**Cover Page**

Title of the Paper: **Changing Trends of Telecom Industry In India- A Study**

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**Abstract**

Telecom Industry in India is the second largest network connection in the World. Present Study aims at highlighting the total no. of Telephone connection in India as well as all the service areas of the States over the years 2016-17 to 2020-21. It has been seen that wireless connection shared dominant role over wireline over the years in India as well as all the States. Private telephone operators played dominant role over PSUs in India as well as all the States over the years. Total Tele-density in India as well as all the service areas of the states has been highlighted over the years 2016-17 to 2020-21. It has been found that Tele-density in India is gradually decreasing over the years. Tele-density in rural area is significantly increasing over the years. Regarding the service areas of States, it has been seen that in all the States, Tele-density is increasing and urban area shared most of Tele-density over rural area.

**Keywords:** Tele-density, Wireline, Wireless, Public Telephone Operator, Private Telephone Operator, Urban, Rural

**Changing Trends of Telecom Industry In India- A Study**

**Introduction**

Telecom Industry is the lifeline of economic growth of India. Over the years no. of Telephone subscribers have been increased. 1G, 2G, 3G, 4G connections from 1980s till today with the launch of 5G change the scenario of India’s Telecom sector. At present total no. of telephone subscribers are 117.281 crore. Government has an ambition to spread the telephone connection to every part of India specially to the remote village and sub-urban area. Present study focusses on the changing trends of Telecom Industry in India over the years of 2017-18 to 2021-22.

**Evolution of Telecom Industry in India**

Telephone services began in India with a manual telephone exchange in 1882 at Kolkata

At the preliminary level, Telephone sector was owned and run by the Government.

In 1985 Department of Telecommunication (DOT) was separated from Indian post and Telecommunication Department and Telecom Industry got flourish.

DOT was responsible for Telecom services in India. MTNL and VSNL were were out of the DOT for separation of its policy functions.

In 2008, 3G connection was launched and In 2012, 4G connection was launched. This created the demand for smart phone among the users. Finally, on 1.10.2022, 5G connection was launched by the Honourable Prime Minister of India through Reliance JIO.

Indian Telecom sector was one of the fast growing and competitive market in the world. The Government increased the Foreign Direct Investment (FDI) limit from 49% to 74%.

In 2005, 2G Telephone Telephone connection was launched to mobile users as a result of which no. Of mobile connections rapidly increased over the landline.

In 2000, TDSAT was formed to settle the disputes between operators, between operators and government and between operators and subscribers.

In 1997, Telecom Regulatory Authority of India (TRAI) was formed to regulate the Telecom operators with their subscribers.

Cellular services was first launched at Kolkata in 1995.

In 1994, The Government introduced National Telecom Policy (NTP) for private players to clarify the role of private operators.

**Objectives of the Study**

* To highlight the total no. of Telephone connection in India and in all States over the years 2016-17 to 2020-21.
* To highlight the Tele-density of Telephone connection in India and in all States over the years 2016-17 to 2020-21.

**Table 1: Total no. of Telephone connection in India over the years 2016-17 to 2020-21**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Item | | | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| No. Of Telephones (In million) | Overall | | 1194.99 | 1211.80 | 1183.41 | 1176.79 | 1200.88 |
| Wire line | | 24.40 | 22.81 | 21.70 | 19.13 | 20.24 |
| Wireless | | 1170.59 | 1188.91 | 1161.71 | 1157.66 | 1180.64 |
| Rural | | 501.81 | 529.01 | 522.91 | 521.25 | 537.11 |
| Urban | | 693.18 | 682.79 | 660.50 | 655.54 | 663.76 |
| % growth of total telephones over previous year | | | 12.80 | 1.40 | -2.34 | -0.55 | 2.04 |
| % Share | | Wireless | 97.96 | 98.12 | 98.17 | 98.37 | 98.02 |
| Public | 10.26 | 10.86 | 11.28 | 11.09 | 10.65 |
| Private | 89.74 | 89.14 | 88.72 | 88.71 | 89.35 |

