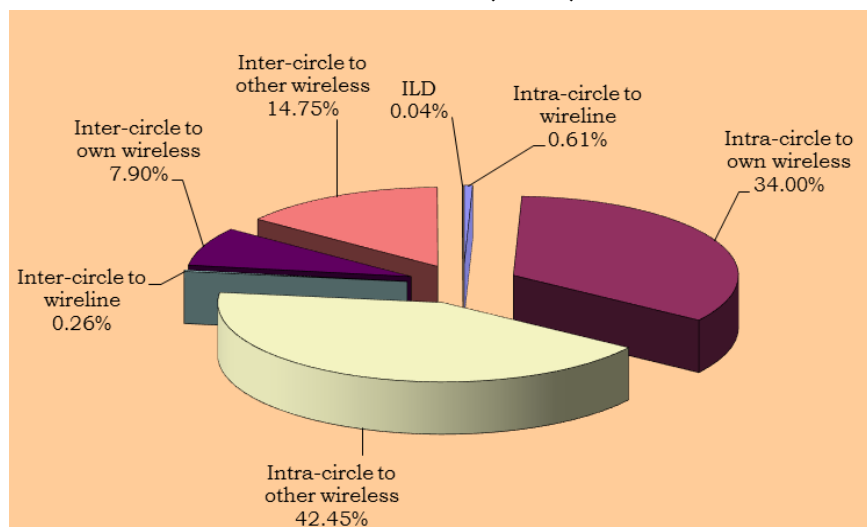
Parameter	Dec-18	Sep-18	Dec-17	QoQ %age change	YoY %age change
Subscriber Base* (million)	1177#	1169	1154	0.69	2.05
Share of Prepaid (%)	95.81	95.76	95.57	0.05	0.25
Incoming MOU* per subscriber per month	330	318	247	3.58	33.64
Outgoing MOU* per subscriber per month	338	309	247	9.41	36.67
No. of Outgoing SMS per subscriber per month	16	17	17	-6.62	-2.21
Average Revenue Per User (ARPU) per month (₹)	70	67	80	4.07	-11.78

* Subscriber figures are closing figures as on last day of the quarter.

Subscriber figures for 4G LTE is also included.

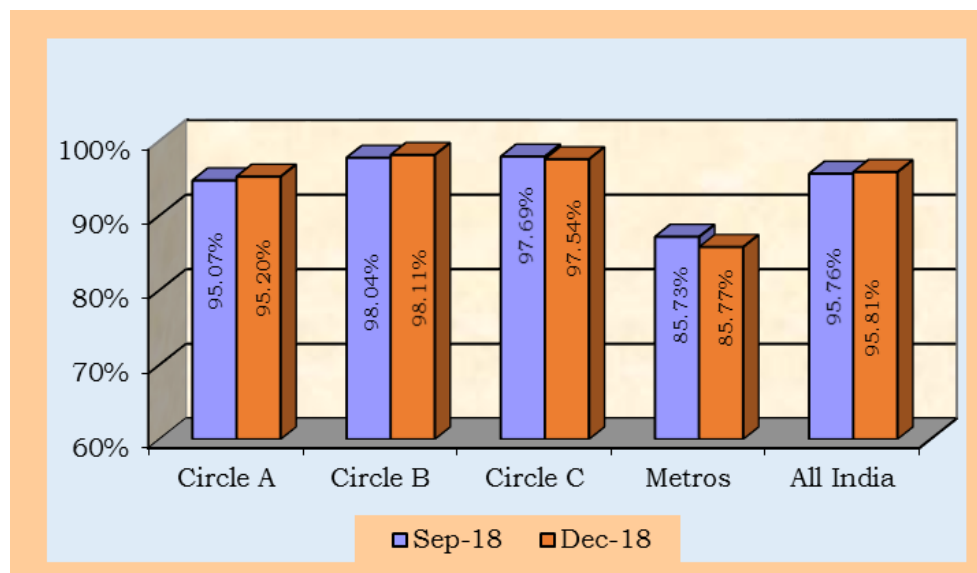
2.1 The following chart presents % break-up of outgoing minutes from Home Service Area (HSA) in the QE Dec-18.

Chart 2.1: Break-up of Outgoing minutes from Home Service Area (HSA)



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

Chart 2.2: Proportion of prepaid subscribers



Note: Based on subscriber figures as on the last day of the quarter.

2.3 Market share of prepaid segment increased from 95.76% at the end of Sep-18 to 95.81% at the end of Dec-18.

2.4 The ARPU per month (all India, blended) increased from ₹67 in Q.E. Sep-18 to ₹70 in Q.E. Dec-18 with quarterly growth rate of 4.07%. 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: Monthly ARPU – Wireless Services in QE Dec-18

Circle Category	ARPU per month (in ₹)		
	Post-paid	Pre-paid	Blended
Circle A	319	71	83
Circle B	301	58	63
Circle C	189	59	63
Metros	295	30	67
All India	296	60	70
All private SPs	299	64	74
BSNL/MTNL	261	32	38

2.5 The ARPU per month for pre-paid segment is ₹60 and ARPU per month for postpaid segment is ₹296 in QE Dec-18.

2.6 The following table presents the composition of ARPU per month in the QE Dec-18.

Table 2.3: Composition of ARPU per month - Wireless Services

S. No.	Item	Revenue (excl. service tax) per subscriber per month (in ₹)	Share of total revenue from subscribers
1	Usage from Home Service Area		
1.1.	Rental Revenue	23.11	27.2%
1.2.	Revenue from calls	10.50	12.4%
1.3.	Revenue from SMS	0.95	1.1%
1.4.	Revenue from data usage	44.97	53.0%
1.5.	Revenue from other VAS	1.90	2.2%
1.6.	Other revenue	1.82	2.1%
2	Usage outside Home Service Area		
2.1.	Revenue from outroamers	1.63	1.9%
3	Total revenue from subscribers (1+2)	84.88	100%
4	Net inter-operator settlement charges receivable *	-15.02	
5	Net Revenue (ARPU) per month(3+4)	70	

* includes Interconnect Usages Charges and roaming settlement charges

2.7 From the above table, it may be seen that the net inter-operator settlement charges payable (₹15.00) accounts for 17.69% of the total revenue from subscribers.

2.8 On an all India average, the overall minutes of usage (MOU) per subscriber per month increased from 627 in QE Sep-18 to 667 in QE Dec-18 with quarterly growth rate of 6.37%.

2.9 The following table presents the total MOU (usage from, and outside, the home service area) per subscriber per month for various categories of circles.

Table 2.4: MOU per subscriber per month - QE Dec-18

Circle category	MOU per subscriber per month								
	Postpaid			Prepaid			Blended		
	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU	Outgoing MOU	Incoming MOU	Total MOU
Circle A	373	340	713	305	280	586	309	283	592
Circle B	396	377	773	327	340	668	329	341	670
Circle C	573	392	964	385	426	812	390	426	815
Metro	330	279	609	406	300	706	395	297	692
All India	380	331	711	336	330	666	338	330	667

Note: MOU indicates total usage i.e. usage from and outside HSA

2.10 The overall ratio of incoming MOU and outgoing MOUs for the QE Dec-18 is 50.6 : 49.4.

2.11 Number of outgoing SMS per subscriber per month declined from 17 in Q.E. Sep-18 to 16 in Q.E. Dec-18. The following table presents the outgoing SMS usage (usage from, and outside, the home service area) per subscriber per month for various categories of circles and various platforms for payment viz. post-paid and pre-paid.

Table 2.5: No. of Outgoing SMS per subscriber per month during QE Dec-18

Circle category	Outgoing SMS per subscriber month		
	Postpaid	Prepaid	Blended
Circle A	38	19	20
Circle B	47	12	13
Circle C	36	16	17
Metro	22	13	14
All India	34	15	16

Note: No. of Outgoing SMS indicate total usage i.e. usage from and outside HSA

Chart 2.3 : Minutes of Usage by Out-roamers as a % of Total Minutes of Usage

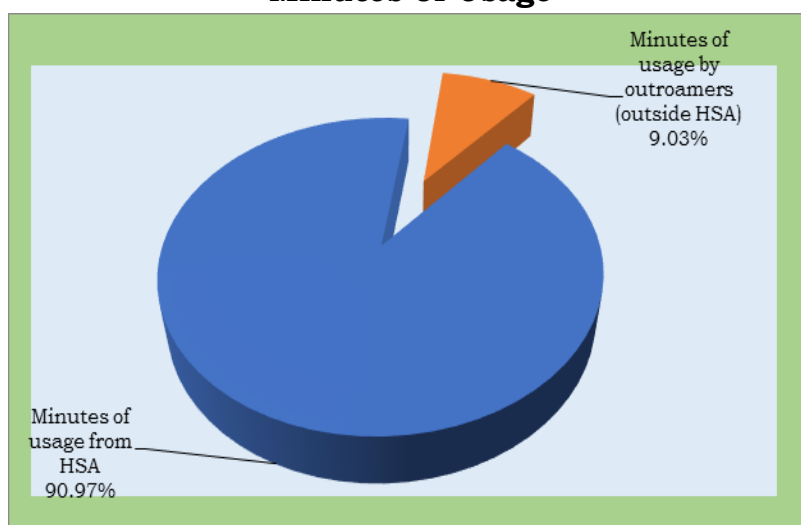
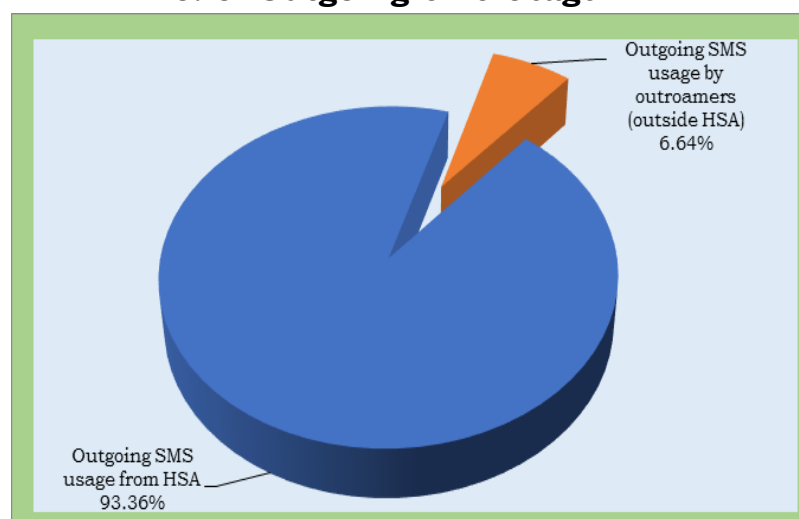


Chart 2.4: Outgoing SMS Usage by Out-roamers as a % of Total No. of Outgoing SMS Usage



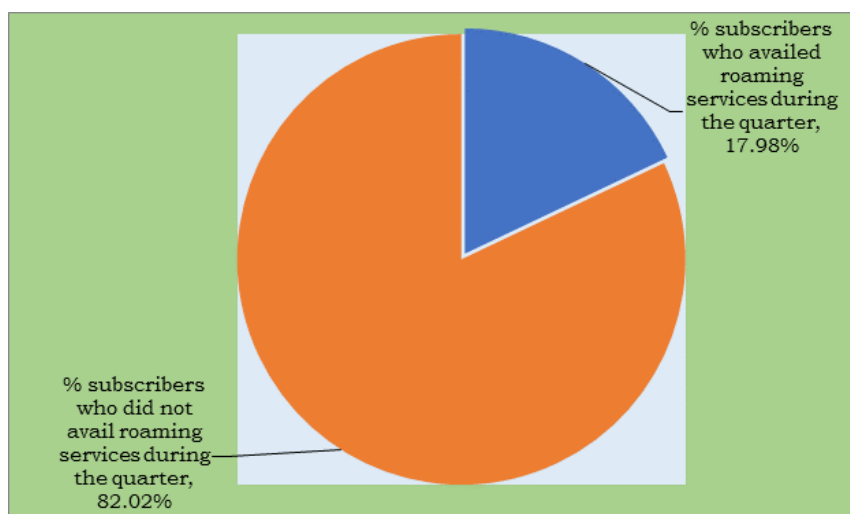
2.12 The following table presents the percentage break-up of outgoing minutes of usage from home service area between various categories of termination networks.

Table 2.6: %Break-up of Outgoing minutes from Home Service Area (HSA)

Circle Category	% Intra-circle to wireline	% Intra-circle to own wireless	% Intra-circle to other wireless	% Inter-circle to wireline	% Inter-circle to own wireless	% Inter-circle to other wireless	% ILD
Circle A	0.74	35.54	43.95	0.29	6.10	13.33	0.04
Circle B	0.47	35.13	44.08	0.20	7.06	13.03	0.04
Circle C	0.25	36.10	41.56	0.20	8.37	13.51	0.01
Metros	1.25	22.59	33.86	0.43	15.25	26.57	0.07
All India	0.61	34.00	42.45	0.26	7.90	14.75	0.04

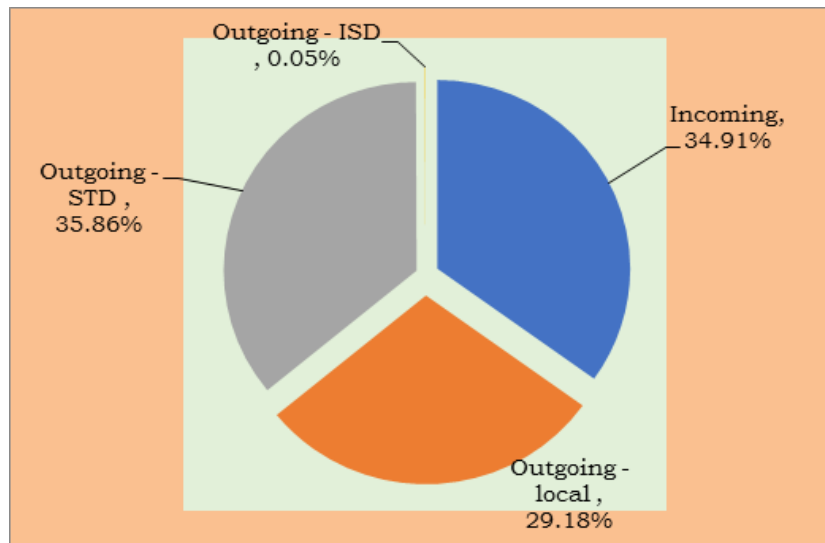
2.13 The chart given below presents the percentage of subscribers who availed roaming services (out-roamers) during the quarter ending Sep-18.

Chart 2.5: % subscribers availed roaming services during the QE Dec-18



2.14 The usage pattern of out-roamers i.e. usage from outside the home service area shows that incoming minutes accounts for 34.91% of the total minutes of usage by out-roamers in QE Dec-18. The chart given below presents the break-up of minutes of usage of out-roamers during the QE Dec-18.

Chart 2.6: % Break-up of minutes of usage of outroamers (usage from outside the Home Service Area)



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

*Average Outgo per Outgoing Minute for usage from HSA =

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

Table 2.7: Average outgo per outgoing minute from HSA

Circle Category	(₹ per minute)		
	Postpaid	Prepaid	Blended
Circle A	0.38	0.11	0.13
Circle B	0.35	0.10	0.11
Circle C	0.16	0.09	0.09
Metros	0.35	0.09	0.12
All India	0.34	0.10	0.11

2.16 All India average outgo per outgoing minute declined from ₹0.12 in the QE Sep-18 to ₹0.11 in the QE Dec-18.

Table 2.8: Trends of Key Parameters - GSM and LTE Services

Parameter	Dec-17	Mar-18	Jun-18	Sep-18	Dec-18
1. ARPU (₹ Per month)	80	76	69	67	70
3. Average outgo (tariff) per GB wireless data (in ₹)	18.55	14.99	12.07	10.91	10.51
3. MOU per subscriber per month	494	583	608	627	667
4. Outgoing MOU per subscriber per month					
4.1 Local (Intra-circle)	180	212	223	224	248
4.2 NLD (inter-circle)	67	83	83	85	90
4.3 ILD	0.5	0.2	0.3	0.1	0.1
5. No. of Outgoing SMS per subscriber per month	17	20	19	17	16
6. Average Outgo (voice) per outgoing minute from HSA (in ₹)	0.19	0.16	0.14	0.12	0.11

2.17 Service Area wise statistics are available at Annexure-2.1.

Chapter 3 :

Financial Data of

Telecom Service

Sector

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

Particulars	QE Dec-17 (₹ in Crore)	QE Sep-18 (₹ in Crore)	QE Dec-18 (₹ in Crore)	Q-O-Q % Change	Y-O-Y % Change
Gross Revenue (GR)	61,089	57,827	58,991	2.01	-3.43
Adjusted Gross Revenue (AGR)	38,536	36,142	36,054	-0.24	-6.44
Pass Through Charges (GR-AGR)	22,552	21,685	22,936	5.77	1.70
License Fee	3,104	2,889	2,890	0.03	-6.90
Spectrum Usage Charges	1,152	1,043	1,064	2.00	-7.62

3.1 Gross Revenue (GR) quarterly increased by 2.01% in QE Dec-18, and on annual basis, it declined by 3.43%. Adjusted Gross Revenue (AGR) quarterly and yearly declined by 0.24% and 6.44% respectively in QE Dec-18.

3.2 Pass through charges quarterly and on annual basis increased by 5.77% and 1.70% respectively in the QE Dec-18.

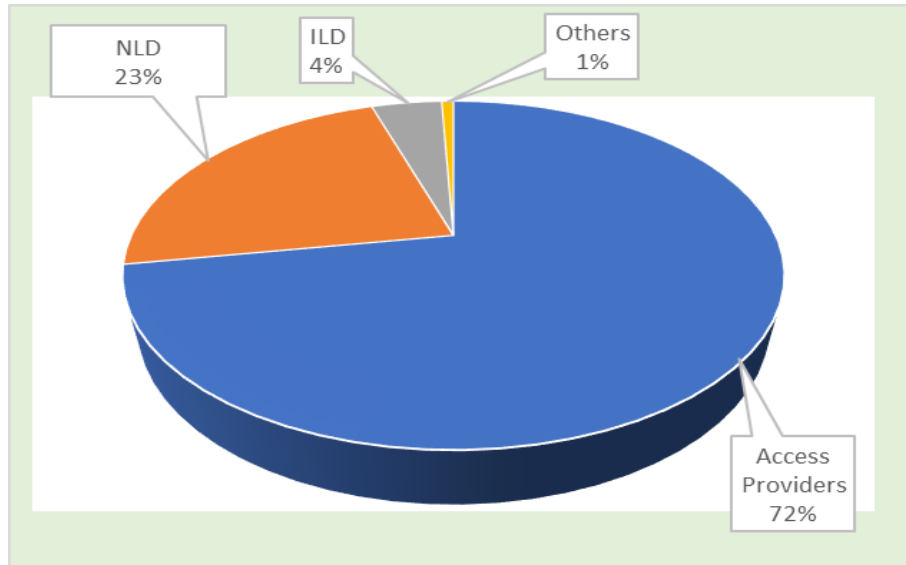
3.3 Pass-through charges as a percentage of Gross Revenue are 38.88% in QE Dec-18 as against 37.50% in the previous quarter.

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

(in ₹ Crore)

Service	GR	AGR	LF	Spectrum Usage Charges
Access Providers	41,760	26,071	2,092	1,060
NLD	10,116	8,181	654	-
ILD	3,260	1,543	123	-
Others	3,854	260	20	4
Total	58,991	36,054	2,890	1,064

Chart 3.1: Composition of Adjusted Gross Revenue



3.4 Access services contributed 72.31% of the total Adjusted Gross Revenue of telecom services. In Access services, Gross Revenue (GR), Adjusted Gross Revenue (AGR), License Fee, Spectrum Usage Charges(SUC) and Pass Through Charges increased by 2.98%, 1.33%, 1.54%, 2.04% and 5.84% respectively in QE Dec-18.

3.5 Monthly Average Revenue per User (ARPU) for Access Services based on AGR increased from ₹72.50 in QE Sep-18 to ₹72.82 in QE Dec-18.

