



**RWANDA  
UTILITIES  
REGULATORY  
AUTHORITY**

**STATISTICS AND TARIFF INFORMATION IN TELECOM SECTOR AS OF  
DECEMBER 2015**

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## **1. PRELIMINARY REMARKS**

The information compiled in this report is from telecom companies, Internet Service Providers and 4G retailers.

Subscription in this context an “active subscriber” is defined as one that has generated revenue within three months of the quarter under review.

## **2. SUMMARY**

This is a fourth quarter report for 2015; it covers the period from October to December 2015. This report includes information on mobile telephone, fixed telephone, internet, tariffs (voice call tariff, and data tariff), traffic, revenues, investment and employment in telecommunication sector.

In the period under review, the mobile telephone subscriptions increased from 8,510,950 recorded in the third quarter 2015 to 8,759,619 that was recorded in the fourth quarter 2015, this portrays a 3% increase. Mobile telephone penetration rate rose to 77.8% as compared to 75.49% recorded at the end of the previous quarter.

Fixed telephone subscriptions in this quarter fell by 62.8% from 45,619 recorded in the third quarter 2015 to 16,983 in this quarter under review. This decrease in fixed telephone subscribers is attributed to CDMA, and inactive telephones in Kigali and other parts of the country that have continued to be disconnected by Liquid telecom Ltd.

On internet data segment, the number of internet subscriptions as of December 2015 increased to 3,784,896 from 3,749,212 recorded in the third quarter. This represents an internet penetration rate of 33.5%.

### 3. MOBILE AND FIXED TELEPHONE SUBSCRIPTIONS

As of December 2015, operators offering mobile telephony services included MTN Rwanda Ltd, TIGO Rwanda Ltd and AIRTEL Rwanda Ltd, and those offering fixed telephone services were Liquid Telecom Ltd and MTN Rwanda Ltd.

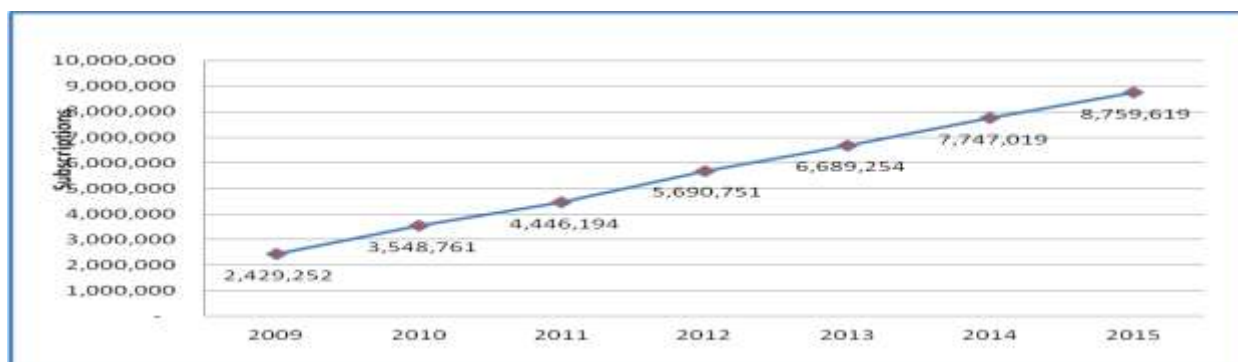
**Table 1. Number of mobile and fixed telephone service subscriptions per operator as of December 2015**

Operators Name	Active Subscribers		Fixed Teledensity	Mobile Teledensity	General Teledensity
	Mobile Active subscribers	Fixed Telephony			
			0.15	77.8	78.0
MTN Rwanda Ltd	4,119,188	15,497			
TIGO Rwanda Ltd	3,061,642	N/A			
Airtel Rwanda Ltd	1,578,789	N/A			
Liquid Telecom Ltd	N/A	1,486			
<b>Total</b>	<b>8,759,619</b>	<b>16,983</b>			

Source: RURA operators' returns'

The number of fixed telephones subscriptions decreased from 45,619 recorded in the third quarter to 16,983 in the fourth quarter. This decrease is mainly due to CDMA and inactive fixed telephones disconnection and the widespread use of mobile telephones which are more convenient to use.

