

POSTAL AND TELECOMMUNICATIONS REGULATORY AUTHORITY OF ZIMBABWE (POTRAZ)



'creating a level playing field'

ANNUAL POSTAL AND TELECOMMUNICATIONS SECTOR PERFORMANCE REPORT

2023

Disclaimer:

This report has been prepared based on data provided by service providers. The information provided in this Annual report is subject to alteration in case of any revisions or updates from the service providers. Although every effort has been made to ensure accuracy of the data contained in this report, the Authority is not liable for the inaccuracy of any information.

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LIST OF ACRONYMS

2G	Second Generation
3G	Third Generation
ACPU	Average Cost per User
AMPU	Average Margin per User
ARPU	Average Revenue per User

ADSL..... Asymmetric Digital Subscriber Line
GB..... Gigabyte
LTE.....Long Term Evolution
MB..... Megabyte
Mbps..... Megabits per second
PSTN..... Public Switched Telephone Network
PB..... Petabyte
VoIP..... Voice Over Internet Protocol

1. EXECUTIVE SUMMARY

This report presents annual information on the performance of the markets within the postal and telecommunications sector during the period January to December 2023. 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 the year 2023:

- **Growth in subscriptions across all telecommunications markets**

The total number of active mobile subscriptions grew by 4.7% to record 14,973,816 in 2023, from 14,300,790 recorded in the previous year. Consequently, mobile penetration rate grew by 3.3% to record 97.5% as of 31 December 2023, from 94.2% recorded in the previous year. The total number of active fixed telephone lines grew by 6.3% to record 309,645 as of 31 December 2023, from 291,324 recorded at the end of 2022. Resultantly, the fixed tele-density increased by 0.1% to reach 2.02% in 2023, from 1.92% recorded in the previous year. On the other hand, the total number of active Internet and data subscriptions as of 31 December 2023 was 11,240,969. This translates to a 13.4% increase from 9,914,950 active subscriptions, as of 31 December 2022. The internet penetration resultantly increased by 8% from 65.3% as of 31 December 2022 to 73.3% as of 31 December 2023

- **Overall growth in Internet / data usage as well as voice traffic**

A total of 171.21 petabytes (PBs) of mobile Internet / data traffic were consumed in 2023. This represents a 50.7% increase in usage, from 113.86PBs consumed in 2022. Used incoming international bandwidth capacity grew by 34.9% to record 367,447Mbps as of 31 December 2023, from 272,340Mbps as of 31 December 2022. Used outgoing international Internet bandwidth capacity also increased by 14.0% to record 102,370Mbps as of 31 December 2023, from 89,790Mbps recorded in 2022. Total voice traffic also increased by 11.4% to record 11.7 billion minutes in 2023, from 10.5 billion minutes recorded in 2022. The growth in total voice traffic emanated mainly from an increase in national traffic, particularly net on net calls.

- **Decline in postal and courier volumes.**

A total of 2,012,181 postal and courier items were processed in 2023; this represents a 6.4% decline from 2,148,849 recorded in 2022. Domestic postal was the only category that recorded growth in volumes, with a 20.8% surge from 949,911, to record 1,147,622 mail volume in 2023.

- **Growth in sector revenues amidst rising operating costs.**

The year 2023 was characterised by a trend of growing revenues, amidst rising operating costs across all subsectors, owing to the inflationary operating environment. Hence, the total postal and telecommunications sector revenue for 2023 amounted to ZWL4.0 trillion, up from ZWL428.7 billion recorded in 2022; this represents an annual variance of 830.4% and an inflation adjusted growth rate of 160.6%.

Total postal and telecommunications sector operating costs amounted to ZWL2.5 trillion in 2023, up from ZWL278.1 billion recorded in 2022, giving an annual variance of 801.7% and an inflation adjusted growth rate of 172.6%.

- **Growth in capital expenditure**

Telecommunications capital expenditure totalled ZWL314.8 billion in 2023, from ZWL28.3 billion recorded in 2022. This represents an annual variance of 1,012.4% and an inflation adjusted growth rate of 242.9%. The capital expenditure was mainly on Long Term Evolution (LTE) deployments and network upgrades. Capital expenditure by postal and courier operators totalled ZWL1.5 billion in 2023, from ZWL 213.3 million recorded in 2022. This represents an annual variance of 625.8% and an inflation adjusted growth rate of 161.9%.

- **Increase in the number of licensees.**

A total of five (5) additional licenses were issued in 2023; these consisted of one Network Facilities Services licence, Mobile Virtual Network Operator licence, one ISP Metropolitan Licence and two Courier services licences. The list of the licensed operators in the various markets as of 31 December 2023 is provided in the following table:

License Category	Licensed Operators
Unified Telecommunication Services	1. TelOne 2. Pecus
Mobile Cellular Services	1. Econet 2. NetOne 3. Telecel
Internet Access Providers	1. Africom 2. Dandemutande 3. Liquid 4. PowerTel 5. Telecontract 6. ZARNet 7. Powertel 8. Dark Fibre Africa Zimbabwe 9. ZIMREN (Pvt) Ltd
Network Facilities, Network Services and International Gateway	1. Fiber Connections 2. Fibrehood (PVT) Ltd
Internet Service Provider (ISP - Metro)	1. KlikIt Telecom 2. Frampol Investments Pvt Ltd 3. IT Anywhere 4. Linter-lix (PVT) Ltd
Internet Service Provider (ISP - National)	1. Timeless Technology 2. ZODSAT
Internet Service Provider (ISP - Provincial)	1. Kamba Communications
Mobile Virtual Network Operator	1. Dolphin Telecoms 2. Taura (APP) Ltd
Application Services	1. Canlink
Postal Services	1. ZIMPOST
Courier Services	2. DHL 3. FEDEX 4. Courier Connect 5. Unifreight/Swift 6. Innscor Transport Company t/a Overnight express

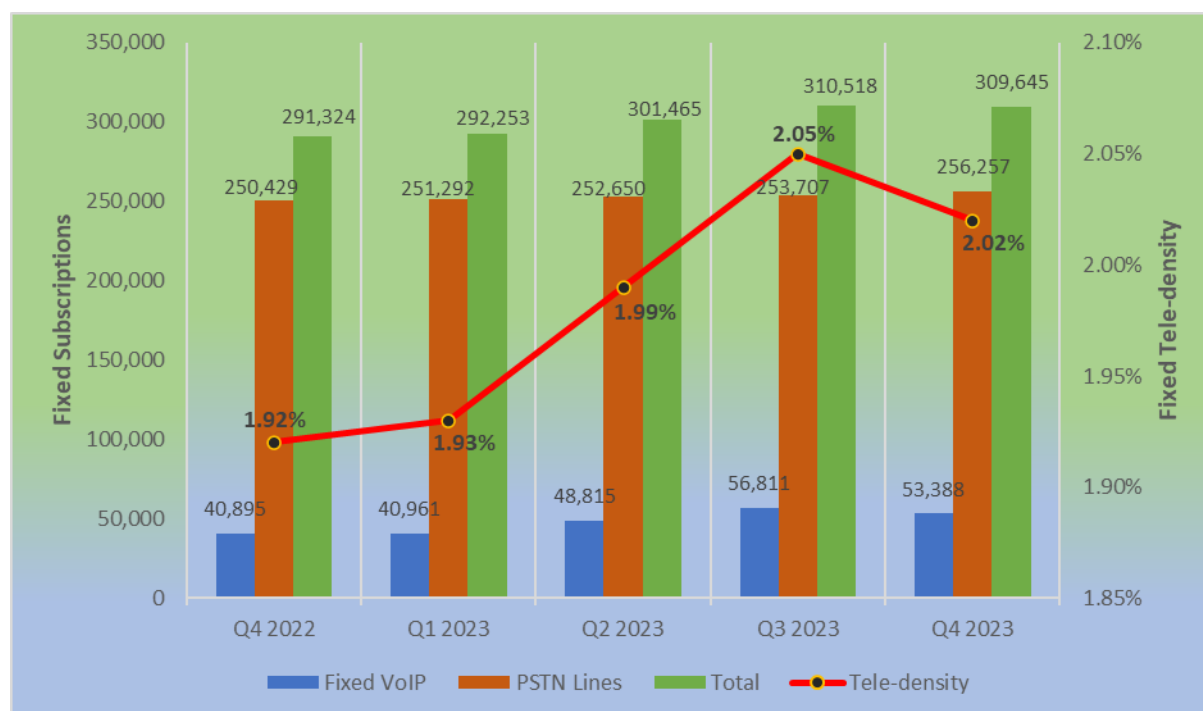
	7. United Parcel Services
	8. Skynet
	9. Tuma Logistics
	10. Zimdelivery
	11. Confident Courier (Pvt) Business Corporation
	12. Merchandise Carriers (Pvt) Ltd