Chart 3.2: Trend in ARPU per month for Access Services



Table 3.3: Access Services - Service Provider wise Adjusted Gross Revenue

(in ₹ Crore)

Service Provider	QE Dec-18	QE Sep-18	% Change
Reliance Jio	9482.31	8271.85	14.63
Vodafone Idea	7223.72	7528.37	-4.05
Bharti	6439.65	6720.88	-4.18
BSNL	1744.37	1925.33	-9.40
Tata	544.04	617.51	-11.90
MTNL	427.24	513.93	-16.87
Reliance Com.	196.31	95.32	105.95
Quadrant	13.08	54.59	-76.03
Grand Total (Access)	26070.72	25727.79	1.33

3.6 Public Sector Undertakings' share in the Access AGR of telecom services is 8.33% in the QE Dec-18.

Table 3.4: Category-wise share in Adjusted Gross Revenue (AGR) of Access Services

Category	AGR of Access Services for QE Dec-18 (in ₹ crore)	%age share of AGR
Metro	3229.58	12.39
A	10449.96	40.08
B	9149.29	35.09
C	3241.89	12.43
Total	26070.72	100

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 Spectrum usage charges (mostly) are now reported on "Payment for the current Quarter" basis. However, some operators are reporting on payment basis or on estimate basis on projected AGR for next quarter.
4. Metro area includes Delhi, Mumbai and Kolkata only. Chennai is clubbed with Tamilnadu.

Chapter 4 : Quality of Service (QoS)

Section A: Quality of Service Performance of Wireless Service Providers

Table 4.1: QoS Summary - Wireless Service

S. No.	Parameters	Bench mark	Performance in respect of UASL/CMTS Licensees for the Parameters and Benchmarks			
			For Q.E. September, 2018		For Q.E. December, 2018	
			Out Of 130 (Nos.)	Out Of 130 (%)	Out Of 129 (Nos.)	Out Of 129 (%)
I.	Network Related Parameters					
1	Network Availability					
(i)	BS Accumulated down-time (not available for service) (%age)	≤ 2%	0	0%	0	0%
(ii)	Worst affected BSs due to down time (%age)	≤ 2%	0	0%	0	0%
2	Connection Establishment (Accessibility)					
(i)	Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)	≥ 95%	1	0.77%	0	0%
(ii)	SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	≤ 1%	0	0%	0	0%
(iii)	TCH, RAB and E-RAB Congestion (%age)	≤ 2%	4	3.08%	4	3.10%
3	Connection Maintenance (Retainability)					
(i)	Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	5	3.85%	1	0.78%
(ii)	Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	3	2.31%	1	0.78%
4	Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality	≥ 95%	0	0%	0	0%
5	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	2	1.54%	1	0.78%

S. No.	Parameters	Bench mark	Performance in respect of UASL/CMTS Licensees for the Parameters and Benchmarks			
			For Q.E. September, 2018		For Q.E. December, 2018	
			Out Of 130 (Nos.)	Out Of 130 (%)	Out Of 129 (Nos.)	Out Of 129 (%)
II. Customer Service Quality Parameters						
6	Metering and Billing					
(i)	Metering and billing credibility - post paid	≤ 0.1%	1	0.77%	0	0%
(ii)	Metering and billing credibility – pre paid	≤ 0.1%	0	0%	1	0.78%
(iii)	Resolution of billing/charging/validity complaints	98% within 4 weeks	0	0%	0	0%
	Resolution of billing/charging/ validity complaints	100% within 6 weeks	0	0%	0	0%
(iv)	Period of applying credit/ waiver/ adjustment to customer’s account from the date of resolution of complaints	within 1 week of resolution of complaint	0	0%	2	1.55%
7	Response time to the customer for assistance					
(i)	Accessibility of call centre/ customer care	≥ 95%	1	0.77%	1	0.78%
(ii)	%age of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	20	15.38%	36	27.91%
8	Termination / closure of service					
(i)	%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	4	3.08%	1	0.78%
(ii)	Time taken for refund of deposits after closures	100% within 60 days	4	3.08%	3	2.33%

*M/s BSNL has submitted PMR report for the circle Chennai included in TamilNadu hence number of circle has reduced from 130 to 129.

4.1 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters:-

- a. Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)
- b. Network QoS DCR Spatial Distribution Measure [Network_QSD (90,90)] (%age)
- c. Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]
- d. Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)
- e. Metering and billing credibility – post-paid
- f. %age requests for Termination/Closure of service complied within 7 days
- g. Time taken for refund of deposits after closures

4.2 The performance has deteriorated in this quarter as compared to the previous quarter in respect of the following parameters:-

- a. Metering and billing credibility – pre-paid
- b. Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints
- c. %age of calls answered by the operators (voice to voice) within 90 sec

Table 4.2: Parameter wise Analysis of Non-compliance of QoS Benchmarks for Wireless Service Providers

Parameter	Benchmark	Service Provider	Service Area	Performance
TCH, RAB and E-RAB Congestion (%age)	≤ 2%	Idea	Madhya Pradesh	3.75
			UP(West)	3.64
		Vodafone	UP(East)	2.82
			UP(West)	2.27
Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	≤ 2%	BSNL	West Bengal	4.85
Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	≤ 3%	BSNL	West Bengal	5.88
Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	≤ 0.5%	RJio	Rajasthan	1
Metering and billing credibility - pre paid	≤ 0.1%	Vodafone	Tamil Nadu	0.12
Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	within 1 week of resolution of complaint	Idea	Haryana	97.62
		Vodafone	Mumbai	98.84
Accessibility of call centre/ customer care	≥ 95%	Airtel	Bihar	87.00
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Airtel	Andhra Pradesh	90.00
			Bihar	93.00
			Delhi	93.00
			Himachal Pradesh	94.00
			Karnataka	91.00
			Kerala	94.00
			Kolkata	89.00
			Maharashtra	94.00
			Mumbai	94.00
			Orissa	91.00
			Rajasthan	93.00
			Tamil Nadu	69.00
			UP(East)	94.00
			UP(West)	94.00
West Bengal	90.00			

Parameter	Benchmark	Service Provider	Service Area	Performance
Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Idea	Andhra Pradesh	93.37
			Madhya Pradesh	91.41
			Mumbai	94.01
		Vodafone	Andhra Pradesh	81.26
			Bihar	77.34
			Delhi	79.79
			Gujarat	72.23
			Haryana	94.67
			Himachal Pradesh	92.33
			Karnataka	90.44
			Kerala	81.67
			Kolkata	79.49
			Madhya Pradesh	79.04
			Maharashtra	76.65
			Mumbai	87.16
			Orissa	67.83
			Punjab	83.33
			Rajasthan	73.99
			Tamil Nadu	70.16
UP(West)	82.39			
West Bengal	86.44			
%age requests for Termination / Closure of service complied within 7 days	100% within 7 days	Vodafone	Mumbai	99.77
Time taken for refund of deposits after closures	100% within 60 days	Idea	Orissa	65.23
		Vodafone	Jammu & Kashmir	99.52
			Orissa	99.93

4.3 The detailed table on Service Provider wise performance of QoS parameters for Wireless Services is available at Annexure-4.1.

Section B: Quality of Service Performance of Wireline Service Providers

Table 4.3: QoS Summary - Wireline Service

S. No.	Parameters	Bench mark	No of license areas where operators not meeting the benchmarks			
			Q.E. Sept, 2018		Q.E. Dec, 2018	
			Out of 82 In Nos.	Out of 82 In %age	Out of 82 In Nos.	Out of 82 In %age
(i)	Fault incidences No. of faults per 100 subs/month)	≤ 7	0	0%	0	0%
(ii)	% Fault repaired by next working day (for urban areas)	$\geq 85\%$	1	1%	3	4%
	% Fault repaired within 5 days (for urban areas)	$\geq 100\%$	2	2%	1	1%
(iii)	% Fault repaired by next working day (for rural and hilly areas)	$\geq 75\%$	0	0%	0	0%
	% Fault repaired within 7 days (for rural and hilly areas)	$\geq 100\%$	0	0%	0	0%
(iv)	Mean time to Repair (MTTR)	$\leq 10\text{Hs}$	1	1%	1	1%
(v)	Point of Interconnection (POI) Congestion (No. of PoIs not meeting benchmark)	$\leq 0.5\%$	0	0%	0	0%
(vi)	Metering and Billing credibility - post-paid	$\leq 0.1\%$	0	0%	0	0%
	Metering and Billing credibility -pre-paid	$\leq 0.1\%$	0	0%	0	0%
(vii)	Resolution of billing/charging /Credit & validity complaints	98% within 4 weeks	0	0%	0	0%
	Resolution of billing/charging / Credit & validity complaints	100% within 6 weeks	0	0%	0	0%
(viii)	Period of applying credit /waiver/ adjustment to customer's account from the date of resolution of complaints	1 week of resolution of complaint	0	0%	0	0%
(ix)	Response time to the customer for Assistance- Accessibility of call centre/ customer care	$\geq 95\%$	0	0%	10	12%
	Response time to the customer for Assistance-%age of calls answered by the operators (voice to voice) within 90 seconds	$\geq 95\%$	11	13%	13	16%

S. No.	Parameters	Bench mark	No of license areas where operators not meeting the benchmarks			
			Q.E. Sept, 2018		Q.E. Dec, 2018	
			Out of 82 In Nos.	Out of 82 In %age	Out of 82 In Nos.	Out of 82 In %age
(x)	Termination / Closure of service- %age of request for Termination / closure of service complied within 7 days	100% within 7 days	7	9%	3	4%
(xi)	Termination / Closure of service- Time taken for refund of deposits after closures	100% within 60 days	0	0%	0	0%

NOTE: Most of the SPs have not reported for the parameter “Metering and billing credibility - prepaid” due to not providing pre-paid service in Basic (Wire line) service.

4.4 The performance has improved in this quarter as compared to the previous quarter in respect of the following parameters:-

- a. %age fault repaired within 5 days (*for urban areas*) 100% within 5 days
- b. %age of request for Termination/Closure of service complied within 7 days

4.5 It is observed that the performance has deteriorated in this quarter as compared to the previous quarter.

- a. %age of fault repaired by next working day (*for urban areas*) $\geq 85\%$
- b. Response time to the customer for Assistance -Accessibility of call centre/ customer care $\geq 95\%$
- c. Response time to the customer for Assistance- %age of calls answered by the operators (Voice to voice) within 90 seconds.

**Table 4.4: Parameter wise Analysis of Non-compliance of QoS
Benchmarks for Wireline Service Providers**

Parameters	Bench- marks	Service Provider	Service areas	Parameters not met
“Fault Repair” %age of fault repaired by next working day (for urban areas)	≥100%	MTNL	DEL	99.59%
“Fault Repair” % Fault repaired within 5 days (for urban areas)	≥ 85%	TATA	HR	58.80%
			KTK	84.40%
			KR	80.60%
Mean time to Repair (MTTR)	≤10 Hrs	TATA	KTK	10.10
Response time to the customer for assistance - Accessibility of call centre/ customer care	≥ 95%	BSNL	A&N	92.86%
			AS	91.55%
			BH	91.70%
			JH	88.05%
			KR	93.85%
			KOL	89.23%
			NE-I	90.00%
			NE-II	89.83%
			OR	90.12%
WB	90.87%			
Response time to the customer for assistance - Percentage of calls answered by the operators (voice to voice) within 90 seconds	≥ 95%	Bharti Airtel	AP	94%
			TN	92%
			DL	94%
			KOL	93%
			PB	94%
			UPE	94%
			MP	94%
			MH	90%
		MUM	84%	
		BSNL	AP	94.31%
			KTK	94.16%
			KR	93.74%
			TN	94.96%
“Termination/ closure of service” %age of request for Termination / closure of service complied within 7 days	100% within 7 days	TATA	KTK	99.75%
			MUM	99.20%
			MH	99.82%

4.6 Detailed table containing QoS parameters for all the Wireline Service Providers is given in Annexure-4.2.

Section C : Quality of Service Performance of Broadband (wireline) Service

4.7 There are 290 Internet Service Providers (ISPs) providing broadband (wireline) service at the end of December, 2018. Out of these 290 ISPs, 50 Service Providers are having broadband subscriber base >10,000 and market share of these 50 SPs is 98.04% of total broadband subscriber base. This report covers performance of 47 broadband Service Providers vis-à-vis the QoS benchmarks prescribed by TRAI, for the QE December, 2018.

Table 4.5 : Summary of Performance of Broadband Service Providers against identified parameters

S. No.	Parameter	Bench- mark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending September, 2018		Quarter Ending December, 2018	
			Out of 64	Out of 64	Out of 66	Out of 66
1	Service Provisioning	100% in =<15 working days				
1.2	%age of connections provided within 15 days of registration of demand	100%	2	3.13%	1	1.52%
2	Faults Repair					
2.2	% of faults repaired by next working day (>90%)	>90%	3	4.69%	2	3.03%
2.3	% of faults repaired within 3 working day	=>99%	6	9.38%	4	6.06%
3	Billing Performance					
3.3	%age of bills disputed	<2%	1	1.56%	0	0.00%
3.4	%age of billing complaints resolved within 4 weeks	100% within 4 weeks	0	0.00%	0	0.00%
3.5	%age of cases to whom refund of deposits is made within 60 days of closures	100% within 60 days	0	0.00%	0	0.00%
4	Response Time to the Customer for assistance					
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	1	1.56%	1	1.52%

S. No.	Parameter	Bench- mark	No. of Licensees not meeting the Benchmarks			
			Quarter Ending September, 2018		Quarter Ending December, 2018	
			Out of 64	Out of 64	Out of 66	Out of 66
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	1	1.56%	3	4.55%
5	Bandwidth utilisation/ throughput					
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	1	1.56%	1	1.52%
5.4	No. of Upstream links for International connectivity having bandwidth utilisation >90% during peak hours (TCBH)	0	1	1.56%	0	0.00%
5.7	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG) <90%	<90%	0	0.00%	0	0.00%
5.8	Broadband Connection Speed available (download) from ISP node to user	>80%	0	0.00%	0	0.00%
6	Service availability/uptime (for all users) in %age					
6.3	Service availability /uptime (for all users) in %age	>98%	0	0.00%	0	0.00%
7	Packet loss (for wired broadband access) in %age					
		<1%	0	0.00%	0	0.00%
8	Network latency (for wired broadband access)					
8.1	User reference point at POP/ISP Gateway node to IGSP/NIXI	<120 ms	0	0.00%	0	0.00%
8.2	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	<350 ms	0	0.00%	0	0.00%
8.3	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)	<800 ms	0	0.00%	0	0.00%

Table 4.6: Parameter-wise Analysis of non-compliance of QoS benchmarks for Broadband Service Providers

Sl. No.	Parameters	Benchmark	Name of the Service Provider not meeting the Benchmark
1	Service Provisioning		
1.2	%age of connections provided within 15 days of registration of demand	100%	You Broadband - All India (98.04%)
2	Faults Repair		
2.2	% of faults repaired by next working day (>90%)	>90%	TATA(TTSL) - All India (87.36%), TATA(TTML) - Maharashtra (79.00%)
2.3	% of faults repaired within 3 working day	=>99%	Atria Convergence - All India (98.33%), Intech Online - Mum. & Mah (98.37%), TATA (TTSL) - All India (94.69%), TATA (TTML) - Maharashtra (91.00%)
4	Response Time to the Customer for assistance		
4.2	%age of calls answered by operator (Voice to voice) within 60 sec	>60%	Atria Convergence - All India (50.00%)
4.3	%age of calls answered by operator (Voice to voice) within 90 sec	>80%	Atria Convergence - All India (54.00%) Bharti Airtel Ltd. - Kerala (79.00%) Nextra Teleservices - Delhi (69.00%)
5	Bandwidth utilisation/throughput		
5.2	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH)	0	Intech Online - Mumbai & Mah (1%))

4.8 Detailed table containing QoS parameters for all the Broadband Service Providers is given in Annexure-4.3.

Chapter 5 :

Performance of Cable TV, DTH and Radio Broadcasting Services

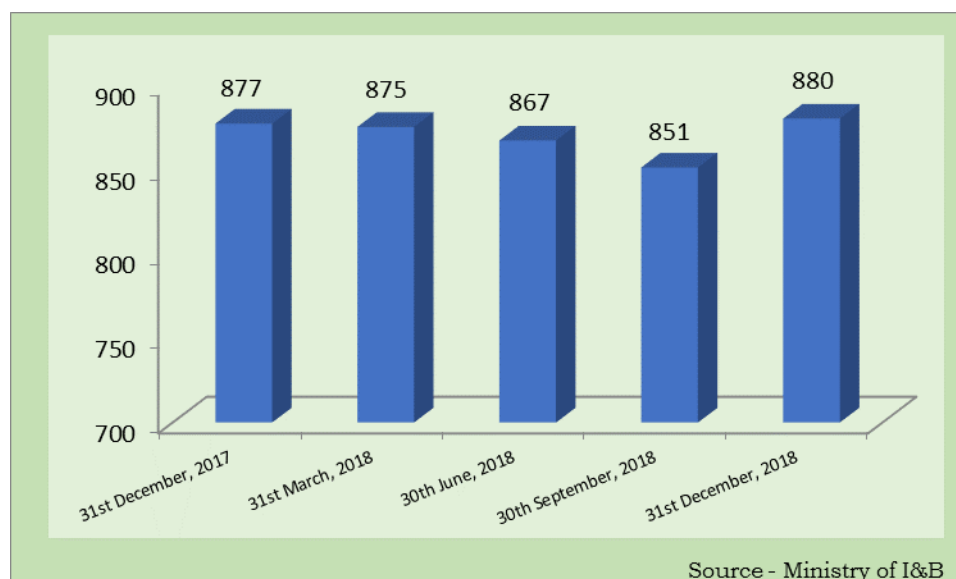
Table 5.1: Key Parameters - Broadcasting & Cable TV Services

S.No	Parameter	QE Sep-18	QE Dec-18
1	Number of Private satellite TV channels permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/ downlinking / uplinking	851	880
2	Number of Pay TV Channels as reported by broadcasters	313	330
3	Number of FM Radio Stations (excluding All India Radio)	350	355
4	Number of pay DTH Operators	5	5
5	Number of pay subscribers net active with private DTH service providers	69.45 Million	70.49 Million
6	Number of Operational Community Radio Stations	238	248

A. Satellite TV Channels

5.1 A total of 880 private satellite TV channels have been permitted by the Ministry of Information and Broadcasting (MIB) for uplinking only/downlinking only/uplinking and downloading both, as on 31st December, 2018. The quarter-wise figures in the total number of TV channels depicted in below chart.

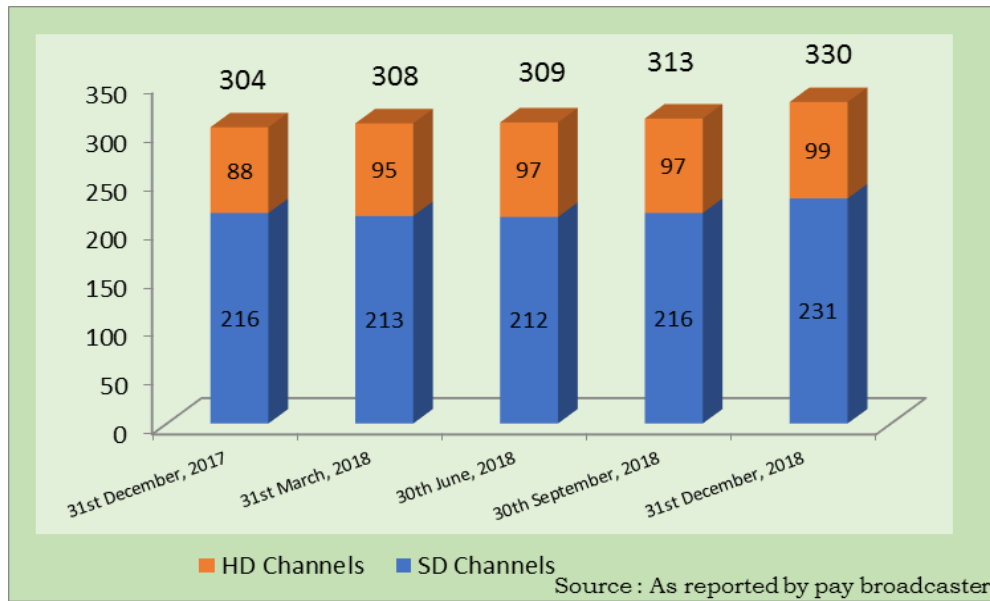
Chart 5.1: Quarterly growth in number of Satellite TV channels (FTA & Pay) registered with Ministry of I&B



B. Pay TV Channels

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

Chart 5.2 : Quarterly growth in number of satellite Pay TV channels in India



C. Cable TV Sector

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

D. Direct-to-Home (DTH) Sector

5.6 Since its introduction in the year 2003, Indian DTH service has displayed a phenomenal growth. During the quarter ending 31st December, 2018, there were 5 pay DTH service providers in India.