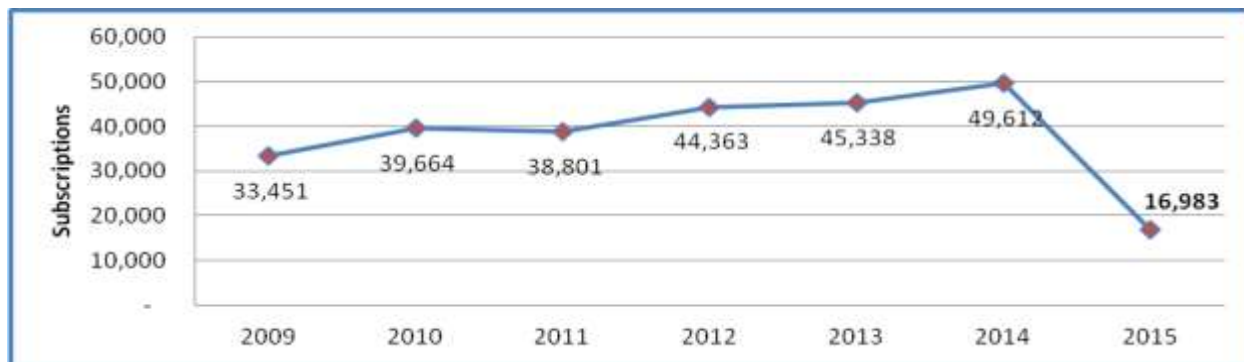
**Figure 1: Development of Mobile telephone Subscriptions**



Source: RURA operators' returns'

The annual increase in mobile telephone subscriptions is 13%, from 7,747,019 subscriptions in December 2014 to 8,759,619 that were recorded in December 2015. The increase is mainly attributed to Burundian refugees, promotional tariffs and calling packs and airtime, popularity of mobile based applications such as social media and financial applications, together with mobile network roll out.

**Figure 2: Development of fixed telephone Subscribers**



The year 2015, recorded a decrease of 66% in fixed telephone subscribers where by the numbers decreased from 49, 612 connections in 2014 to 16,983 connections in 2015. The diffusion of mobile telephones has made people to shift from using fixed phones to mobile telephones. Secondly Liquid Telecom ltd, that has been the main operator in fixed telephones has disconnected inactive fixed telephones all over the country and the CDMA phones in up country.

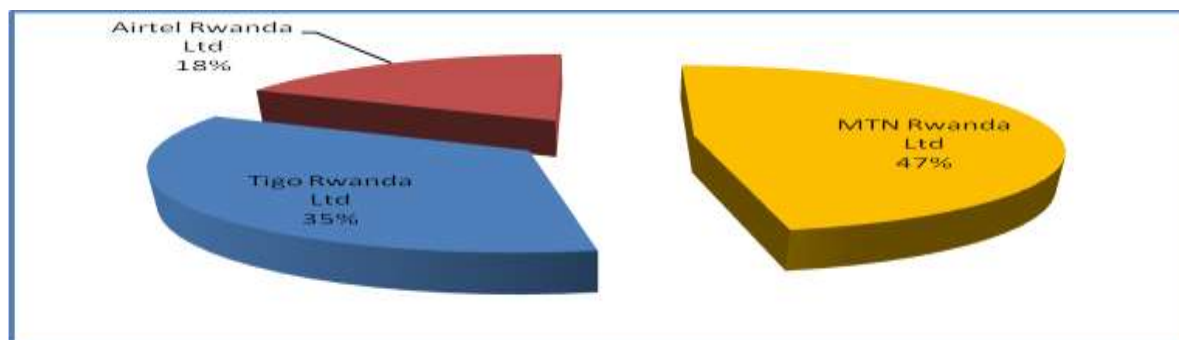
**Table 2. International average roaming subscribers' as of the December 2015**

	Incoming	Outgoing
MTN Rwanda Ltd	165,875	170,849
TIGO Rwanda Ltd	21,248	36,547
AIRTEL Rwanda Ltd	112,115	44,223
Total	299,238	251,619

Source: RURA operators' returns'

#### 4. MARKET SHARE AND COVERAGE

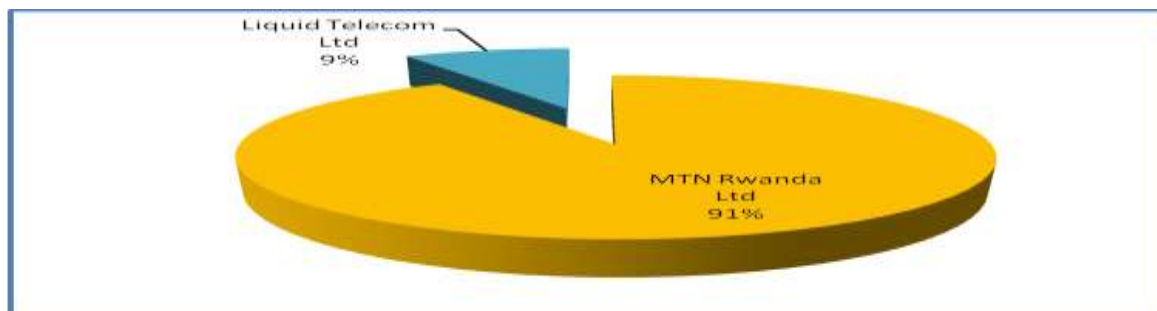
**Figure 3: Mobile Telephone subscribers market share per operator as of the December 2015**



Source: RURA operators' returns'

MTN Rwanda Ltd continued to show the biggest market share in the third quarter 2015 of 47%, Tigo Rwanda followed with 35 % and Airtel Rwanda has the least market share of 18%.