**Source: Annual Report, Department of Telecommunications, Ministry of Communications, Govt. of India.**

From the above table, it has been seen that total no. of telephone connections were increased from 2016-17 to 2017-18 but from 2018-19 till 2019-20 it got decrease and again increased in 2020-21. We have seen that out of the total telephone connection, % of wireless connection over wire line increased over the years 2016-17 to 2020-21. Private telephone operators captured over public over the years. Urban people used more telephones over rural people but it has been seen that in rural areas, people used telephones but share of rural telephone connection decreased over the years. People have a tendency to use less of landline and more of wireless telephones. Private telephone operators captured almost 90% of the total telephone connections. Public telephone operators only captured with an average of 10% of the total telephone industry.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Table 2: Total No. of Telephones for the period 2016-17 to 2020-21** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Service Area**  **Service Area** | **Wireline Phones** | | | | | | | | | | | | | | | **Wireless Phones** | | | | | | | | | | | | | | |
| **Total** | | | | | **PSUs’ operators** | | | | | **Private operators** | | | | | **Total** | | | | | **PSUs’ operators** | | | | | **Private operators** | | | | |
| **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
| **ANDHRA PPRADESH** | **1637790** | **1428825** | **1275020** | **1380429** | **1833671** | **1216162** | **1002188** | **809997** | **639750** | **683522** | **421628** | **426637** | **465023** | **740679** | **1150149** | **84942695** | **86829334** | **87226639** | **87474074** | **86233103** | **9922220** | **10120866** | **9927070** | **9676241** | **9182467** | **75020475** | **76708468** | **77299569** | **77797833** | **77050636** |
| **ASSAM** | **155445** | **121917** | **102227** | **122407** | **185824** | **153165** | **119097** | **98837** | **85726** | **102769** | **2280** | **2820** | **3390** | **36681** | **83055** | **21838804** | **21703793** | **23656788** | **23871990** | **24386765** | **1536256** | **2437570** | **2730679** | **2935442** | **3127340** | **20302548** | **19266223** | **20926109** | **20936548** | **21259425** |
| **BIHAR** | **314982** | **242468** | **167811** | **204957** | **388971** | **294437** | **228431** | **155193** | **134050** | **178936** | **20545** | **14037** | **12618** | **70907** | **210035** | **84614773** | **87565325** | **84753008** | **84649148** | **87041046** | **4055403** | **4812751** | **5140243** | **5930172** | **5453955** | **80559370** | **82752574** | **79612765** | **78718976** | **81587791** |
| **GUJARAT** | **1356154** | **1223903** | **1064047** | **964000** | **1020566** | **1110425** | **1008158** | **836759** | **524113** | **436908** | **245729** | **215745** | **227288** | **439887** | **583658** | **71842692** | **70372673** | **67669966** | **67574581** | **68690269** | **4853500** | **5665443** | **6076716** | **6111937** | **5558866** | **66989192** | **64707230** | **61593250** | **61462644** | **63131403** |
| **HARYANA** | **345736** | **282679** | **250328** | **231304** | **318850** | **282293** | **220778** | **187134** | **141593** | **182355** | **63443** | **61901** | **63194** | **89711** | **136495** | **25046565** | **27537022** | **27915084** | **27489195** | **27860123** | **3715975** | **4895554** | **4985316** | **5061105** | **4962800** | **21330590** | **22641468** | **22929768** | **22428090** | **22897323** |
| **HIMACHAL PRADESH** | **149347** | **118696** | **102858** | **89961** | **114626** | **142809** | **113704** | **99302** | **81131** | **88334** | **6538** | **4992** | **3556** | **8830** | **26292** | **10431261** | **10452687** | **10452687** | **10975782** | **10461197** | **2167585** | **2747851** | **2940044** | **3004030** | **2710918** | **8263676** | **7704836** | **7817052** | **7971752** | **7750279** |
| **JAMMU & KASHMIR** | **134283** | **106247** | **122540** | **153165** | **261993** | **134283** | **106247** | **122540** | **95714** | **105788** | **0** | **0** | **0** | **57451** | **156205** | **11907044** | **11454542** | **9830181** | **11686661** | **11752683** | **1477005** | **1216613** | **1269058** | **1262324** | **1313912** | **10430039** | **10237929** | **8561123** | **10424337** | **10438771** |