5.7 DTH has attained net pay active subscriber base of around 70.49 million with 5 pay DTH service providers as on 31st December, 2018. This is in addition to the subscribers of the free DTH services of Doordarshan. Quarterly growth in the DTH sector in terms of the net active subscriber base and Market Share of DTH operators in terms

of the percentage of net active subscribers during the quarter is depicted in the following charts.

Chart 5.3 : Quarterly growth in Net Active subscribers (in million) of pay DTH

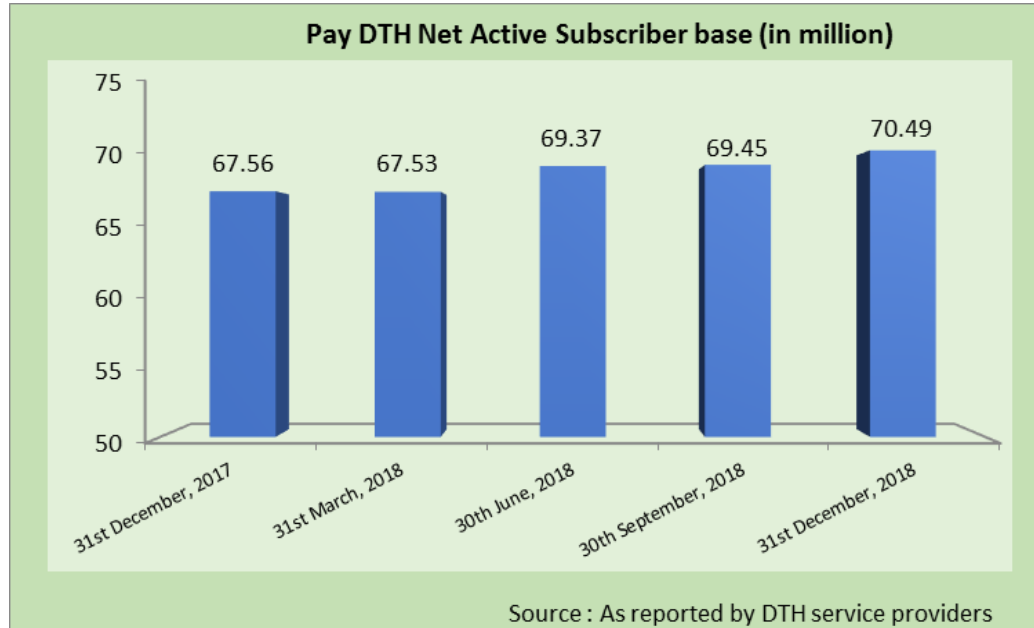
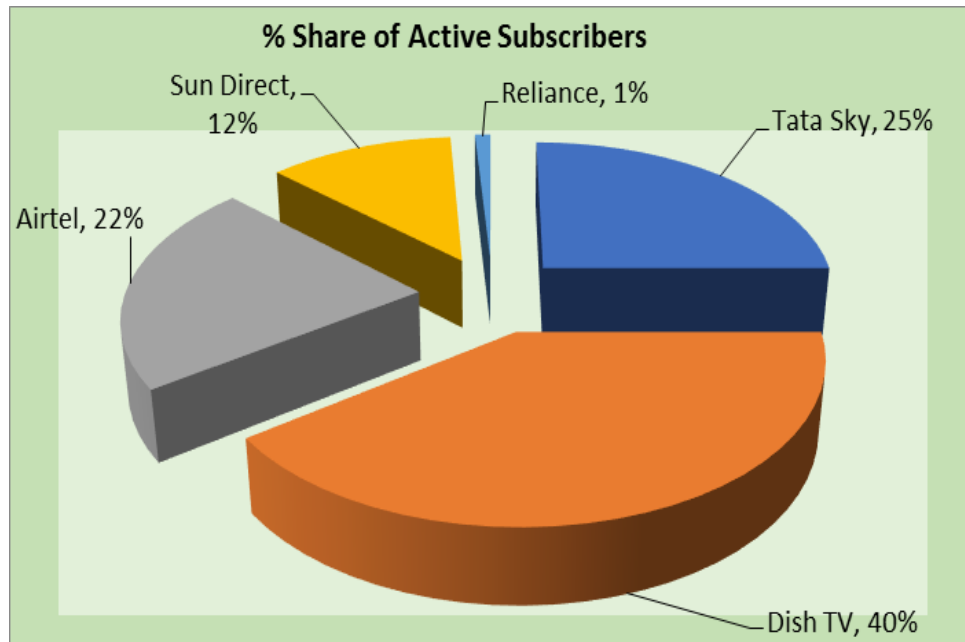


Chart 5.4 : Market share of DTH Operators



Source : As reported by DTH service providers

E. FM Radio Services

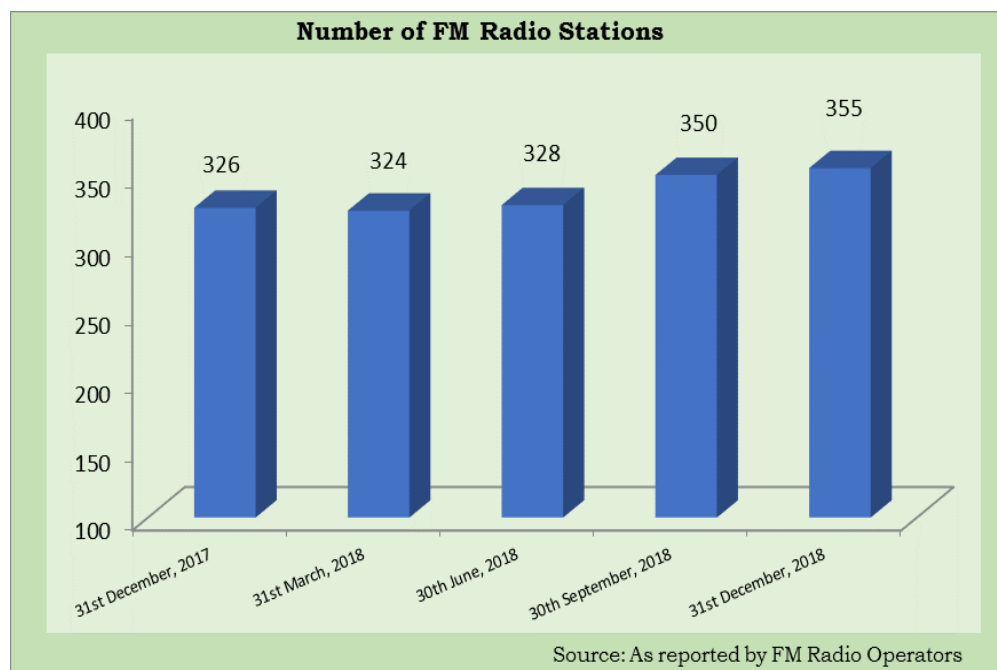
5.8 Apart from the radio stations operated by All India Radio- the public broadcaster, as on 31st December 2018, there are 355 operational private FM Radio stations in 97 cities with operational 33 Private FM Radio broadcaster as compared to 349 private FM Radio Stations in 94 cities with operational 33 FM Radio broadcasters in the previous quarter. A list of 97 existing cities with operational private FM radio channels in India as on 31st December, 2018 is placed at **Annexure 5.3.**

5.9 During the quarter ending 31st December, 2018, six new private FM Radio Stations have become operational. The details of new private FM Radio stations are as under:-

New Private FM Radio Stations

Sl. No.	Name of FM Radio Operator	No of stations	Name of Cities	
			(Existing)	(New)
1	The Entertainment Network (I) Ltd	05	1.Hubli Dharwad 2.Puducherry	1.Jamnagar 2.Mehsana 3.Palanpur
2	M/s South Asia FM Limited	01	1.Jhansi	
	Total	06		

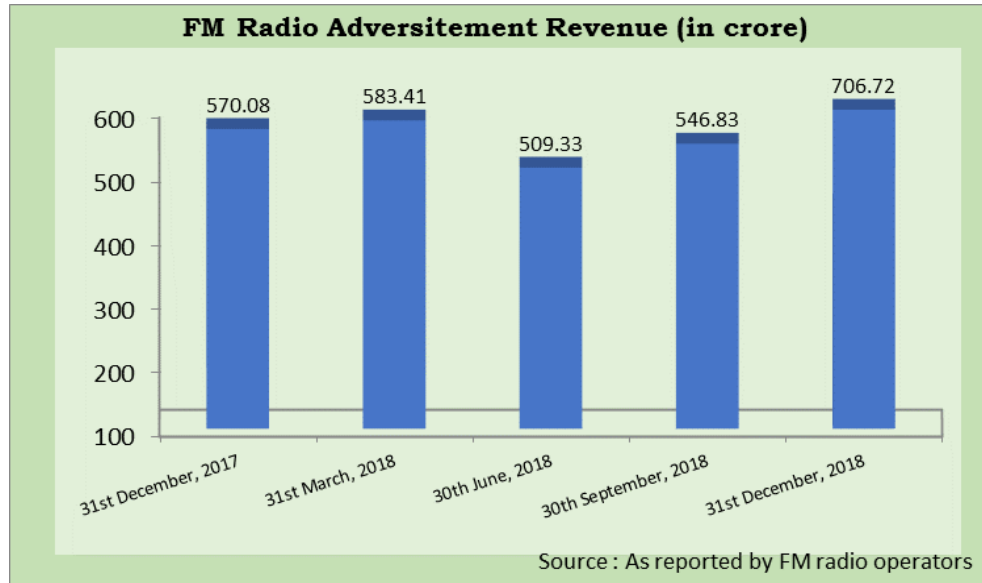
Chart 5.5 : Quarterly growth in private FM Radio stations



5.10 The reported advertisement revenue during the quarter ending 31st December 2018 in respect of 354 private FM Radio stations is Rs 706.72 crore as against Rs 546.83 crore in respect of 349 private FM Radio stations for the previous quarter i.e September 2018. One FM Radio Broadcaster, M/s Gwalior Firm Private Limited, operating in the city of Guwahati, has not submitted the advertisement revenue.

5.11 The following chart is based on the details of quarterly Advertisement Revenue submitted by the FM Radio broadcasters to TRAI during last one year.

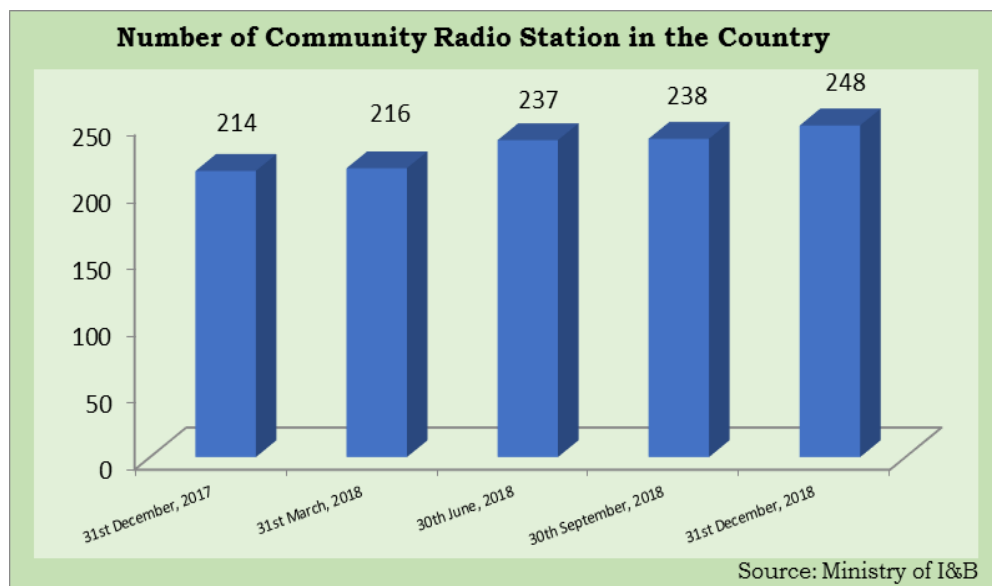
Chart 5.6 : Quarterly growth in FM Radio Advertisement Revenue



F. Community Radio

5.12 As on 31st December, 2018, there are 248 Community Radio stations in operation as compared to 238 Community Radio station at the end of previous quarter. The quarterly growth in the number of operational community radio stations is depicted in the chart below.

Chart 5.7 : Quarterly Growth in number of Operational Community Radio Stations



Annexures

Annexure 1.1: Wireless Subscriber Base

Service Area	Vodafone Idea		Bharti		Reliance Com.		Tata		BSNL	
	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18
Andhra Pradesh	23,977,810	23,144,533	30,026,566	29,798,728	2,623	2,298	1,931,249	1,700,765	10,117,353	10,145,072
Assam	5,776,230	5,303,241	8,418,266	8,382,180	-	-	-	-	2,336,741	2,418,559
Bihar	25,036,871	23,417,362	39,593,326	39,346,424	102	129	386,772	310,450	4,724,672	4,890,882
Delhi	19,728,674	19,570,240	15,172,046	15,164,364	6,424	3,920	137,248	62,435		
Gujarat	34,564,187	33,947,738	12,449,875	12,322,135	287	314	1,066,720	884,064	5,641,764	5,775,864
Haryana	11,729,137	11,247,676	3,869,469	3,812,942	76	90	981,753	832,938	4,779,107	4,904,904
Himachal Pradesh	1,495,380	1,371,833	3,657,922	3,615,762	72	72	6,073	4,291	2,715,771	2,767,116
Jammu & Kashmir	1,483,982	1,339,981	5,659,892	5,642,025	-	-	-	-	1,208,592	1,214,265
Karnataka	16,906,191	15,923,911	27,196,971	27,186,628	3,743	3,155	3,533,210	3,150,454	7,014,510	7,101,238
Kerala	20,502,232	20,404,012	5,097,537	5,131,817	260	317	390,245	318,184	10,825,739	10,850,884
Madhya Pradesh	33,786,811	32,185,390	15,822,548	15,617,229	498	589	2,222,462	1,936,607	6,017,078	6,119,647
Maharashtra	50,270,674	48,916,041	16,649,830	16,404,201	982	923	2,024,488	1,647,573	6,925,452	6,907,764
Mumbai	15,980,680	15,776,272	8,389,788	8,447,178	6,989	5,427	1,068,859	850,151	-	-
North East	2,353,972	2,067,625	5,387,075	5,335,815	-	-	-	-	1,603,167	1,642,752
Orissa	6,583,705	5,885,690	13,194,247	13,114,987	47	75	646,536	527,842	5,510,262	5,527,595
Punjab	12,090,901	11,494,406	10,450,837	10,362,648	84	137	1,029,811	891,419	5,212,346	5,335,427
Rajasthan	20,042,460	18,751,708	23,850,722	23,357,048	248	243	162,978	123,990	5,640,989	5,694,204
Tamil Nadu (incl. Chennai)	26,463,679	25,332,666	26,015,186	25,771,495	4,806	3,390	1,706,322	1,511,988	11,696,433	11,909,640
UP(E)	37,840,566	36,564,291	33,187,047	32,724,449	470	624	1,889,481	1,765,487	11,905,520	11,820,748
UP(W)	30,321,177	29,513,753	14,213,444	13,772,831	59	60	1,530,798	1,365,337	5,886,864	5,923,283
Kolkata	10,024,532	9,674,397	6,480,384	6,439,985	45	42	1,214,176	1,083,018	1,683,227	1,792,484
West Bengal	28,004,555	26,912,269	18,740,367	18,508,444	198	333	51,789	38,546	1,602,433	1,630,129
Total	434,964,406	418,745,035	343,523,345	340,259,315	28,013	22,138	21,980,970	19,005,539	113,048,020	114,372,457

Annexure 1.1 (contd.)

Service Area	M TNL		Reliance Jio		Total		Net Additions
	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	
Andhra Pradesh			20,399,046	22,422,936	86,454,647	87,214,332	759,685
Assam			5,028,609	5,639,950	21,559,846	21,743,930	184,084
Bihar			17,780,229	20,119,506	87,521,972	88,084,753	562,781
Delhi	2,233,956	2,220,516	13,325,084	14,108,953	50,603,432	51,130,428	526,996
Gujarat			16,576,888	17,720,545	70,299,721	70,650,660	350,939
Haryana			6,179,323	6,880,952	27,538,865	27,679,502	140,637
Himachal Pradesh			2,505,658	2,744,696	10,380,876	10,503,770	122,894
Jammu & Kashmir			2,975,802	3,309,640	11,328,268	11,505,911	177,643
Karnataka			13,666,438	15,258,054	68,321,063	68,623,440	302,377
Kerala			6,501,146	6,942,760	43,317,159	43,647,974	330,815
Madhya Pradesh			18,740,661	21,044,892	76,590,058	76,904,354	314,296
Maharashtra			18,698,415	21,132,249	94,569,841	95,008,751	438,910
Mumbai	1,260,470	1,254,382	10,370,022	11,209,409	37,076,808	37,542,819	466,011
North East			2,349,334	2,622,832	11,693,548	11,669,024	(24,524)
Orissa			7,180,438	8,078,892	33,115,235	33,135,081	19,846
Punjab			10310180	11234533	39,094,159	39,318,570	224,411
Rajasthan			16,165,830	18,458,434	65,863,227	66,385,627	522,400
Tamil Nadu (incl. Chennai)			16,296,598	18,221,611	82,183,024	82,750,790	567,766
UP(E)			17,103,514	18,914,302	101,926,598	101,789,901	(136,697)
UP(W)			12,598,432	14,177,099	64,550,774	64,752,363	201,589
Kolkata			7,424,214	8,072,806	26,826,578	27,062,732	236,154
West Bengal			10,076,141	11,802,717	58,475,483	58,892,438	416,955
Total	3,494,426	3,474,898	252,252,002	280,117,768	1,169,291,182	1,175,997,150	6,705,968