2. SUBSCRIPTIONS & PENETRATION RATES

2.1 FIXED

The total number of active fixed telephone lines grew by 6.3% to record 309,645 as of 31 December 2023, from 291,324 recorded in the previous year. Growth in fixed VoIP as well as PSTN lines throughout the year is shown in Figure 1 below:

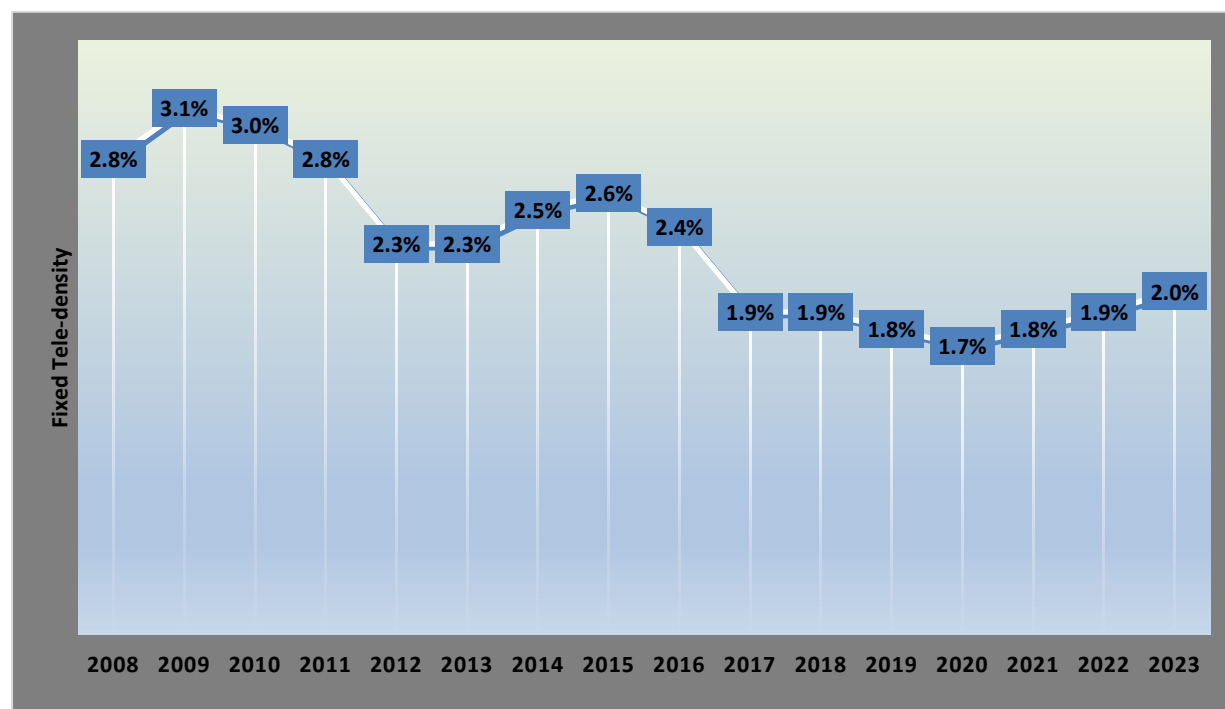
Figure 1: Growth in Fixed Telephone Subscriptions



Fixed VoIP subscriptions have been on an upward trend in recent years. This is evidenced by a 30.5% growth from 40,895, to 53,388 recorded as of 31 December 2023. VoIP services are relatively cheaper compared to traditional landlines and mobile voice. This cost advantage attracts many businesses, hence an increase in the adoption of the service.

Traditional fixed voice active subscriptions also grew by a margin of 2.3% to record 256,257 as of 31 December 2023, from 250,429 recorded as of 31 December 2022. Resultantly, the fixed tele-density increased by 0.1% to reach 2.02% in 2023, from 1.92% recorded in the previous year as shown in Figure 2 below:

Figure 2: Fixed Tele-density



VoIP services often offer lower rates for both local and international calls compared to traditional telephony. This affordability incentivizes individuals and businesses to use VoIP for both local and international communication needs. Consequently, the adoption of VoIP for calling can contribute to an increase in tele density.

2.2 MOBILE

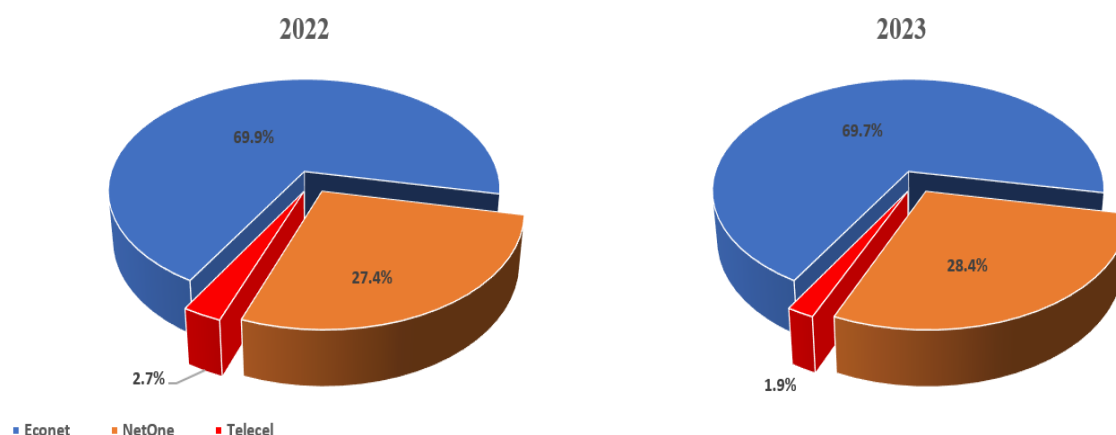
The total number of active mobile subscriptions grew by 4.7% to record 14,973,816 in 2023, from 14,300,790 recorded in the prior year as shown in Table 1 below:

Table 1: Active Mobile Subscriptions per Operator

	Active Subscriptions 2022	Active Subscriptions 2023	Variance (%)
Econet	9,988,105	10,440,693	4.5%
NetOne	3,922,734	4,251,791	8.4%
Telecel	389,951	281,332	-27.9%
Total	14,300,790	14,973,816	4.7%

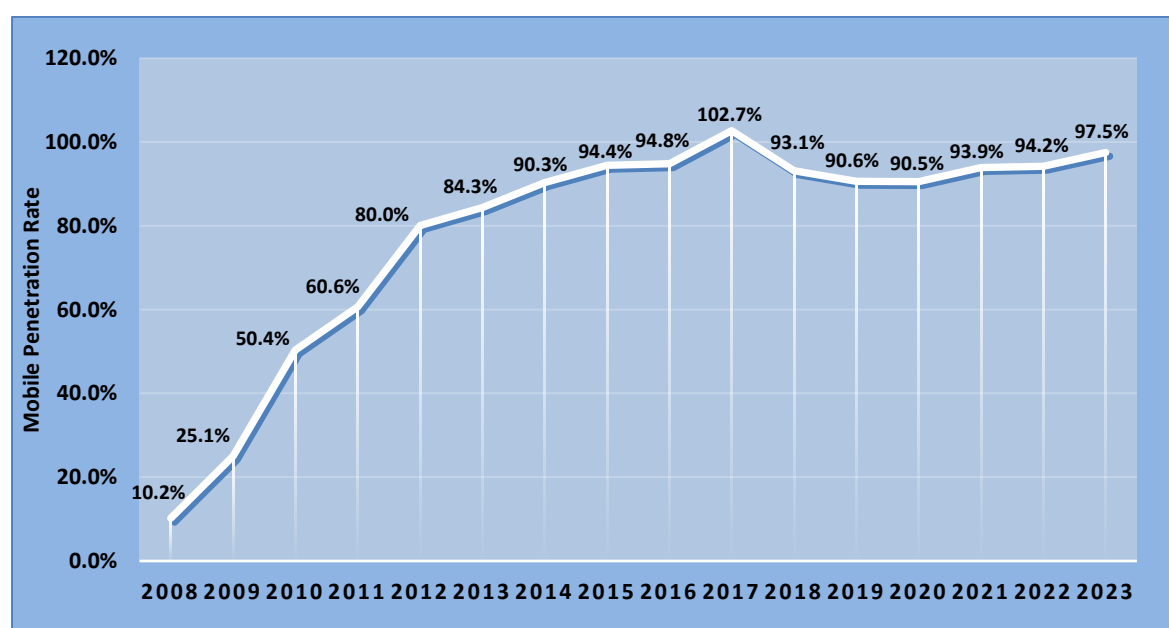
NetOne and Econet gained subscribers in 2023 by 8.4% and 4.5% respectively, whereas Telecel recorded a 27.9% decline in active subscriptions. The annual variation in the market share of active mobile subscriptions is shown in Figure 3 below:

Figure 3: Market Share of Mobile Subscriptions



As shown above, only NetOne gained subscriber market share by 1.0% in 2023, whereas Telecel and Econet lost subscriber market share by 0.8% and 0.2% respectively. NetOne subscriber growth may have been caused by a technical challenge they faced during the year that allowed users to access the Internet for free using the network. This prompted buying of NetOne sim cards to benefit from the technical challenge. Consequently, mobile penetration rate grew by 3.3% to record 97.5% as of 31 December 2023, from 94.2% recorded in the previous year. The annual mobile penetration rate variations are shown in Figure 4 below:

Figure 4: Mobile penetration rate



Telecommunication companies have been expanding their network coverage to reach previously underserved areas, including rural and remote regions. The expansion of mobile networks improves accessibility and availability of mobile services, attracting new users and increasing mobile penetration rates. As such mobile penetration rate is expected to grow steadily due to increased adoption of mobile services.

2.3 INTERNET

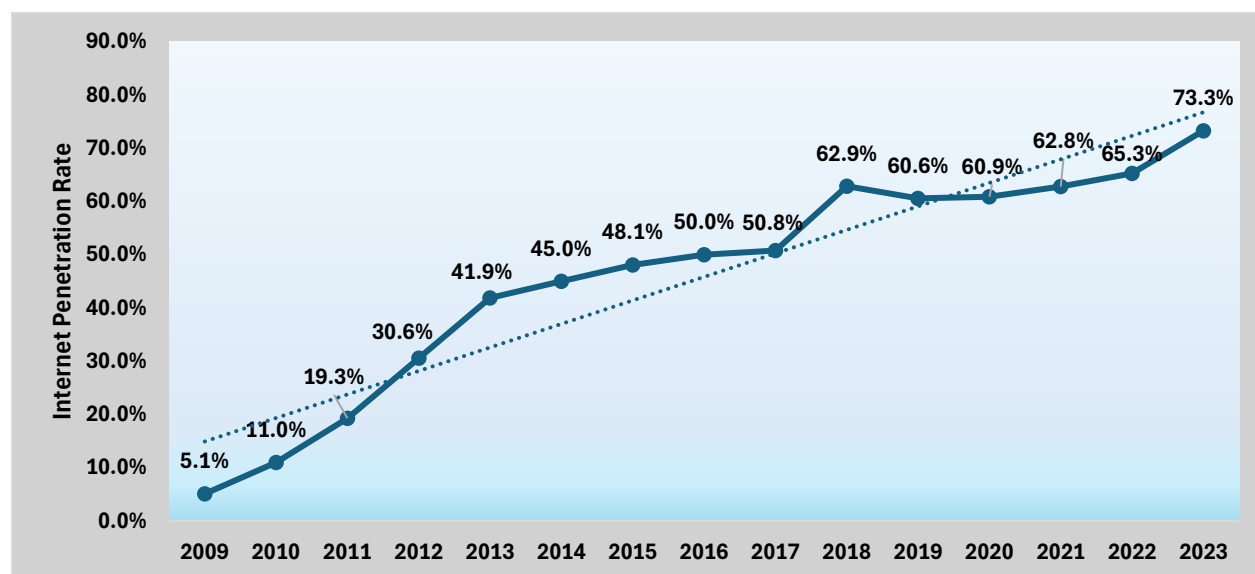
The total number of active Internet/data subscriptions as of 31 December 2023 was 11,240,969. This translates to a 13.4% increase from 9,914,950 active subscriptions, as of 31 December 2022. The growth in active subscriptions by technology is shown in table 2 below:

Table 2: Active Internet subscriptions

Technology	2022	2023	Variance (%)
3G/HSDPA/LTE	9,720,328	11,044,535	13.6%
Leased Lines	2,667	2,870	7.6%
DSL	104,888	104,463	-0.4%
WiMAX	7,821	9,359	19.7%
CDMA	5,767	170	-97.1%
VSAT	5,518	5,073	-8.1%
Active Fibre Subscriptions	67,961	74,499	9.6%
Total	9,914,950	11,240,969	13.4%

CDMA network decommissioning by telecommunication operators led to a 97.1% decline in CDMA subscribers. However, increase in deployments in next generation technologies, particularly LTE deployments, increased total subscribers by 13.4% in the year under review. The Internet penetration rate increased by 8.0% to reach 73.3%, from 65.3% recorded in 2022 as shown in Figure 5 below:

Figure 5: Internet penetration rate



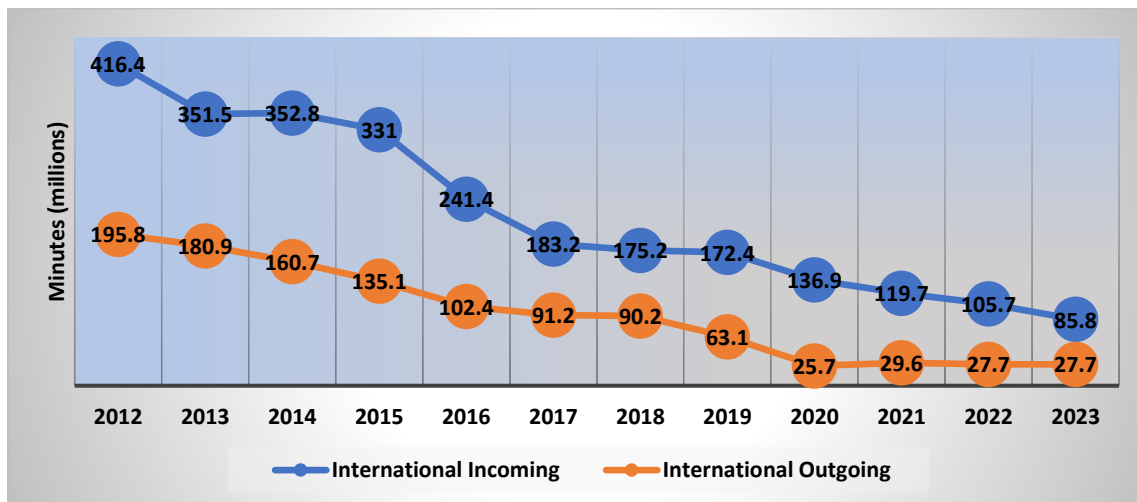
Increased use of internet based services, using mobile devices, particularly smartphones, has played a significant role in driving Internet penetration over the years, especially in rural areas where traditional fixed-line infrastructure is limited. The availability of cheaper lower end smartphones, coupled with the expansion of mobile networks, has made Internet access more accessible to a larger segment of the population as depicted above.