**Figure 4: Fixed telephone service Market share per operator as of December 2015**



Source: RURA operators' returns'

The continued disconnection of fixed telephones by Liquid Telecom Ltd has moved it from being with the largest market to the least market share of 9%, and gave MTN Rwanda to have the largest market share in this segment with 91%.

**Table 3. Mobile telephone network coverage per type of technology and per operator as of December 2015**

Operator	2G	2.5G	3G	3.5G
<b>GEOGRAPHIC COVERAGE</b>				
<b>MTN Rwanda Ltd</b>	99.11%	99.11%	68.92%	68.92%
<b>TIGO Rwanda Ltd</b>	89.06%	89.06%	15.74%	15.74%
<b>AIRTEL Rwanda Ltd</b>	92.02%	92.02%	17.00%	17.00%
<b>POPULATION COVERAGE</b>				
<b>MTN Rwanda Ltd</b>	99.91%	99.91%	88.01%	88.01%
<b>TIGO Rwanda Ltd</b>	99.98%	99.98%	52.43%	52.43%
<b>AIRTEL Rwanda Ltd</b>	93.45	93.45	23.15	23.15

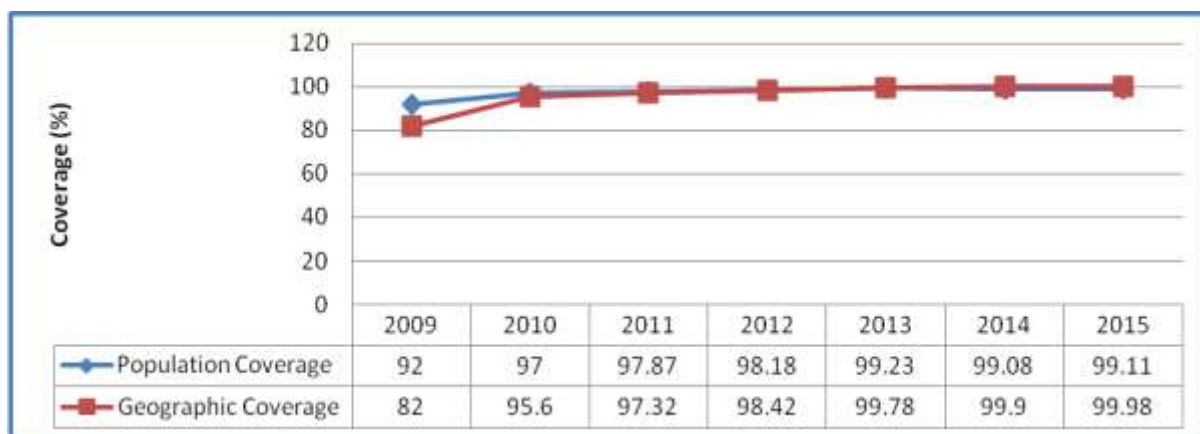
Source: RURA operators' returns'

Geographically MTN 2G and 2.5 Network covers 99.11% of the total land area, followed by Airtel Rwanda Ltd with 92.02 % and 89.06% for TIGO Rwanda. This geographic network gives the opportunity to 99.91% of the population to access 2G and 2.5G networks of MTN Rwanda Ltd, 99.98% of TIGO Network and 93.45% of AIRTEL network.

3G and 3.5G mobile technologies were deployed geographically by MTN Rwanda Ltd at the level of 68.92%, Tigo Rwanda Ltd at 15.74%, and 17% for Airtel Rwanda Ltd as of December 2015.

**Figure 5: Geographic and population network coverage Trend**





## 5. VOICE TARIFF STRUCTURE

### Mobile telephone tariff structure

Table 4. Mobile telephone voice tariff (in Rwf) per minute) per operator as of December 2015.