Annexure 1.2: Wireline Subscriber Base

Service Area	Bharti		Reliance Com.		Quadrant		Tata		MTNL		BSNL		Vodafone		Total		Net Additions
	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	Sep-18	Dec-18	
Andhra Pradesh	170,731	174,826	49,901	46,869			175,192	174,471			1,012,648	998,736	30,230	34,580	1,438,702	1,429,482	-9,220
Assam											123,444	116,309	2,790	2,820	126,234	119,129	-7,105
Bihar			4,374	3,540			8,749	8,410			230,498	222,513	1,800	1,770	245,421	236,233	-9,188
Delhi	1,358,401	1,382,801	140,679	124,216			151,721	154,349	1,503,186	1,490,886			42,580	51,070	3,196,567	3,203,322	6,755
Gujarat	81,614	82,520	23,975	20,620			91,102	89,660			1,009,137	1,008,211	20,088	20,539	1,225,916	1,221,550	-4,366
Haryana	22,668	22,800	3,049	2,894			35,843	36,258			225,606	220,020	150	150	287,316	282,122	-5,194
Pradesh			3,121	3,035			2,001	1,831			114,891	113,046		60	120,013	117,972	-2,041
Kashmir											107,958	105,329			107,958	105,329	-2,629
Karnataka	661,126	671,236	146,662	140,110			277,374	274,109			1,052,271	1,039,637	40,145	42,475	2,177,578	2,167,567	-10,011
Kerala	59,559	59,997	19,857	17,170			19,854	19,413			1,813,189	1,809,217	2,880	2,550	1,915,339	1,908,347	-6,992
Madhya Pradesh	242,223	242,111	11,487	10,724			15,728	15,770			656,329	656,076	690	870	926,457	925,551	-906
Maharashtra	87,100	88,787	54,992	49,324			297,202	289,655			1,162,466	1,123,163	16,597	18,343	1,618,357	1,569,272	-49,085
Mumbai	362,239	363,306	195,555	179,535			569,615	571,166	1,784,706	1,773,866			47,195	53,050	2,959,310	2,940,923	-18,387
North East											107,170	106,397	270	270	107,440	106,667	-773
Orissa			2,642	2,520			7,798	7,463			237,613	225,488	1,950	2,160	250,003	237,631	-12,372
Punjab	126,264	128,549	11,702	10,571	233,693	227,164	14,502	14,096			426,496	411,522	1,530	1,620	814,187	793,522	-20,665
Rajasthan	52,352	53,518	25,527	20,999			12,199	12,273			470,038	451,088	7,140	7,320	567,256	545,198	-22,058
Tamil Nadu (incl. Chennai)	557,755	555,593	76,665	72,696			118,397	118,701			1,474,450	1,456,658	17,590	18,675	2,244,857	2,222,323	-22,534
U.P.(E)	65,518	66,088	10,285	6,174			8,897	8,215			362,054	358,611	11,520	11,840	458,274	450,928	-7,346
U.P.(W)	22,736	23,323	4,271	3,749			6,051	5,342			289,358	273,129	3,900	3,990	326,316	309,533	-16,783
Kolkata	125,629	126,895	43,375	39,764			53,060	52,749			515,718	500,573	7,940	8,390	745,722	728,371	-17,351
West Bengal			1,757	1,694			2,587	2,410			249,066	242,995	120	120	253,530	247,219	-6,311
Total	3,995,915	4,042,350	829,876	756,204	233,693	227,164	1,867,872	1,856,341	3,287,892	3,264,752	11,640,400	11,438,718	257,105	282,662	22,112,753	21,868,191	-244,562

Annexure 1.3: Service Area and Operator wise details of PCOs

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2018	Number of PCOs as on 31.12.2018	Net PCO increase/decrease as on 31.12.2018
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	7,755	6,965	-790
	Bharti Group	181	181	0
	Tata Group	4,389	0	0
Telangana	Bharat Sanchar Nigam Ltd.	5,257	5,188	-69
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	13,012	12,153	-859
	Bharti Group	181	181	0
	Tata Group	4,389	0	0
Assam	Bharat Sanchar Nigam Ltd.	4,853	4,877	24
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	1,209	1,117	-92
	Tata Group	12	0	0
Jharkhand	Bharat Sanchar Nigam Ltd.	2,441	2,441	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	3,650	3,558	-92
	Tata Group	12	0	0
Delhi	Bharti Group	330	330	0
	Mahanagar Telephone Nigam Ltd./MTNL	46,524	46,349	-175
	Tata Group	229	0	0
Gujarat	Bharat Sanchar Nigam Ltd.	18,579	18,200	-379
	Bharti Group	14	14	0
	Tata Group	275	0	0
Haryana	Bharat Sanchar Nigam Ltd.	1,361	1,357	-4
	Bharti Group	142	141	-1
	Tata Group	42	0	0
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	1,002	877	-125
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,218	1,056	-162
Karnataka	Bharat Sanchar Nigam Ltd.	18,317	17,527	-790
	Bharti Group	3,384	3,356	-28
	Tata Group	13	0	0
Kerala	Bharat Sanchar Nigam Ltd.	15,513	15,316	-197
	Bharti Group	440	436	-4
	Tata Group	21	0	0
Kolkata	Bharat Sanchar Nigam Ltd.	3,868	3,527	-341
	Bharti Group	27	28	1
	Tata Group	10	0	0
Madhya Pradesh (excluding Chhattisgarh)	Bharat Sanchar Nigam Ltd.	16,357	15,786	-571
	Bharti Group	1,595	1,573	-22
	Tata Group	346	0	0
Chhattisgarh	Bharat Sanchar Nigam Ltd.	1,022	1,004	-18

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2018	Number of PCOs as on 31.12.2018	Net PCO increase/decrease as on 31.12.2018
Madhya Pradesh (including Chhattisgarh)	Bharat Sanchar Nigam Ltd.	17,379	16,790	-589
	Bharti Group	1,595	1,573	-22
	Tata Group	346	0	0
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	34,723	34,172	-551
	Tata Group	5,579	0	0
Mumbai	Bharti Group	50	50	0
	Mahanagar Telephone Nigam Ltd./MTNL	33,192	22,230	-10,962
	Tata Group	358	0	0
Maharashtra (including Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	34,723	34,172	-551
	Bharti Group	50	50	0
	Mahanagar Telephone Nigam Ltd./MTNL	33,192	22,230	-10,962
	Tata Group	5,937	0	0
Arunachal Pradesh	Bharat Sanchar Nigam Ltd.	1,353	1,352	-1
Manipur	Bharat Sanchar Nigam Ltd.	855	846	-9
Meghalaya	Bharat Sanchar Nigam Ltd.	431	431	0
Mizoram	Bharat Sanchar Nigam Ltd.	130	130	0
Nagaland	Bharat Sanchar Nigam Ltd.	118	118	0
Tripura	Bharat Sanchar Nigam Ltd.	529	524	-5
Orissa	Bharat Sanchar Nigam Ltd.	1,778	1,707	-71
	Tata Group	3	0	0
Punjab	Bharat Sanchar Nigam Ltd.	2,142	1,900	-242
	Bharti Group	20	18	-2
	Quadrant Televentures Ltd.	1,420	1,420	0
	Tata Group	203	0	0
Rajasthan	Bharat Sanchar Nigam Ltd.	3,894	3,134	-760
	Bharti Group	209	209	0
	Tata Group	125	0	0
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	32,967	31,314	-1,653
	Bharti Group	4,677	4,584	-93
	Tata Group	65	0	0
Chennai	Bharat Sanchar Nigam Ltd.	9,022	8,307	-715
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	41,989	39,621	-2,368
	Bharti Group	4,677	4,584	-93
	Tata Group	65	0	0
Uttar Pradesh-East	Bharat Sanchar Nigam Ltd.	8,024	8,565	541
	Bharti Group	77	77	0
	Tata Group	6	0	0

Annexure 1.3 (contd.)

Name of the Circle/Service Area	Service Provider	Number of PCOs as on 30.9.2018	Number of PCOs as on 31.12.2018	Net PCO increase/decrease as on 31.12.2018
Uttarakhand	Bharat Sanchar Nigam Ltd.	988	921	-67
Uttar Pradesh - West (excluding Uttarakhand)	Bharat Sanchar Nigam Ltd.	1,975	1,880	-95
	Bharti Group	20	13	-7
	Tata Group	94	0	0
Uttar Pradesh - West (including Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,963	2,801	-162
	Bharti Group	20	13	-7
	Tata Group	94	0	0
West Bengal (excluding Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	3,497	3,342	-155
	Tata Group	3	0	0
Andaman and Nicobar	Bharat Sanchar Nigam Ltd.	142	142	0
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	3,639	3,484	-155
	Tata Group	3	0	0
Total		305,395	275,032	-30,363

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

Name of Circle/ Service Area	Service Provider	Number of VPTs as on 30.9.2018	Number of VPTs as on 31.12.2018	Net VPTs increase/ decreased as on 31.12.2018
Andhra Pradesh (Excluding Telangana)	Bharat Sanchar Nigam Ltd.	3,138	2,787	-351
Telangana	Bharat Sanchar Nigam Ltd.	1,533	1,333	-200
Andhra Pradesh (Including Telangana)	Bharat Sanchar Nigam Ltd.	4,671	4,120	-551
Assam	Bharat Sanchar Nigam Ltd.	105	105	0
Bihar (excluding Jharkhand)	Bharat Sanchar Nigam Ltd.	6,368	6,368	0
Jharkhand	Bharat Sanchar Nigam Ltd.	489	489	0
Bihar (including Jharkhand)	Bharat Sanchar Nigam Ltd.	6,857	6,857	0
Gujarat	Bharat Sanchar Nigam Ltd.	5,297	5,297	0
Haryana	Bharat Sanchar Nigam Ltd.	687	687	0
Himachal Pradesh	Bharat Sanchar Nigam Ltd.	2,312	2,209	-103
Jammu & Kashmir	Bharat Sanchar Nigam Ltd.	1,057	1,060	3
Karnataka	Bharat Sanchar Nigam Ltd.	6,781	4,075	-2,706
Kerala	Bharat Sanchar Nigam Ltd.	358	349	-9
Kolkata	Bharat Sanchar Nigam Ltd.	130	130	0
Madhya Pradesh (excl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	39,692	39,692	0
Chhattisgarh	Bharat Sanchar Nigam Ltd.	444	453	9
Madhya Pradesh (incl. Chhattisgarh)	Bharat Sanchar Nigam Ltd.	40,136	40,145	9
Maharashtra & Goa	Bharat Sanchar Nigam Ltd.	8,295	8,166	-129
Maharashtra (incl. Mumbai & Goa)	Bharat Sanchar Nigam Ltd.	8,295	8,166	-129
Orissa	Bharat Sanchar Nigam Ltd.	4,122	1,819	-2,303

Annexure 1.4 (contd.)

Name of Circle/ Service Area	Service Provider	Number of VPTs as on 30.9.2018	Number of VPTs as on 31.12.2018	Net VPTs increase/ decreased as on 31.12.2018
Punjab	Bharat Sanchar Nigam Ltd.	0	5,104	5,104
Rajasthan	Bharat Sanchar Nigam Ltd.	1,366	1,212	-154
Tamilnadu (excluding chennai)	Bharat Sanchar Nigam Ltd.	6,086	6,086	0
Chennai	Bharat Sanchar Nigam Ltd.	144	0	-144
Tamil Nadu (including Chennai)	Bharat Sanchar Nigam Ltd.	6,230	6,086	-144
Uttar Pradesh- East	Bharat Sanchar Nigam Ltd.	981	981	0
Uttarakhand	Bharat Sanchar Nigam Ltd.	3,473	3,473	0
Uttar Pradesh - West (excl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	2,112	1,994	-118
Uttar Pradesh - West (incl. Uttarakhand)	Bharat Sanchar Nigam Ltd.	5,585	5,467	-118
West Bengal (excl. Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	26,352	36,352	10,000
Andaman & Nicobar	Bharat Sanchar Nigam Ltd.	327	94	-233
West Bengal (including Andaman & Nicobar)	Bharat Sanchar Nigam Ltd.	26,679	36,446	9,767
Total		123,736	132,403	8,667

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

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

Annexure 1.5 (contd.)

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

Annexure 1.5 (contd.)

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

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
109	NISS INTERNET SERVICES PVT. LTD.	0	2622	2622
110	Kaizen Infonet Pvt Ltd	0	2526	2526
111	TRANSMEDIA TECHNOLOGIES (AP) PVT LTD	0	2525	2525
112	Chandra Net Pvt. Limited	0	2435	2435
113	Speed Online.net Pvt. Ltd.	0	2369	2369
114	S.S. Netcom Pvt Ltd	0	2155	2155
115	Rainbow Internet teleservices Pvt Ltd	35	2004	2039
116	SMARTLINK SOLUTIONS PVT. LTD.	0	1965	1965
117	WSNS PVT LTD	0	1935	1935
118	SCUD COMMUNICATION PVT LTD	0	1922	1922
119	Capture Network Systems Pvt. Ltd.	288	1517	1805
120	Jetspot Networks Pvt. Ltd.	0	1751	1751
121	Assistive networks & technologie Pvt Ltd	0	1701	1701
122	GALAXYNET CONNECTIONS PVT LTD	0	1694	1694
123	Touch Net India Pvt. Ltd.	0	1643	1643
124	Nettlinx Ltd.	0	1609	1609
125	ULTRANET INFOTECH SOLUTION PRIVATE LIMITED	0	1600	1600
126	Rajesh Patel Net Services Pvt. Ltd.	23	1547	1570
127	Sanchit Infocomm Pvt Ltd	0	1502	1502
128	Symbois Creations Pvt. Ltd.	0	1458	1458
129	Sphier Infotech Pvt. Ltd.	0	1438	1438
130	CJ Online Pvt. Ltd.	0	1428	1428
131	Craze IT Solutions Pvt Ltd	0	1394	1394
132	Netfirre Communications Pvt Ltd	0	1393	1393
133	Harisree CableNet Pvt. Ltd.	0	1333	1333
134	Imperium Digital Network Pvt. Ltd.	0	1322	1322
135	Hughes Communications India Ltd.	428	893	1321
136	GURU NETCOMM PVT LTD	0	1301	1301
137	Shree Balaji Infoway Pvt Ltd	0	1281	1281
138	Fiberzone Communications Pvt. Ltd.	0	1280	1280
139	FIBERZONE COMMUNICATION (P) Ltd	0	1270	1270
140	Gorakhpur Net Services Pvt. Ltd.	0	1259	1259
141	MAKS COMMUNICATIONS PVT. LTD.	0	1248	1248
142	delDSL Internet Pvt Ltd	0	1192	1192
143	INET FIBER INDIA PVT LTD	0	1165	1165
144	Elyzium Technologies Pvt. Ltd.	0	1148	1148

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
145	Aeroway Networks Pvt Ltd.	0	1142	1142
146	HARDWORK CABLE & INTERNET SERVICES PVT LTD	0	1122	1122
147	GIGACAST NETWORK PVT LTD	0	924	924
148	SS FIBER NET OPTICAL COMMUNICATION PVT. LTD	0	918	918
149	Touchnet Broadband Services Pvt. Ltd.	0	893	893
150	SKY ONLINE TECHNOSYSTEM Pvt Ltd	0	863	863
151	DREAMLINK TECHNOLOGIES Pvt Ltd	0	848	848
152	Click4Net Internet Services Pvt Ltd	0	843	843
153	NetMagic Solutions(P) Ltd.	0	833	833
154	ESTO BORADNAD PVT LTD./ESTO INTERNET PVT LTD	0	824	824
155	Japra Tele Link Pvt. Ltd.	0	816	816
156	ANTARIKSH BROADBAND & WIRELESS SOLUTIONS PVT LTD	800	0	800
157	Smart Net India Pvt Ltd	0	798	798
158	VIVA Communications Pvt Ltd	0	780	780
159	Sify Technologies Ltd.	415	363	778
160	Correl IT Services Pvt. Ltd.	0	775	775
161	Ani Broadband Service Pvt. Ltd.	0	763	763
162	Datawave IT solutions Pvt. Ltd.	0	761	761
163	STN Communication & Advertising Pvt Ltd.	3	733	736
164	Suncity Broadband Pvt Ltd.	0	732	732
165	Daksh Broadband Services Pvt Ltd	0	732	732
166	NGC Broadband Pvt. Ltd.	731	0	731
167	Barani Data Solutions Private Limited	410	304	714
168	CLOUDNET COMMUNICATIONS PVT LTD	0	714	714
169	SVD DIGITAL NETWORKS PVT LTD	0	684	684
170	HPS DIGITAL BROADBAND PVT LTD	0	672	672
171	Grace Teleinfra Pvt Ltd	0	663	663
172	HOSTAXIS NETWORKS PVT LTD	0	637	637
173	Primenet Global Ltd.	0	628	628
174	Wi-Link Network Pvt. Ltd	0	614	614
175	Panav Network and Communications Private Limited	0	604	604
176	FASTNET COMMUNICATION PVT LTD	200	401	601
177	WEBRIDERS INTERNET PVT LTD	0	594	594

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
178	Cyber Crazy Infocom Pvt. Ltd.	0	574	574
179	Alphanet Broadband Pvt Ltd	0	571	571
180	Alegra Communication Pvt Ltd	0	552	552
181	Digital2Virtual ISP Pvt. Ltd.	0	549	549
182	SHREE MANORANJAN BROADBAND PVT LTD	0	532	532
183	DATAMAX TECHNOLOGY PVT LTD	39	482	521
184	INFINITY WIRELESS SERVICES PVT. LTD.	0	520	520
185	Rida Communication Pvt. Ltd.	0	515	515
186	LAIRONET COMMUNICATION Pvt Ltd	0	507	507
187	VARESHA AIR WORLD NETWORKS PVT LTD	483	0	483
188	HELM CONSULTANTS PVT LTD	193	274	467
189	ELECON INFOTMATION TECHNOLOGY LTD	0	466	466
190	Light Air Transmission Pvt. Ltd.	232	232	464
191	Data Infosys Ltd.	0	457	457
192	Oasis Cable Pvt Ltd.	0	445	445
193	Power Grid Corporation of India Ltd.	0	437	437
194	AIRMAX INTERNET PVT LTD	0	432	432
195	Packenet Solutions Pvt. Ltd.	0	422	422
196	Speedmaxx Digital Networks Pvt Ltd	0	412	412
197	Reticule Infotech Pvt. Ltd.	0	407	407
198	Tamana Winet Pvt. Ltd.	0	406	406
199	ADRI INFOCOM PVT. LTD.	0	400	400
200	Gleam Worldwide Services Pvt. Ltd.	0	398	398
201	PACKNET SOLUTIONS PVT Ltd	0	397	397
202	CNS INFOTEL SERVICES PVT LTD	0	392	392
203	SPIRENET DIGITAL COMMUNICATION PVT LTD	0	382	382
204	Spider Broadband and Cable Pvt Ltd	0	375	375
205	WINDSOR INTERNET PVT LTD	0	374	374
206	BASS JOKERNET PRIVATE LIMITED	0	359	359
207	Pulse Telesystems Pvt. Ltd.	0	334	334
208	Sai Akshay Internet Services Pvt Ltd.	0	332	332
209	CATLA IT&ENGG. CO. PVT LTD.	0	327	327
210	REVOLUTION BROADBAND PVT LTD	0	327	327
211	Twincity Communication Pvt Ltd	0	325	325

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
212	DEVELOPMENT LOGICS SOLUTIONS PVT LTD	0	322	322
213	PANCHSHEEL BROADBAND SERVICES'S PVT LTD.	0	321	321
214	Bhiwani Communications Pvt. Ltd.	73	233	306
215	MORADABAD INTERNET DERVICES PVT LTD	0	279	279
216	SG IT Infotech Pvt. Ltd.	0	276	276
217	NEXTGEN COMPUSOFT PVT LTD	0	275	275
218	Singh Internet Services Pvt. Ltd.	0	260	260
219	Cityline Networks Pvt Ltd	0	251	251
220	ALWAR ONLINE PVT LTD	250	0	250
221	AUSPICE INFRATAL PVT LTD	142	105	247
222	Faiconet Internet Pvt Ltd	0	245	245
223	Wi5 Internet Services P Limited	0	241	241
224	SEFARO NETWORKS PRIVATE LTD	0	233	233
225	ANUSHREE DIGITAL NETWORK PVT LTD	0	229	229
226	Khetan Cable Network (P) Ltd	0	228	228
227	VMO BROADBAND PVT LTD	225	0	225
228	SUPER SONIC BROADBAND PVT LTD	0	223	223
229	NETTECH INFOVISION PVT LTD	0	220	220
230	ACEBROWSE PVT LTD	0	219	219
231	WAVETREE NETWORKS PVT LTD	0	218	218
232	CIT SOLUTIONS PVT. LTD.	0	217	217
233	SRINAGAR TECHNOLOGY CONSULTANTS LTD	213	0	213
234	Saibaba Broadband Pvt. Ltd.	0	206	206
235	Oistel Telecom Pvt. Ltd.	0	198	198
236	CERALINK COMMUNICATION Pvt Ltd	0	196	196
237	Kartik Network Pvt. Ltd.	0	188	188
238	Rajdhani Telecom Pvt. Ltd.	4	182	186
239	Gazillio Technologies Pvt. Ltd.	0	182	182
240	AirFiber IT Solutions Pvt. Ltd	2	178	180
241	ERNET India	108	70	178
242	NETWIRE INTERNET SOLUTIONS PVT. LTD.	0	178	178
243	STN Infotech Pvt. Ltd	0	175	175
244	Microsense Pvt. Ltd.	0	174	174
245	Kataria Net Solutions Pvt. Ltd.	0	163	163