| **KARNATAKA** | **2244432** | **2173522** | **2092887** | **2174466** | **2491995** | **1229813** | **1043592** | **933093** | **792957** | **870560** | **1014619** | **1129930** | **1159794** | **1381509** | **1621435** | **69141496** | **68541848** | **67679334** | **67342979** | **66611282** | **7027402** | **7100130** | **7320502** | **7257169** | **6953582** | **62114094** | **61448018** | **60358832** | **60085810** | **59657700** |
| **KERALA** | **2111703** | **1908546** | **1777687** | **1314199** | **1301020** | **1999633** | **1808479** | **1677609** | **1168981** | **1069835** | **112070** | **100067** | **100078** | **145218** | **231185** | **39163429** | **43487931** | **43661839** | **44496541** | **44341235** | **9106689** | **10838850** | **10928286** | **10958555** | **10675401** | **30056740** | **32645121** | **32733553** | **33537986** | **33665924** |
| **MADHYA PRADESH** | **1023788** | **927255** | **835329** | **682903** | **941463** | **714319** | **656829** | **572546** | **278813** | **291409** | **309469** | **270426** | **262783** | **404090** | **650054** | **69579554** | **76672024** | **74601862** | **76745068** | **79415899** | **5202784** | **6053950** | **6302009** | **6338735** | **5967668** | **64376770** | **70618074** | **68299853** | **7040633** | **73448231** |
| **MAHARASHTRA** | **1879865** | **1497466** | **1372108** | **1336200** | **1363597** | **1419352** | **1135855** | **935736** | **849237** | **749978** | **460513** | **361611** | **436372** | **486963** | **613619** | **93901121** | **94405344** | **92898783** | **92931149** | **94330535** | **6504338** | **6819600** | **7128441** | **6900110** | **6954366** | **87396783** | **8758744** | **85770342** | **86031039** | **87736169** |
| **NORTH-EAST** | **120982** | **107165** | **94304** | **97749** | **148699** | **120802** | **106895** | **94064** | **74363** | **81557** | **180** | **270** | **240** | **23386** | **67142** | **12567426** | **11870513** | **12125079** | **12135666** | **12075363** | **1668616** | **1721794** | **1465344** | **1366299** | **1350345** | **10898810** | **10148179** | **10659735** | **10769367** | **10725018** |
| **ODISHA** | **292156** | **240180** | **211088** | **203292** | **299019** | **279674** | **227956** | **195006** | **157117** | **193146** | **12482** | **12224** | **16082** | **46175** | **105873** | **34291643** | **33095265** | **33220532** | **33352612** | **33427104** | **5028558** | **5545728** | **5905152** | **6372565** | **6246307** | **29263085** | **27549537** | **27315380** | **26980047** | **27180797** |
| **PUNJAB** | **1006783** | **800282** | **701626** | **687059** | **797070** | **586185** | **415876** | **337178** | **250991** | **258750** | **420598** | **384406** | **364448** | **436068** | **538320** | **35965443** | **39310071** | **39230991** | **39029272** | **38188112** | **4541692** | **5269546** | **5679305** | **5834048** | **5307331** | **31423751** | **34040425** | **33551686** | **33195224** | **32880781** |
| **RAJASHTHAN** | **738474** | **555812** | **482152** | **466324** | **645661** | **599739** | **458062** | **385204** | **276685** | **301005** | **138783** | **97750** | **96948** | **189639** | **344656** | **67360220** | **66082103** | **65442074** | **65088980** | **64889528** | **5566135** | **5668470** | **6115055** | **6360921** | **6178117** | **61794085** | **60413663** | **59327019** | **58728059** | **58711411** |
| **TAMILNADU** | **2547792** | **2233666** | **2035013** | **1942951** | **2271600** | **1737302** | **1463431** | **1281102** | **991348** | **1036242** | **810490** | **770235** | **753911** | **951603** | **1235358** | **89255920** | **82569330** | **81980717** | **80393617** | **81437095** | **9231908** | **11850637** | **12252922** | **11203679** | **9932629** | **80024012** | **70718693** | **69727795** | **69194938** | **71504466** |
| **UTTARPRADESH** | **891034** | **764619** | **654067** | **675390** | **1100583** | **2117300** | **1287598** | **580103** | **338416** | **392967** | **155616** | **131335** | **123964** | **336954** | **707616** | **152461358** | **166071201** | **159121798** | **117147555** | **122456850** | **14798037** | **17807467** | **17518289** | **8251894** | **16771930** | **141818097** | **148263734** | **141603509** | **142970674** | **149955890** |
| **WEST BENGAL** | **325905** | **249683** | **175136** | **238220** | **346007** | **319963** | **245381** | **170869** | **200681** | **229424** | **5942** | **4302** | **4267** | **37539** | **116583** | **58252043** | **58435589** | **55518767** | **54782961** | **57534536** | **1908182** | **1552139** | **2021069** | **2373244** | **2661598** | **56343861** | **56883450** | **53497698** | **52409717** | **54872938** |

