

POSTAL AND TELECOMMUNICATIONS REGULATORY AUTHORITY OF ZIMBABWE (POTRAZ)



ABRIDGED ANNUAL POSTAL AND TELECOMMUNICATIONS SECTOR PERFORMANCE REPORT

2017

Disclaimer:

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TABLE OF CONTENTS

1. EXECUTIVE SUMMARY	4
2. SUBSCRIPTIONS	7
2.1 MOBILE SUBSCRIPTIONS	7
2.2 FIXED TELEPHONY SUBSCRIPTIONS	9
2.3 DATA & INTERNET SUBSCRIPTIONS	10
3. PENETRATION RATES	12
3.1 FIXED TELEDENSITY	12
3.2 MOBILE PENETRATION RATE.....	12
3.3 INTERNET PENETRATION RATE	13
4. TRAFFIC AND USAGE PATTERNS	14
4.1 VOICE TRAFFIC	14
4.2 INTERNET & DATA TRAFFIC.....	16
4.3 POSTAL & COURIER VOLUMES.....	17
5. REVENUES & INVESTMENT	19
5.1 MOBILE.....	19
5.3 IAP REVENUES & INVESTMENT.....	20
6. MOBILE MONEY	21
6.1 SUBSCRIPTIONS	21
6.2 MOBILE MONEY AGENTS	22
6.3 VALUE OF TRANSACTIONS.....	23
7. TELECOMMUNICATIONS INFRASTRUCTURE	24
7.1 MOBILE BASE STATIONS	24
7.2 NATIONAL BACKBONE FIBRE LENGTH.....	26
8. INTERNATIONAL INTERNET BANDWIDTH.....	27
9. EMPLOYMENT.....	28
9.1 FIXED NETWORK	28
9.2 MOBILE NETWORK OPERATORS	29
9.3 INTERNET ACCESS PROVIDERS	29
9.4 POSTAL & COURIER	30
10. OUTLOOK	31

LIST OF FIGURES

Figure 1: Growth in active mobile subscriptions	7
Figure 2: Market share of mobile subscribers.....	8
Figure 3: Fixed Telephone Subscriptions	9
Figure 4: Internet Subscriptions.....	11
Figure 5: LTE/4G usage.....	11
Figure 6: Fixed Tele-density	12
Figure 7: Mobile penetration rate.....	13
Figure 8: Internet penetration rate.....	13
Figure 9: Voice traffic.....	14
Figure 10: International traffic	15
Figure 11: Mobile voice traffic market share.....	15
Figure 12: Growth in mobile internet & data usage.....	16
Figure 13: Market share of data usage	17
Figure 14: Market Share of domestic courier	18
Figure 15: Market Share of International Courier.....	18
Figure 16: Mobile Revenues	19
Figure 17: Growth in IAP revenue.....	20
Figure 18: Growth of active mobile money subscriptions	22
Figure 19: Mobile Money Agents	23
Figure 20: Airtime, Bill & Merchant Payments.....	24
Figure 21: Mobile Base Stations	25
Figure 22: Growth in base stations	25
Figure 23: Market share of mobile base stations	26
Figure 24: National backbone fibre length	26
Figure 25: Equipped international internet bandwidth.....	27
Figure 26: Market share of equipped bandwidth capacity	27
Figure 27: Employment by the fixed network	28
Figure 28: Employment by mobile operators	29
Figure 29: Employment by Internet Access Providers	30
Figure 30: Postal & Courier employees	30

LIST OF TABLES

Table 1: Active and Total Mobile Subscriptions	7
Table 2: Active Mobile Subscriptions per Operator	8
Table 3: Fixed telephone lines by location	9
Table 4: Active Internet subscriptions	10
Table 5: Postal & Courier Volumes	17
Table 6: Mobile Revenues, Investment & Costs	19
Table 7: IAP Revenues & Investment	20
Table 8: IAP Revenues Market Share.....	21
Table 9: Active mobile money subscriptions.....	22
Table 10: Value of mobile money transactions	23

LIST OF ACRONYMS

ARPU.....	Average Revenue per User
ACPU.....	Average Cost per User
AMPU.....	Average Margin per User
LTE.....	Long Term Evolution
3G.....	Third Generation
2G.....	Second Generation
MB.....	Megabyte
GB.....	Gigabyte
TB.....	Terabyte
Mbps.....	Megabits per second

1. EXECUTIVE SUMMARY

This report presents the performance of the various markets within the postal and telecommunications sector during the period January to December 2017. The report covers data on subscriptions, usage traffic, infrastructure deployment, revenues, investment and employment in the postal and telecommunication sector. The data collected is also used by the Authority to monitor and inform policy decisions aimed at facilitating orderly growth of these sectors. The following trends characterised the postal and telecommunications sector in 2017:

- **Growth in mobile and internet subscriptions and a decline in fixed subscriptions**

The total number of active fixed telephone lines declined by 13.6% to record 264,150 from 305,720 recorded in 2016. As a result, the fixed tele-density declined from 2.4% recorded in 2016 to reach 1.9% in 2017. Active mobile subscriptions increased by 9.4% to reach 14,092,104 in 2017 from 12,878,926 recorded in 2016; hence, the mobile penetration rate increased by 7.9% reach 102.7% in 2017 from 94.8% recorded in 2016. The total number of active internet subscriptions increased by 3.7% to reach 6,971,617 from 6,721,947 subscriptions recorded in 2016. As a result, the internet penetration rate increased by 0.8% to reach 50.8% in 2017 from 50% recorded in 2016. Fibre internet registered the highest growth in active subscriptions of 59.7% to reach 31,455 in 2017 from 19,698 recorded in 2016.

- **Growth in data and internet usage and continued decline of voice traffic**

Total voice traffic including fixed voice declined by 5.7% to record 4,400,994,563 minutes from 4,666,909,037 minutes recorded in 2016. This is the fourth consecutive year in which a decline in voice traffic has been recorded; however, the rate of decline has reduced from 20% recorded in 2016. This can largely be attributed to the significant increase in mobile voice traffic of 14% registered in the fourth quarter of 2017. The increase of mobile voice traffic can be attributed to the euphoria of the festive season and the excitement for the new political dispensation.

On the other hand, mobile internet and data usage increased by 89.8% to record 15.4 billion Megabytes from 8.1 billion Megabytes of data consumed in 2016. Used incoming international

bandwidth capacity also increased by 46.4% to record 47,779Mbps from 32,645Mbps recorded in 2016.

- **Continued decline of postal and courier volumes**

Total postal and courier volumes declined by 7.1% to record 8,098,751 in 2017 from 8,721,550 recorded in 2016. International outgoing postal and courier recorded the biggest decline in volumes by 9.5% to record 323,773 items from 357,655 recorded in 2016. Domestic postal volumes also declined by 8.5% to record 5.8 million postal items from 6.3 million recorded in 2016. The decline in postal and courier volumes over the years is attributable to e-substitution, which is the substitution of traditional paper communication for electronic methods such as emails and WhatsApp, Twitter and Viber among others.

- **Growth in sector revenue**

The year 2017 marked an upturn in sector revenues from the depressed growth experienced since 2014. Total telecommunications revenue increased by 11.2% to record \$1,109,899,246 from \$998,094,747 recorded in 2016. Mobile revenues increased by 17.6% to record \$849,880,488 from \$722,934,718 recorded in 2016. Revenues by IAPs registered the biggest growth rate of 17.8% to record \$186,843,531 from \$158,565,855 recorded in 2016. The growth in telecommunications revenue is attributed to the upsurge in the consumption of data and internet in the country.

- **Market structures remain relatively unchanged**

Market structures remained relatively unchanged across postal and telecommunications markets in 2017. The list of the licensed operators in the various markets as at December 2017 is provided in the following table:

Market		Service Description	Licensed Operators
Fixed Service	Telephone	Fixed Voice and Fixed Internet Services	1. TelOne
Mobile Services	Cellular	Mobile Voice and Internet Services	1. Econet
			2. NetOne
			3. Telecel

Internet Access Providers (Class A)	Data and Internet Services	1. Africom
		2. Aptics
		3. Aquiva
		4. Dandemutande
		5. Liquid
		6. Pecus
		7. Powertel
		8. Telecontract
		9. Transmedia
Internet Access Provider (Class B)	Data and Internet Services	1. CommIT
		2. NetOne
Postal Services	Postal Services	1. ZIMPOST
Courier Services	Domestic and International Courier Services	1. DHL
		2. FEDEX
		3. Courier Connect
		4. Unifreight/Swift
		5. Innscor Transport Company t/a Overnight express
		6. United Parcel Services
		7. Skynet

2. SUBSCRIPTIONS

2.1 MOBILE SUBSCRIPTIONS

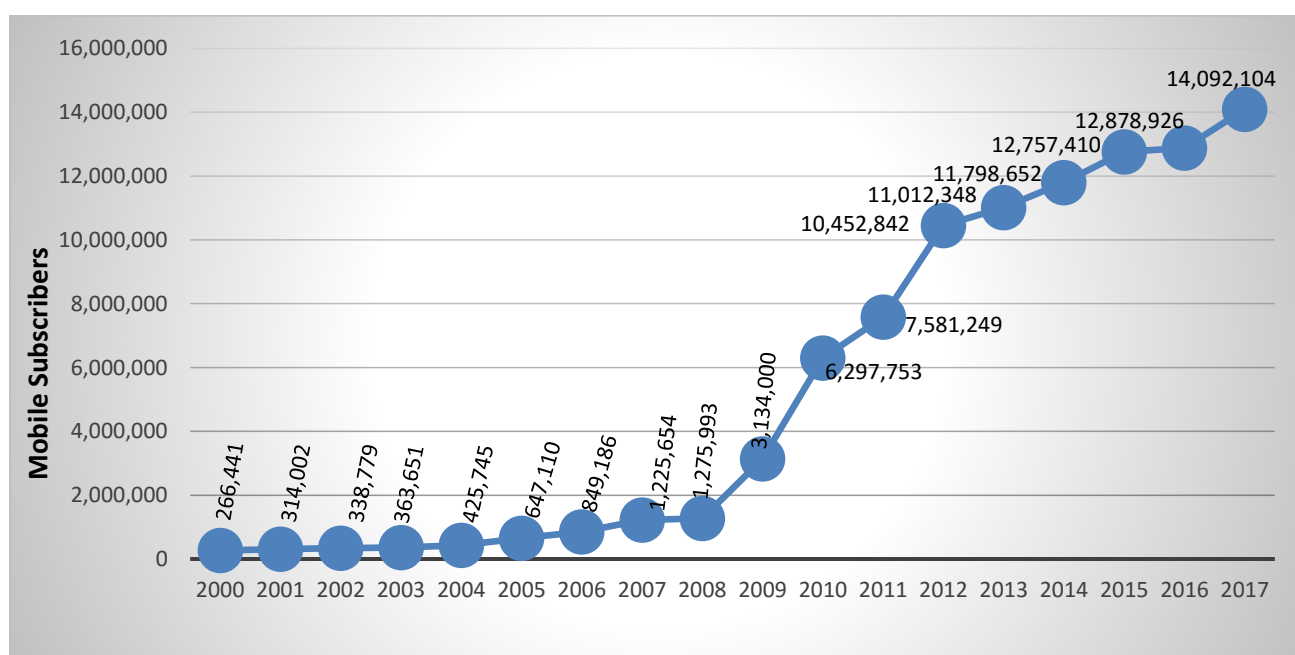
The total number of active mobile subscriptions as at 31 December 2017 was 14,092,104. This represents a 9.4% growth from 12,878,926 recorded in 2016. An active mobile subscription is a mobile line that has been used to make or receive a call, send or receive a message and/or used the internet at least once in the last 90 days. Table 1 below shows the annual variation in active and total mobile subscriptions:

Table 1: Active and Total Mobile Subscriptions

	2016	2017	Annual Change
Active Subscriptions	12,878,926	14,092,104	9.4%
Total Subscriptions	20,561,437	21,648,805	5.3%

Demand for mobile telephone services has been consistently growing. The growth in active mobile telephone subscriptions in the country from 2000 to 2017 is shown in the graph below:

Figure 1: Growth in active mobile subscriptions



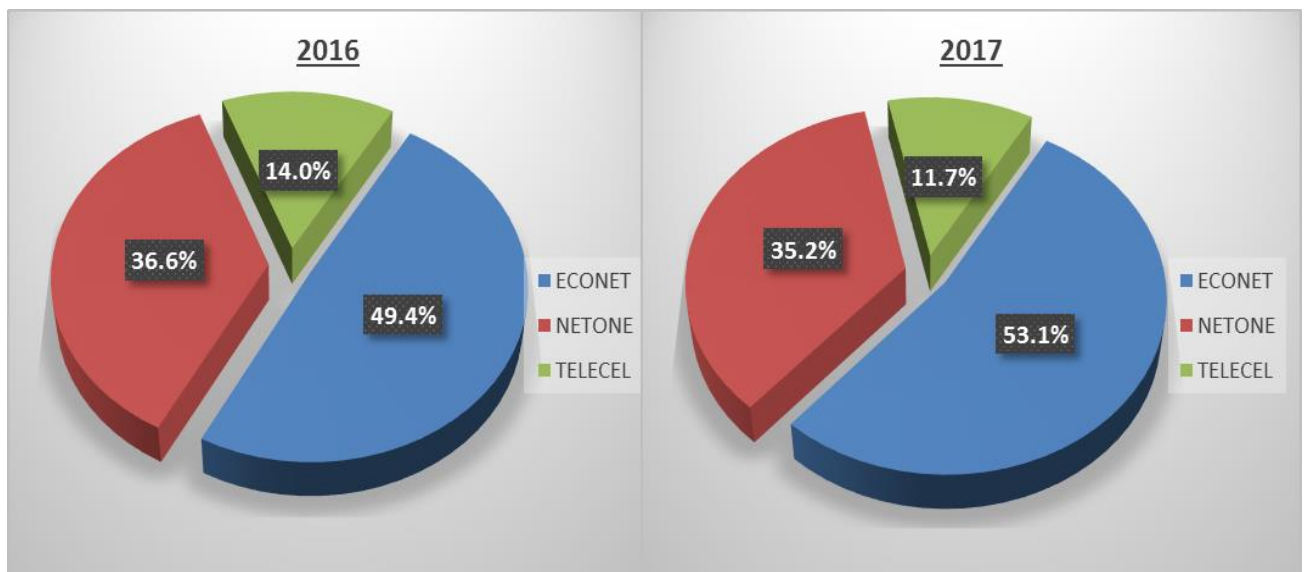
The growth in mobile subscriptions per operator is shown in Table 2 below:

Table 2: Active Mobile Subscriptions per Operator

	Active Subscriptions 2016	Active Subscriptions 2017	% Change
Econet	6,360,904	7,488,588	17.7%
Telecel	1,805,612	1,646,411	-8.8%
NetOne	4,712,410	4,957,105	5.2%
Total	12,878,926	14,092,104	9.4%

As shown above, Telecel was the only mobile operator to register a decline in active mobile subscriptions. Econet recorded the highest growth in active subscriptions of 17.7%. A comparison of the market share of mobile subscriptions for 2016 and 2017 is shown in Figure 2 below:

Figure 2: Market share of mobile subscribers

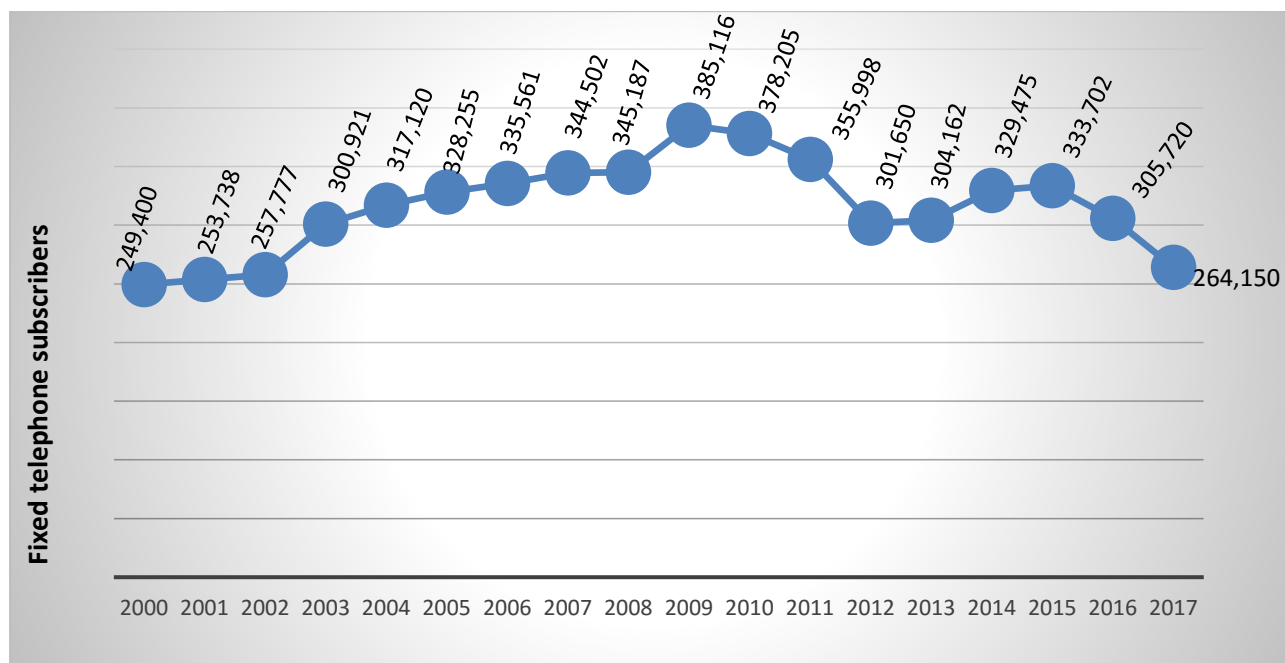


Econet continued to dominate the market with a market share of 53.1% at the end of 2017. Econet's market share increased by 3.7% in line with the 17.7% growth in active subscriptions. On the other hand NetOne and Telecel lost market share by 1.4% and 2.3% respectively.

2.2 FIXED TELEPHONY SUBSCRIPTIONS

The total number of active fixed telephone lines declined by 13.6% to reach 264,150 from 305,720 recorded in 2016. Active fixed telephone subscriptions have been fluctuating over the years as shown in Figure 3 below:

Figure 3: Fixed Telephone Subscriptions



The fixed network recorded a decline in both rural and urban subscriptions. The annual variation in the distribution of fixed telephone lines by location is shown in Table 3 below:

Table 3: Fixed telephone lines by location

	2016	2017	% Change
Rural	10,499	8,036	-23.5%
Urban	295,221	256,114	-13.2%
Total	305,720	264,150	-13.6%

Active fixed telephone lines in rural areas recorded a huge decline of 23.5%. The majority of fixed lines in rural areas are connected to schools, hospitals, the police and local authorities.

The decline could be attributed to the increasing number of institutions adopting mobile numbers and VoIP numbers.

2.3 DATA & INTERNET SUBSCRIPTIONS

The total number of active internet subscriptions increased by 3.7% to reach 6,971,617 from 6,721,947 recorded in 2016. The annual growth of internet subscriptions per category is shown in Table 4 below:

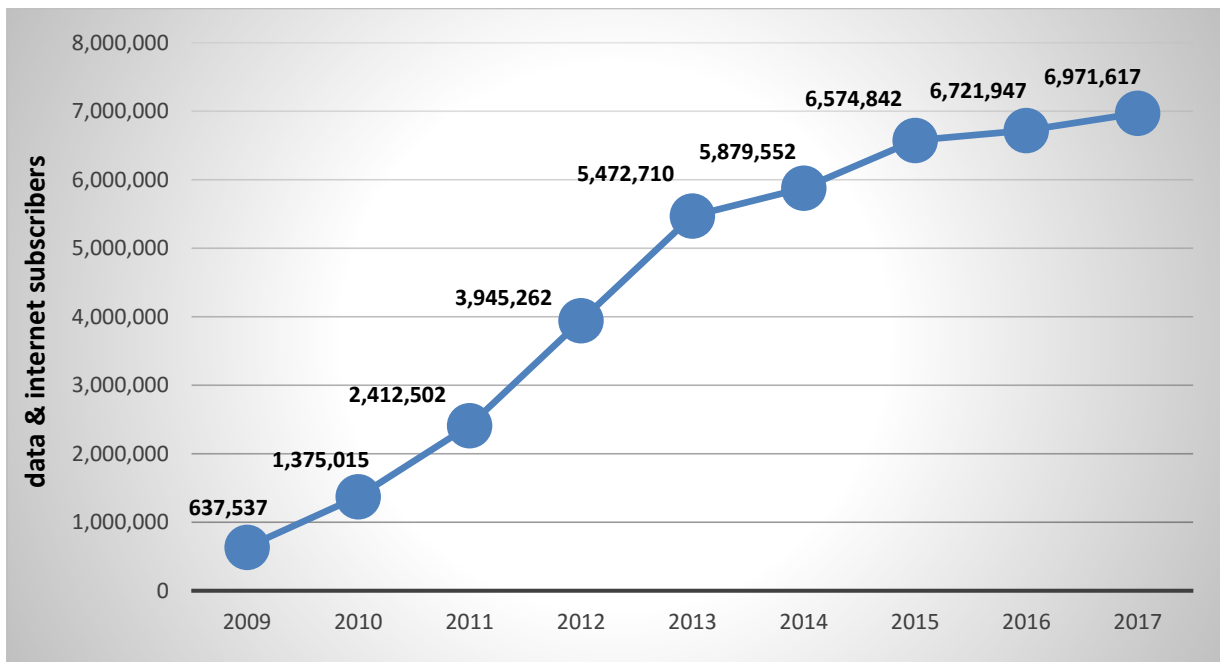
Table 4: Active Internet subscriptions

Technology	2016	2017	Annual Variation
Mobile Internet (3G, LTE...)	6,591,109	6,824,307	3.5%
Leased Lines	1,048	1,351	28.9%
Dial up	16	-	-100%
ADSL	68,370	81,016	18.5%
WiMAX	7,196	4,915	-31.7%
CDMA	32,019	25,095	-21.6%
VSAT	2,491	3,478	39.6%
Active Fibre links	19,698	31,455	59.7%
TOTAL	6,721,947	6,971,617	3.7%

Source: POTRAZ, Operator Returns

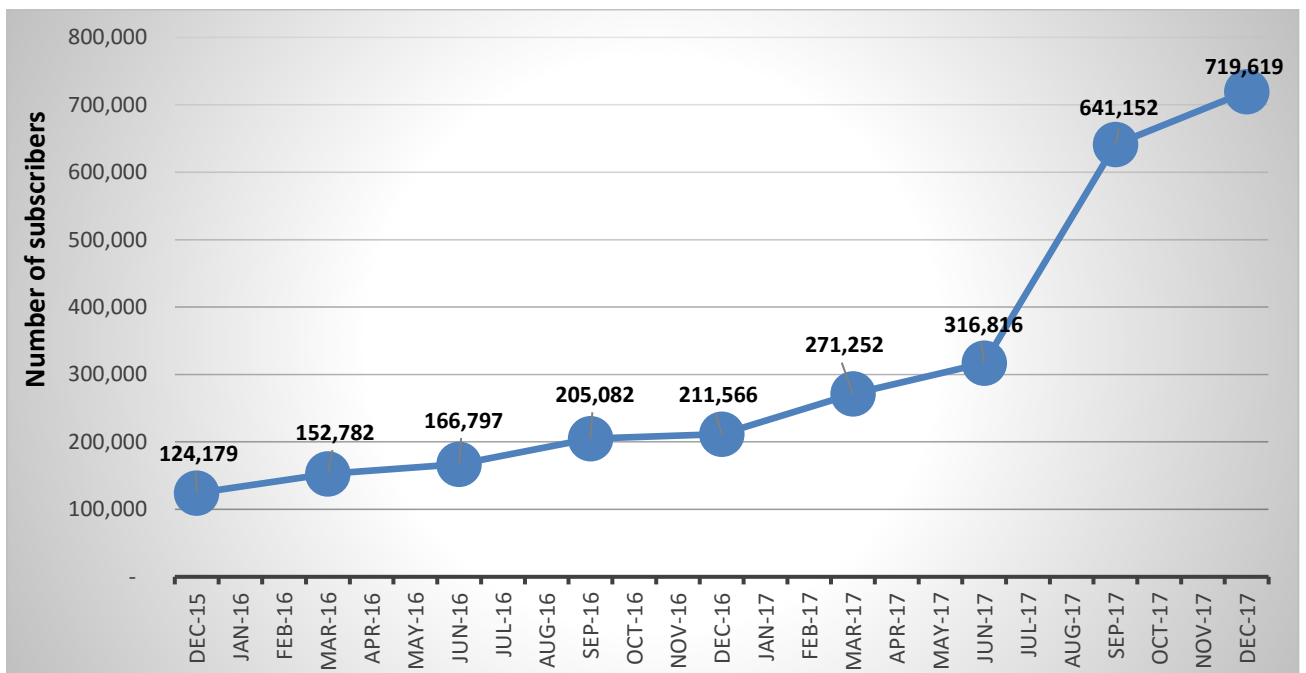
As shown above, Dial Up, WiMAX and CDMA were the three categories to record a decline in active subscriptions. Dial Up was phased out by the Internet Access Providers in 2017. WiMAX and CDMA internet have faced competition from other fixed internet technologies such as ADSL and Fibre. Demand for internet and data services has been consistently growing. The growth in internet subscriptions from 2009 to 2017 is shown in Figure 4 below:

Figure 4: Internet Subscriptions



Of the 6,824,307 mobile internet subscriptions as at 31 December 2016, 719,619 were active LTE users. The growth in LTE usage in from 2015 to 2017 is shown in Figure 5 below:

Figure 5: LTE/4G usage



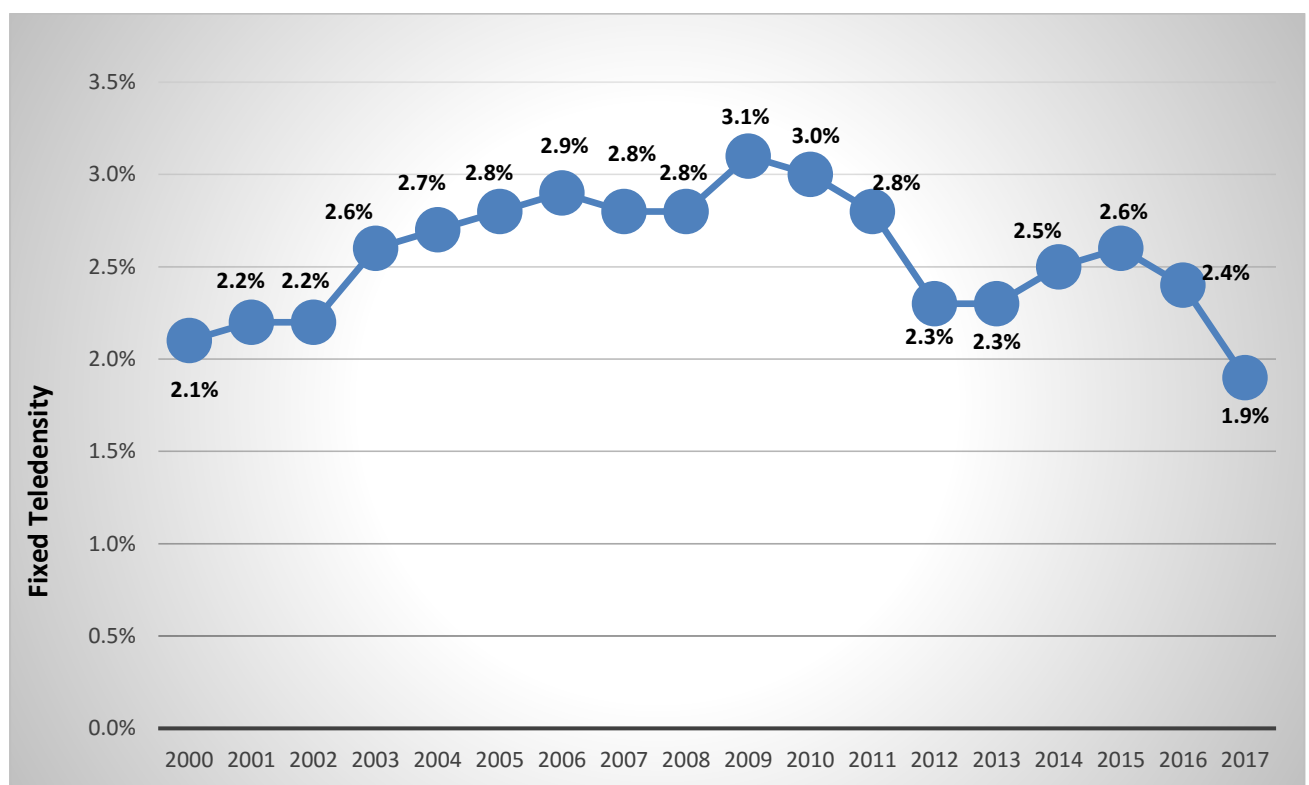
LTE use is expected to continue improving as the LTE coverage and the smartphone penetration grows.

3. PENETRATION RATES

3.1 FIXED TELEDENSITY

The fixed teledensity declined by 0.5% to reach 1.9% as at 31 December 2017 from 2.4% recorded as at 31 December 2016. This is attributed to the 13.6% decline in active fixed telephone subscriptions. The movement in the fixed tele-density from 2000 to 2017 is shown in Figure 6 below:

Figure 6: Fixed Tele-density

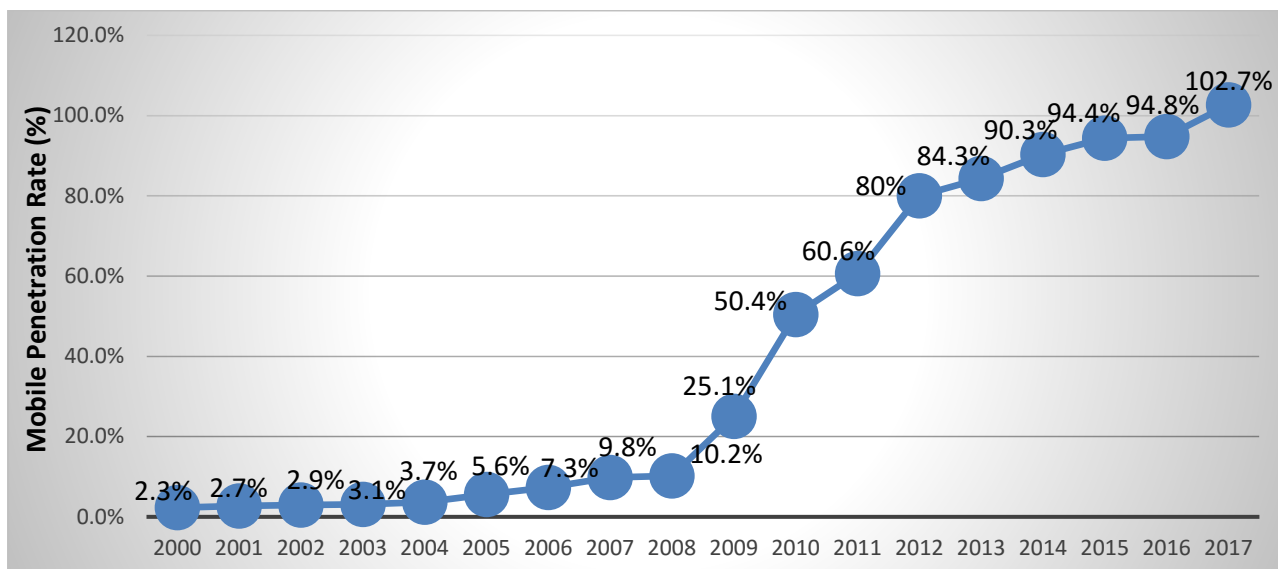


As shown above, in 2017 the fixed tele-density was at its lowest since the year 2000.

3.2 MOBILE PENETRATION RATE

The active mobile penetration rate as at 31 December 2017 was 102.7%. This represents a 7.9% growth from 94.8% recorded in 2016. This is attributed to the 9.4% increase in active mobile subscriptions as shown in Table 1. The movement in the mobile penetration rate from 2000 to 2017 is shown in Figure 7 below:

Figure 7: Mobile penetration rate

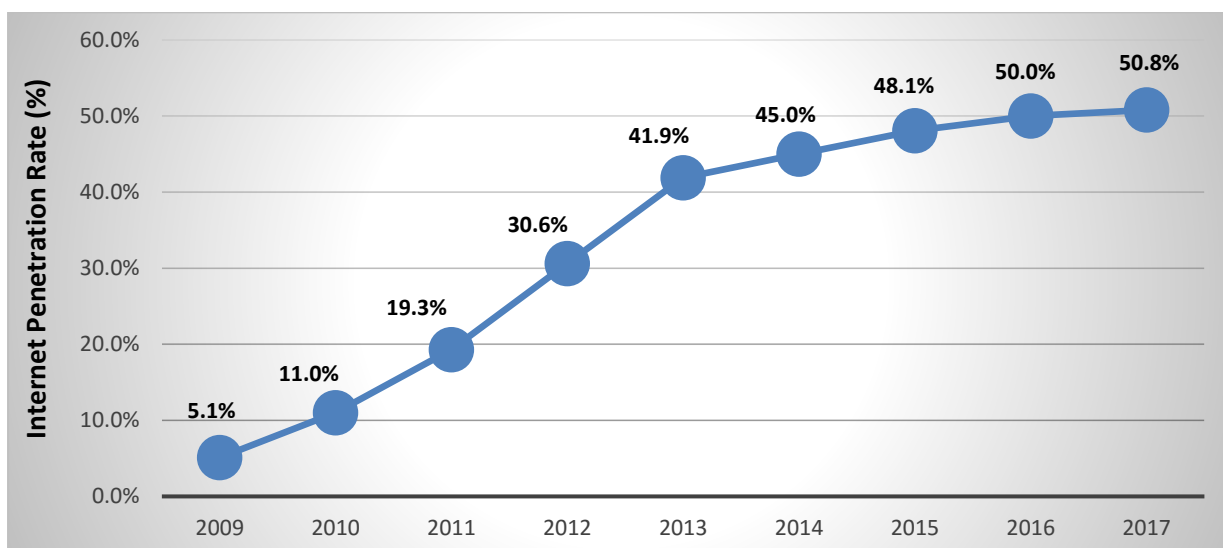


As shown above, the active mobile penetration rate has been consistently increasing in line with the growth in active mobile subscriptions.

3.3 INTERNET PENETRATION RATE

The internet penetration rate increased by 0.8% to reach 50.8% in 2017 from 50% recorded in 2016, in line with the 3.7% increase in active internet subscriptions. Figure 8 captures the growth in the internet penetration rate in over the years.

Figure 8: Internet penetration rate



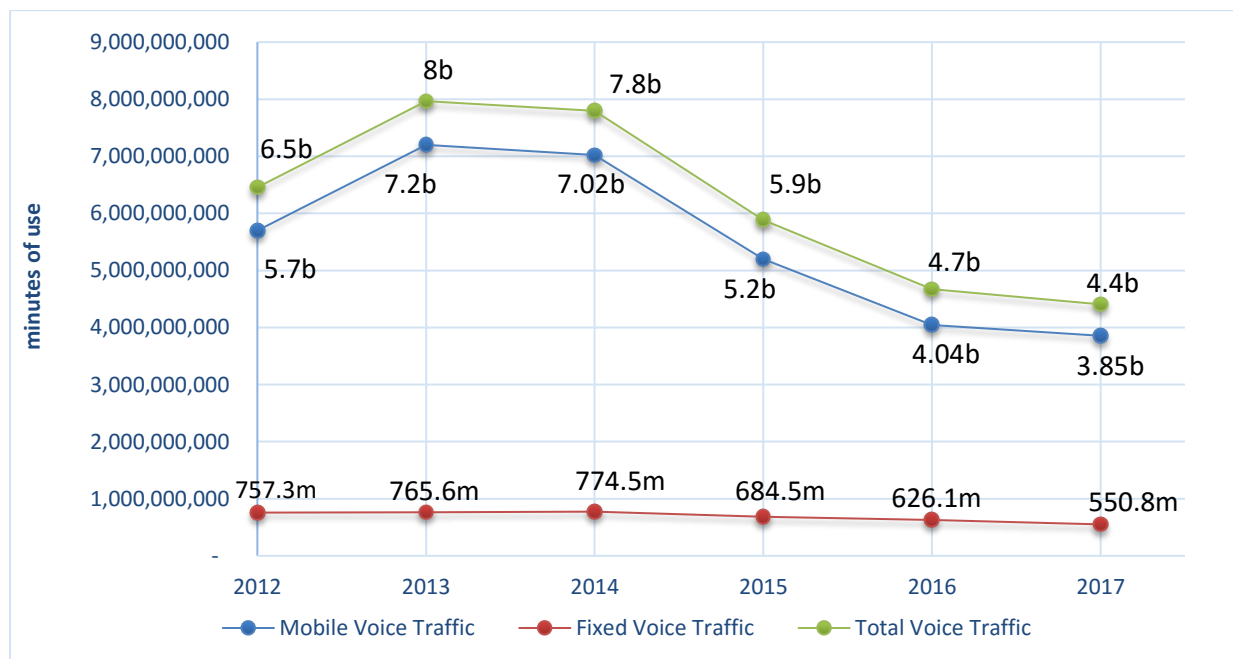
As shown in Figure 8 above, the internet penetration rate has been consistently increasing in line with the growing number of active internet and data subscriptions. Demand for internet and data services in the country is expected to continue growing as the internet coverage, variety of services and the availability and accessibility of devices improves.