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
246	SOUTHNET BROADBAND PVT LTD	0	154	154
247	Conjoinix Technologies Pvt Ltd	0	153	153
248	NETVISION AWADH NETWORKS PVT LTD	0	153	153
249	Unitel Media Pvt Ltd	0	142	142
250	Invensys Networks pvt ltd	27	112	139
251	Shineplus Networks Pvt Ltd	0	137	137
252	ROYAL WIRELESS SERVICES Pvt Ltd	0	129	129
253	MLC INTERNET PVT LTD	0	126	126
254	Airtechzone Services India Pvt Ltd	78	47	125
255	SKYNETZONE WIFI SERVICES Pvt Ltd	5	114	119
256	Shreepad Communication Pvt. Ltd.	0	116	116
257	Global India Tele Infra Pvt. Ltd.	27	85	112
258	Optisky Fiber Pvt Ltd	0	112	112
259	SHRI RAM BRAOADBAND SERVICES PVT LTD	0	112	112
260	PROLINE DATATECH SERCIVCES PVT LTD	0	111	111
261	Verizon Communications India Pvt Ltd	0	109	109
262	Achiever Communication and Services Pvt. Ltd.	0	109	109
263	Pronoc Technologies Pvt. Ltd.	0	107	107
264	Shri Vinayagaa Internet Pvt Ltd	0	102	102
265	Airmesh Communications Limited	0	96	96
266	QBC Infotech Pvt. Ltd.	0	94	94
267	Cheetah Networks Pvt Ltd	0	94	94
268	AT&T Global Network Services India Private Limited	0	92	92
269	SHEEN TELECOM CONSULTANTS PVT LTD	91	0	91
270	Angel Air Network Solutions Pvt Ltd	0	89	89
271	Micronova Network Solutions Ltd	89	0	89
272	SATH TECHNOLOGIES PVT LTD	0	87	87
273	TRIPLE LINK PVT LTD	0	86	86
274	GETWAY BROADBAND PVT LTD	0	85	85
275	Vidarbha Wi-Fi & Network Services Pvt. Ltd.	84	0	84
276	Dream Plus Multi Services Pvt. Ltd.	0	82	82
277	CLASSIC INTERNET AND CABLE SERVICES PVT LTD	80	0	80
278	DigiStar Info Solutions Pvt Ltd	40	40	80

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
279	ARP INFONET PVT. LTD.	0	78	78
280	PMG NETWORKD PVT LTD	0	77	77
281	Telestra Telecommunications Pvt. Ltd.	0	75	75
282	NR DATA SERVICE PVT LTD	0	75	75
283	Satpar Infotech Pvt Ltd	0	66	66
284	Malang Solutions Pvt. Ltd.	0	65	65
285	Airlink Broadband Pvt Ltd	0	64	64
286	S A INTERNET SOLUTION PVT LTD	0	61	61
287	Edge Telecommunications Pvt. Ltd.	0	59	59
288	DRONAGIRI INFOTECH PVT LTD	0	57	57
289	Infiber Broadnet Pvt. Ltd.	0	56	56
290	City Broadband Pvt. Ltd.	0	52	52
291	Pimoonny Broadband Serives Pvt Ltd	0	50	50
292	V NET NETWORKS PVT. LTD	0	48	48
293	Trans Virtual Pvt. Ltd.	0	47	47
294	Pacific Internet India Pvt. Ltd.	0	40	40
295	IWAVE TELECOMMUNICATIONS PVT LTD	0	38	38
296	Navariya Satellite Services Pvt.Ltd.	33	0	33
297	Dreamnet Pvt.Ltd.	0	30	30
298	West Bengal Electronics Industry Development Corp. Ltd.	0	30	30
299	Sanyog Networks Pvt Ltd	0	29	29
300	Divine Broadband Services Pvt Ltd	0	28	28
301	JAI MATA DI TELETRONIX PVT LTD	0	27	27
302	HCL Comnet Systems & Services Ltd.	11	14	25
303	WE INTERNET LIMITED	0	25	25
304	Orange Business Services India Network Pvt. Ltd.	0	22	22
305	Adya Tech One Services Pvt Ltd	0	21	21
306	Mastek Infosystems OPC Pvt. Ltd.	0	19	19
307	FASTHOOK NETWORKS PVT LTD	0	18	18
308	UBERCORE DATA LABS PVT LTD	0	16	16
309	Jetfirenet Telelink Pvt Ltd	0	16	16
310	SUN BOARDBAND AND DATA SERVICES PVT LTD	0	15	15
311	Microtel Internet Network Pvt ltd	0	15	15
312	Novanet India Ltd.	0	14	14
313	Texas Connect Private Limited	0	14	14

Annexure 1.5 (contd.)

S.No.	Name of the Service Provider	Narrowband Subscribers	Broadband Subscribers	Total Internet Subscribers
314	Marutham Networks Pvt. Ltd.	0	13	13
315	A TO Z INFOLINK PVT.LTD.	0	12	12
316	Financial Technologies Communications Ltd.	10	0	10
317	Reliance Telecom Limited	0	8	8
318	Essel Shyam Communications Limited	0	7	7
319	Clear Beam Communication Pvt Ltd	0	6	6
320	ABT Ltd.	3	2	5
321	Angrow Netcomm Pvt. Ltd.	5	0	5
322	Nelco Ltd.	0	4	4
323	Tatanet Services Ltd	0	4	4
324	Aristo Telenet Pvt Ltd	0	3	3
325	KIIRUS INFONET PVT. LTD.	0	2	2
326	Sabse Internet Services Provider Pvt Ltd	0	2	2
	Total	78856388	525357875	604214263

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-18**

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.
17	Warmconnect Internet Services Pvt. Ltd.

Annexure 1.7: Service Area wise PMRTS subscriber Base

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			30.09.2018	31.12.2018
1	Delhi(Faridabad/ Gurgaon)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5720	6015
		Procall(Delhi)	2910	2938
		Procall (Faridabad)		
		Procall (Gurgaon)		
		Total	8630	8953
2	Mumbai (Navi Mumbai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	8241	8375
		Smartalk (Mumbai)	572	526
		Bhilwara Telenet(Mumbai)	855	870
		Airtalk Solutions & Services Pvt. Ltd	339	361
		Total	10007	10132
3	Kolkata	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	2409	2467
		Total	2409	2467
4	TN(Chennai)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7100	7177
		Quick Calls	590	592
		Total	7690	7769
5	Karnataka (Bangalore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	7170	7231
		Quick Calls	595	602
		Total	7765	7833
6	Andhra Pradesh (Vishakhapatnam & Hyderabad)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	5384	5408
		Quick Calls (Hyderabad Urban)	872	871
		Total	6256	6279
7	Madhya Pradesh (Indore)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1382	1363
		Total	1382	1363
8	Rajasthan (Jaipur)	Procall	268	280
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	635	531
		Total	903	811

Annexure- 1.7 (Contd.)

Sl. No.	Operative Area	Service Provider	Subscriber Base	
			30.09.2018	31.12.2018
9	Gujarat (Ahmedaba/Surat /Vadodara/ Bharuch/Dahej/ Kutch/Amrela /Jamnagar)	Arya Omnitalk Radio Trunking Services Pvt.Ltd. (Ahmedaba/Surat/ Vadodara/ Bharuch/Dahej)	6481	6811
		Inative Network Pvt. Ltd. (Ahmedaba/Surat/ Vadodara/ Bharuch/ Kutch/Amrela / Jamnagar)	1820	1820
		Total	8301	8631
10	Maharashtra (Pune)	Arya Omnitalk Radio Trunking Services Pvt.Ltd.	1754	1904
		Smartalk	432	442
		Total	2186	2346
11	Kerala (Cochin City & Quilon)	Wiwonet Solutions Pvt. Ltd.	361	361
		Arya Omnitalk Radio Trunking Services Pvt.Ltd.	810	839
		Total	1171	1200
		Grand Total	56700	57784

**Annexure 2.1: Wireless Revenue Service - Service Area wise Statistics for
QE Dec-18**

Key parameters for service areas of category-A

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
AP	95.67	92	22	318	304	622
Gujarat	95.37	70	14	306	255	560
Karnataka	94.06	82	24	324	298	622
MH	95.69	79	20	298	270	569
TN (incl. Chennai)	94.94	89	20	300	287	587

Key parameters for service areas of category-B

Service Area	% of pre-paid in total Subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Haryana	97.90	51	11	332	312	644
Kerala	97.26	95	16	261	273	534
MP	98.08	68	18	321	318	638
Punjab	95.79	77	11	342	292	634
Rajasthan	97.77	66	12	350	334	683
UP(E)	98.73	49	10	343	413	756
UP(W)	98.42	55	13	341	347	689
WB	99.41	58	13	314	341	656

Key parameters for service areas of category-C

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Assam	97.74	79	32	379	414	793
Bihar	99.31	53	10	404	470	874
HP	98.44	66	11	317	285	602
J&K	78.20	88	24	478	419	897
NE	98.40	72	37	325	317	642
Orissa	98.92	64	15	376	403	778

Key parameters for service areas of category-Metro

Service Area	% of pre-paid in total subscribers	ARPU (₹ per month)	Total usage (from & outside HSA) per subscriber per month			
			Outgoing SMS	Outgoing MOU	Incoming MOU	Total MOU
Kolkata	93.90	52	14	306	275	581
Delhi	85.77	63	16	457	337	794
Mumbai	79.91	81	13	378	262	640

Annexure 4.1: Performance of QoS Parameters for Cellular Mobile Service

Performance Monitoring Report on Quality of Service of Cellular Mobile Service Providers for quarter ending December, 2018																			
Name of Service Area	Name of Service Provider	Network Related Parameters									Customer Service Quality Parameters								
		Network Availability		Connection Establishment (Accessibility)			Connection Maintenance (Retainability)			POI	Metering and billing				Response time to the customer for assistance		Termination / closure of service		
		BS Accumulated down-time (not available for service) (%age)	Worst affected BSs due to down-time (%age)	Call Set-up Success Rate and Session Establishment Success Rate for Circuit Switched Voice or VoLTE as applicable (within licensee's own network)	SDCCH/ Paging Channel Congestion/ RRC Congestion (%age)	TCH, RAB and E-RAB Congestion (%age)	Network QoS DCR Spatial Distribution Measure [Network_QSD(90,90)]	Network QoS DCR Temporal Distribution Measure [Network_QTD(97,90)]	Connections with good voice quality, Circuit Switched Voice Quality and VoLTE quality	Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark) (Averaged over a period of quarter)	Metering and billing credibility - post paid	Metering and billing credibility - pre paid	Resolution of billing/charging complaints	Period of applying credit/waiver/adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures	
		≤ 2%	≤ 2%	≥ 95%	≤ 1%	≤ 2%	≤ 2%	≤ 3%	≥ 95%	≤ 0.5%	≤ 0.1%	≤ 0.1%	98% within 4 weeks	100% within 6 weeks	within 1 week of resolution of complaint	≥ 95%	≥ 95%	100% within 7 days	100% within 60 days
The achievement of benchmark against each parameter is to be averaged over a period of one quarter for 2G, 3G and 4G VoLTE Services (combined) as per the measurement methodology explained in Explanatory Memorandum to regulations																			
Andhra Pradesh	Airtel	0.13	0.27	98.30	0.24	0.60	1.69	2.27	95.10	0	0.01	0.01	100.00	100.00	100.00	100.00	90.00	100.00	100.00
	BSNL	0.88	1.74	98.15	0.9	1.4	1.9	2.02	98.33	0	0.00	0.00	100.00	100.00	100.00	98.00	98.00	100.00	100.00
	Idea	0.09	0.23	99.02	0.52	0.14	1.29	1.58	99.37	0	0.01	0.01	99.95	100.00	100.00	98.99	93.37	100.00	100.00
	RJio	0.06	0.17	99.63	0.00	0.00	0.33	0.41	99.92	0	0.00	0.00	100.00	100.00	100.00	96.14	99.40	100.00	100.00
	TATA	0.50	0.16	99.53	0.03	0.06	0.00	2.79	98.50	0	0.00	0.00	100.00	100.00	100.00	98.66	97.10	100.00	100.00
	Vodafone	0.15	0.74	99.88	0.17	0.12	1.43	1.83	99.21	0	0.01	0.05	100.00	100.00	100.00	100.00	81.26	100.00	100.00
Assam	Airtel	0.58	1.50	97.89	0.38	0.57	1.96	2.52	98.99	0	0.01	0.01	100.00	100.00	100.00	100.00	98.00	100.00	100.00
	BSNL	1.96	1.92	98.21	0.81	1.79	1.51	2.95	96.9	0	0.01	0.00	100.00	100.00	100.00	96.00	97.47	100.00	100.00
	Idea	1.38	1.01	96.41	0.62	1.87	1.96	2.29	95.94	0	0.03	0.01	100.00	100.00	100.00	97.66	98.02	100.00	100.00
	RJio	0.36	1.40	99.55	0.01	0.00	0.55	0.65	99.89	0	0.00	0.00	100.00	100.00	100.00	96.71	98.88	100.00	100.00
	Vodafone	0.65	0.71	98.93	0.41	1.02	1.88	2.25	97.98	0	0.02	0.06	100.00	100.00	100.00	99.93	99.11	100.00	100.00
Bihar	Airtel	0.14	0.76	98.09	0.42	0.96	1.77	1.98	98.01	0	0.01	0.00	100.00	100.00	100.00	87.00	93.00	100.00	100.00
	BSNL	1.76	1.7	96.2	0.69	0.91	1.82	2.43	98.3	0	0.00	0.00	99.35	100.00	100.00	98.00	95.89	100.00	100.00
	Idea	0.17	1.68	97.37	0.72	1.65	1.63	2.06	98.50	0	0.01	0.02	100.00	100.00	100.00	96.86	96.09	100.00	100.00
	RJio	0.19	0.68	99.45	0.00	0.01	0.60	0.71	99.90	0	0.00	0.00	100.00	100.00	100.00	96.98	97.64	100.00	100.00
	TATA	0.32	1.49	97.08	0.16	0.01	0.00	0.00	98.22	0	0.00	0.00	100.00	100.00	100.00	98.91	98.18	100.00	100.00
	Vodafone	0.30	1.46	99.23	0.14	0.77	1.89	2.24	98.03	0	0.01	0.07	100.00	100.00	100.00	100.00	77.34	100.00	100.00
Delhi	Airtel	0.08	0.00	99.18	0.46	0.54	1.92	2.79	96.18	0	0.02	0.01	100.00	100.00	100.00	100.00	93.00	100.00	100.00
	Idea	0.14	0.50	99.30	0.11	0.20	1.35	1.79	97.97	0	0.01	0.01	100.00	100.00	100.00	99.28	95.60	100.00	100.00
	MTNL	0.05	0.00	97.93	0.11	1.06	1.53	1.71	96.59	0	0.01	0.00	100.00	100.00	100.00	99.80	98.66	100.00	100.00
	RJio	0.11	0.41	99.58	0.00	0.01	0.22	0.30	99.90	0	0.00	0.00	100.00	100.00	100.00	96.75	97.76	100.00	100.00
	TATA	0.34	1.65	98.65	0.00	0.59	0.00	1.84	99.09	0	0.00	0.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
	Vodafone	0.09	0.33	99.57	0.16	0.30	1.92	2.59	99.29	0	0.02	0.09	100.00	100.00	100.00	100.00	79.79	100.00	100.00

Annexure 4.1 (Contd.)

Gujarat	Airtel	0.06	0.06	98.83	0.23	0.25	1.72	2.04	95.52	0	0.01	0.01	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	BSNL	1.36	1.18	97.83	0.07	0.42	1.74	2.39	100	0	0.01	0.00	100.00	100.00	100.00	98.00	97.11	100.00	100.00
	Idea	0.06	0.16	98.79	0.42	0.71	1.43	1.96	97.98	0	0.01	0.01	100.00	100.00	100.00	97.31	99.30	100.00	100.00
	RJio	0.12	0.47	99.56	0.01	0.00	0.42	0.55	99.92	0	0.00	0.00	100.00	100.00	100.00	97.33	98.91	100.00	100.00
	TATA	0.23	0.00	99.24	0.00	0.00	0.00	0.00	97.12	0	0.00	0.00	100.00	100.00	100.00	99.52	97.91	100.00	100.00
Vodafone	0.10	0.09	99.66	0.07	0.22	1.39	1.89	99.03	0	0.08	0.03	100.00	100.00	100.00	100.00	72.23	100.00	100.00	100.00
Haryana	Airtel	0.10	0.24	99.68	0.16	0.19	1.25	1.78	98.09	0	0.02	0.00	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	BSNL	0.44	0.18	98.96	0.13	0.25	1.61	1.75	97.64	0	0.01	0.00	100.00	100.00	100.00	100.00	99.99	100.00	100.00
	Idea	0.12	0.25	99.50	0.30	0.43	1.10	2.61	98.35	0	0.02	0.01	100.00	100.00	97.62	96.10	96.04	100.00	100.00
	RJio	0.04	0.06	99.56	0.00	0.00	0.46	0.60	99.94	0	0.00	0.00	100.00	100.00	100.00	97.63	98.57	100.00	100.00
	TATA	0.36	0.00	99.70	0.19	0.02	0.00	0.38	98.32	0	0.00	0.00	100.00	100.00	100.00	98.17	98.15	100.00	100.00
Vodafone	0.17	0.63	99.69	0.48	0.24	1.48	2.17	99.03	0	0.05	0.08	100.00	100.00	100.00	99.70	94.67	100.00	100.00	
Himachal Pradesh	Airtel	0.11	0.48	98.99	0.12	0.98	0.85	1.18	95.01	0	0.02	0.01	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	BSNL	1.8	1.78	98.11	0.64	1.89	1.95	2.41	95.76	0	0.01	0.00	100.00	100.00	100.00	100.00	99.91	100.00	100.00
	Idea	0.14	0.01	99.34	0.06	0.27	1.96	2.13	97.41	0	0.00	0.02	100.00	100.00	100.00	98.78	99.46	100.00	100.00
	RJio	0.09	0.29	99.58	0.00	0.00	0.39	0.50	99.93	0	0.00	0.00	100.00	100.00	100.00	97.28	98.63	100.00	100.00
	TATA	0.02	0.00	98.22	0.00	0.00	0.00	0.00	97.15	0	0.00	0.00	100.00	100.00	100.00	99.26	100.00	100.00	100.00
Vodafone	0.17	0.00	99.98	0.01	0.02	1.69	2.58	98.18	0	0.01	0.08	100.00	100.00	100.00	100.00	92.33	100.00	100.00	
Jammu & Kashmir	Airtel	0.16	0.28	97.84	0.10	0.10	1.04	1.39	98.41	0	0.01	0.01	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	BSNL	1.01	1.95	98.84	0.63	0.96	1.84	2.24	96.81	0	0.01	0.00	100.00	100.00	100.00	100.00	99.95	100.00	100.00
	Idea	0.47	0.01	98.94	0.19	0.64	1.98	2.38	97.47	0	0.01	0.03	100.00	100.00	100.00	96.80	98.92	100.00	100.00
	RJio	0.18	0.83	99.59	0.00	0.01	0.53	0.66	99.93	0	0.00	0.00	100.00	100.00	100.00	97.61	99.27	100.00	100.00
	Vodafone	0.59	1.60	99.96	0.03	0.04	1.66	2.31	98.74	0	0.02	0.09	100.00	100.00	100.00	100.00	97.33	100.00	99.52
Karnataka	Airtel	0.30	0.63	98.92	0.27	0.37	1.96	2.84	95.46	0	0.02	0.01	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	BSNL	1.22	1.98	97.5	0.33	0.78	1.98	2.95	97.11	0	0.00	0.00	99.77	100.00	100.00	97.00	98.04	100.00	100.00
	Idea	0.08	0.24	99.74	0.19	0.10	0.77	1.03	97.52	0	0.04	0.01	100.00	100.00	100.00	99.93	98.63	100.00	100.00
	RJio	0.20	0.67	99.64	0.00	0.00	0.37	0.51	99.92	0	0.00	0.00	100.00	100.00	100.00	96.39	99.10	100.00	100.00
	TATA	0.50	0.38	96.55	0.13	0.00	0.78	2.68	99.23	0	0.00	0.00	100.00	100.00	100.00	98.66	98.06	100.00	100.00
Vodafone	0.22	1.27	99.51	0.12	0.07	1.26	1.79	99.62	0	0.03	0.08	99.90	100.00	100.00	100.00	90.44	100.00	100.00	
Kerala	Airtel	0.06	0.11	99.34	0.10	0.19	1.92	2.94	97.33	0	0.01	0.00	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	BSNL	0.31	1.15	98.99	0.27	0.83	1.96	2.38	98.8	0	0.01	0.00	99.00	100.00	100.00	97.00	98.14	100.00	100.00
	Idea	0.15	1.70	99.32	0.33	0.46	0.95	1.21	97.80	0	0.06	0.03	99.94	100.00	100.00	98.63	99.34	100.00	100.00
	RJio	0.06	0.05	99.68	0.00	0.00	0.38	0.62	99.91	0	0.00	0.00	100.00	100.00	100.00	96.62	98.45	100.00	100.00
	TATA	0.52	0.48	99.84	0.01	0.01	0.00	0.00	99.85	0	0.00	0.00	100.00	100.00	100.00	98.65	96.53	100.00	100.00
Vodafone	0.07	0.10	99.79	0.04	0.04	0.92	1.16	99.58	0	0.06	0.07	100.00	100.00	100.00	100.00	81.67	100.00	100.00	
Kolkata	Airtel	0.01	0.00	99.48	0.30	0.25	1.74	2.25	98.67	0	0.01	0.01	100.00	100.00	100.00	99.00	89.00	100.00	100.00
	BSNL	0.76	1.37	99.34	0.4	0.31	1.73	1.85	97.94	0	0.01	0.01	99.83	100.00	100.00	95.00	95.02	100.00	100.00
	Idea	0.07	0.48	99.70	0.07	0.12	0.64	1.33	99.39	0	0.03	0.00	100.00	100.00	100.00	97.03	99.11	100.00	100.00
	RJio	0.01	0.02	99.63	0.00	0.00	0.19	0.27	99.94	0	0.00	0.00	100.00	100.00	100.00	96.81	97.95	100.00	100.00
	TATA	0.67	1.51	99.54	0.03	0.11	0.00	0.00	99.33	0	0.00	0.00	100.00	100.00	100.00	98.91	98.15	100.00	100.00
Vodafone	0.16	0.93	99.50	0.05	0.44	1.22	1.68	98.67	0	0.03	0.07	100.00	100.00	100.00	100.00	79.49	100.00	100.00	

Annexure 4.1 (Contd.)