3. TRAFFIC AND USAGE PATTERNS

3.1 VOICE TRAFFIC

Total voice traffic increased by 11.4% to record 11.7 billion minutes in 2023, from 10.5 billion minutes recorded in the previous year. The growth in total voice traffic emanated mainly from an increase in national traffic, particularly net on net calls due to an eroded tariff and some promotional bundled packages. However, International traffic continued a downward trend as shown in Figure 6 below:

Figure 6: International traffic

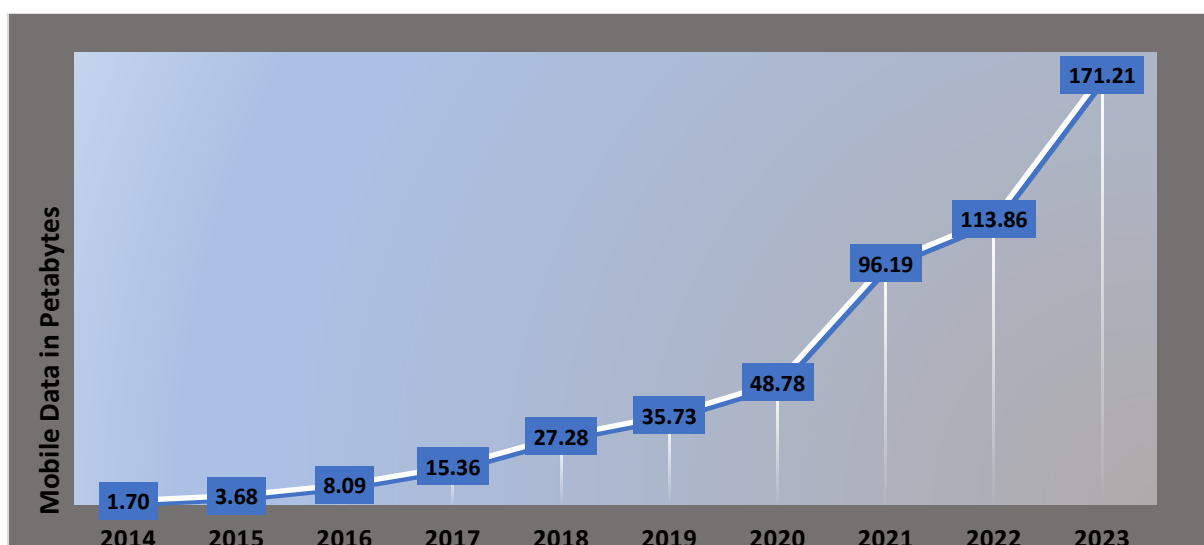


As shown above, international voice traffic has been declining over the years. As the world continues to undergo digital transformation, people now have various alternatives for international communication, such as email, video conferencing, instant messaging, and social media platforms. These channels offer alternative communication routes that may be more suitable for certain purposes or situations, reducing the reliance on traditional voice calls.

3.2 MOBILE INTERNET & DATA TRAFFIC

A total of 171.21 petabytes (PBs) of mobile Internet and data traffic were consumed in 2023. This represents a 50.7% increase in usage, from 113.86PBs consumed in 2022. The growth in mobile Internet and data traffic is shown in Figure 7 below:

Figure 7: Growth in mobile Internet & data usage

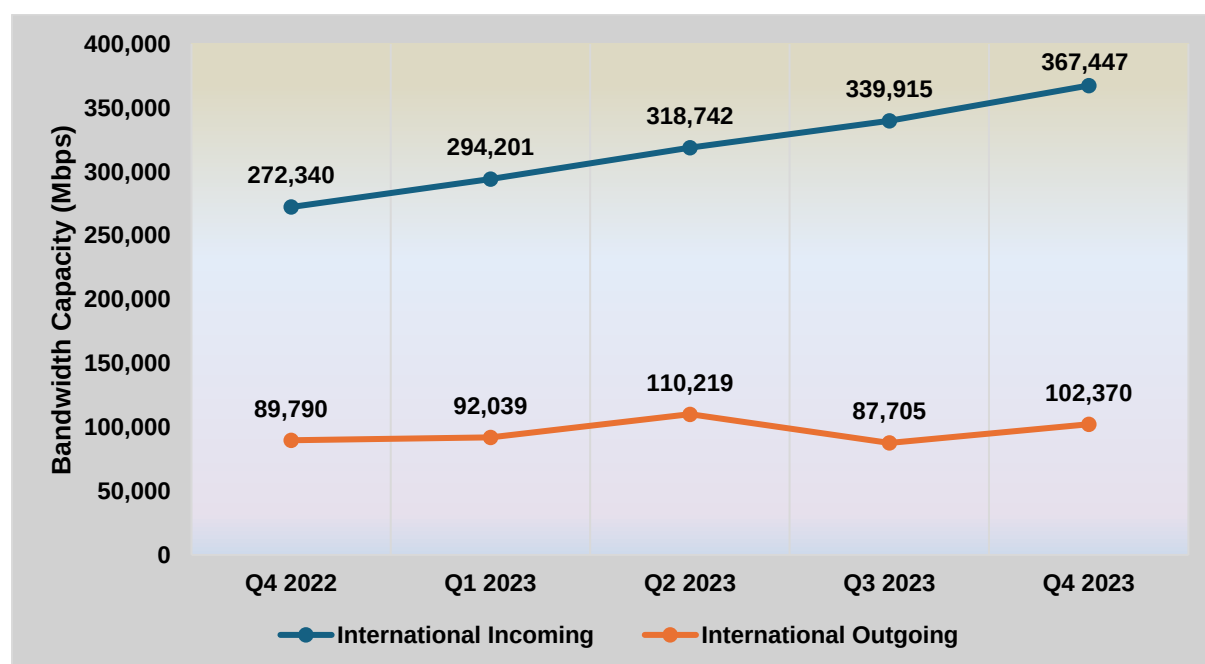


4G/LTE network rollout in recent years provided faster speeds and better coverage, enabling seamless video streaming, online shopping, and other data intensive activities online. Internet/data usage is expected to continue growing due to the prominence of Internet in today's everyday life and growth in mobile subscriptions necessitated by the continued adoption of Internet of Things (IoTs).

3.3 USED INTERNATIONAL INTERNET BANDWIDTH CAPACITY

Used incoming international bandwidth capacity grew by 34.9% to record 367,447Mbps as of 31 December 2023, from 272,340Mbps as of 31 December 2022. Used outgoing international Internet bandwidth capacity also increased by 14.0% to record 102,370Mbps as of 31 December 2023, from 89,790Mbps recorded as of 31 December 2022. The growth in used incoming and outgoing international Internet bandwidth capacity over the past year is shown in Figure 8 below:

Figure 8: International Internet Bandwidth Capacity (Mbps)



Over the years, the demand for international Internet bandwidth has been steadily increasing. This trend can be attributed to factors such as the expansion of Internet connectivity, the proliferation of digital services, and the increasing reliance on cloud-based platforms. As the global village increasingly becomes digitally connected, the need for international bandwidth to facilitate global communication and data exchange has risen.

3.4 POSTAL & COURIER VOLUMES

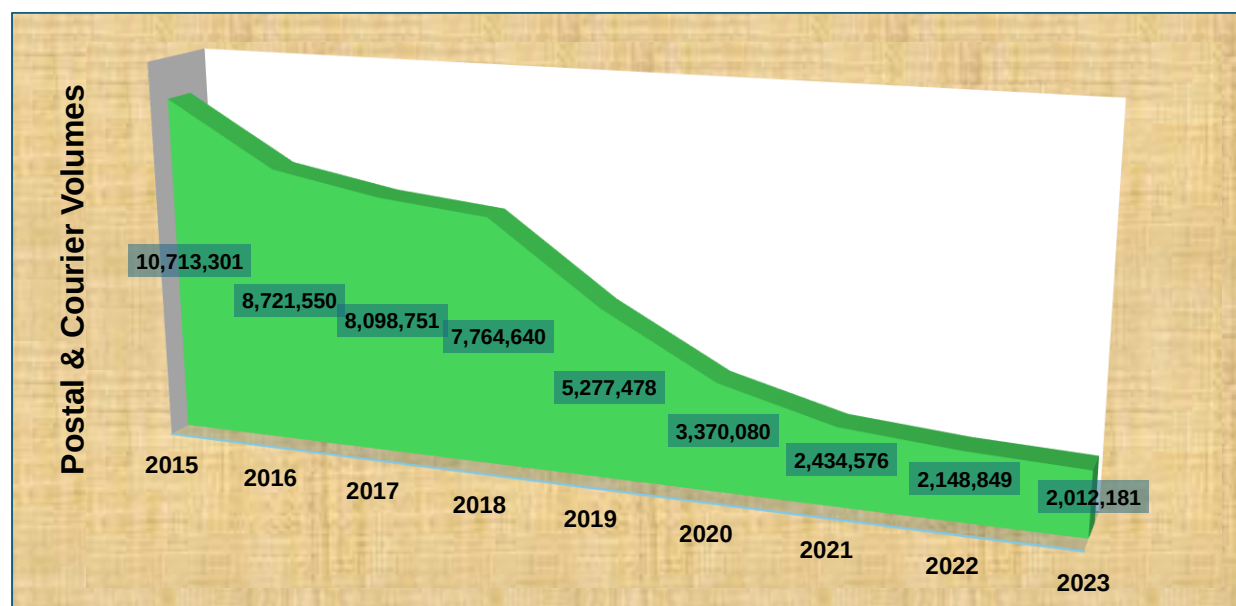
A total of 2,012,181 postal and courier items were processed in 2023; this represents a 6.4% decline from 2,148,849 recorded in 2022. The annual variation in postal and courier volumes is shown in Table 3 below:

Table 3: Postal & Courier Volumes

	2022	2023	Variance (%)
Domestic postal	949,911	1,147,622	20.8%
domestic courier	514,454	486,562	-5.4%
International incoming postal & courier	613,541	310,059	-49.5%
International outgoing postal & courier	102,762	67,938	-33.9%
Total postal & courier	2,148,849	2,012,181	-6.4%

Domestic postal was the only category that recorded growth in volumes as shown above. Total postal and courier volumes in recent years is shown in Figure 9 below:

Figure 9: Postal & Courier Volumes



The rise of e-commerce has significantly increased the demand for parcel deliveries. Postal and courier operators should capitalize on this trend through developing partnerships with e-

commerce platforms and expanding their last-mile delivery capabilities. Offering efficient and reliable delivery services for online purchases can help attract a larger customer base and help boost postal and courier volumes.