4. TRAFFIC AND USAGE PATTERNS

4.1 VOICE TRAFFIC

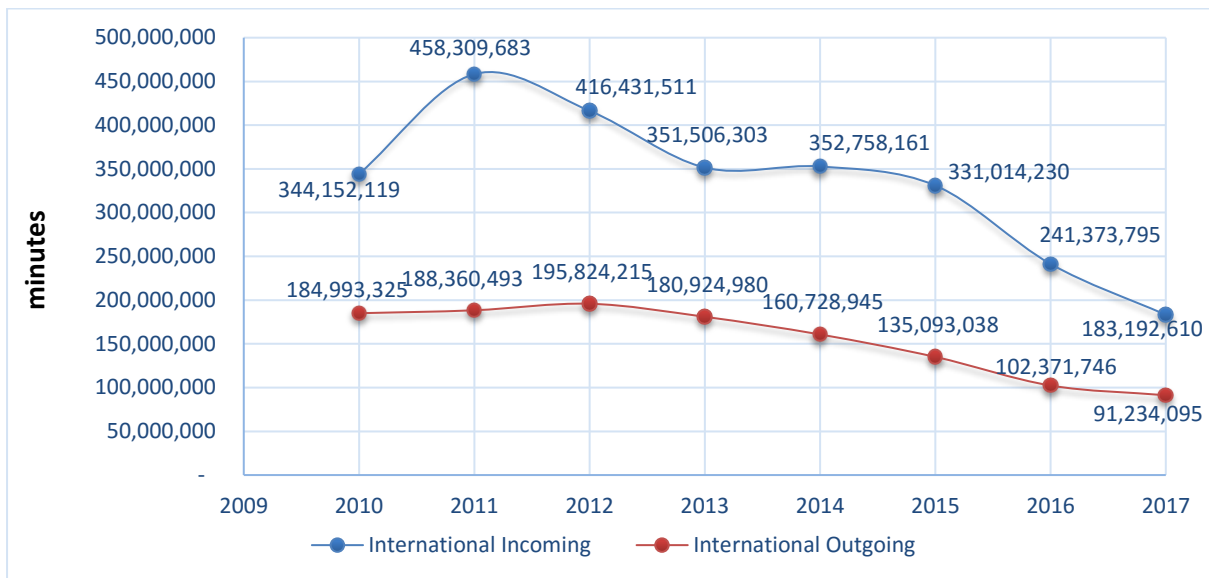
Total voice traffic declined by 5.7% to record 4,400,994,563 minutes from 4,666,909,037 minutes recorded in 2016. Voice traffic has been declining since 2014 as shown in Figure 9 below:

Figure 9: Voice traffic



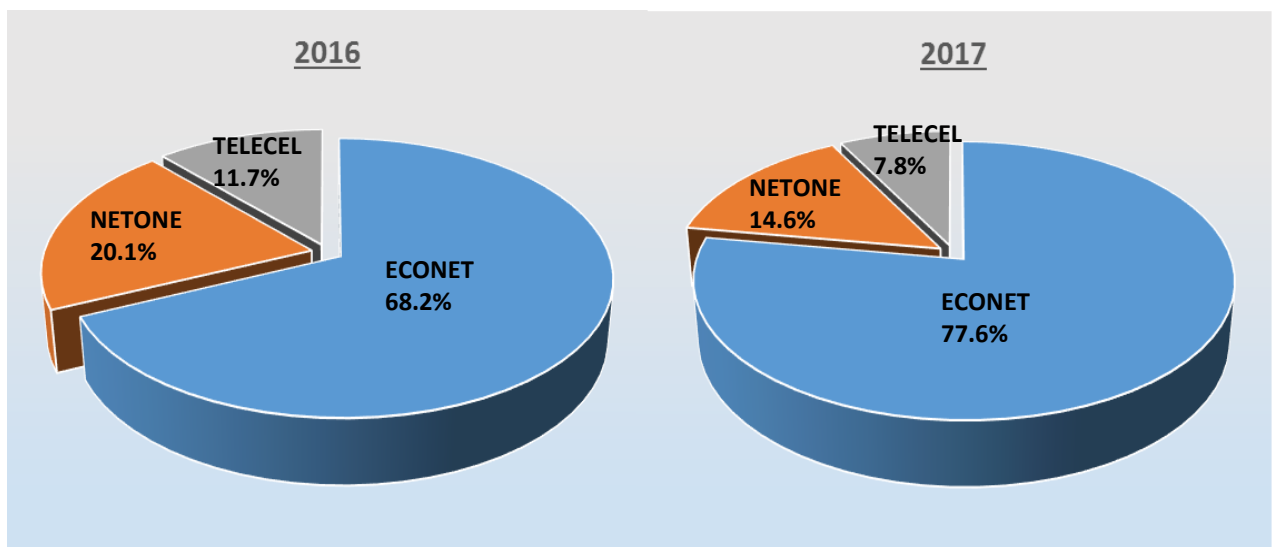
As shown above, the mobile networks as well as the fixed network have been experiencing a decline in voice traffic. Voice traffic has been affected by the declining consumer demand for traditional voice because of the proliferation of cheaper Over-the-top alternatives. The traffic categories that have been mostly affected are International incoming and international outgoing voice traffic as shown in Figure 10 below:

Figure 10: International traffic



International traffic is a major source of foreign currency for the telecommunications sector as Zimbabwe has always been a net-receiver of international traffic and revenues. The huge decline in international incoming traffic volumes has a negative impact on the foreign currency earnings by the sector. A comparison of the market share of annual voice traffic in 2016 and 2017 is shown in Figure 11 below:

Figure 11: Mobile voice traffic market share

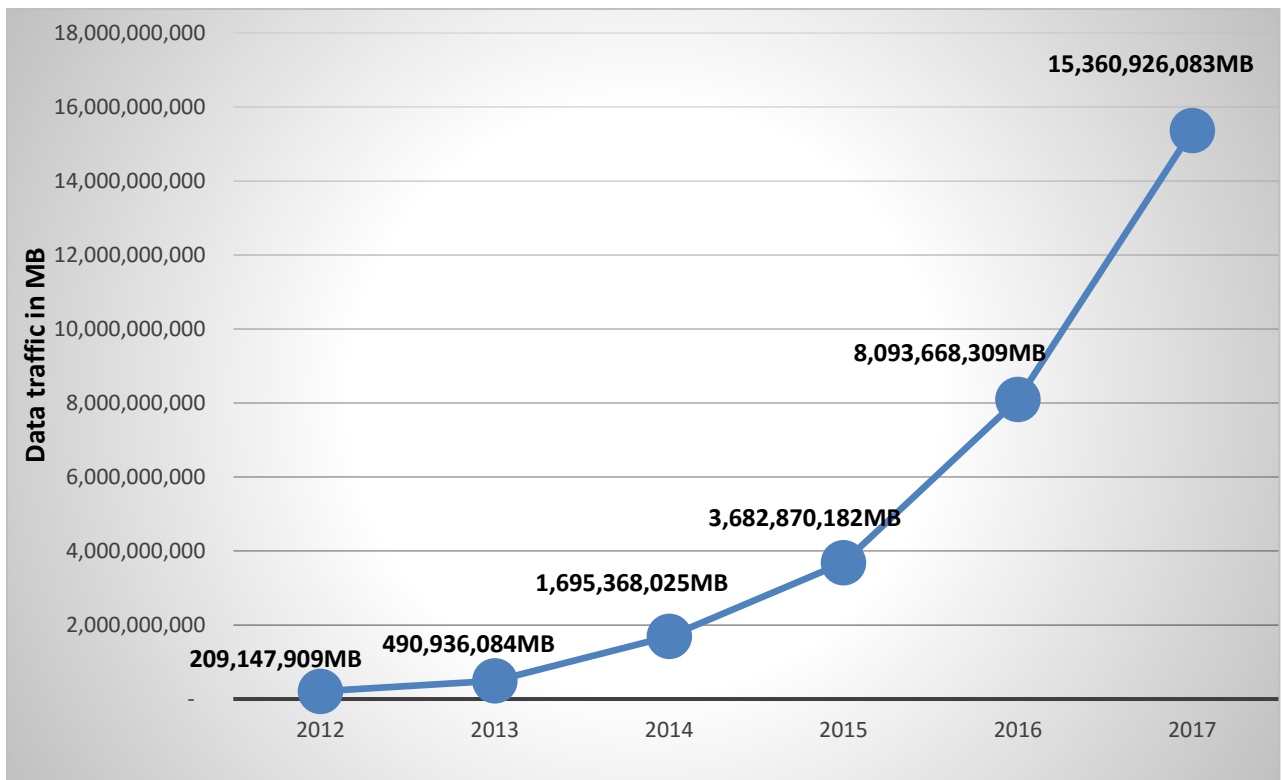


As shown above, Econet's market share of mobile voice traffic increased by 9.4% whereas NetOne and Telecel lost market share by 5.5% and 3.9% respectively.

4.2 INTERNET & DATA TRAFFIC

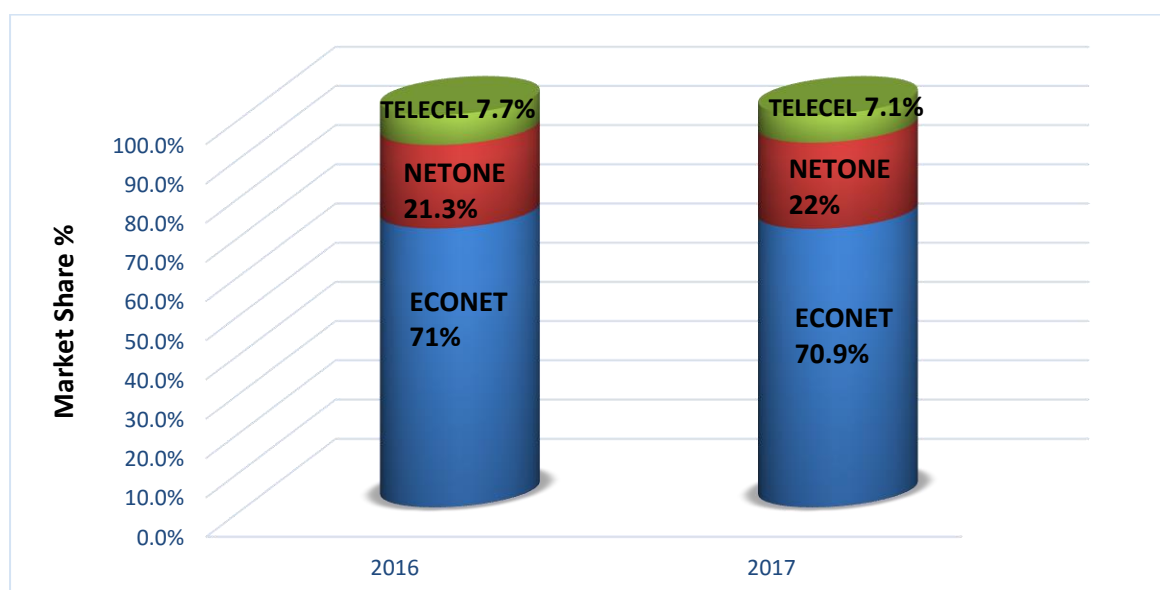
Mobile internet and data usage increased by 89.8% to record 15.4 billion Megabytes in 2017 from 8.1 billion Megabytes of data consumed in 2016. Internet and data usage has been consistently increasing over the years. The annual growth in mobile internet and data usage from 2012 to 2017 is shown in Figure 12 below:

Figure 12: Growth in mobile internet & data usage



Demand for internet services has been rapidly growing as access has been improving. Based on the mobile data usage per mobile operator, the market share of mobile data usage was as follows:

Figure 13: Market share of data usage



As shown above, Econet retained dominance in internet and data usage; however, their market share declined by 0.2%. Telecel`s market share also declined by 0.6% whereas NetOne gained 0.7%.

Used incoming international bandwidth capacity of Internet Access Providers increased by 46.4% to record 47,779Mbps from 32,645Mbps recorded in 2016. As the number of internet users continues to increase, the used international internet bandwidth is also expected to increase.