Madhya Pradesh	Airtel	0.11	0.21	98.41	0.18	0.39	1.92	2.27	95.46	0	0.01	0.01	100.00	100.00	100.00	100.00	96.00	100.00	100.00
	BSNL	1.17	1.9	96.92	0.53	1.12	1.81	2.83	97.65	0	0.03	0.02	99.85	100.00	100.00	99.00	97.69	100.00	100.00
	Idea	0.16	0.38	96.33	0.64	3.75	1.81	2.46	97.52	0	0.04	0.01	100.00	100.00	100.00	98.58	91.41	100.00	100.00
	RJio	0.11	0.37	99.59	0.00	0.00	0.56	0.78	99.90	0	0.00	0.00	100.00	100.00	100.00	96.48	97.96	100.00	100.00
	TATA	0.99	0.00	97.08	0.12	0.25	0.00	0.00	99.57	0	0.00	0.00	100.00	100.00	100.00	99.52	98.27	100.00	100.00
Vodafone	0.10	0.38	99.94	0.08	0.06	1.85	2.38	98.75	0	0.01	0.05	100.00	100.00	100.00	100.00	79.04	100.00	100.00	
Maharashtra	Airtel	0.03	0.05	99.23	0.19	0.33	1.47	1.67	95.96	0	0.01	0.00	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	BSNL	1.63	1.9	97.55	0.88	1.12	2	2.43	95.91	0	0.01	0.01	100.00	100.00	100.00	100.00	99.00	100.00	100.00
	Idea	0.25	1.13	98.54	0.46	0.65	1.67	2.94	97.60	0	0.03	0.02	100.00	100.00	100.00	99.60	99.93	100.00	100.00
	RJio	0.30	1.45	99.58	0.00	0.00	0.43	0.55	99.89	0	0.00	0.00	100.00	100.00	100.00	97.02	98.79	100.00	100.00
	TATA	1.70	0.00	97.88	0.21	1.14	0.00	2.34	99.38	0	0.00	0.00	100.00	100.00	100.00	99.52	97.66	100.00	100.00
Vodafone	0.15	0.52	99.13	0.37	0.80	1.52	2.04	98.97	0	0.03	0.03	100.00	100.00	100.00	99.99	76.65	100.00	100.00	
Mumbai	Airtel	0.27	0.71	99.09	0.58	0.57	1.85	1.99	95.81	0	0.01	0.00	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	Idea	0.09	0.11	99.07	0.47	0.27	1.43	2.22	95.95	0	0.01	0.00	100.00	100.00	100.00	98.64	94.01	100.00	100.00
	MTNL	0.60	1.20	97.64	0.57	0.38	1.97	2.96	98.23	0	0.02	0.01	100.00	100.00	100.00	100.00	98.59	100.00	100.00
	RJio	0.17	0.75	99.53	0.01	0.01	0.20	0.28	99.91	0	0.00	0.00	100.00	100.00	100.00	96.87	98.21	100.00	100.00
	TATA	0.24	0.75	99.00	0.09	0.77	0.00	0.00	98.85	0	0.00	0.00	100.00	100.00	100.00	99.52	98.06	100.00	100.00
Vodafone	0.20	1.28	98.97	0.39	0.89	1.68	2.54	98.58	0	0.04	0.03	100.00	100.00	98.84	99.96	87.16	99.77	100.00	
North East	Airtel	0.91	1.82	97.14	0.73	0.56	1.96	2.68	98.80	0	0.03	0.00	100.00	100.00	100.00	100.00	96.00	100.00	100.00
	BSNL	1.77	1.9	97.52	0.76	1.76	1.76	2.32	97.73	0	0.05	0.05	100.00	100.00	100.00	97.00	95.79	100.00	100.00
	Idea	1.55	0.86	99.07	0.08	0.59	1.82	2.78	96.75	0	0.05	0.01	100.00	100.00	100.00	95.94	99.80	100.00	100.00
	RJio	0.88	1.67	99.58	0.01	0.00	0.67	1.00	99.92	0	0.00	0.00	100.00	100.00	100.00	97.22	97.90	100.00	100.00
Vodafone	0.32	1.67	98.47	0.53	1.22	1.98	2.90	98.23	0	0.04	0.08	100.00	100.00	100.00	99.90	99.10	100.00	100.00	
Orissa	Airtel	0.29	0.52	98.83	0.29	0.70	1.65	1.85	97.67	0	0.01	0.00	100.00	100.00	100.00	100.00	91.00	100.00	100.00
	BSNL	1.4	1.97	98.35	0.88	1.65	1.99	2.25	96.81	0	0.02	0.00	100.00	100.00	100.00	99.00	98.36	100.00	100.00
	Idea	0.30	1.17	99.25	0.16	0.44	0.90	1.30	97.49	0	0.00	0.00	100.00	100.00	100.00	96.93	96.19	100.00	65.23
	RJio	0.13	0.65	99.61	0.02	0.00	0.41	0.55	99.92	0	0.00	0.00	100.00	100.00	100.00	96.54	98.95	100.00	100.00
	TATA	0.90	0.00	99.60	0.03	0.00	0.00	0.00	98.33	0	0.00	0.00	100.00	100.00	100.00	98.91	98.27	100.00	100.00
Vodafone	0.18	0.12	99.42	0.39	0.56	1.92	2.96	98.53	0	0.01	0.06	100.00	100.00	100.00	99.76	67.83	100.00	99.93	
Punjab	Airtel	0.05	0.04	99.40	0.13	0.17	1.82	2.22	97.90	0	0.01	0.00	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	BSNL	0.23	1.5	98.42	0.39	0.48	1.65	1.91	97.92	0	0.01	0.00	100.00	100.00	100.00	100.00	99.97	100.00	100.00
	Idea	0.04	0.09	99.49	0.11	0.09	1.16	2.09	99.54	0	0.02	0.01	100.00	100.00	100.00	99.89	99.47	100.00	100.00
	RJio	0.04	0.08	99.57	0.00	0.00	0.22	0.31	99.95	0	0.00	0.00	100.00	100.00	100.00	97.45	97.96	100.00	100.00
	TATA	0.38	0.60	99.28	0.91	0.16	0.00	0.00	99.15	0	0.00	0.00	100.00	100.00	100.00	98.17	98.02	100.00	100.00
Vodafone	0.05	0.15	99.75	0.12	0.20	1.25	1.75	98.53	0	0.04	0.06	100.00	100.00	100.00	99.90	83.33	100.00	100.00	

Annexure 4.1 (Contd.)

Rajasthan	Airtel	0.12	0.23	98.13	0.16	0.57	1.71	2.24	98.17	0	0.01	0.01	100.00	100.00	100.00	100.00	93.00	100.00	100.00
	BSNL	1.13	1.72	98.42	0.75	1.58	1.72	2.22	98.26	0	0.03	0.01	100.00	100.00	100.00	99.00	100.00	100.00	100.00
	Idea	0.08	0.17	99.71	0.10	0.11	1.32	1.80	99.55	0	0.05	0.01	100.00	100.00	100.00	98.52	99.59	100.00	100.00
	RJio	0.05	0.08	99.54	0.01	0.00	0.70	0.87	99.94	1	0.00	0.00	100.00	100.00	100.00	96.49	98.15	100.00	100.00
	TATA	0.74	0.00	98.26	0.00	0.43	0.00	0.00	99.72	0	0.00	0.00	100.00	100.00	100.00	99.52	98.45	100.00	100.00
	Vodafone	0.11	0.35	99.43	0.12	0.55	1.61	2.26	97.51	0	0.03	0.05	100.00	100.00	100.00	99.90	73.99	100.00	100.00
Tamil Nadu	Airtel	0.19	1.05	99.49	0.18	0.30	1.31	1.92	95.62	0	0.01	0.01	100.00	100.00	100.00	100.00	69.00	100.00	100.00
	BSNL	0.57	1.67	97.38	0.2	0.63	1.96	2.78	97.91	0	0.00	0.00	100.00	100.00	100.00	100.00	95.16	100.00	100.00
	Idea	0.04	0.11	99.87	0.10	0.06	0.63	1.15	98.70	0	0.00	0.01	100.00	100.00	100.00	95.46	99.51	100.00	100.00
	RJio	0.03	0.10	99.60	0.00	0.00	0.26	0.36	99.92	0	0.00	0.00	100.00	100.00	100.00	97.81	99.22	100.00	100.00
	TATA	0.38	1.27	99.57	0.03	0.14	0.00	1.69	99.00	0	0.00	0.00	100.00	100.00	100.00	98.66	96.62	100.00	100.00
	Vodafone	0.11	0.55	98.47	0.83	1.46	1.33	2.06	98.81	0	0.10	0.12	100.00	100.00	100.00	100.00	70.16	100.00	100.00
UP(East)	Airtel	0.39	1.31	96.24	0.67	1.07	1.53	2.14	97.10	0	0.01	0.00	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	BSNL	1.73	1.61	97.45	0.84	1.51	1.58	1.89	96.15	0	0.09	0.09	98.60	100.00	100.00	99.00	96.74	100.00	100.00
	Idea	0.29	1.22	98.94	0.69	0.96	1.85	2.66	98.64	0	0.03	0.00	100.00	100.00	100.00	99.78	97.78	100.00	100.00
	RJio	0.34	1.54	99.40	0.01	0.00	0.57	0.65	99.90	0	0.00	0.00	100.00	100.00	100.00	96.76	97.96	100.00	100.00
	TATA	0.79	0.76	98.51	0.03	0.10	0.00	0.00	97.62	0	0.00	0.00	100.00	100.00	100.00	98.17	98.23	100.00	100.00
	Vodafone	0.04	0.16	97.07	0.92	2.82	1.97	2.98	97.98	0	0.03	0.03	100.00	100.00	100.00	99.71	99.47	100.00	100.00
UP(West)	Airtel	0.68	0.83	99.32	0.51	0.07	1.96	2.70	99.41	0	0.01	0.01	100.00	100.00	100.00	100.00	94.00	100.00	100.00
	BSNL	1.55	1.73	98.2	0.81	0.96	1.8	1.96	96.41	0	0.06	0.00	100.00	100.00	100.00	100.00	95.00	100.00	100.00
	Idea	0.19	0.54	95.07	0.81	3.64	1.75	2.67	97.73	0	0.03	0.01	99.97	100.00	100.00	99.43	98.96	100.00	100.00
	RJio	0.09	0.34	99.49	0.00	0.00	0.58	0.67	99.92	0	0.00	0.00	100.00	100.00	100.00	96.88	98.01	100.00	100.00
	TATA	0.33	0.00	99.54	0.11	0.01	0.00	0.00	99.11	0	0.01	0.00	100.00	100.00	100.00	98.17	98.14	100.00	100.00
	Vodafone	0.21	0.96	97.70	0.46	2.27	1.85	2.65	97.38	0	0.05	0.05	100.00	100.00	100.00	100.00	82.39	100.00	100.00
West Bengal	Airtel	0.09	0.02	98.91	0.58	0.79	1.79	2.78	97.18	0	0.00	0.00	100.00	100.00	100.00	100.00	90.00	100.00	100.00
	BSNL	0.25	0.27	97.9	0.72	1.34	4.85	5.88	95.08	0	0.03	0.02	98.00	100.00	100.00	95.00	95.14	100.00	100.00
	Idea	1.69	1.97	99.73	0.04	0.06	1.11	1.95	97.24	0	0.01	0.00	100.00	100.00	100.00	96.19	99.11	100.00	100.00
	RJio	0.12	0.42	99.53	0.00	0.00	0.79	0.94	99.86	0	0.00	0.00	100.00	100.00	100.00	96.87	97.97	100.00	100.00
	TATA	0.56	1.11	99.94	0.93	0.04	0.00	0.00	99.63	0	0.00	0.00	100.00	100.00	100.00	98.92	98.29	100.00	100.00
	Vodafone	0.08	0.21	99.32	0.24	0.65	1.71	2.13	97.64	0	0.02	0.07	100.00	100.00	100.00	100.00	86.44	100.00	100.00

Annexure 4.2 : Performance of QoS Parameters for Basic (Wire-line) Service

Quarterly Performance Monitoring Report (PMR) on QoS of Basic Telephone Service (Wireline) for QE December, 2018																			
Sl. No.	Name of Service Area	Name of Service Provider	Faults incidences (No. of faults/ 100 Subs./ month)	Fault Repair				Rent Rebate	Mean Time to Repair (MTTR)	POI	Metering and Billing					Response time to the customer for Assistance		Termination / Closure of service	
				% of faults repaired by next working day	% of faults repaired within 5 days	% of faults repaired by next working day	% of faults repaired within 7 days				Point of Interconnection (POI) Congestion (No. of POIs not meeting the benchmark	Metering and Billing credibility - post paid	Metering and Billing credibility - pre paid	Resolution of billing/ charging/ validity complaints	Period of applying credit/ waiver/ adjustment to customer's account from the date of resolution of complaints	Accessibility of call centre/ customer care	Percentage of calls answered by the operators (voice to voice) within 90 seconds	%age requests for Termination / Closure of service complied within 7 days	Time taken for refund of deposits after closures
≤7	For urban areas by next working day: ≥85%	For urban areas: ≥ 100%	For rural and hilly areas: ≥ 75%	For rural and hilly areas: ≥ 100%	≤ 10 Hrs	≤0.5%	≤0.1%	≤0.1%	98% within 4 weeks	100% within 6 weeks	1 week of resolution of complaint	≥95%	≥95%	100% within 7 days	100% within 60 days				
1	A&N	BSNL	5.00	85.00%	100.00%	85.00%	100%	14	7.00	0.00	0.00%	0.00%	98.00%	100.00%	100.00%	92.86%	99.00%	100.00%	100.00%
2	AP	Bharti	2.05	93.78%	100.00%	NA	NA	719	4.04	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%
3		BSNL	4.00	98.00%	100.00%	97.50%	100%	198	7.00	0.00	0.01%	0.00%	100.00%	100.00%	100.00%	95.52%	94.31%	100.00%	100.00%
4		TTSL	5.51	96.80%	100.00%	NA	NA	258	4.51	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.34%	96.48%	100.00%	100.00%
5		Vodafone	0.24	100.00%	100.00%	NA	NA	NA	1.34	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
6	Assam	BSNL	3.00	94.00%	100.00%	86.00%	100%	215	5.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	91.55%	100.00%	100.00%	100.00%
7		Vodafone	1.84	100.00%	100.00%	NA	NA	NA	4.14	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
8	Bihar	BSNL	3.00	93.00%	100.00%	89.00%	100%	0	5.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	91.70%	99.33%	100.00%	100.00%
9		TTSL	0.62	96.20%	100.00%	NA	NA	0	3.33	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	99.26%	100.00%	100.00%
10		Vodafone	1.26	100.00%	100.00%	NA	NA	NA	4.18	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
11	Chattisgarh	BSNL	3.00	97.00%	100.00%	97.00%	100%	513	6.00	0.00	0.01%	0.01%	99.00%	100.00%	100.00%	97.34%	97.63%	100.00%	100.00%
12	Chennai	BSNL	4.00	91.00%	100.00%	91.00%	100%	385	8.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.46%	95.49%	100.00%	100.00%
13	Delhi	Bharti	2.07	92.12%	100.00%	NA	NA	2038	5.32	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%
14		MTNL	3.45	91.21%	99.59%	NA	NA	5079	3.58	0.00	0.01%	0.00%	99.71%	100.00%	100.00%	98.62%	99.94%	100.00%	100.00%
15		TTSL	1.85	95.60%	100.00%	NA	NA	21	5.09	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	98.01%	100.00%	100.00%
16		Vodafone	0.76	100.00%	100.00%	NA	NA	NA	2.30	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
17	Gujarat	Bharti	1.85	92.07%	100.00%	NA	NA	290	5.87	0.00	0.06%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
18		BSNL	4.00	96.00%	100.00%	94.00%	100%	138	4.00	0.00	0.02%	0.00%	100.00%	100.00%	100.00%	97.83%	97.85%	100.00%	100.00%
19		TTSL	1.29	88.70%	100.00%	NA	NA	43	7.10	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.83%	97.14%	100.00%	100.00%
20		Vodafone	0.21	100.00%	100.00%	NA	NA	NA	1.26	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA

Annexure 4.2 (Contd.)