4. REVENUES & INVESTMENT

4.1 FIXED TELEPHONY REVENUES & INVESTMENT

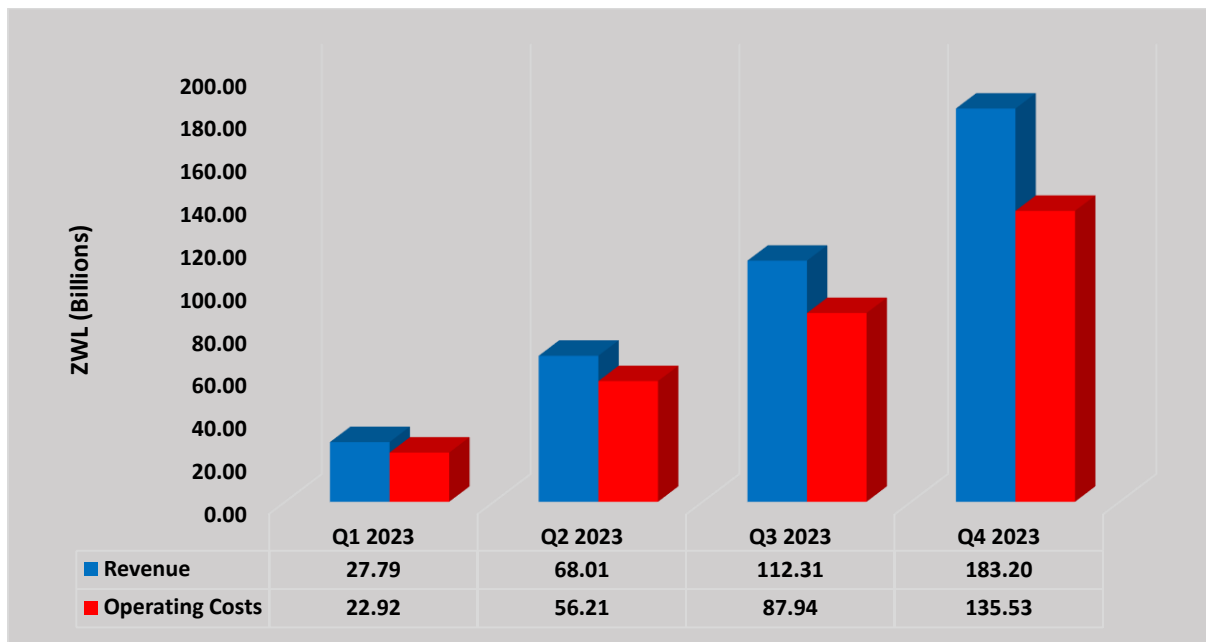
The fixed network generated a total of ZWL391.3 billion in 2023, incurred ZWL302.6 billion costs in the same period and invested ZWL96.97 billion throughout the year. An annual comparison of the absolute and the inflation adjusted growth in revenues, costs and investment figures is shown in Table 4 below:

Table 4: Fixed Network Revenue, Costs & Investment

	2022 (Absolute)	2023 (Absolute)	% Growth	CPI Adjusted Growth Rate
Revenue	39,572,336,318	391,304,196,950	888.8%	176.1%
Costs	31,445,781,785	302,597,239,053	862.3%	161.6%
Investment	3,425,937,774	96,969,428,090	2730.4%	947.4%

Capital expenditure registered the highest increase in percentage terms compared to revenue and costs as shown above. This is indicative of the efforts being put in place to expand and upgrade network infrastructure, which is usually financed through off-shore loans. The trend of growing revenues and operating costs continued throughout 2023, as shown in Figure 10 below:

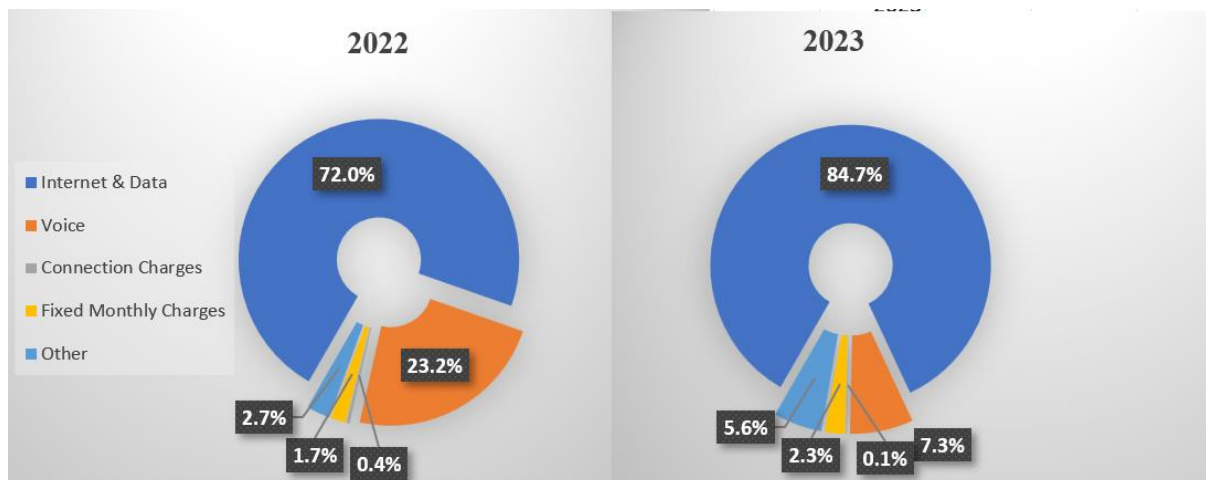
Figure 10: Fixed Telephone Revenues & Operating Costs



The trend is reflective of the impact of inflationary pressures on the cost of service delivery, which reduces the profitability of operators.

In terms of revenue contribution by service, for the fixed operator, Internet/data contributed close to 85% of the fixed network revenue, an indication that the fixed operator is now more data centric in terms of service provision. The annual variation in the revenue contribution by service is shown in Figure 11 below:

Figure 11: Contribution to revenue by service



The growth in Internet and data demand is largely emanating from the use of data hungry applications. As such, Internet/data usage has been increasing across the board, hence the increasing trend in its contribution to operator revenues.