4.3 POSTAL & COURIER VOLUMES

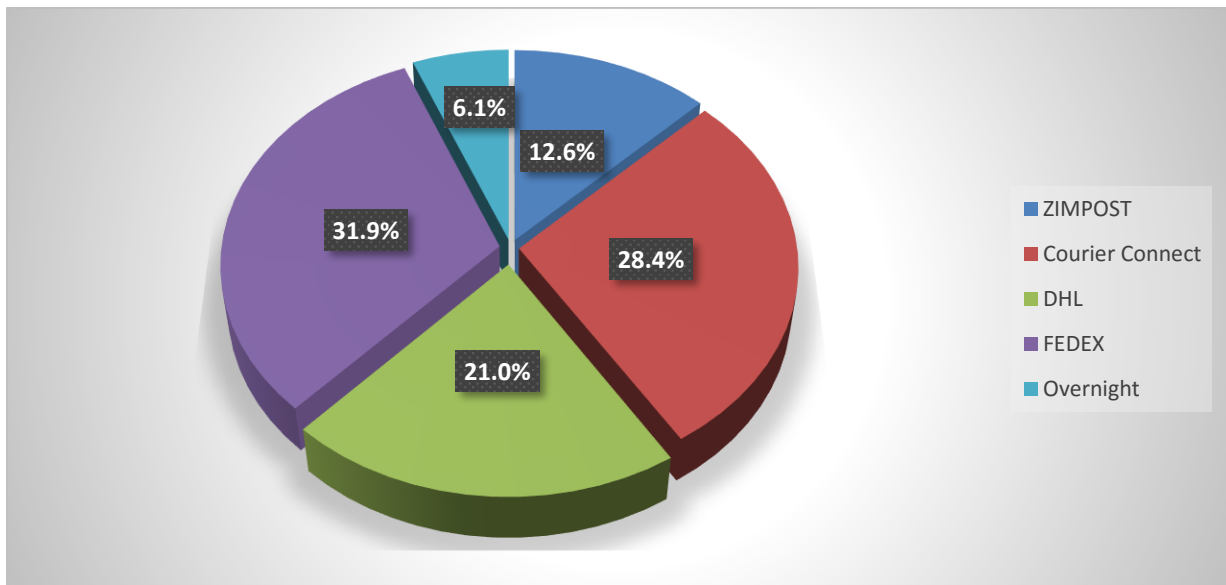
Total postal and courier volumes declined by 7.1% to record 8,098,751 in 2017 from 8,721,550 recorded in 2016. The annual growth per postal and courier category is shown in Table 5 below:

Table 5: Postal & Courier Volumes

	2016	2017	% Growth
Domestic postal	6,331,179	5,795,034	-8.5%
domestic courier	529,195	535,718	1.2%
International incoming postal & courier	1,503,521	1,444,226	-3.9%
International outgoing postal & courier	357,655	323,773	-9.5%
Total postal & courier	8,721,550	8,098,751	-7.1%

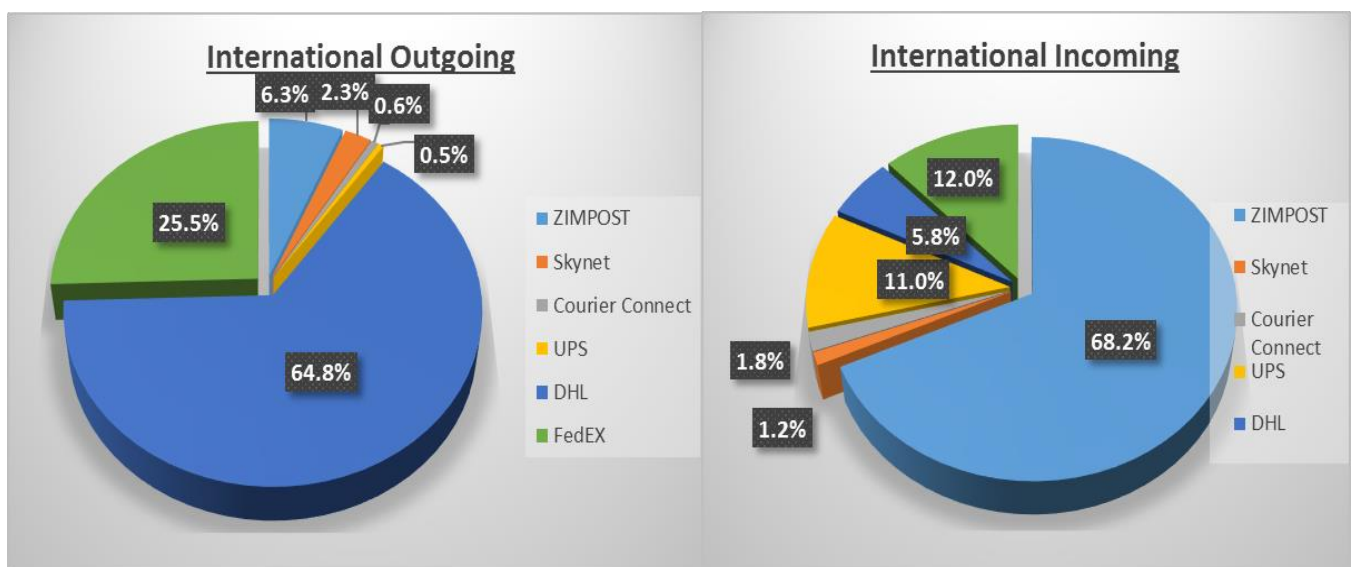
The domestic postal volumes above comprised of domestic letters processed by Zimpost. Domestic postal volumes are expected to continue declining with the introduction of electronic utility bills. The market share of domestic courier services for 2017 is shown in Figure 14 below:

Figure 14: Market Share of domestic courier



DHL maintained their pole position as the dominant operator in terms of international outgoing courier whereas ZIMPOST was the dominant operator in international incoming courier as shown in Figure 15 below:

Figure 15: Market Share of International Courier



ZIMPOST`s dominance in international incoming courier is attributable to the fact that they are cheapest channel for receiving courier items in Zimbabwe, especially when purchasing goods on e-commerce sites such as Aliexpress.

5. REVENUES & INVESTMENT

5.1 MOBILE

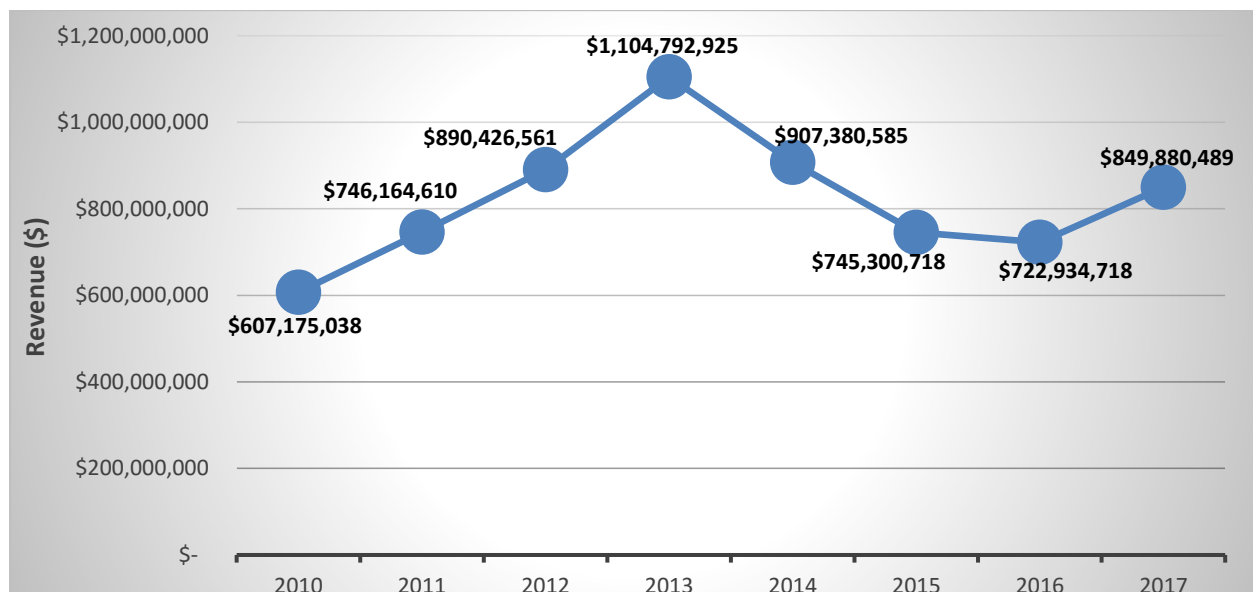
Mobile revenue, costs and investment information is shown in Table 6 below:

Table 6: Mobile Revenues, Investment & Costs

	2016	2017	% Growth
Revenues	\$722,934,718	\$849,880,489	17.6%
Operating costs	\$503,441,339	\$527,345,083	4.7%
Investment	\$187,677,658	\$100,853,947	-46.3%

As shown above, the total revenue generated by the mobile operators increased by 17.6% to record \$849,880,489 in 2017 from \$722,934,718 recorded in 2016. On the other hand operating costs also increased by 4.7%. Investment declined by 46.3% to record \$100.9 million from \$187.7 million invested in 2016. It is worthy to note that this is the first year in four years to record an increase in mobile revenues as shown in Figure 16 below:

Figure 16: Mobile Revenues



The growth in mobile revenues is attributable to the growth in mobile internet and data usage as well as mobile money.

5.3 IAP REVENUES & INVESTMENT

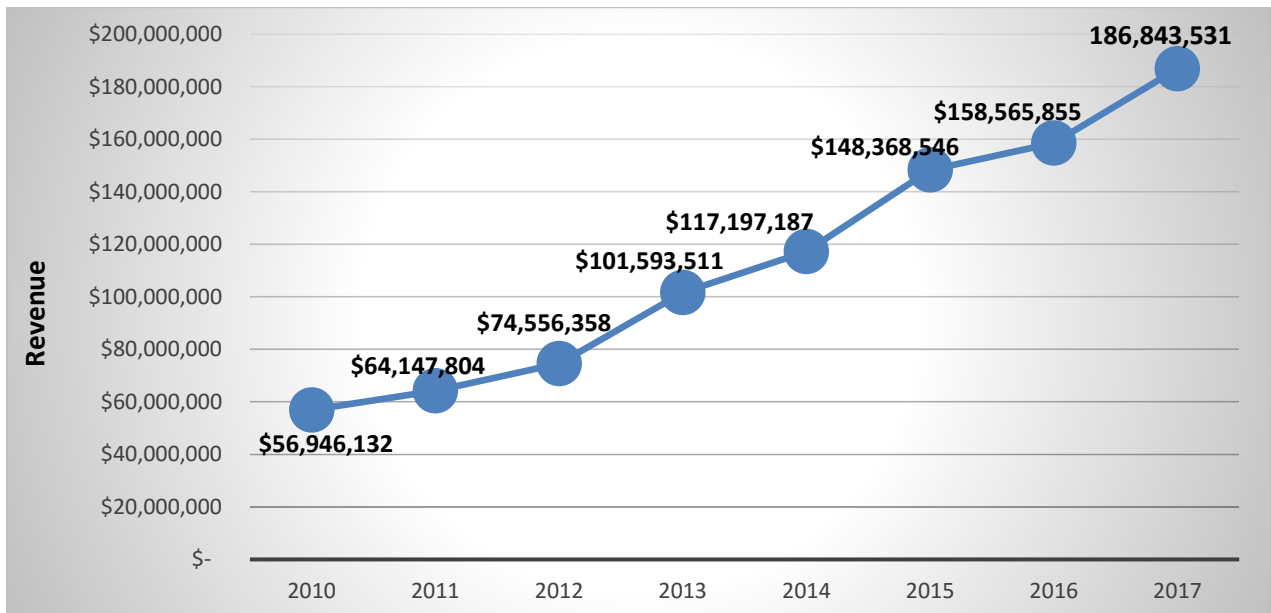
Revenues by IAPs increased by 17.8% to record \$186,843,531 from \$158,565,855 recorded in 2016. On the other hand, investment declined by 1.8% to record \$38.9 million from \$39.6 million recorded in 2016 as shown in Table 7 below:

Table 7: IAP Revenues & Investment

	2016	2017	% Growth
Revenue	\$158,565,855	\$186,843,531	17.8%
Investment	\$39,600,975	\$38,881,537	-1.8%

IAP revenues have been consistently increasing and this is attributable to the growing internet and data usage. The growth in IAP revenues from 2010 to 2017 is shown in Figure 17 below:

Figure 17: Growth in IAP revenue



An annual comparison of the IAP revenue market share is shown in Table 8 below:

Table 8: IAP Revenues Market Share

	Market Share of IAP Revenues 2016	Market Share of IAP Revenues 2017	% Change
Liquid	50.3%	52.6%	2.3%
TelOne	22.9%	23.0%	0.1%
Powertel	16.8%	13.9%	-2.9%
Dandemutande	5.2%	6.1%	0.9%
Africom	3.1%	3.0%	-0.1%
Telecontract	1.5%	1.3%	-0.2%
Aquiva	0.2%	0.2%	0.0%
Aptics*	0.0%	0.0%	0.0%
Total	100%	100%	0.0%

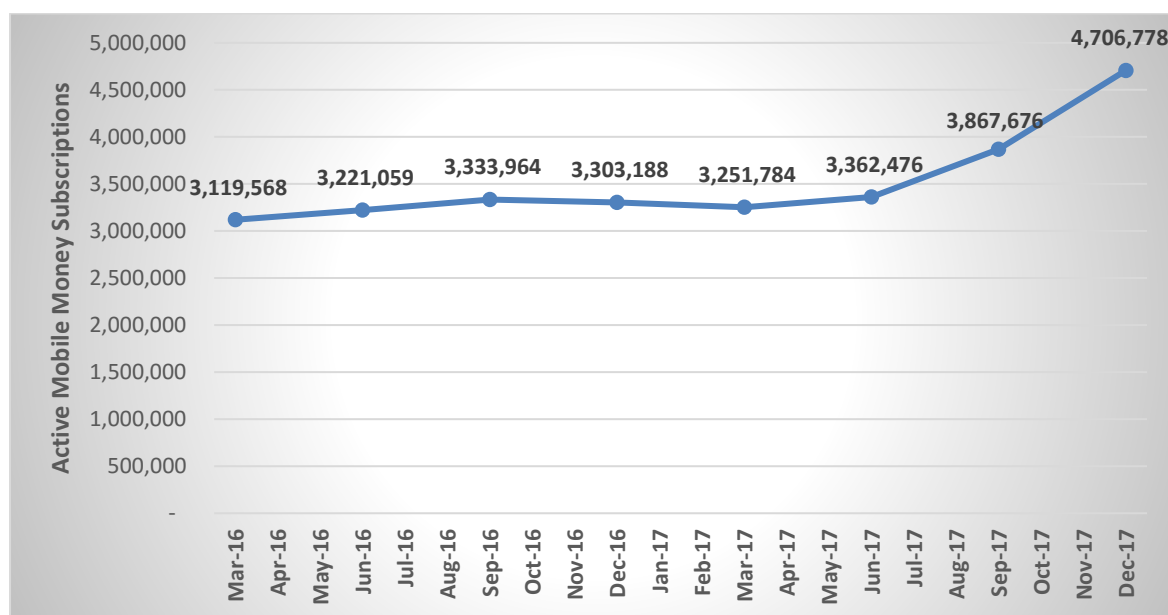
Powertel, Africom and Telecontract lost market share in line with the decline in their annual revenues.