21	HP	BSNL	5.00	89.00%	100.00%	93.00%	100%	107	6.00	0.00	0.03%	0.00%	98.22%	100.00%	100.00%	95.72%	100.00%	100.00%	100.00%
22		Vodafone	0.00	100.00%	100.00%	NA	NA	NA	0.0	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
23	HR	Bharti	3.32	95.90%	100.00%	NA	NA	13	3.28	0.00	0.03%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
24		BSNL	5.00	95.00%	100.00%	93.00%	100%	256	6.00	0.00	0.07%	0.00%	100.00%	100.00%	100.00%	95.86%	100.00%	100.00%	100.00%
25		TTSL	0.31	58.80%	100.00%	NA	NA	2	9.40	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.97%	96.26%	100.00%	100.00%
26		Vodafone	5.56	100.00%	100.00%	NA	NA	NA	1.46	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
27	J&K	BSNL	4.00	96.00%	100.00%	92.00%	100%	8	7.00	0.00	0.01%	0.00%	98.00%	100.00%	100.00%	96.08%	100.00%	100.00%	100.00%
28	JHAR	BSNL	3.00	99.00%	100.00%	97.00%	100%	621	5.00	0.00	0.09%	0.00%	98.00%	100.00%	100.00%	88.05%	99.33%	100.00%	100.00%
29	KERALA	Bharti	3.35	92.12%	100.00%	NA	NA	792	8.14	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	97.00%	100.00%	100.00%
30		BSNL	4.00	93.00%	100.00%	93.00%	100%	1343	7.00	0.00	0.05%	0.00%	99.81%	100.00%	100.00%	93.85%	93.74%	100.00%	100.00%
31		TTSL	0.23	80.60%	100.00%	NA	NA	0	6.90	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	96.89%	100.00%	100.00%
32		Vodafone	0.80	100.00%	100.00%	NA	NA	NA	2.45	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
33	KOL	Bharti	2.19	94.91%	100.00%	NA	NA	798	9.72	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	93.00%	100.00%	100.00%
34		BSNL	7.00	91.00%	100.00%	NA	NA	390	8.00	0.00	0.00%	0.00%	98.17%	100.00%	100.00%	89.23%	99.00%	100.00%	100.00%
35		Vodafone	0.75	100.00%	100.00%	NA	NA	NA	4.44	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
36	KTK	Bharti	2.86	85.00%	100.00%	NA	NA	2780	4.83	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	96.00%	100.00%	100.00%
37		BSNL	4.00	97.00%	100.00%	96.00%	100%	2414	7.00	0.00	0.09%	0.00%	98.00%	100.00%	100.00%	95.11%	94.16%	100.00%	100.00%
38		TTSL	0.51	84.40%	100.00%	NA	NA	67	10.10	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	96.53%	99.75%	100.00%
39		Vodafone	0.70	100.00%	100.00%	NA	NA	NA	2.27	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
40	MH	Bharti	1.10	93.63%	100.00%	NA	NA	228	5.3	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	90.00%	100.00%	100.00%
41		BSNL	5.00	91.00%	100.00%	85.00%	100%	866	6.00	0.00	0.01%	0.00%	100.00%	100.00%	100.00%	97.39%	97.34%	100.00%	100.00%
42		TTSL	1.17	88.70%	100.00%	NA	NA	292	8.52	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.31%	96.21%	99.82%	100.00%
43		Vodafone	0.56	100.00%	100.00%	NA	NA	NA	2.38	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
44	MP	Bharti	4.36	89.89%	100.00%	NA	NA	1295	5.14	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%
45		BSNL	4.00	92.00%	100.00%	89.00%	100%	269	4.00	0.00	0.03%	0.00%	100.00%	100.00%	100.00%	97.99%	98.04%	100.00%	100.00%
46		TTSL	6.99	100.00%	100.00%	NA	NA	0	3.54	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	95.00%	97.58%	100.00%	100.00%
47		Vodafone	2.30	100.00%	100.00%	NA	NA	NA	1.22	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
48	MUM	Bharti	0.89	92.25%	100.00%	NA	NA	478	5.51	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	84.00%	100.00%	100.00%
49		MTNL	2.90	96.80%	100.00%	NA	NA	12677	5.11	0.00	0.04%	NA	99.45%	100.00%	100.00%	98.78%	98.85%	100.00%	100.00%
50		TTSL	2.89	89.80%	100.00%	NA	NA	1149	8.13	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	96.83%	97.05%	99.20%	100.00%
51		Vodafone	0.82	100.00%	100.00%	NA	NA	NA	2.39	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
52	NE	Vodafone	0.00	100.00%	100.00%	NA	NA	NA	0.00	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	NA	NA
53	NE-I	BSNL	5.00	93.00%	100.00%	96.00%	100%	33	7.00	0.00	0.03%	0.00%	98.00%	100.00%	100.00%	90.00%	99.00%	100.00%	100.00%
54	NE-II	BSNL	2.00	94.00%	100.00%	96.00%	100%	98	5.00	0.00	0.00%	0.01%	100.00%	100.00%	100.00%	89.83%	99.33%	100.00%	100.00%

Annexure 4.2 (Contd.)

55	ORISA	BSNL	6.00	92.00%	100.00%	88.00%	100%	667	5.00	0.00	0.08%	0.00%	99.00%	100.00%	100.00%	90.12%	99.67%	100.00%	100.00%
56		TTSL	1.05	100.00%	100.00%	NA	NA	0	1.98	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	96.15%	100.00%	100.00%
57		Vodafone	0.79	100.00%	100.00%	NA	NA	NA	1.14	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
58	PUNJAB	Bharti	2.30	89.26%	100.00%	NA	NA	535	4.81	0.00	0.00%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%
59		BSNL	5.00	95.00%	100.00%	87.00%	100%	153	6.00	0.00	0.01%	0.00%	98.00%	100.00%	100.00%	95.73%	100.00%	100.00%	100.00%
60		Quadrant	4.37	96.00%	100.00%	100.00%	100%	0	4.34	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	99.00%	95.00%	100.00%	100.00%
61		TTSL	0.74	94.10%	100.00%	NA	NA	0	5.76	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	98.87%	100.00%	100.00%
62	Vodafone	0.31	100.00%	100.00%	NA	NA	NA	0.16	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
63	RAJASTHAN	Bharti	2.11	85.23%	100.00%	NA	NA	397	6.48	0.00	0.02%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
64		BSNL	6.00	95.00%	100.00%	96.00%	100%	537	6.00	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	95.71%	100.00%	100.00%	100.00%
65		TTSL	2.84	98.00%	100.00%	NA	NA	0	2.85	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	98.99%	100.00%	100.00%
66	Vodafone	0.56	100.00%	100.00%	NA	NA	NA	3.22	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
67	TAMILNADU	Bharti	4.49	95.42%	100.00%	NA	NA	2442	6.73	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	92.00%	100.00%	100.00%
68		BSNL	3.00	93.00%	100.00%	92.00%	100%	1912	8.00	0.00	0.09%	0.00%	100.00%	100.00%	100.00%	95.96%	94.96%	100.00%	100.00%
69		TTSL	1.20	94.70%	100.00%	NA	NA	23	5.07	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	95.48%	97.84%	100.00%	100.00%
70		Vodafone	0.43	100.00%	100.00%	NA	NA	NA	2.24	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
71	UPE	Bharti	2.88	89.06%	100.00%	NA	NA	271	5.04	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	94.00%	100.00%	100.00%
72		BSNL	4.00	87.00%	100.00%	87.00%	100%	785	5.00	0.00	0.03%	0.00%	100.00%	100.00%	100.00%	96.98%	100.00%	100.00%	100.00%
73		TTSL	2.12	100.00%	100.00%	NA	NA	0	2.10	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	97.52%	95.33%	100.00%	100.00%
74	Vodafone	0.41	100.00%	100.00%	NA	NA	NA	2.54	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA	
75	UPW	Bharti	4.83	86.86%	100.00%	NA	NA	137	5.79	0.00	0.01%	NA	100.00%	100.00%	100.00%	100.00%	95.00%	100.00%	100.00%
76		BSNL	6.00	95.00%	100.00%	94.00%	100%	339	5.00	0.00	0.03%	0.00%	100.00%	100.00%	100.00%	96.36%	100.00%	100.00%	100.00%
77		TTSL	2.05	100.00%	100.00%	NA	NA	0	2.54	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	99.05%	100.00%	100.00%	100.00%
78		Vodafone	0.67	100.00%	100.00%	NA	NA	NA	2.55	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA
79	Uttaranchal	BSNL	4.00	95.00%	100.00%	91.00%	100%	162	5.00	0.00	0.00%	0.00%	98.00%	100.00%	100.00%	96.45%	100.00%	100.00%	100.00%
80	WB	BSNL	4.00	92.00%	100.00%	92.00%	100%	2324	4.00	0.00	0.07%	0.00%	100.00%	100.00%	100.00%	90.87%	99.00%	100.00%	100.00%
81		TTSL	1.17	99.50%	100.00%	NA	NA	17	4.16	0.00	0.00%	0.00%	100.00%	100.00%	100.00%	100.00%	98.47%	100.00%	100.00%
82		Vodafone	3.89	100.00%	100.00%	NA	NA	NA	2.37	0.00	0.00%	NA	NA	NA	NA	98.00%	100.00%	100.00%	NA

Annexure 4.3: Quality of Service Performance of Broadband Service Providers

Performance Monitoring Report on Quality of Service of Service Providers providing broadband (wireline) service for Quarter Ending Dec 2018																				
Sl. No.	Service Provider	Service area	Service Provisioning	Faults Repair		Billing Performance			Response Time to the Customer for assistance		Bandwidth utilisation/throughput				Service availability (for all users) in %age	Packet Loss (for wired broadband access) in %age	Network latency (for wired broadband access)			
			%age of connections provided within 15 days of registration of demand	% of faults repaired by next working day (>90%)	% of faults repaired within 3 working day	Rent Rebate	%age of bills disputed	%age of billing complaints resolved within 4 weeks	%age of cases to whom refund of deposits is made within 60 days of closures	%age of calls answered by operator (Voice to voice) within 60 sec	%age of calls answered by operator (Voice to voice) within 90 sec	No. of Intra network links having Bandwidth utilisation >90% during peak hours (TCBH) or upstream links for international connectivity having bandwidth utilisation >90% during peak hours (TCBH)	% International bandwidth utilization during peak hours (TCBH) (Enclose MRTG)	Broadband Connection Speed available (download) from ISP node to user			Packet loss (for wired broadband access) in %age	User reference point at POP/ISP Gateway node to International gateway (IGSP/NIXI)	User reference point at ISP Gateway node to International nearest NAP port abroad (terrestrial)	User reference point at ISP Gateway node to International nearest NAP port abroad (satellite)
1	Bharat Sanchar Nigam Ltd.(BSNL)	All India (except Delhi & Mumbai)	100.00%	93.95%	99.70%	33238	0.05%	100.00%	100.00%	96.99%	97.86%	NA	0	55.90%	91.68%	99.67%	0.20%	15	175	NA
2	Mahanagar Telephone Nigam Ltd.	Delhi & Mumbai	100.00%	95.15%	99.51%	5334	0.53%	100.00%	100.00%	98.48%	98.78%	Nil	0	78.70%	89.69%	99.75%	0.53%	49	298	NA
3	Airlink Communications Pvt. Ltd.	All India	100.00%	91.56%	99.26%	0	NA	100.00%	NA	64.77%	100.00%	0	0	89.57%	86.84%	99.93%	0.48%	120	350	NA
4	Alliance Broadband Services Pvt. Ltd.	All India	100.00%	93.63%	99.83%	Nil	0.00%	100.00%	Nil	85.00%	96.63%	0	0	78.59%	99.42%	99.27%	0.14%	72	210	417
5	ANI network Pvt. Ltd.	Delhi	100.00%	98.00%	100.00%	Nil	Nil	Nil	Nil	87.00%	99.00%	Nil	0	79.00%	99.00%	99.99%	0.40%	10	288	NA
6	Asianet Satellite Communications Ltd.	All India	100.00%	90.32%	99.41%	Nil	1.88%	100.00%	100.00%	60.49%	80.51%	Nil	0	66.90%	90.00%	99.50%	1.00%	50	270	NA
7	Atria Convergence Technologies Pvt. Ltd.	All India	100.00%	90.00%	98.33%	46361	0.80%	100.00%	Nil	50.00%	54.00%	0	0	47.00%	90.00%	100.00%	1.00%	28	188	NA
8	Bharti Airtel Ltd.	Andhra Pradesh	100.00%	94.80%	100.00%	810	0.09%	100.00%	100.00%	91.00%	95.00%	0	0	34.00%	100.00%	99.95%	0	38	48	NA
		Delhi	100.00%	93.18%	99.37%	1598	0.04%	100.00%	100.00%	90.00%	94.00%	0	0	45.00%	100.00%	99.95%	0	53	80	NA
		Gujarat	100.00%	94.37%	99.41%	355	0.12%	100.00%	100.00%	90.00%	94.00%	0	0	NA	100.00%	99.95%	0	38	NA	NA
		Haryana	100.00%	95.98%	99.43%	5	0.03%	100.00%	100.00%	90.00%	94.00%	0	NA	NA	100.00%	99.95%	0	29	NA	NA
		Karnataka	100.00%	90.16%	100.00%	1723	0.06%	100.00%	100.00%	93.00%	97.00%	0	0	37.00%	100.00%	99.78%	0	27	39	NA
		Kerala	100.00%	91.58%	99.93%	569	0.04%	100.00%	100.00%	70.00%	79.00%	0	NA	NA	100.00%	99.85%	0	35	NA	NA
		Kolkata	100.00%	92.85%	100.00%	463	0.02%	100.00%	100.00%	89.00%	94.00%	0	0	40.00%	100.00%	99.96%	0	63	72	NA
		Madhya Pradesh	100.00%	91.79%	99.04%	757	0.06%	100.00%	100.00%	89.00%	94.00%	0	0	40.00%	100.00%	99.87%	0	65	67	NA
		Maharashtra	100.00%	95.26%	99.18%	186	0.08%	100.00%	100.00%	86.00%	90.00%	0	NA	NA	100.00%	99.91%	0	35	NA	NA
		Mumbai	100.00%	94.01%	99.21%	403	0.03%	100.00%	100.00%	87.00%	92.00%	0	0	46.00%	100.00%	99.97%	0	33	54	NA
		Punjab	100.00%	91.13%	99.29%	333	0.01%	100.00%	100.00%	91.00%	94.00%	0	0	41.00%	100.00%	99.98%	0	47	86	NA
		Rajasthan	100.00%	90.20%	99.78%	261	0.01%	100.00%	100.00%	90.00%	94.00%	0	NA	NA	100.00%	99.99%	0	67	NA	NA
		Tamilnadu	100.00%	93.10%	99.49%	1741	0.03%	100.00%	100.00%	89.00%	94.00%	0	0	28.00%	100.00%	99.90%	0	58	36	NA
Uttar Pradesh - East	100.00%	93.89%	99.51%	163	0.01%	100.00%	100.00%	90.00%	94.00%	0	0	32.00%	100.00%	99.96%	0	64	91	NA		
Uttar Pradesh - West	100.00%	90.14%	99.07%	110	0.02%	100.00%	100.00%	90.00%	94.00%	0	NA	NA	100.00%	99.92%	0	23	NA	NA		
9	Broadband Pacenet India Pvt. Ltd.	All India	100.00%	94.40%	99.50%	1	0.50%	100.00%	0.00	92.00%	92.00%	0	0	53.00%	93.00%	99.60%	0.45%	80	260	350
10	DEN Networks Ltd.	All India	100.00%	97.28%	99.74%	0	Nil	Nil	Nil	92.47%	94.14%	0	0	74.87%	100.00%	98.23%	0.00%	NA	260	NA
11	Digital Satellite Connect Pvt. Ltd.	Mumbai	100.00%	91.15%	99.23%	0	0.02%	100.00%	Nil	61.91%	83.72%	0	0	80.00%	80.00%	99.82%	1.00%	4	255	600
12	Digital Network Associates Pvt. Ltd	Maharashtra & Goa	100.00%	90.35%	99.32%	None	0.13%	100.00%	Nil	60.95%	80.93%	Nil	0	80.00%	80.00%	99.73%	1.00%	4	255	600
		Mumbai	100.00%	96.58%	99.69%	None	0.00%	100.00%	Nil	75.06%	97.60%	Nil	0	80.00%	80.00%	99.86%	1.00%	4	255	600
13	DNA Infotel Pvt. Ltd.	Maharashtra	100.00%	90.65%	99.15%	None	0.02%	100.00%	Nil	60.46%	81.13%	Nil	0	80.00%	80.00%	99.77%	1.00%	4	255	600