**Source: Annual Reports, Department of Telecommunications, Ministry of Communications, Govt. of India.**

Total No. of Telephones both wireline and wireless provided by PSUs operators and private operators of all the States for the period 2016-17 to 2020-21 has been shown. It has been seen that among the States, South Indian States specially Tamilnadu, Karnataka have most wireline Telephones. PSUs operators shared most for wireline Telephone connections over private Telephone operators in almost all the States over the period 2016-17 to 2020-21. In case of wireless Telephone connections, Maharashtra has most wireless Telephone connection over the years and it has been seen that most of the wireless Telephone connections have been shared by the private Telephone operators. The main reason for the private players to come forefront in Telephone Industry is the good service provided with the schemes given time to time. South Indian States like Andhra Pradesh, Karnataka, Tamilnadu, Kerala have most the private operators for wireless Telephone connections over the years 2016-17 to 2020-21. It has also been seen that in all the states people have more wireless Telephone connections over the wireline. North Eastern States have a tendency to use more private operators for wireless Telephone connections over the years. Whereas, Eastern States like Odisha has a tendency to use less of private operators for wireless Telephone connections over the years.

**To highlight the Tele-density of Telephone connection in India and in all States over the years 2016-17 to 2020-21**

Tele-density means the No. of Telephones per 100 population. It is an important indicator of Telecom penetration.

**Table 3: Tele-density of Telephone connection in India over the years 2016-17 to 2020-21**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Item | | 2016-17 | 2017-18 | 2018-19 | 2019-20 | 2020-21 |
| Tele-density  (Telephones per 100 persons) | Overall | 93.01 | 93.27 | 90.10 | 88.66 | 88.15 |
| Rural | 56.98 | 59.25 | 57.50 | 57.87 | 60.17 |
| Urban | 171.52 | 166.64 | 159.66 | 153.68 | 141.29 |

**Source: Annual Reports, Department of Technology, Ministry of Communications, Govt. of India**

Overall Tele-density in India increased at the initial years from 2016-17 to 2017-18. But it decreased over the years from 2018-19 to 2020-21. Average Tele-density in India over the five years was 90.638. On the other hand, it has been seen that in rural areas, Tele-density increased over the years 2016-17 to 2020-21 with an average of 58.354. In urban areas, Tele-density was more than rural areas. In urban areas, it has been significantly observed that Tele-density decreased over the years. It shows that Govt. of India has a mission to spread Telephone connections to the remote areas of rural area. The average Tele-density in urban area was 158.558 which is a significant for urban areas.