6. MOBILE MONEY

6.1 SUBSCRIPTIONS

The total number of active mobile money subscriptions increased by 42.5% to reach 4,706,778 in 2017 from 3,303,188 recorded in 2016. Big leaps in active mobile money subscriptions were experienced in 2017. Mobile money provided an effective alternative to cash for making payments in the midst of the liquidity crisis. The growth in mobile money subscriptions is shown in Figure 18 below:

Figure 18: Growth of active mobile money subscriptions



All the mobile operators recorded growth in active mobile money subscriptions as shown in table 9 below:

Table 9: Active mobile money subscriptions

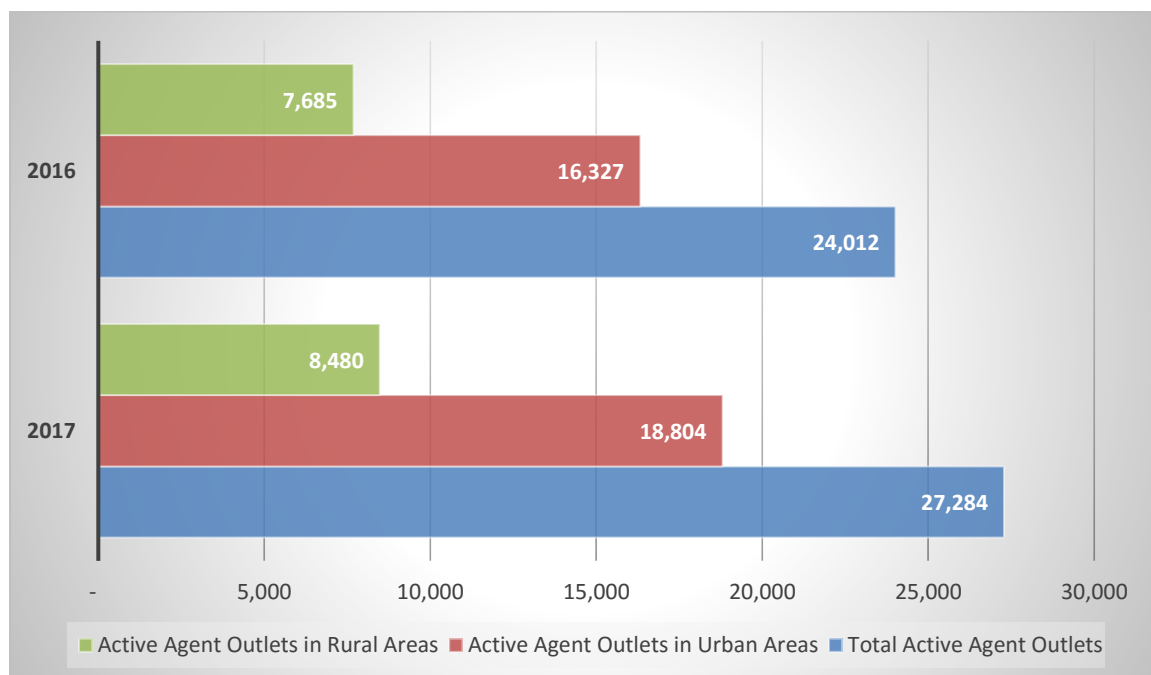
	2016	2017	% Growth
Econet	3,245,405	4,574,409	41.0%
Telecel	49,549	79,429	60.3%
NetOne	8,234	52,940	542.9%
Total	3,303,188	4,706,778	42.5%

NetOne recorded the biggest growth of 542.9% to reach 52,940 from 8,234 active subscriptions recorded in 2016. Econet had a market share of 97.2% whereas Telecel and NetOne had 1.7% and 1.1% respectively.

6.2 MOBILE MONEY AGENTS

The total number of active agent outlets increased by 13.6% to reach 27,284 in 2017 from 24,012 recorded in 2016. The number of active agent outlets in the urban areas as well as the rural areas increased as shown in Figure 19 below:

Figure 19: Mobile Money Agents



6.3 VALUE OF TRANSACTIONS

There was an overall decline in Cash-In transactions, Cash-Out transactions and Cross Network transfers as shown in the table below:

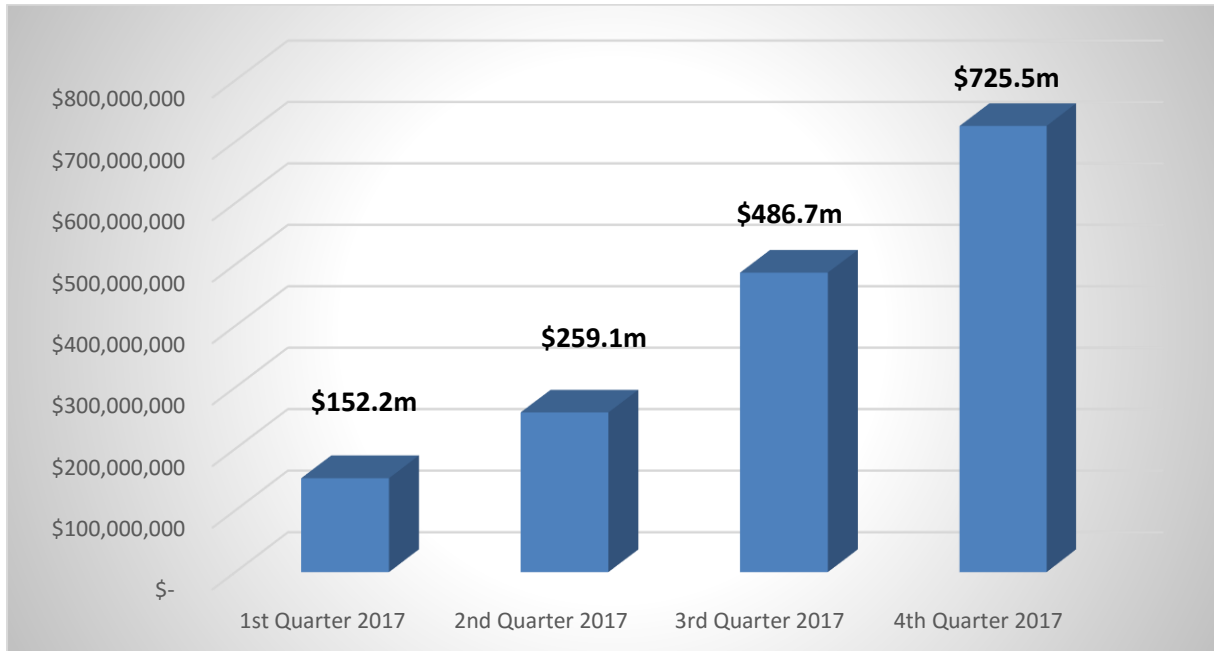
Table 10: Value of mobile money transactions

	2016	2017	% Growth
Cash-In transactions	\$1,638,676,041	\$1,544,100,162	-5.8%
Cash-Out transactions	\$1,564,106,065	\$1,382,968,270	-11.6%
Cross-network transfers (by origination)	\$8,012,269	\$1,282,318	-84.0%

The decline cash based transactions is attributable to the cash crisis in 2017. The introduction of bank to wallet transfers spurred the use of mobile money for effecting payment transactions. Airtime, bill and merchant payments using mobile money totalled \$1,623,469,563 in 2017. The

growth in the value of mobile money airtime, bill and merchant payments over the course of 2017 is shown in Figure 20 below:

Figure 20: Airtime, Bill & Merchant Payments



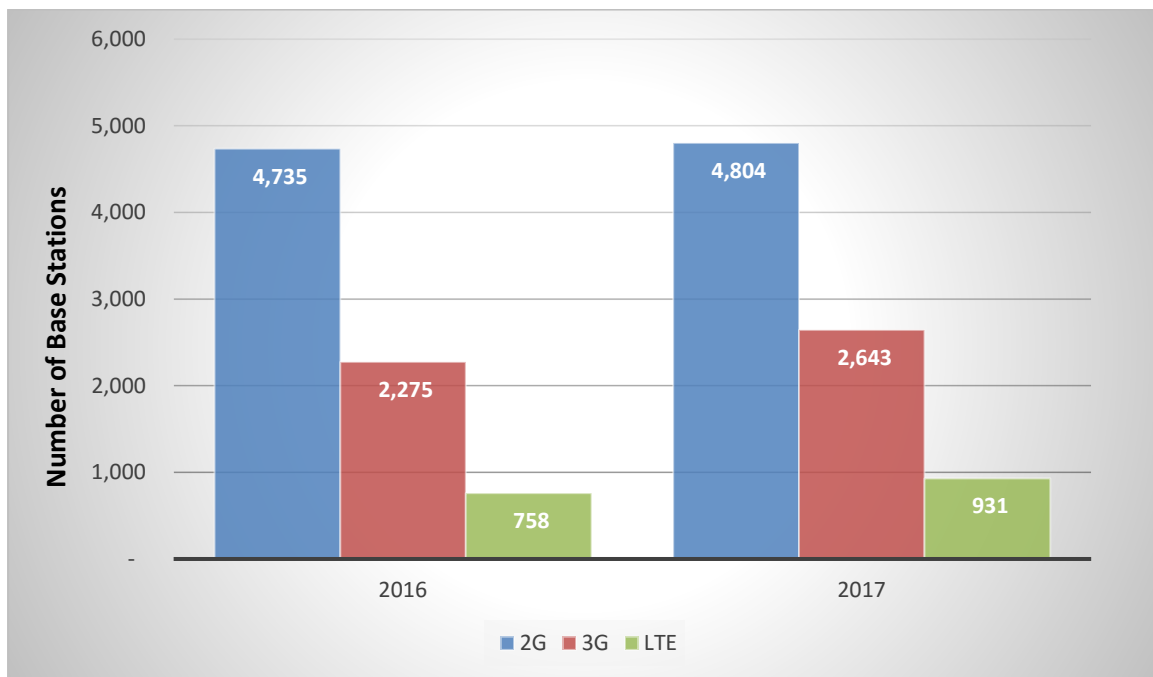
97.6% of mobile money transactions were made on the Ecocash platform whereas Telecash and OneMoney had 1.6% and 0.8% respectively. This is in tandem with the market share of active mobile money subscriptions.