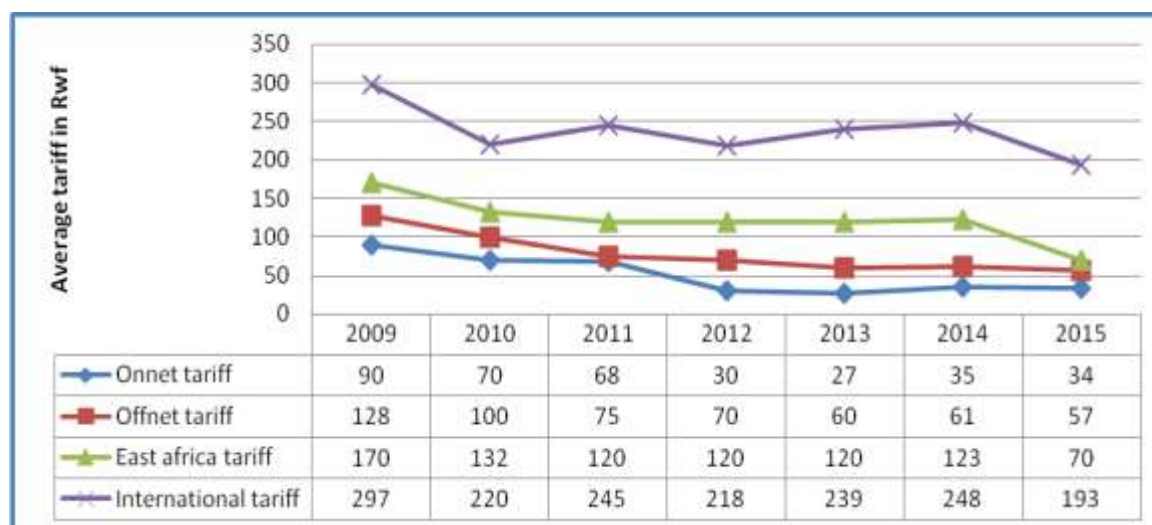
Destination	MTN Rwanda Ltd		Tigo Rwanda Ltd	Airtel Rwanda Ltd
	Prepaid	Postpaid		
<i>Onnet Tariff</i>	46		35	25 <sup>[[1]]</sup> /31 <sup>[[2]]</sup>
<i>Offnet tariff</i>	60		60	<a href="#">62(46)[[3]]</a>
<i>One Area Network</i>	<b>70</b>		70	70
<a href="#">US/Canada/China/India/Belgium[2]</a>	51			29 <sup>[[4]]</sup> /50 <sup>[[5]]</sup>

Table 5: Fixed telephone service tariff structure

Fixed Telephone Tariff	Liquid Rwanda Ltd	MTN Rwanda Ltd
<b>On net</b>	20	46
<b>Off net</b>	90	60
<b>Regional</b>	135	70
<b>Rest of Africa</b>	155	255

Source: RURA operators' returns'

Figure 6: Voice Tariff Trend (Frw per minute)



Source: RURA operators' returns'

Table 6 : SMS tariff structure

SMS	On net Tariff	Off net tariff	One area Network
MTN Rwanda Ltd	12	60	45
Airtel Rwanda Ltd	11	22	11
Tigo Rwanda Lt d	11	26	45

Source: RURA operators' returns'

## 6. TRAFFIC STATISTICS

6.1 Voice total outgoing and incoming mobile calls (In Minutes)

Table 7. Outgoing and Incoming traffic as of December 2015 per operator

Destination	MTN Rwanda Ltd	Airtel Rwanda Ltd	Tigo Rwanda Ltd	Total
<b>Outgoing traffic</b>				
On net	779,496,900	750,610,683	1,166,312,647	2,696,420,230
Off net	11,873,462	9,435,455	8,970,927	30,279,844
International	25,715,368	2,595,525	2,471,897	30,782,790
<b>Incoming traffic</b>				
Off net	19,372,602	3,086,608	27,087,680	49,546,890
International	15,357,061	4,349,161	4,708,000	24,414,222

Source: RURA operators' returns'

6.2 Voice total outgoing and incoming roaming traffic (In Minutes)

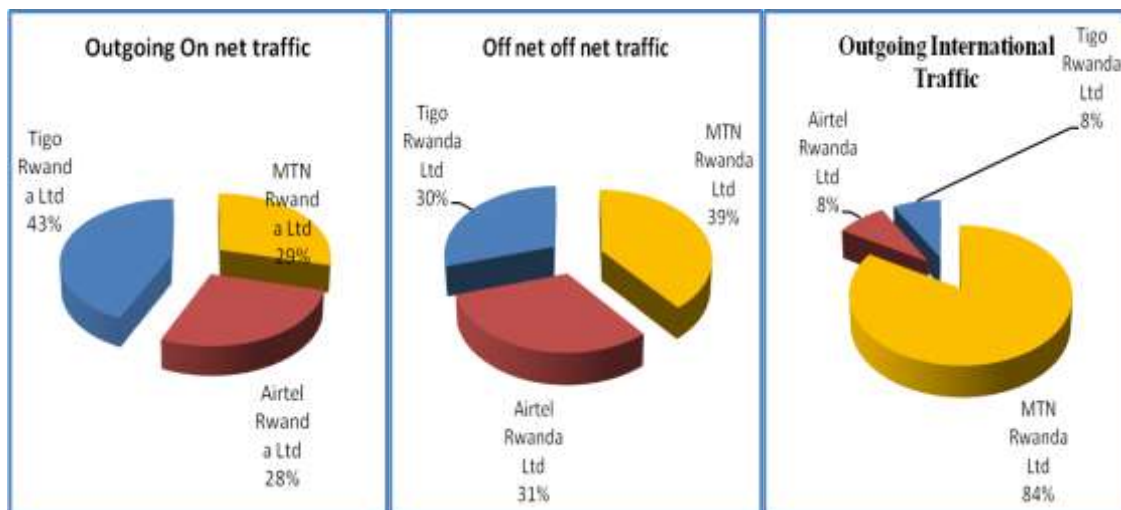
Table 8. Outgoing and Incoming Roaming traffic as of December 2015 per operator