**Table 4: Tele-density of Telephone connection in all States over the years 2016-17 to 2020-21**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| **Service Area**  **Service Area** | **Tele-density** | | | | | | | | | | | | | | | **Telephones** | | | | | | | | | | | | | | |
| **overall** | | | | | **Urban** | | | | | **Rural** | | | | | **Overall** | | | | | **Urban** | | | | | **Rural** | | | | |
| **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** | **2016-17** | **2017-18** | **2018-19** | **2019-20** | **2020-21** |
| **ANDHRA PPRADESH** | **97.18** | **97.88** | **97.48** | **98.31** | **97.00** | **192.02** | **182.21** | **182.87** | **124.91** | **121.97** | **60.35** | **65.02** | **64.13** | **80.76** | **80.07** | **86580485** | **88258159** | **88501659** | **88854503** | **88066774** | **47852971** | **46070866** | **46628329** | **44886770** | **44753352** | **38727514** | **42187473** | **41873330** | **43967733** | **43313422** |
| **ASSAM** | **66.97** | **65.29** | **70.35** | **68.66** | **69.62** | **152.63** | **165.82** | **176.53** | **167.16** | **169.89** | **50.25** | **45.09** | **48.66** | **50.88** | **51.35** | **21994249** | **21825710** | **23759015** | **23994397** | **24572589** | **8186981** | **9272825** | **10115449** | **8931356** | **9240509** | **13807268** | **12552885** | **13643566** | **15063041** | **15332080** |
| **BIHAR** | **60.99** | **61.92** | **59.27** | **52.71** | **53.54** | **186.98** | **159.17** | **40.76** | **114.67** | **117.72** | **46.25** | **45.10** | **43.10** | **41.47** | **41.80** | **84929755** | **87807793** | **84920819** | **84854105** | **87430717** | **36022612** | **32742858** | **31762208** | **28351626** | **29718221** | **48907143** | **55064935** | **53158611** | **56502179** | **57712496** |
| **GUJARAT** | **113.71** | **109.21** | **103.77** | **97.05** | **97.39** | **165.93** | **148.18** | **45.45** | **121.31** | **121.47** | **75.55** | **74.78** | **70.16** | **74.59** | **74.60** | **73198846** | **71596156** | **68734013** | **68538581** | **69710835** | **45099941** | **43532707** | **42275591** | **41187675** | **42274856** | **28098905** | **28060369** | **26458422** | **27350906** | **27435979** |
| **HARYANA** | **91.01** | **97.49** | **97.43** | **94.35** | **94.70** | **136.25** | **139.51** | **46.45** | **129.70** | **128.71** | **64.81** | **66.72** | **71.52** | **70.01** | **70.72** | **25392301** | **27819701** | **28165412** | **27720499** | **28178973** | **13942323** | **15926011** | **15345010** | **15537823** | **15839745** | **11449978** | **11893690** | **12820402** | **12182676** | **12339238** |
| **HIMACHAL PRADESH** | **147.86** | **145.89** | **148.81** | **149.90** | **142.49** | **409.03** | **332.97** | **401.85** | **474.25** | **460.64** | **112.65** | **120.13** | **113.48** | **112.84** | **106.04** | **10580608** | **10571383** | **10859954** | **11065743** | **10575823** | **3476746** | **2920115** | **3592552** | **3590107** | **3514705** | **7103862** | **7651268** | **7267402** | **7475636** | **7061118** |
| **JAMMU & KASHMIR** | **95.91** | **90.67** | **77.39** | **86.55** | **87.19** | **174.43** | **166.14** | **154.16** | **153.07** | **154.45** | **65.23** | **60.65** | **46.54** | **58.11** | **58.06** | **12041327** | **11560789** | **9952721** | **11839826** | **12014676** | **6152118** | **6027681** | **5682314** | **6271418** | **6431182** | **5889209** | **5533108** | **4270407** | **5568408** | **5583494** |
| **KARNATAKA** | **113.39** | **110.83** | **108.52** | **104.20** | **102.89** | **198.06** | **177.31** | **163.99** | **146.20** | **143.88** | **58.81** | **66.96** | **71.40** | **72.09** | **70.93** | **79385128** | **70721670** | **69772221** | **69517445** | **69103277** | **48876459** | **44981081** | **42270617** | **42262175** | **42336475** | **22509469** | **25740589** | **27501604** | **27255270** | **26766802** |
| **KERALA** | **114.75** | **125.12** | **124.65** | **129.00** | **127.98** | **248.35** | **266.24** | **267.61** | **98.16** | **97.24** | **69.53** | **77.55** | **76.57** | **202.73** | **209.80** | **41275132** | **45392917** | **45439526** | **45810740** | **45642345** | **22587028** | **24350231** | **24550754** | **24576923** | **25209605** | **18688104** | **21042286** | **20888772** | **21233117** | **20432740** |
| **MADHYA PRADESH** | **67.07** | **72.16** | **69.29** | **68.14** | **69.85** | **128.86** | **139.18** | **136.60** | **131.87** | **135.77** | **43.52** | **46.23** | **43.01** | **43.19** | **43.83** | **70603342** | **77599279** | **75437919** | **77427971** | **80357062** | **37433508** | **41754166** | **48717817** | **42162844** | **44208288** | **33169834** | **35845133** | **33679374** | **35265127** | **36149074** |
| **MAHARASHTRA** | **95.88** | **94.46** | **91.99** | **94.09** | **95.34** | **143.70** | **133.30** | **132.59** | **144.60** | **147.67** | **68.20** | **71.37** | **67.45** | **66.83** | **67.18** | **95780986** | **95902810** | **94270891** | **94267349** | **95694132** | **52638977** | **50464227** | **51177326** | **50773240** | **51859301** | **43142009** | **45438583** | **43093565** | **43494109** | **43834831** |
| **NORTH-EAST** | **89.94** | **83.49** | **84.36** | **79.29** | **78.50** | **176.42** | **184.26** | **175.40** | **116.54** | **116.19** | **60.51** | **48.51** | **52.39** | **60.66** | **59.12** | **12688408** | **11977668** | **12219383** | **12233415** | **12224062** | **6319484** | **6810369** | **6603727** | **5996097** | **6143096** | **6368984** | **5167309** | **5615656** | **6237318** | **6080966** |
| **ODISHA** | **80.74** | **76.86** | **76.53** | **76.28** | **76.42** | **184.01** | **144.21** | **144.48** | **144.29** | **143.36** | **58.18** | **61.82** | **61.15** | **60.89** | **61.08** | **34583799** | **33335445** | **33431620** | **33555904** | **33726123** | **14129864** | **11418425** | **11647720** | **11715197** | **11796012** | **20453935** | **21917020** | **21783900** | **21840707** | **21930111** |
| **PUNJAB** | **118.28** | **126.08** | **124.24** | **126.15** | **127.12** | **165.52** | **180.20** | **177.68** | **192.80** | **187.22** | **80.51** | **81.14** | **78.85** | **75.36** | **73.28** | **36972226** | **40110353** | **39932617** | **39716331** | **38985182** | **22985344** | **26005246** | **26229648** | **26253191** | **25886223** | **13986862** | **14105107** | **13702969** | **13463140** | **13098959** |
| **RAJASHTHAN** | **92.02** | **88.15** | **86.15** | **82.95** | **81.99** | **186.76** | **164.08** | **169.72** | **144.27** | **141.21** | **61.73** | **63.76** | **59.22** | **61.07** | **60.70** | **68098694** | **66637945** | **65924226** | **65555304** | **65535189** | **33481675** | **30157082** | **31645820** | **29980264** | **29839526** | **34617019** | **36480863** | **34278406** | **35575040** | **35695663** |
| **TAMILNADU** | **128.41** | **117.59** | **115.93** | **105.73** | **107.08** | **150.61** | **134.74** | **124.88** | **141.30** | **141.86** | **93.88** | **89.02** | **100.39** | **65.59** | **67.11** | **91803712** | **84802996** | **84015730** | **82341568** | **83708695** | **65527953** | **60718565** | **57423823** | **58349019** | **59298375** | **26276119** | **24084431** | **26591907** | **23992549** | **24410320** |
| **UTTARPRADESH** | **74.03** | **70.01** | **66.10** | **66.73** | **68.73** | **167.56** | **140.29** | **136.49** | **120.80** | **124.16** | **46.06** | **48.74** | **44.78** | **49.44** | **50.85** | **172126988** | **166835820** | **159775865** | **161169029** | **167828343** | **117807943** | **77676777** | **76828616** | **70687142** | **73937911** | **79050206** | **89159043** | **82947249** | **90481887** | **93890492** |
| **WEST BENGAL** | **73.59** | **72.77** | **68.53** | **66.14** | **70.13** | **162.71** | **164.78** | **157.59** | **110.55** | **118.53** | **58.54** | **57.18** | **49.95** | **53.63** | **55.48** | **58577948** | **58685272** | **55693903** | **55021181** | **57880543** | **18718538** | **19268899** | **21010186** | **20990995** | **22729981** | **39859410** | **39416373** | **34683087** | **34030186** | **35150562** |