7. TELECOMMUNICATIONS INFRASTRUCTURE

7.1 MOBILE BASE STATIONS

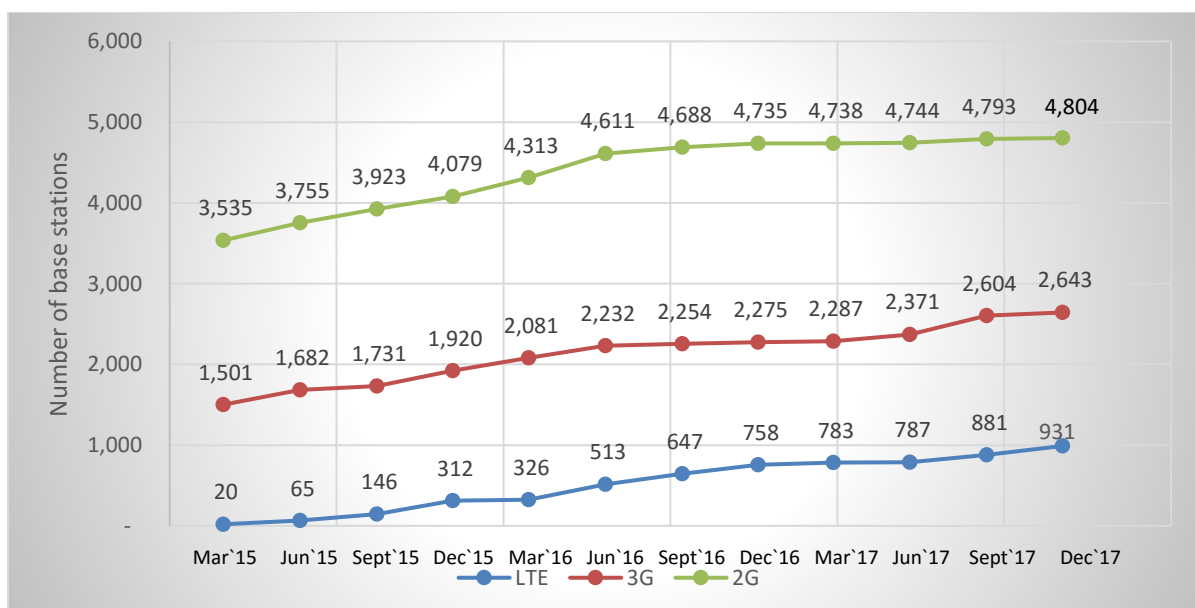
The total number of base stations in the country as at 31 December 2017 was 8,378. This represents a 7.9% growth from 7,768 recorded in 2016. The growth in the number of 2G, 3G and 4G base stations in 2017 is shown in the Figure 21 below:

Figure 21: Mobile Base Stations



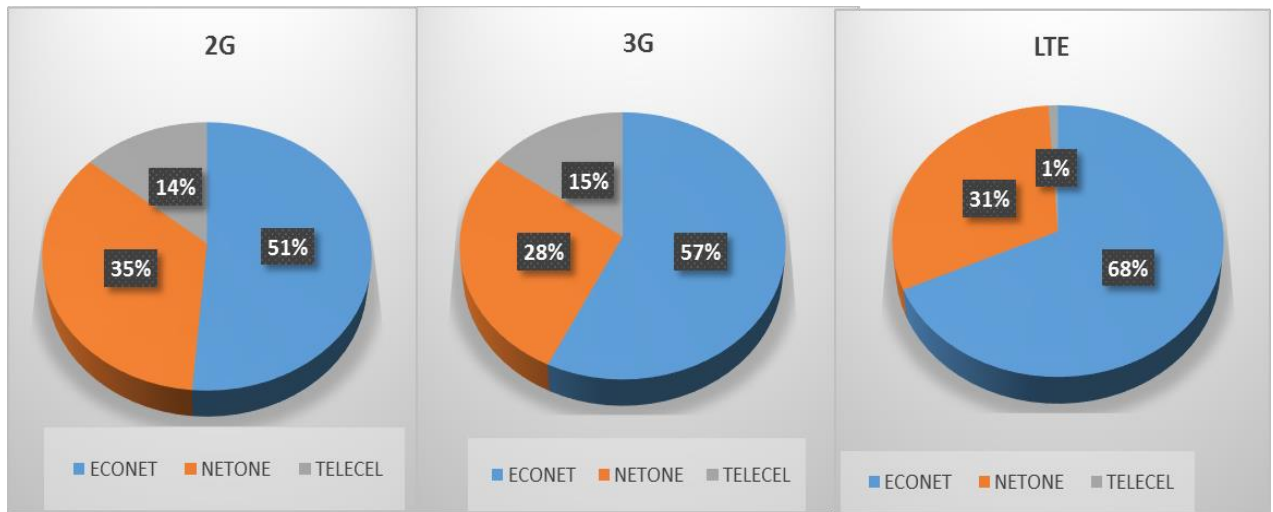
30.8% of the total number of base stations were in the rural areas. As shown above, 3G base stations recorded the highest growth. The mobile operators deployed more 3G and LTE than 2G base stations to meet the growing demand for internet services. The growth in 2G and 3G base stations as well as LTE eNode Bs from 2015 to 2017 is shown in Figure 22 below:

Figure 22: Growth in base stations



The market share of mobile base stations was as follows:

Figure 23: Market share of mobile base stations

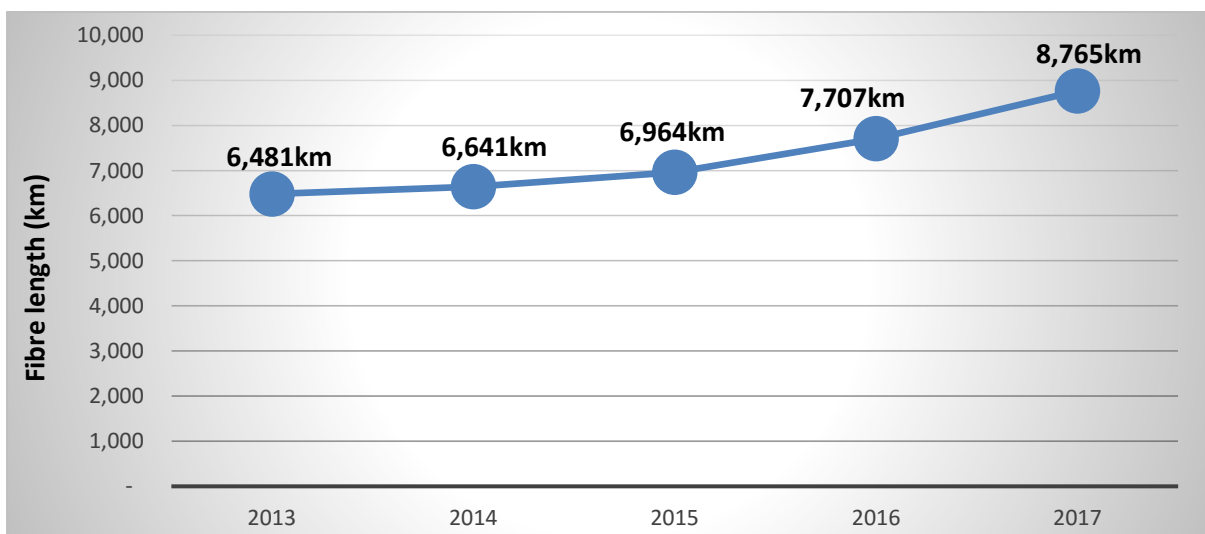


Econet had the biggest market share of 2G base stations, 3G base stations as well as LTE eNode Bs. There was no major change in the market share of base stations, save for the entry of Telecel into the LTE market with a market share of 1%.

7.2 NATIONAL BACKBONE FIBRE LENGTH

The total national backbone fibre length as at 31 December 2017 was 8,765km up from 7,707km recorded as at 31 December 2016. The growth in national backbone fibre length from 2013 to 2017 is shown in Figure 24 below:

Figure 24: National backbone fibre length

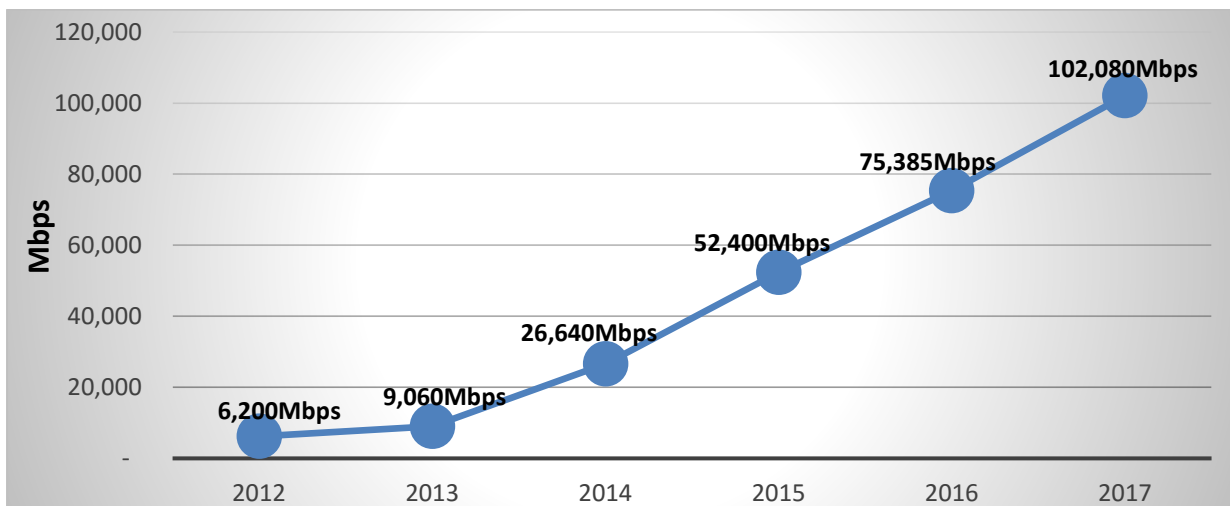


Demand for residential Fibre to the Home (FTTH) as well as Fibre to the Building for corporates is currently on the rise hence the need to increase the national fibre backbone for enhanced connectivity.

8. INTERNATIONAL INTERNET BANDWIDTH

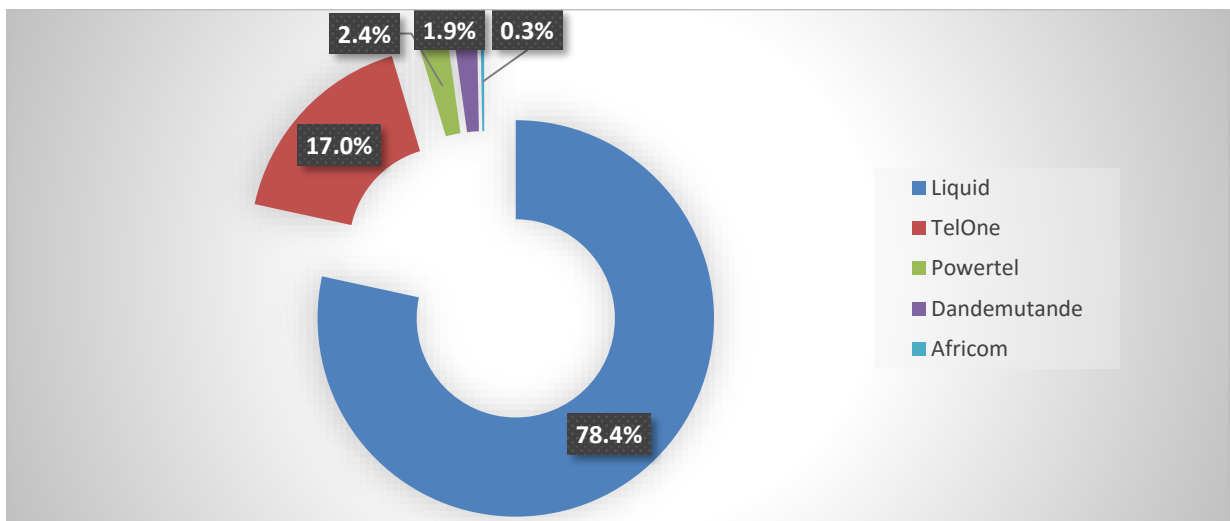
Equipped international incoming internet bandwidth increased by 35.4% to reach 102,080Mbps in 2017 from 75,385Mbps recorded in 2016. The growth in equipped international internet bandwidth capacity from 2012 to date is shown in the graph below:

Figure 25: Equipped international internet bandwidth



The market share of equipped international internet bandwidth was as follows:

Figure 26: Market share of equipped bandwidth capacity



An annual comparison shows that Liquid and Africom lost 0.6% and 0.3% respectively; TelOne and Dandemutande gained 0.6% and 0.3% respectively; Powertel’s market share remained unchanged at 2.4%.