4.2 MOBILE

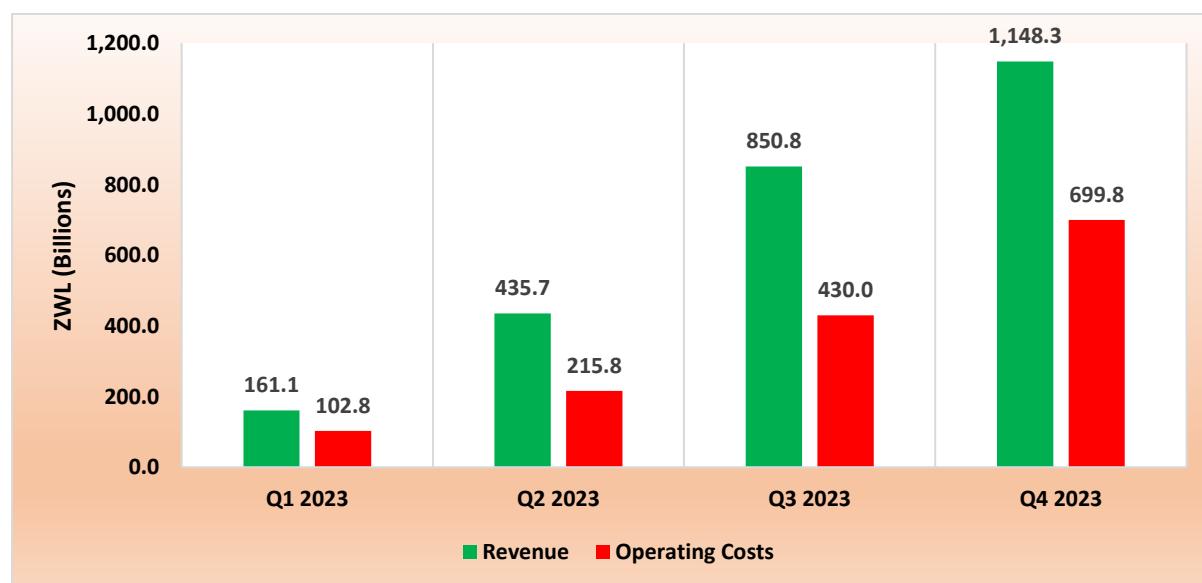
An annual comparison of the absolute and the inflation adjusted mobile revenue, operating costs and investment is shown in Table 5 below:

Table 5: Mobile Revenue, Operating Costs & Investment

	2022 (Absolute)	2023 (Absolute)	% Growth	CPI Adjusted Growth Rate
Revenue	266,745,601,165	2,595,885,382,950	873.2%	158.6%
Costs	171,962,701,818	1,448,271,811,922	742.2%	125.8%
Investment	16,933,589,289	191,876,295,856	1033.1%	229.8%

As shown above, the magnitude of growth in both revenues and operating costs is reflective of the extent that inflationary pressures have exerted on the entire telecommunications supply chain. This is a common phenomenon in an inflationary environment where demand for services is relatively inelastic. The MNOs revenues against incurred costs throughout the year 2023 are as shown in Figure 12 below:

Figure 12: Mobile Network Revenues & Costs



4.3 IAP REVENUES, COSTS & INVESTMENT

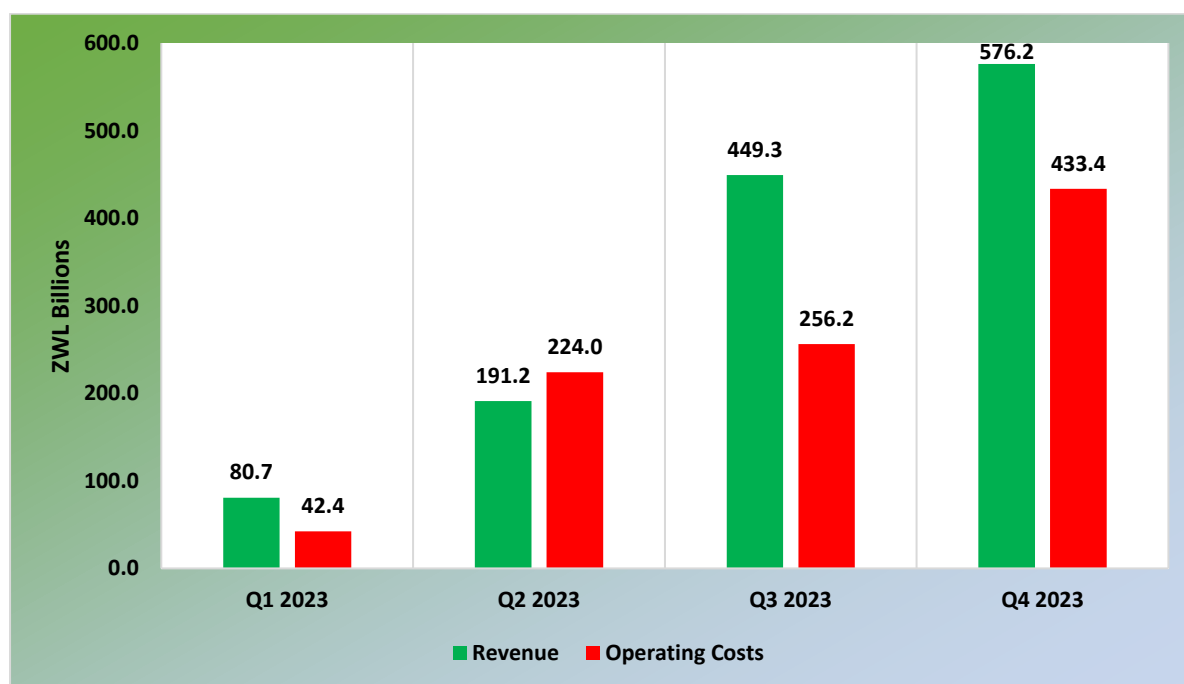
Internet Access Providers (IAPs) generated a total of ZWL1.3 trillion in 2023, from ZWL111.3 billion generated in 2022; Operating costs amounted to ZWL956 billion, whereas capital expenditure amounted to ZWL122.9 billion. An annual comparison of the absolute and the inflation adjusted figures is shown in Table 6 below:

Table 6: IAP Revenues, Costs & Investment

	2022 (Absolute)	2023 (Absolute)	% Growth	CPI Adjusted Growth Rate
Revenue	111,279,334,365	1,297,366,366,373	1,065.9%	167.2%
Costs	65,258,570,999	956,027,644,265	1,365.0%	284.9%
Investment	7,895,338,616	122,927,760,533	1,457.0%	267.6%

As shown above, revenues, costs and capital expenditure grew by margins greater than 1000%. This phenomenon is reflective of the inflationary environment in which the sector was operating in throughout the year. Revenues vis a vis operating costs over the past year are shown in Figure 13 below:

Figure 13: IAP Revenues & Operating Costs



The consistent growth, by big margins, in revenues and operating costs is attributable to the inflationary operating environment. Of concern is the diminishing profitability of operators, which can have a debilitating impact on sector investment and development.

4.4 POSTAL & COURIER

An annual comparison of the absolute and the inflation adjusted postal and courier revenue, operating costs and investment is shown in Table 7 below.

Table 7: Postal & Courier Revenue, Costs & Investment

	2022 (Absolute)	2023 (Absolute)	% Growth	CPI Adjusted Growth Rate
Revenue	11,055,083,580	95,469,705,509	763.6%	143.4%
Costs	9,356,614,446	103,213,652,098	1,003.1%	208.0%
Investment	213,330,548	1,548,174,770	625.7%	161.9%

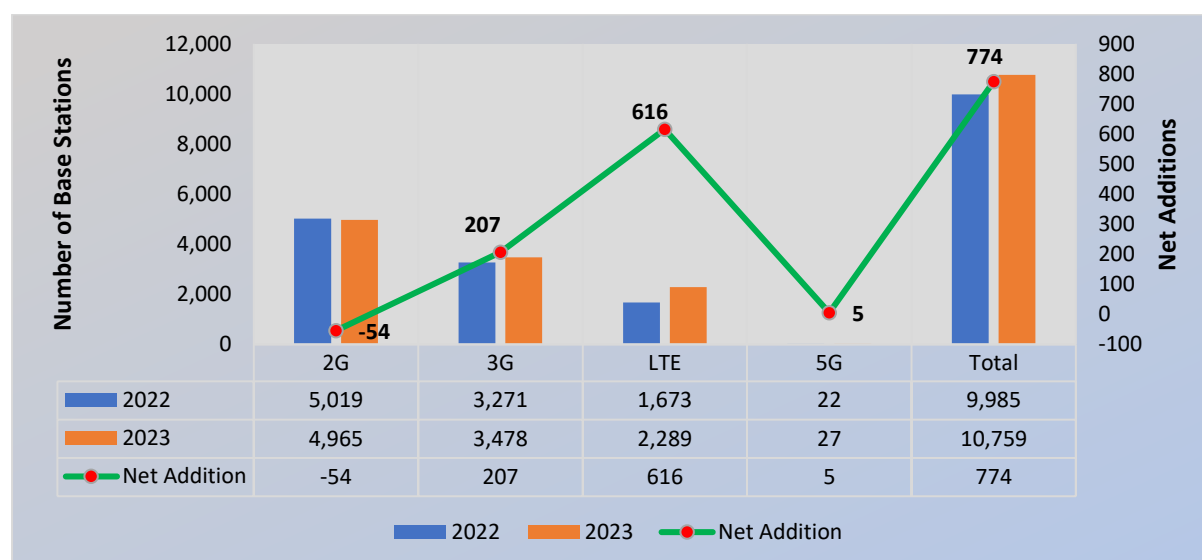
Operating costs grew by a margin that outpaced revenues in 2023. If this continues over an extended period of time, sustained losses can deplete cash reserves, strain capital resources, and jeopardize the long-term viability and development of the sector.