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

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
1	ABP News Network Pvt Limited	1	ABP Ananda	News	Bengali	0.50	SD
		2	ABP Majha	News	Marathi	0.50	SD
2	AETN 18 Media Pvt Limited	3	The History Channel	Infotainment	Hindi	3.00	SD
		4	FY1 TV18	Infotainment	English	0.25	SD
		5	FY1 TV18 (HD)	Infotainment	English	1.00	HD
		6	Histry TV 18 HD	Infotainment	Hindi	7.00	HD
3	Asianet Communications Limited	7	Asianet	GEC	Malayalam	19.00	SD
		8	Asianet Plus	GEC	Malayalam	5.00	SD
		9	Asianet Movies	Movies	Malayalam	15.00	SD
		10	Suvarna Plus	Movies	Kannada	5.00	SD
		11	Star Suvarna HD	GEC	Kannada	19.00	HD
		12	Asianet HD	GEC	Malayalam	19.00	HD
4	Bangla Entertainment Private Limited	14	AATH	GEC	Bangla	4.00	SD
		15	SONY Marathi	GEC	Marathi	4.00	SD
5	BBC Global News India Private Limited	16	BBC World News	News	English	1.00	SD
6	Bennett, Coleman & Company Limited	17	Zoom	GEC	Hindi	0.50	SD
		18	Romedy Now	Movies	English	6.00	SD
		19	MN +	Movies	English	10.00	HD
		20	Mirror Now	News	English/Hindi	2.00	SD
		21	ET NOW	News	English/Hindi	3.00	SD
		22	Times Now	News	English/Hindi	3.00	SD
		23	Romedy Now HD	Movies	English	9.00	HD
		24	Movies Now HD	Movies	English	12.00	HD
		25	MNX HD	Movies	English	9.00	HD
		26	MNX	Movies	English	6.00	SD
7	Celebrities Management Pvt Limited	28	Travel XP HD	Lifestyle	English	9.00	HD
		29	Travel XP Tamil	Lifestyle	Tamil	1.50	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
8	CSL Info Media Private Limited	30	JAN TV PLUS	News	Hindi	50.00	SD
9	Discovery Communications India	31	Animal Planet	Infotainment	English/Hindi	2.00	SD
		32	Discovery Channel	Infotainment	English/Hindi	4.00	SD
		33	Discovery Channel – Tamil	Infotainment	Tamil	4.00	SD
		34	Discovery Kids Channel	Kids	English	3.00	SD
		35	Discovery Science	Infotainment	English/Hindi	1.00	SD
		36	Discovery Turbo	Infotainment	English/Hindi	1.00	SD
		37	Discovery Jeet	GEC	Hindi	1.00	SD
		38	Discovery HD World	Infotainment	English	6.00	HD
		39	Animal Planet HD World	Infotainment	English/Hindi	3.00	HD
		40	TLC HD world	Infotainment	English/Hindi	3.00	HD
		41	Discovery Jeet HD	GEC	Hindi	2.00	HD
		42	TLC	Infotainment	English/Hindi	2.00	SD
		43	Dsport	Sports	English	4.00	SD
10	Disney Broadcasting (India) Limited	44	Disney Junior	Kids	English	4.00	SD
		45	UTV Movies	Movies	Hindi	2.00	SD
		46	Marvel HQ (Disney XD)	Kids	English/Hindi	4.00	SD
		47	Disney International HD	GEC	English	12.00	HD
		48	Hungama TV	Kids	English/Hindi	6.00	SD
		49	The Disney Channel	Kids	English/Hindi	8.00	SD
		50	UTV HD	Movies	Hindi	8.00	HD
11	Eenadu Televisoin Private Limited	51	ETV	GEC	Telugu	17.00	SD
		52	ETV Andhra Pradesh	News	Telugu	1.00	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		53	ETV - Telangana	News	Telugu	1.00	SD
		54	ETV Cinema	Movies	Telugu	6.00	SD
		55	ETV Life	GEC	Telugu	1.00	SD
		56	ETV Plus	GEC	Telugu	7.00	SD
		57	ETV Abhiruchi	GEC	Telugu	2.00	SD
		58	ETV HD	GEC	Telugu	19.00	HD
		59	ETV Plus HD	GEC	Telugu	9.00	HD
		60	ETV Cinema HD	Movies	Telugu	8.00	HD
		61	ETV Abhiruchi HD	GEC	Telugu	3.00	HD
		62	ETV Life HD	GEC	Telugu	2.00	HD
12	EPIC Television Networks Pvt Limited	63	EPIC TV	Infotainment	English/Hindi	2.00	SD
13	Genx Entertainment Limited	64	UTV Bindass	GEC	Hindi	1.00	SD
		65	UTV Action	Movies	Hindi	2.00	SD
14	Greycells18 Media Limited	66	Topper TV	Miscellaneous	English	59.32	SD
15	IBN Lokmat News Private Ltd	67	News 18 Lokmat	News	Hindi	0.25	SD
16	Living Entertainment Enterprises Private Ltd	68	Living Foodz HD	Infotainment	Hindi	10.00	HD
		69	Living Travelz	Infotainment	Hindi	0.10	SD
17	Mavis Satcom Limited	70	J Movies	Movies	Tamil	3.75	SD
		71	Jaya Max	Music	Tamil	3.75	SD
		72	Jaya Plus	News	Tamil	1.00	SD
		73	Jaya TV HD	GEC	Tamil	19.00	HD
18	MSM World Wide Factual Media Private Limited	74	SONY BBC EARTH	Infotainment	English/Hindi	4.00	SD
		75	SONY BBC EARTH HD	Infotainment	English/Hindi	10.00	HD
19	Media World Wide Limited	76	Travel XP	Lifestyle	English	3.00	SD
20	Lifestyle and Media Broadcasting Limited	77	Good Times	Lifestyle	English	1.50	SD
21	New Delhi Television Limited	78	NDTV 24*7	News	English	3.00	SD
		79	NDTV India	News	Hindi	1.00	SD
		80	NDTV Profit	News	English	1.00	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
22	NGC Network (India) Pvt Limited	81	Fox Life	Lifestyle	English/Hindi	1.00	SD
		82	National Geographic Channel (NGC)	Infotainment	English/Hindi	2.00	SD
		83	Fox Life HD	Lifestyle	English/Hindi	1.00	HD
		84	Nat Geo Wild	Infotainment	English/Hindi	1.00	SD
		85	National Geographic HD	Infotainment	English/Hindi	10.00	HD
		86	Nat Geo Music HD	Music	English/Hindi	1.00	HD
		87	Nat Geo Wild HD	Infotainment	English/Hindi	5.00	HD
		88	Nat Geo People HD	Infotainment	English/Hindi	1.00	HD
		89	Baby TV HD	Kids	English/Hindi	1.00	HD
23	NOIDA Software Technology Park Limited	90	NHK World Premium (HD Distribution)	Infotainment	Japanese	1800.00	HD
24	Odisha Television Limited	91	Prarthana	Devotional	Odia	2.00	SD
		92	Tarang	GEC	Odia	10.00	SD
		93	Tarang Music	Music	Odia	2.00	SD
		94	Alankar	Movies	Odia	4.00	SD
25	Panorama Television Private Limited	95	News 18 Bihar Jharkhand	News	Hindi	0.25	SD
		96	News 18 Madhya Pradesh / Chattisgarh	News	Hindi	0.25	SD
		97	News 18 Rajasthan	News	Hindi	0.25	SD
		98	News 18 Uttar Pradesh/ Uttaranchal	News	Hindi	0.25	SD
		99	News 18 Urdu	News	Urdu	0.25	SD
		100	News 18 Kannada	News	Kannada	0.25	SD
		101	News 18 Bangla	News	Bangla	0.25	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		102	News 18 Punjab / Haryana / Himanchal Pradesh	News	Punjabi	0.25	SD
		103	News 18 Gujarati	News	Gujarati	0.25	SD
		104	News 18 Odia	News	Odia	0.25	SD
26	Raj Television Network Limited	105	Raj Musix Kannada	Music	Kannada	0.25	SD
		106	Raj Digital Plus	Movies	Tamil	1.50	SD
		107	Raj Musix	Music	Tamil	1.00	SD
		108	Raj News	News	Tamil	0.25	SD
		109	Raj TV	GEC	Tamil	3.00	SD
		110	Vissa TV	GEC	Telugu	0.50	SD
27	Sarthak Entertainment Pvt Limited	111	Sarthak TV	GEC	Odia	19.00	SD
28	Silverstar Communications Limited	112	Mega 24	GEC	Tamil	1.00	SD
		113	Mega Musiq	Music	Tamil	2.00	SD
		114	Mega TV	GEC	Tamil	3.00	SD
29	Sony Pictures Networks India Private Limited	115	Sony YAY!	Kids	English	2.00	SD
		116	AXN	GEC	English	5.00	SD
		117	SET MAX	Movies	Hindi	15.00	SD
		118	MIX	Music	Hindi	1.00	SD
		119	SAB	GEC	Hindi	19.00	SD
		120	SONY ENTERTAINMENT CHANNEL (SET)	GEC	Hindi	19.00	SD
		121	PIX	Movies	English	10.00	SD
		122	SIX	Sports	English/Hindi	15.00	SD
		123	MAX 2	Movies	Hindi	1.00	SD
		124	PAL	GEC	Hindi	1.00	SD
		125	SET HD	GEC	Hindi	19.00	HD
		126	SIX HD	Sports	English/Hindi	19.00	HD
		127	PIX HD	Movies	English	15.00	HD
		128	MAX HD	Movies	Hindi	17.00	HD
		129	SONY ESPN HD	Sports	English/Hindi	7.00	HD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		130	Ten 2 HD	Sports	English/Hindi	17.00	HD
		131	Ten 3 HD	Sports	English/Hindi	17.00	HD
		132	SONY ESPN	Sports	English/Hindi	5.00	SD
		133	AXN HD	GEC	English	7.00	HD
		134	Ten 2	Sports	English/Hindi	15.00	SD
		135	Ten 1	Sports	English	19.00	SD
		136	Ten 3	Sports	English/Hindi	17.00	SD
		137	Ten 1 HD	Sports	English	19.00	HD
		138	SONY Wah	Movies	Hindi	1.00	SD
		139	SAB HD	GEC	Hindi	19.00	HD
30	Star India Private Limited	140	Star Sports 3	Sports	English/Hindi	4.00	SD
		141	Star Sports 1 Tamil	Sports	Tamil	17.00	SD
		142	Star Sports Select 2	Sports	English/Hindi	7.00	SD
		143	Star Bharat	GEC	Hindi	10.00	SD
		144	Movies OK	Movies	Hindi	1.00	SD
		145	Star Sports 1 Hindi	Sports	Hindi	19.00	SD
		146	Star Gold	Movies	Hindi	8.00	SD
		147	Star Jalsha	GEC	Bangla	19.00	SD
		148	Star Movies	Movies	English	12.00	SD
		149	Star Gold Select	Movies	Hindi	7.00	SD
		150	Star Plus	GEC	Hindi	19.00	SD
		151	Star Pravah	GEC	Marathi	9.00	SD
		152	Star Sports 1	Sports	English/Hindi	19.00	SD
		153	Star Sports 2	Sports	English/Hindi	6.00	SD
		154	Star World	GEC	English	8.00	SD
		155	Jalsha Movies	Movies	Bangla	6.00	SD
		156	Star Sports HD 2	Sports	English/Hindi	19.00	HD
		157	Star Sports HD 1	Sports	English/Hindi	19.00	HD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		158	Star Bharat HD	GEC	Hindi	19.00	HD
		159	Star Gold HD	Movies	Hindi	10.00	HD
		160	Star Movies HD	Movies	English	19.00	HD
		161	Star Plus HD	GEC	Hindi	19.00	HD
		162	Star World Prmiere HD	GEC	English	9.00	HD
		163	Star Sports 1 HD Hindi	Sports	Hindi	19.00	HD
		164	Star Sports Select 1	Sports	English/Hindi	19.00	SD
		165	Star Movies Select HD	Movies	English	10.00	HD
		166	Star World HD	GEC	English	9.00	HD
		167	Star Sports First	Sports	English/Hindi	1.00	SD
		168	MAA Gold	Movies	Telugu	2.00	SD
		169	MAA Movies	Movies	Telugu	10.00	SD
		170	MAA Music	Music	Telugu	1.00	SD
		171	MAA TV	GEC	Telugu	19.00	SD
		172	Star Pravah HD	GEC	Marathi	15.00	HD
		173	Star Jalsha HD	GEC	Bangla	19.00	HD
		174	Jalsha Movies HD	Movies	Bangla	19.00	HD
		175	Star Sports Select HD 1	Sports	English/Hindi	19.00	HD
		176	Star Sports Select HD 2	Sports	English/Hindi	10.00	HD
		177	MAA HD	GEC	Telugu	19.00	HD
		178	Star Gold Select HD	Movies	Hindi	10.00	HD
		179	MAA Movies HD	Movies	Telugu	19.00	HD
		180	Star Sport 1 Telugu	Sports	Telugu	19.00	SD
		181	Star Sport 1 Kannada	Sports	Kannada	19.00	SD
		182	Star Utsav	GEC	Hindi	1.00	SD
		183	Star Utsav Movies	Movies	Hindi	1.00	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
31	SUN TV Network Limited	184	Adithya TV	Movies	Tamil	9.00	SD
		185	Chintu TV	Kids	Kannada	6.00	SD
		186	Chutti TV	Kids	Tamil	6.00	SD
		187	Gemini Comedy	Movies	Telugu	5.00	SD
		188	Gemini Life	GEC	Telugu	5.00	SD
		189	Gemini Movies	Movies	Telugu	17.00	SD
		190	Gemini Music	Music	Telugu	4.00	SD
		191	Gemini News	News	Telugu	0.10	SD
		192	Gemini TV	GEC	Telugu	19.00	SD
		193	KTV	Movies	Tamil	19.00	SD
		194	Surya Movies	Movies	Malayalam	11.00	SD
		195	Kushi TV	Kids	Telugu	4.00	SD
		196	SUN Life	GEC	Tamil	9.00	SD
		197	Sun Music	Music	Tamil	6.00	SD
		198	Sun News	News	Tamil	1.00	SD
		199	Surya Music	Music	Malayalam	4.00	SD
		200	SUN TV	GEC	Tamil	19.00	SD
		201	Surya Comedy	Movies	Malayalam	4.00	SD
		202	Surya TV	GEC	Malayalam	12.00	SD
		203	Udaya Comedy	Movies	Kannada	6.00	SD
		204	Udaya Movies	Movies	Kannada	16.00	SD
		205	Udaya Music	Music	Kannada	6.00	SD
		206	Udaya News	News	Kannada	0.10	SD
		207	Udaya TV	GEC	Kannada	17.00	SD
208	Kochu TV	Kids	Malayalam	5.00	SD		
209	Sun TV HD	GEC	Tamil	19.00	HD		
210	KTV HD	Movies	Tamil	19.00	HD		
211	Sun Music HD	Music	Tamil	19.00	HD		
212	Gemini TV HD	GEC	Telugu	19.00	HD		
213	Gemini Music HD	Music	Telugu	19.00	HD		
214	Gemini Movies HD	Movies	Telugu	19.00	HD		
215	Surya TV HD	GEC	Malayalam	19.00	HD		
216	Udaya TV HD	GEC	Kannada	19.00	HD		
32	Turmeric Vision Private Limited	217	Food Food TV	Infotainment	Hindi	1.00	SD
33	Turner International India Pvt Ltd	218	Cartoon Network	Kids	Hindi	4.25	SD
		219	CNN International	News	English	0.50	SD
		220	HBO	Movies	English	10.00	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		221	POGO	Kids	Hindi	4.25	SD
		222	Cartoon Network HD+	Kids	Hindi	10.00	HD
		223	WB	Movies	English	1.00	SD
		224	HBO HD	Movies	English	15.00	HD
34	TV 18 Broadcast Limited	225	CNN News 18	News	English	0.50	SD
		226	CNBC Bajaar	News	Gujarati	1.00	SD
		227	CNBC TV 18 Prime HD	News	English	1.00	HD
		228	CNBC Awaaz	News	Hindi	1.00	SD
		229	News 18 Tamil Nadu	News	Tamil	0.25	SD
		230	News 18 Kerala	News	Malayalam	0.25	SD
		231	News 18 Assam / North East	News	Assamese	0.25	SD
		232	News 18 India	News	Hindi	1.00	SD
		233	CNBC TV 18	News	English	4.00	SD
35	TV Today Network Limited	234	Aaj Tak	News	Hindi	0.75	SD
		235	India Today	News	English	1.00	SD
		236	AAJ Tak HD	News	Hindi	1.50	HD
		237	Aaj Tak Tez	News	Hindi	0.25	SD
36	Viacom 18 Media Private Limited	238	Colors	GEC	Hindi	19.00	SD
		239	Comedy Central (HD)	GEC	English	9.00	HD
		240	MTV	Music	Hindi	3.00	SD
		241	NICK	Kids	Hindi	6.00	SD
		242	NICK JR	Kids	English	1.00	SD
		243	SONIC	Kids	Hindi	2.00	SD
		244	VH 1 (HD Distribution)	Music	English	2.00	HD
		245	Colors Infinity HD	GEC	English	9.00	HD
		246	Colors Infinity	GEC	English	7.00	SD
		247	Colors HD	GEC	Hindi	19.00	HD
		248	NICKS HD+	Kids	Hindi	10.00	HD
		249	Rishtey Cineplex	Movies	Hindi	3.00	SD
		250	MTV Beats	Music	Hindi	0.50	SD
		251	Colors Kannada HD	GEC	Kannada	19.00	HD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		252	Colors Marathi HD	GEC	Marathi	17.00	HD
		253	Colors Bangla HD	GEC	Bangla	14.00	HD
		254	Colors Super	GEC	Kannada	3.00	SD
		255	Colors Bangla	GEC	Bangla	7.00	SD
		256	Colors Gujarati	GEC	Gujarati	5.00	SD
		257	Colors Kannada	GEC	Kannada	19.00	SD
		258	Colors Marathi	GEC	Marathi	10.00	SD
		259	Colors Oriya	GEC	Oriya	6.00	SD
		260	MTV Beats HD	Music	Hindi	1.00	HD
		261	Colors Tamil	GEC	Tamil	3.00	SD
		262	Cineplex HD	Movies	Hindi	5.00	HD
		263	VH 1	Music	English	1.00	SD
		264	Colors Tamil HD	GEC	Tamil	7.00	HD
		265	MTV HD+	Music	Hindi	5.00	HD
		266	Rishtey	GEC	Hindi	1.00	SD
		267	Colors Kannada Cinema	Movies	Kannada	2.00	SD
		268	Comedy Gujarati Cinema	Movies	Gujarati	1.00	SD
		269	Comedy Central	GEC	English	7.00	SD
		270	The office	Movies	Bangla	1.00	SD
37	Vijay Television Pvt Limited	271	Vijay TV	GEC	Tamil	17.00	SD
		272	Vijay Super	GEC	Tamil	2.00	SD
		273	Vijay HD	GEC	Tamil	19.00	HD
38	Zee Akaash News Private Limited	274	24 Ghanta	News	Bangla	0.50	SD
39	Zee Entertainment Enterprises Limited	275	Zee Bollywood	Movies	Hindi	2.00	SD
		276	Zee Action	Movies	Hindi	1.00	SD
		277	Zee Bangla Cinema	Movies	Bangla	8.00	SD
		278	Zee Café HD	GEC	English	19.00	HD
		279	Zee Café	GEC	English	15.00	SD
		280	Zee Cinema	Movies	Hindi	19.00	SD
		281	Zee Talkies	Movies	Marathi	17.00	SD
		282	Zee TV	GEC	Hindi	19.00	SD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
		283	Zing	Music	Hindi	1.00	SD
		284	& Picture	Movies	Hindi	10.00	SD
		285	Zee Bangla	GEC	Bangla	19.00	SD
		286	Zee Marathi	GEC	Marathi	19.00	SD
		287	Living Foodz	Infotainment	English/Hindi	1.00	SD
		288	Zee TV HD	GEC	Hindi	19.00	HD
		289	Zee Cinema HD	Movies	Hindi	19.00	HD
		290	& TV	GEC	Hindi	12.00	SD
		291	& TV HD	GEC	Hindi	19.00	HD
		292	Zee Kannada	GEC	Kannada	19.00	SD
		293	Zee Telugu	GEC	Telugu	19.00	SD
		294	& Pictures HD	Movies	English/Hindi	19.00	HD
		295	Zee Cinemalu	Movies	Telugu	10.00	SD
		296	Zee Yuva	GEC	Marathi	10.00	SD
		297	Zee Marathi HD	GEC	Marathi	19.00	HD
		298	Living Zen	Infotainment	Hindi	0.10	SD
		299	& Prive HD	Movies	English	19.00	HD
		300	Zee Bangla HD	GEC	Bangla	19.00	HD
		301	Zee Tamil HD	GEC	Tamil	19.00	HD
		302	Zee Cinemalu HD	Movies	Telugu	16.00	HD
		303	Zee Telugu HD	GEC	Telugu	19.00	HD
		304	Zee Tamil	GEC	Tamil	12.00	SD
		305	Zee Kannada HD	GEC	Kannada	19.00	HD
		306	Zee Anmol Cinema	Movies	Hindi	1.00	SD
		307	& Flix HD	Movies	English	19.00	HD
		308	& Flix	Movies	English	15.00	SD
		309	Zee Keralam HD	GEC	Malayalam	8.00	HD
		310	Zee Keralam	GEC	Malayalam	0.10	SD
		311	Zee ETC	Music	Hindi	1.00	SD
		312	Zee Anmol	GEC	Hindi	1.00	SD
		313	Big Magic	GEC	Hindi	1.00	SD
		314	Big Ganga	GEC	Bhojpuri	2.00	SD
		315	Zee Talkies HD	Movies	Marathi	19.00	HD

Annexure 5.1(Contd.)

S. No	Name of the broadcaster	Sl. No	Name of the channel	Reported Genre as per new Regulatory framework	Reported Language	MRP as per New Regulatory Framework 2017	Declared as SD or HD
40	Zee Media Corporation Limited	316	Zee 24 Taas	News	Marathi	0.50	SD
		317	Zee Kalinga	News	Odia	0.50	SD
		318	Zee Business	News	Hindi	0.50	SD
		319	Zee Punjab Haryana Himachal	News	Hindi	0.50	SD
		320	Zee Madhya Pradesh Chattisgarh	News	Hindi	0.50	SD
		321	Zee Salaam	News	Urdu	1.00	SD
		322	Zee 24 Kalak	News	Hindi	0.50	SD
		323	WION	News	Hindi	1.00	SD
		324	Zee Uttar Pradesh Uttrakhand	News	Hindi	0.50	SD
		325	Zee Hindustan	News	Hindi	0.50	SD
		326	Ezmall.com	Miscellaneous	Hindi	0.10	SD
		327	Zee Bihar Jharkhand	News	Hindi	0.50	SD
		328	Zee News	News	Hindi	0.50	SD
329	Zee Rajasthan News	News	Hindi	0.50	SD		
41	Zoom Entertainment Network Limited	330	Movies Now	Movies	English	10.00	SD

Annexure 5.2 : List of pay DTH Operators

- 1. M/s. Tata Sky Ltd.,**
Tata Communications Complex,
Mandi Road, PO Chattarpur,
New Delhi – 110 074
Tel: 011-6616 3000
Fax-022-6616 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. Independent TV Limited.**
H-67, Sector – 63, NOIDA
Ph: 0120-6270100
Fax : 0120-4315999
Website : www.rcom.co.in

Annexure 5.3: List of 97 existing cities with operational FM Radio Channels in India as on 31st December, 2018

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	4
8	Aligarh	C	3
9	Allahabad	B	4
10	Amritsar	B	4
11	Asansol	B	2
12	Aurangabad	C	4
13	Bareilly	C	4
14	Bengaluru	A	8
15	Bharuch	D	1
16	Bhopal	B	4
17	Bhubaneshwar	C	4
18	Bikaner	C	4
19	Bilaspur	C	3
20	Chandigarh	C	4
21	Chennai	A+	8
22	Cochin	B	4
23	Coimbatore	B	4
24	Delhi	A+	9
25	Dehradun	C	1
26	Dhule	C	3
27	Erode	C	2
28	Gangtok	D	2
29	Gorakhpur	C	4
30	Gulbarga	C	1
31	Guwahati	C	4
32	Gwalior	C	4
33	Hissar	D	4
34	Hubli - Dharwad	C	2
35	Hyderabad	A	8

Annexure 5.3 (Contd.)

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

Annexure 5.3 (Contd.)

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

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

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