Destination	MTN Rwanda Ltd	Tigo Rwanda Ltd	Airtel Rwanda ltd	Total
-------------	----------------	-----------------	-------------------	-------

<b>Incoming</b>	3,878,860	888,676	3,952,982	8,720,518
<b>Outgoing</b>	1,376,044	5,347,751	10,849,848	17,573,643

Source: RURA operators' returns'

**Figure 7: Outgoing on net, off net and international voice traffic market share per operator as of December 2015**



### 6.3 Data Traffic

**Table 9: Mobile data traffic as of December 2015**

Operator	Data Traffic
<b>MTN Rwanda Ltd</b>	624,674,4913
<b>Airtel Rwanda Ltd</b>	379,077,036
<b>Tigo Rwanda Ltd</b>	266,009,529
<b>Total</b>	<b>645,711,239</b>

Source: RURA operators' returns'

## 7. STATUS OF INTERNET SERVICE PROVISION

### 7.1. Licensed Operators

**Table 10. Licensed internet service providers as of December 2015**

ISPs	Licensed From (Year)	Status
<b>Internet Service Providers</b>		
<b>MTN Rwanda Ltd</b>	2006	Operational
<b>Liquid Telecom Ltd</b>	2014	Operational
<b>TIGO Rwanda Ltd</b>	2008	Operational

<b>New Artel Ltd</b>	2004	Operational
<b>ISPA Ltd</b>	2006	Operational
<b>4G NETWORKS Ltd</b>	2009	Operational
<b>BSC Ltd</b>	2010	Operational
<b>AIRTEL Rwanda Ltd</b>	2011	Operational
<b>AXIOM</b>	2014	Operational
<b>4G LTE Wholesaler</b>		
<b>Olleh Rwanda Network(ORN)</b>	2013	Operational
<b>4G LTE Retailers</b>		
<b>GMAX</b>	2014	Operational
<b>Intercom Technologies</b>	2014	
<b>4NetAfrica Ltd</b>	2014	Operational
<b>Piramie Inc</b>	2014	
<b>Twinning in Corporation</b>	2015	
<b>Simba Supermarket</b>	2015	Operational
<b>TRUCONNECT ltd</b>	2015	Operational
<b>POPCORN Ltd</b>	2015	Operational
<b>Suku NSA Ltd</b>	2015	

Source: RURA operators' returns'

## 7.2. Internet Subscribers

The table below illustrates the breakdown of internet subscribers per category and per operator

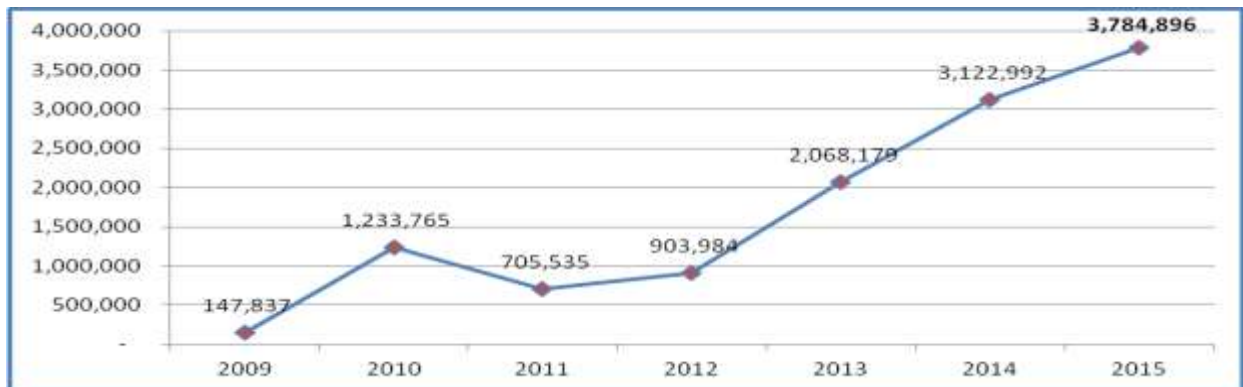
**Table 11. Internet subscribers per category per operator as of December 2015**