5. TELECOMMUNICATIONS INFRASTRUCTURE

5.1 MOBILE BASE STATIONS

The total number of base stations was 10,759 as of 31 December 2023, up from 9,985 as of 31 December 2022. The breakdown of base stations by technology and rollouts throughout the year are shown in Figure 14 below:

Figure 14: Mobile Base Stations



Operators continued to move away from deployment of 2G network infrastructure in favour of 3G and LTE network technologies as illustrated on the chart above. A total of 774 base stations were deployed in 2023, of which 616 were LTE. An additional five (5) 5G base stations were deployed to bring the total to 27 by the end of 2023.

In terms of mobile network coverage, the annual variation in population coverage by technology is shown in the Table 8 below:

Table 8: Mobile Network Population Coverage

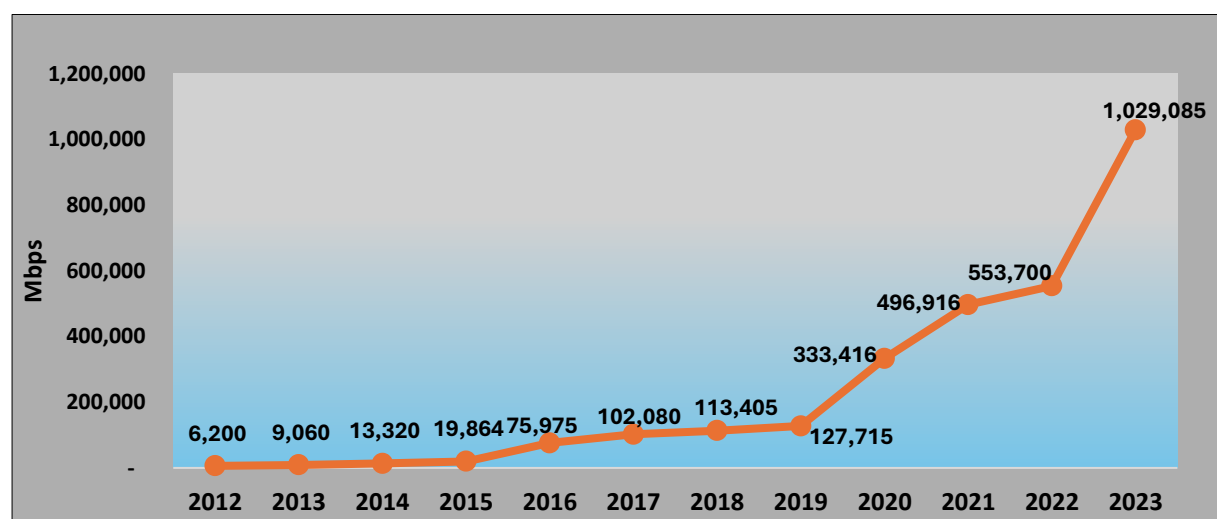
		2022	2023	Variance (%)
2G	Rural	74.96%	75.07%	0.11%
	Urban	99.89%	99.90%	0.01%
	Total	93.62%	93.75%	0.13%
3G	Rural	67.30%	67.60%	0.30%
	Urban	99.92%	99.90%	-0.02%
	Total	84.08%	86.80%	2.72%
LTE	Rural	2.85%	3.75%	0.90%
	Urban	92.87%	93.0%	0.13%
	Total	40.06%	44.70%	4.64%
5G	Rural	-	-	
	Urban	2.65%	2.65%	0.00%
	Total	2.65%	2.65%	0.00%

As shown above, LTE network population coverage increased by a notable margin due to the deployment of additional 616 LTE base stations during the year 2023. However, network population coverage still lags in the rural areas due to lower population density, limited infrastructure, and other geographical barriers. There is need for the sector to continue working together in implementing infrastructure projects targeting underserved rural areas.

6. INTERNATIONAL INTERNET BANDWIDTH

Equipped international Internet bandwidth increased by 85.9% to reach 1,029,085Mbps as of 31 December 2023, from 553,700Mbps as of 31 December 2022. Demand for data and Internet services continued an upward trend in the year under review. Consequently, Internet Access Providers invested in the expansion of their respective bandwidth capacities as shown in Figure 15 below:

Figure 15: Equipped International Internet Bandwidth Capacity



With the increasing interconnectedness of the global economy, businesses and organizations require robust international Internet connectivity to communicate, collaborate, and conduct cross-border operations. In trying to meet up with this surge in demand, operators have been investing in expanding their international Internet Bandwidth capacities over the years as depicted above.

7. EMPLOYMENT

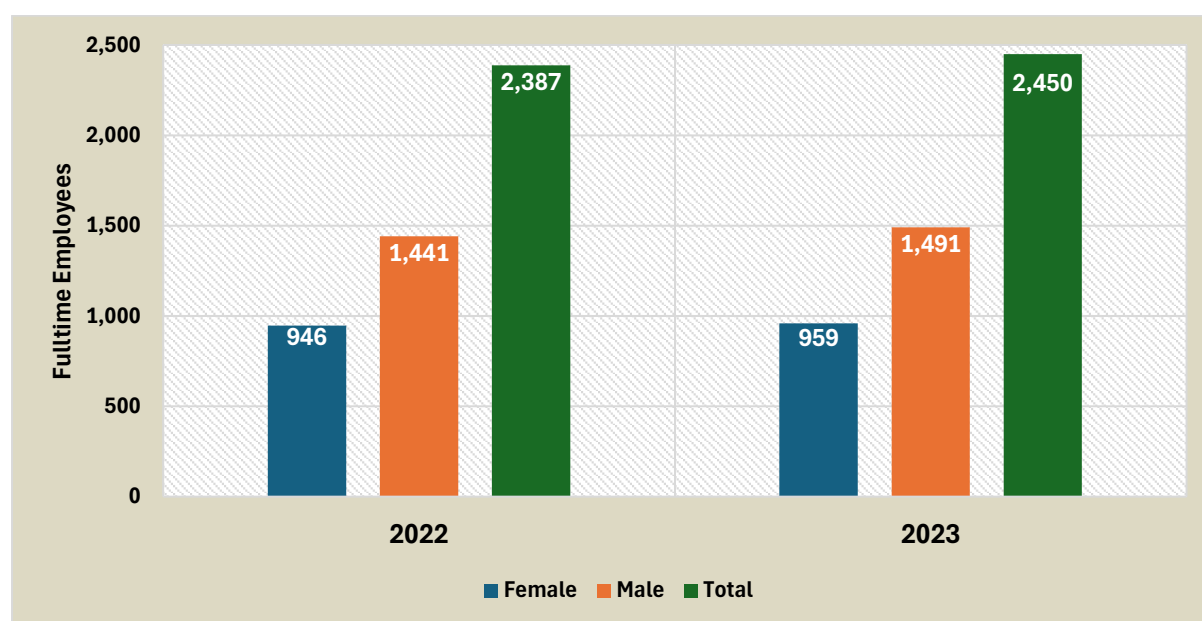
The total number of people employed on a full-time basis in the postal and telecommunications sector increased by 6.4%, to reach 6,260 as of 31 December 2023, from 5,883 people employed

as of 31 December 2022. The number of employees is broken down by subsector and by gender as follows:

7.1 MOBILE NETWORK OPERATORS:

The total number of people employed by the mobile networks on a full-time basis, as of 31 December 2023, was 2,450. This translates to a 2.6% increase from 2,387 employees recorded in the previous year. The total number of mobile network employees is broken down by gender in Figure 16 below:

Figure 16: Employment by mobile operators

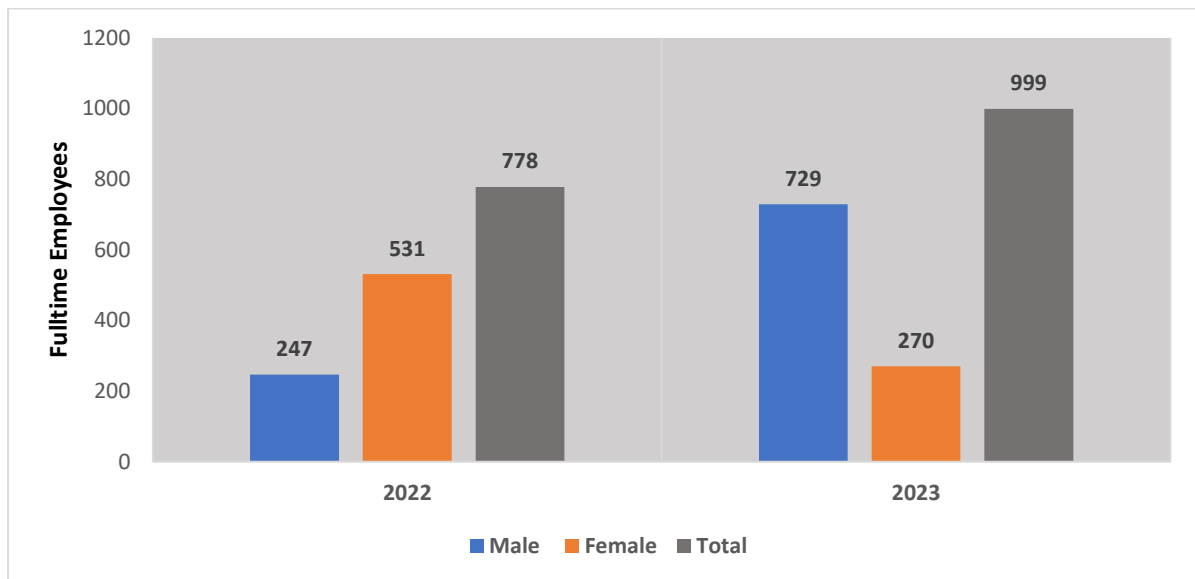


As shown above, there was growth in employment by mobile network operators, across gender, in 2023.

7.2 INTERNET ACCESS PROVIDERS

Internet Access Providers (IAPs) employees are broken down by gender in Figure 17 below:

Figure 17: Employment by Internet Access Providers

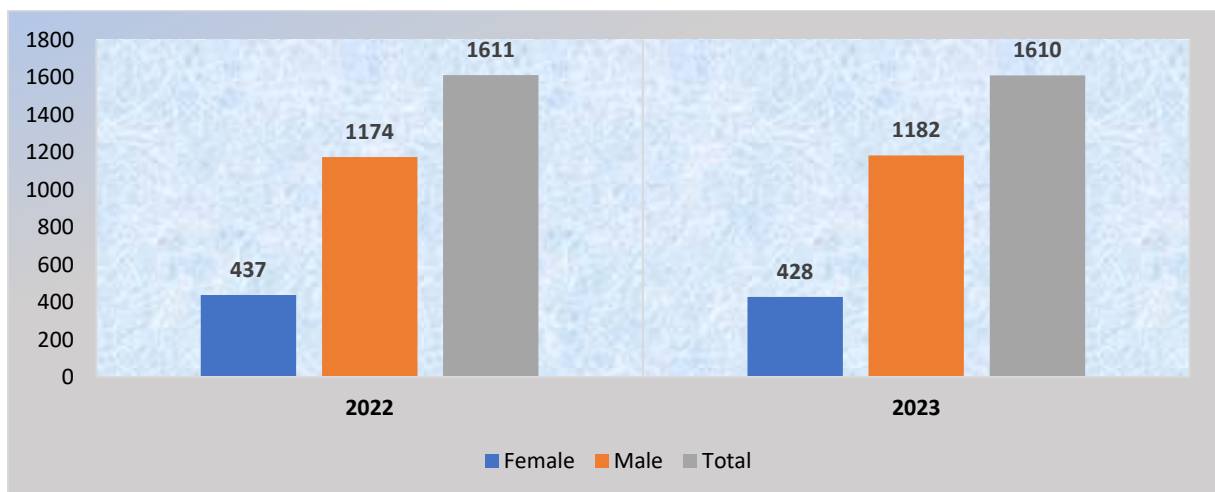


As shown above, there was an increase in male employees by Internet Access Providers (IAPs), in 2023. Noteworthy is the decline in female employees amongst Internet Access Providers. However, collectively employees increased to record 999, from 778 recorded in the previous year.

7.3 FIXED NETWORK

The total number of people employed by the fixed network on a full-time basis declined by just 1 employee in the year under review. The annual comparison is shown in Figure 18 below.

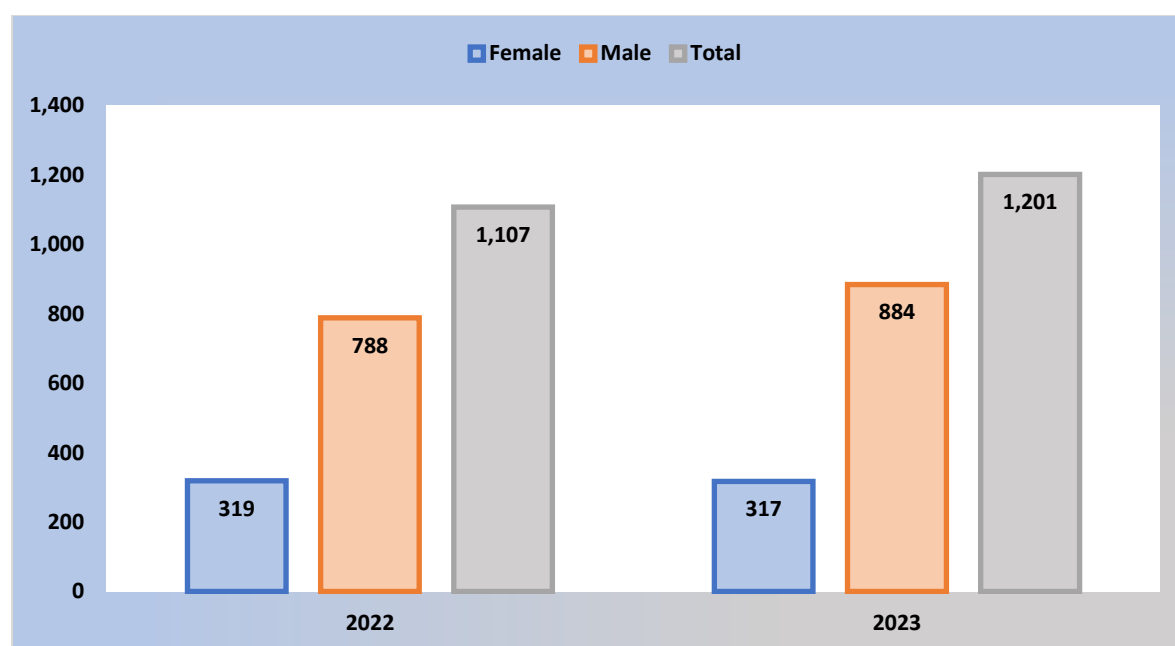
Figure 18: Employment by the fixed network



7.4 POSTAL & COURIER

The total number of people employed on a full-time basis by the postal and courier operators was 1,201 as of 31 December 2023, up from 1,107 people employed as of 31 December 2022 as shown in Figure 19 below:

Figure 19: Postal & Courier employees



8. OUTLOOK

The hyper – inflationary environment that prevailed in 2023 posed significant challenges across the sector. This resulted in significant increases in the cost of providing services. Revenue to cost ratios diminished for most operators, which is a signal for diminishing profitability across the sector. This is a worrying situation, which calls for consistent alignment of service charges to the increasing cost of service provision. Unless this problem is addressed, profitability will continue to diminish with implications on sector investment, innovation, and development. The country is still lagging in deployment of Long Term Evolution (LTE) base stations, hence the need to ensure that operators remain profitable to enable them to invest in high-speed networks.

On the other hand, demand for Internet/data will continue to grow significantly, spurred by the growing popularity of data hungry applications such as Netflix, Facebook, Youtube and TikTok. Hence, progress for the sector will also depend on the extent to which operators adopt

newer technologies such as Artificial Intelligence (AI) for strategic decision-making, including predictive analytics, advanced cybersecurity, and automated customer service to improve efficiency, security, and innovation in managing their networks. On its part, the regulator will continue to pursue the principle of technological neutrality in its licensing processes as well as foster infrastructure sharing aimed at increasing competition and innovation. For the postal sector, there is need to foster adoption and promotion of e-commerce to boost parcel and courier volumes.