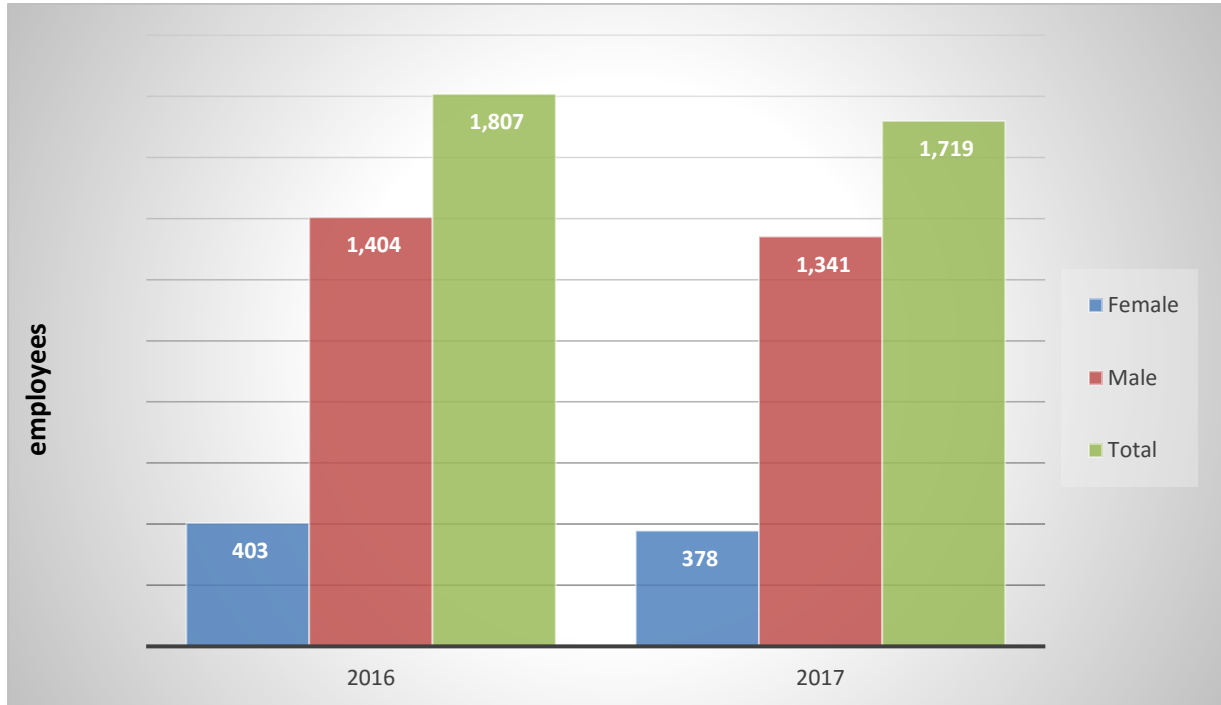
9. EMPLOYMENT

The total number of people employed on a full-time basis in the postal and telecommunications sector declined by 9.9% to reach 6,178 in 2017 from 6,193 employees recorded in 2016. Females constituted 31.5% of the workforce up from 29.9% recorded in 2016. The number of employees is broken down by subsector and by gender as follows:

9.1 FIXED NETWORK

The fixed network had 1,719 full-time employees as at 31 December 2017. This represents a 4.9% decline from 1,807 employees recorded as at 31 December 2016. Figure 27 below shows a breakdown of TelOne’s employees by gender.

Figure 27: Employment by the fixed network

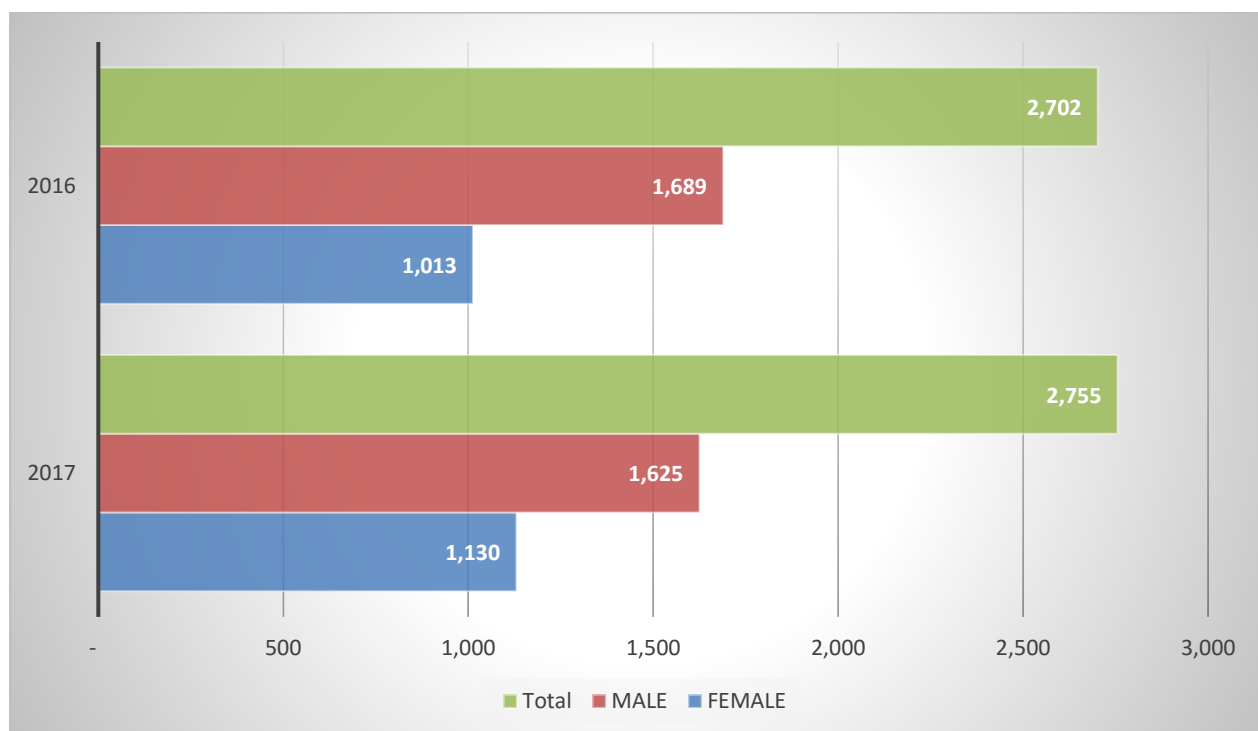


The decline is attributed to layoffs as well as employee attrition to other organisations.

9.2 MOBILE NETWORK OPERATORS

The mobile network operators employed 2,755 people on a fulltime basis as at 31 December 2017. This is a 2% increase from 2,702 employees recorded in 2016. The total number of mobile network employees is broken down by gender as follows:

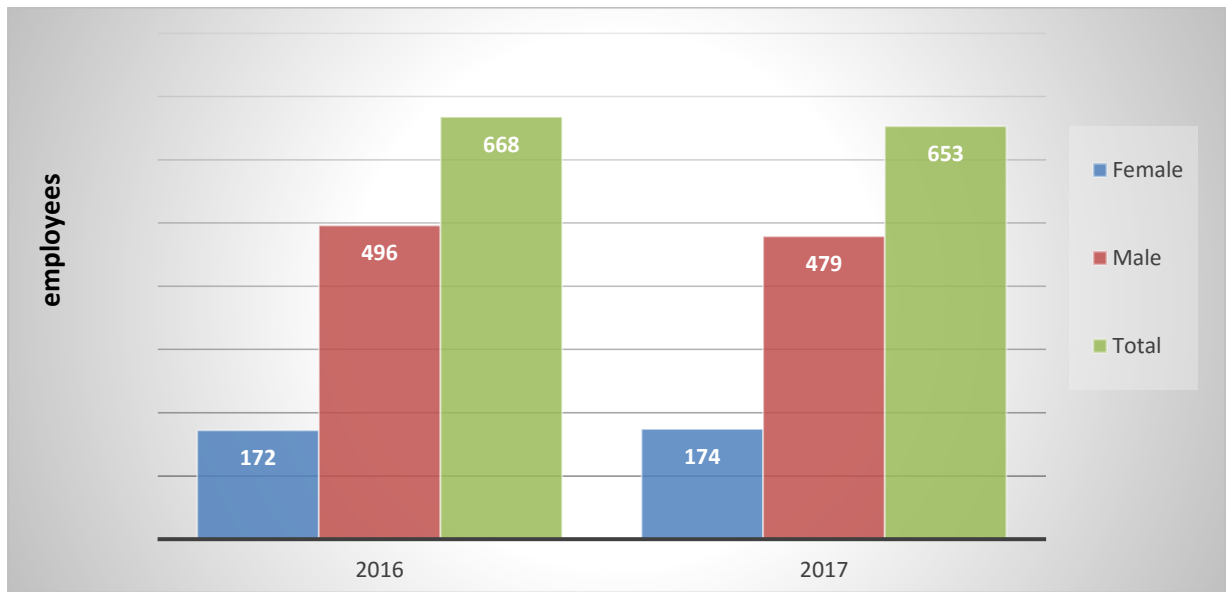
Figure 28: Employment by mobile operators



9.3 INTERNET ACCESS PROVIDERS

The total number of people employed by Internet Access Providers declined by 2.2% to reach 653 from 668 employees recorded in 2016. The employees are broken down by gender as follows:

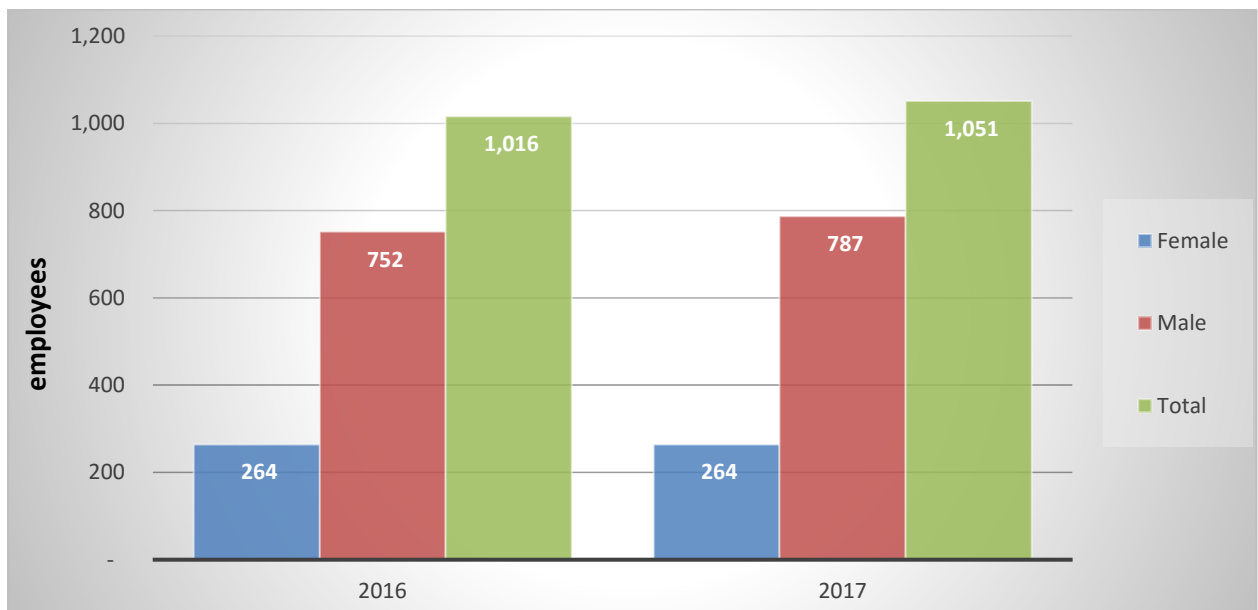
Figure 29: Employment by Internet Access Providers



9.4 POSTAL & COURIER

The number of people employed by postal and courier operators as at 31 December 2017 was 1,051. This represents a 3.4% increase from 1,016 full-time employees recorded in 2016 as shown in Figure 30 below:

Figure 30: Postal & Courier employees



10. OUTLOOK

Industry growth continues to be driven by mobile internet and fixed broadband services and this trend is expected to continue into 2018. Usage traffic for internet and data services is expected to continue rising. This will be largely spurred by innovation related to non-traditional business models. Growth in the use of Internet of Things (IOTs) applications will take centre stage, driven by consumer appetite for digital solutions that are convenient and affordable. Such solutions will revolve around mobile payments such as payment of utility bills, parking fees and the increased use of plastic money as well as mobile banking. Other government driven initiatives such as e-government, tele-medicine and e-learning will also help boost demand and usage of data and internet services. The rapid deployment of Next Generation Networks (NGN) such as 4G/LTE and Fibre to the Home (FTTH). The three prime drivers of internet use, i.e. availability, affordability and scalability, need to be supported to advance the internet revolution in the country.

Penetration rates for all subscription-based services are expected to grow marginally. The mobile penetration rate has surpassed the 100% mark; there are now more mobile lines than there are people. The internet penetration rate has surpassed the 50% mark and is expected to continue growing on the back of 3G and 4G as well as fixed internet technologies such as Fibre and ADSL. The fixed tele-density has remained stagnant at 1.9%; marginal growth in the fixed telephone subscriber base is expected.

The year 2017 witnessed growth in telecommunications revenues, largely driven by the mobile telephone market. Revenues have been spurred by data as well as mobile money. Mobile money services have emerged to be a key revenue contributor in the current economic environment. The introduction of bank to wallet transfers has spurred the used of mobile money for transactional purposes in the midst of cash shortages. This trend of growing mobile money use is expected to continue in the current environment.

The postal and courier sector continues to record depressed service volumes and revenues. The impact of e-substitution on the postal and courier business is expected to continue as the data revolution gathers momentum. E-commerce needs to be supported, as it is a key driver of international courier volumes and revenues.