<b>Operator</b>	<b>Fixed internet</b>			<b>Total internet subscribers</b>
	<b>Narrowband (≤256kbps)</b>	<b>Broadband (≥256kbps)</b>	<b>Mobile Internet</b>	
<b>Liquid Telecom Ltd</b>	12	371		383

<b>MTN Rwanda Ltd</b>	419	19075	1,574,441	1,593,516
<b>TIGO Rwanda Ltd</b>		115	1,505,773	1,505,888
<b>New Artel Ltd</b>	16	45	85	146
<b>ISPA Ltd</b>	38	116		154
<b>4G Networks Ltd</b>		110	146	256
<b>BSC Ltd</b>		1,176	1,088	2,264
<b>Axiom Networks Ltd</b>		89	17	106
<b>Airtel Rwanda Ltd</b>		28	681,648	681,676
<b>GMAX LTE</b>			109	109
<b>POPCONN Ltd</b>			280	280
<b>TRUCONNECT</b>			73	73
<b>4NET</b>			45	45
<b>Total</b>	<b>485</b>	<b>21,125</b>	<b>3,763,705</b>	<b>3,784,896</b>

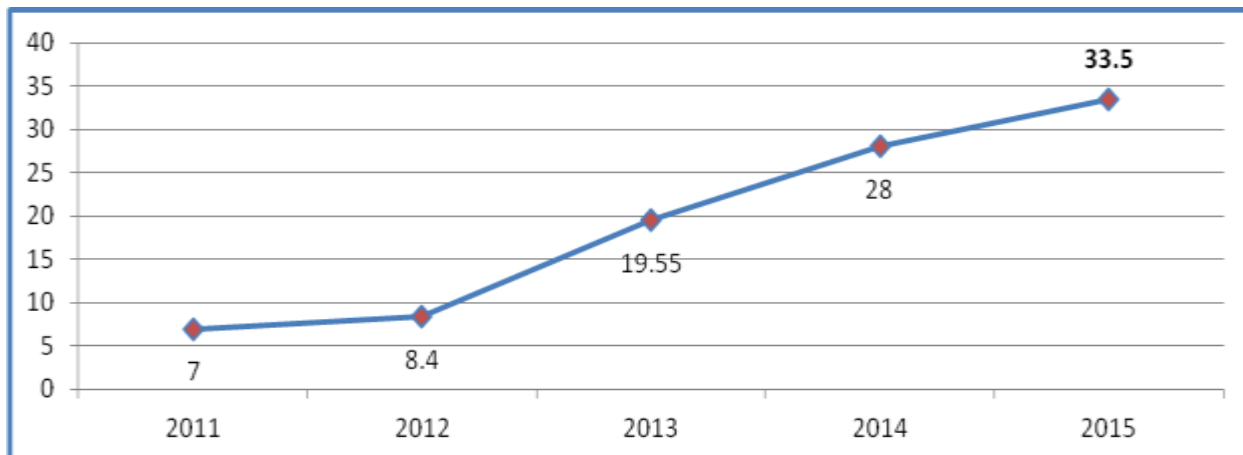
Source: RURA operators' returns'

**Figure 8: Trend in total internet Subscribers up to December 2015**



Source: RURA operators' returns'

**Table 12. Internet penetration rate trend up to December 2015**



### 7.3. International Internet Bandwidth

**Table 13: International internet bandwidth (Mbps) per operator as of December 2015**

Type	MTN Rwanda Ltd	Liquid Telecom Ltd	New Artel Ltd	Tigo Rwanda Ltd	Airtel Rwanda ltd	ISP A	4G Networks Ltd	BS C	Axiom Networks Ltd	Total
UP Link	1552	1000	60	900	20	130	110	2440	120	12,664
Down Link	1552	1000	60	900	20	130	110	2440	120	