**Source: Annual Reports, Department of Telecommunications, Ministry of Communications, Govt. of India.**

Tele-density of all the service areas relating to all the States has been shown. From the above table it has been seen that Himachal Pradesh has highest Tele-density (147.86 to 142.49 over the period of 2016-17 to 2020-21) followed by Tamilnadu (128.41 to 107.08), Punjab (118.28 to 127.12), Kerala (114.75 to 127.98) and Gujarat (113.71 to 93.79). Whereas, Bihar has lowest Tele-density (60.99 to 53.54 over the period 2016-17 to 2020-21) followed by Assam (66.97 to 69.62), Madhya Pradesh (67.07 to 69.85), West Bengal (73.59 to 70.13) and Uttar Pradesh (74.03 to 68.73). Tele-density in urban area is more than rural area over the years 2016-17 to 2020-21 in the service areas of all the States. It has been significantly seen that in all the service areas of the States Telephone connection in rural areas has been increasing over the years.

**Conclusion**

Telecom Industry in India is the second largest network connection in the world. In this article, we have seen that Telephone connection in rural area has been increasing over the years. It has also been noticed that private telephone operators shared maximum over PSUs telephone operators. No. of wireless connection is more than wireline over the years. So, People have a tendency to use smart phones over landlines. Regarding the service areas of all the States, it has been seen that private telephone operators played dominant role over PSUs regarding wireless and wireline connections. We have concluded that Tele-density in India has been gradually decreasing over the years and Tele-density in rural areas is significantly increasing over the years but in urban area, it is gradually decreasing. Tele-density in all the states has been increasing over the years and urban shared most over rural areas.

**References**

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