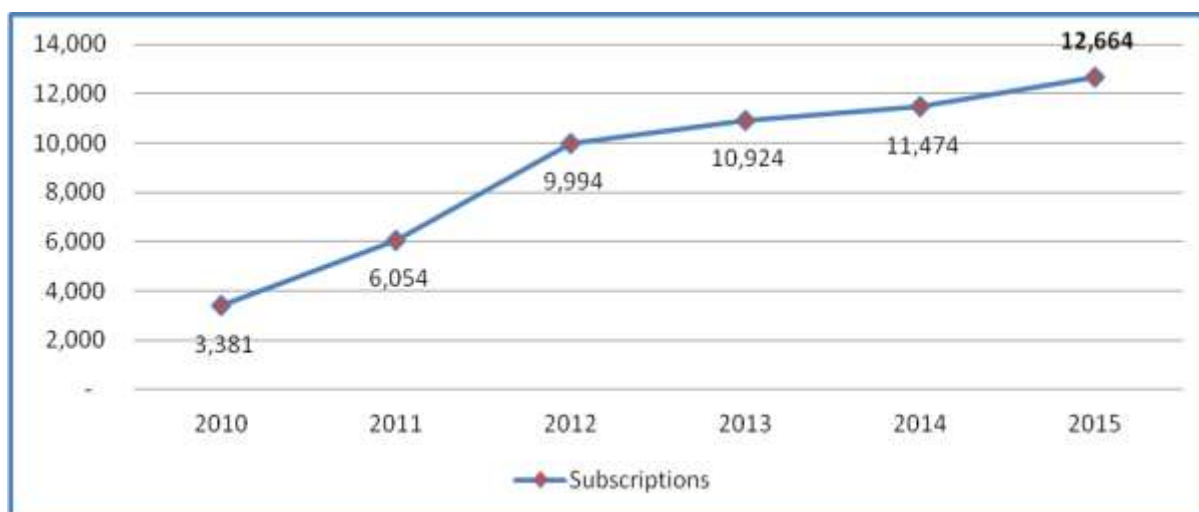
Source: RURA operators' returns'

**Table 14. 4G Geographic and Population coverage by ORN**

Network coverage	Geographic Coverage	Population Coverage
Overall coverage	6	20
City of Kigali	75	93
Northern Province	3	6
Eastern Province	4	13
Southern Province	2	8
Western Province	4	13

Source: RURA operators' returns'

**Figure 9: Trend in International Internet bandwidth**

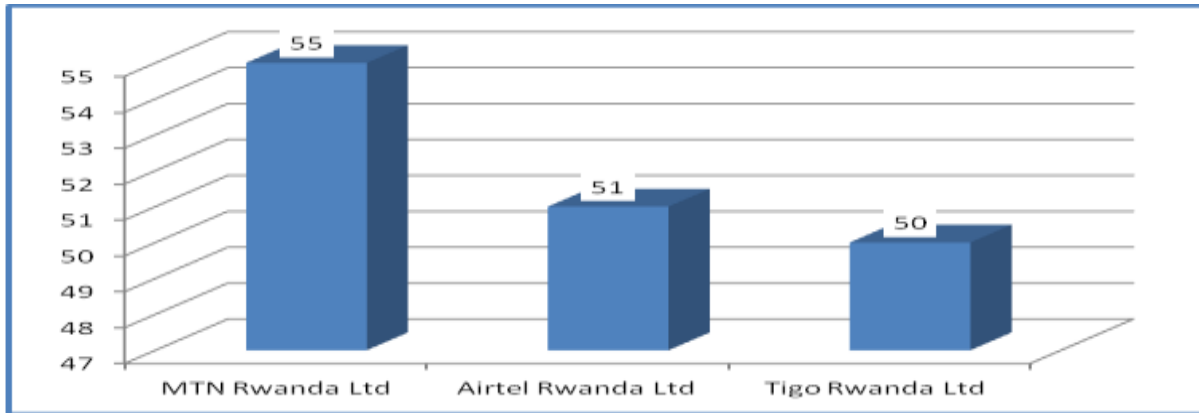


Source: RURA operators' returns'

## 7.4. Internet Tariff

### 7.4.1 Mobile Internet Tariff

**Figure 10: Standard mobile Internet tariff (Rwf/Mb) as of December 2015**



Source: RURA operators' returns

## 7.4.2 Fixed Internet Tariff

**Table 15. Fixed Internet tariffs per operator as of December 2015 (In Rwf VAT inclusive)**

		<b>Liquid Telecom Ltd</b>	<b>MTN Rwanda Ltd</b>	<b>Tigo Rwanda Ltd</b>	<b>ISP A</b>	<b>New Artel Ltd</b>	<b>BSC</b>	<b>Axiom Networks Ltd</b>	<b>4G Networks Ltd</b>
<b>Wireless</b>	128/64 Kbps Residential	64,900		66,150	59,000				
	128/64 Kbps Business	64,900							
	128/128 Kbps					59,000			
	256/128 Kbps	236,000			118,000				
	256/256 Kbps					118,000			41,595
	384/192 Kbps	354,000		132,300					
	512/512Kbps		210,000						62,540
	512/256Kbps	743,400							
	1Mbps	1,534,000		264,600		300,000		297,362	103,250
	1Mbps dedicated								236,000
	2 Mbps dedicated								413,000
	2 Mbps			480,000				467,282	
	3Mbps			720,000				594,723	
	5Mbps Dedicated						180,000		743,400
	4Mbps			840,000					
	5Mbps			1,050,000					
6Mbps			1,260,000						
7Mbps			1,470,000						
8Mbps			1,680,000						



				0					
	9Mbps			1,890,000					
	10Mbps			2,100,000					
<b>Fiber</b>	64 Kbps	50,150							
	128Kbps	100,300							
	256Kbps	141,600							
	512Kbps	177,000	210,000						
	1Mbps	354,000							
	2Mbps	590,000							
	3Mbps	826,000					270,000		
	4Mbps	1,062,000							
	5Mbps	1,298,000							
	6Mbps	1,534,000							
	7Mbps	1,770,000							
	8Mbps	2,006,000							
9Mbps	2,242,000								
10Mbps	2,478,000								
<b>Copper</b>	64 Kbps Data Copper- Kigali	101,511							
	64 Kbps Data Copper-Up country	185,222							
	128 kbps Data Copper- Kigali	147,184							
	128 kbps Data Copper-Up	268,933							
							630,000		

	country						
	256kbps-DATA(Copper-kigali)	213,166					
	256kbps-DATA(copper-Up country)	415,360					
	512kbps DATA(Copper)	296,405					
	1024kbps DATA(Copper)	479,117					
	2048kbps DATA(Copper)	544,079					
	EVDO	35,000					
<b>Fixed</b>	1Mbps					534,963	438,480
	2 Mbps					900,579	
	3Mbps					1,134,003	

Source: RURA Operators' returns'

**Table 16: Bandwidth tariff (in Rwf VAT inclusive)**

<b>VOLUME BASED TARIFFS</b>	<b>In Rwf</b>
<b>1GB or less(price per 1GB)</b>	3,226
<b>1-3GB(Price per 1GB)</b>	3,011
<b>3-10GB(Price per 1GB)</b>	2,797
<b>10-100GB(Price per 1GB)</b>	2,710
<b>Above 100GB and unlimited(Price per 1GB)</b>	2,581
<b>wholesale monthly products packs</b>	
<b>MUP 500MB/Day</b>	15,486
<b>MUP smart 500MB+500MB per day</b>	17,208
<b>MUP 1GB/Day</b>	30,973
<b>MUP 2GB/Day</b>	61,946
<b>MUP 4GB/Day</b>	123,893
<b>Smart Business 100GB/Month</b>	197,885
<b>Others</b>	
<b>Dark Fiber LEASE (Rwf/Core/Km)</b>	27,756
<b>Domestic shared Capacity Service</b>	80,015
<b>International Capacity</b>	68,830

Source: RURA operators' returns

**Table 17: Trend in Telecom Revenues for the year 2015(in million Rwf)**

	Quarter1	Quarter 2	Quarter 3	Quarter 4	Total
<b>Total MNOs Revenues</b>	44,539	43,390	45,388	44,080	177,399
<b>Total ISPs, 4G Retailers, ORN and Liquid Revenues</b>	2,419	2,513	4,829	4,284	14,046
<b>Total</b>	46,958	45,903	50,218	48,365	191,446

Source: RURA operators' returns'

**Table 18: Trend in Telecom investment for the year 2015(in million Rwf)**

	Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total
<b>Total Investment</b>	3,702	15,214	6,501	18,382	43,799

## 8. EMPLOYMENT IN TELECOMMUNICATION SECTOR

957 people are employed in Telecommunication sector, 785 are permanent staffs and 150 are temporary staffs. 22% of these staff is women and 78% are male as it is shown in the following table;

**Table 19: Number of staffs employed in Telecommunication sectors as of December 2015**

Operator	Temporary	Female	Foreign	Permanent	Total staff
<b>MTN Rwanda Ltd</b>	22	73	12	230	252
<b>Tigo Rwanda Ltd</b>	0	37	21	204	204
<b>Airtel Rwanda Ltd</b>	70	51	17	93	185
<b>Liquid Telecom Ltd</b>	34	10	3	64	98
<b>BSC Ltd</b>	9	6	0	16	25
<b>4G Networks Ltd</b>	5	2	0	3	8
<b>ISPA Ltd</b>	0	3	0	19	19
<b>New Artel Ltd</b>	0	4	0	45	45
<b>Axiom Networks Ltd</b>	4	1	0	25	29
<b>ORN</b>	6		25	86	92
<b>Total</b>	<b>150</b>	<b>187</b>	<b>78</b>	<b>785</b>	<b>957</b>

Source: RURA operators' returns'

**Figure 11: Employment status in Telecommunication Sector (by gender) as of December 2015**

