

Tanzania Communications Regulatory Authority

Communication Statistics

Quarter ending 30th September 2023

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About this report

This report presents communication statistics for the first quarter of the financial year 2023/2024. The report provides statistics on telecommunication, mobile money, internet, broadcasting, postal and other ICT-related services for the quarter.

The statistics have been prepared in line with the statistical standards and International Telecommunications Union (ITU) standards for collecting administrative/supply-side data on telecommunications/Information and Communications Technologies.

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TelecommunicationServices Statistics

Telecom services statistics for subscriptions, tariffs, traffic minutes and SMS are highlighted. The highlights are provided on a monthly, quarterly and annual basis.

1.1 Telecom Subscriptions

A count of all active subscriptions which have registered activity or used at least once in the past three months describes the telecom subscription. Table 1.1 presents the number of subscriptions for June to September 2023.



September 2023 67.1 million

Table 1.1 Number of telecom subscriptions

	JUNE	JULY	AUGUST	SEPTEMBER
AIRTEL	17,505,139	17,924,973	18,426,704	18,485,232
TIGO	17,484,387	17,505,562	17,756,672	18,181,259
TTCL	1,559,090	1,585,879	1,606,925	1,621,049
SMILE	13,840	13,724	13,404	7,826
HALOTEL	8,410,029	8,332,702	8,436,839	8,266,320
VODACOM	19,116,166	19,732,390	20,165,204	20,555,763
TOTAL	64,088,651	65,095,230	66,405,748	67,117,449

1.1.1 Operators' subscriptions market shares

Chart 1.1.1 shows the telecom market shares by subscriptions per operator. It is shown that there is no operator with a market share greater than 35%, which is a minimum significant level for a dominant operator. This observation signifies no dominant operator, indicating healthy competition among the operators.

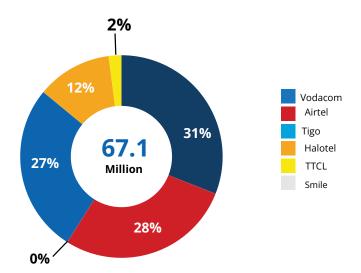


Chart 1.1.1 Operators' Subscriptions Market Shares as of September 2023

1.1.2 Subscriptions to mobile and fixed network

Table 1.1.2 presents the number of subscriptions for July, August and September 2023.

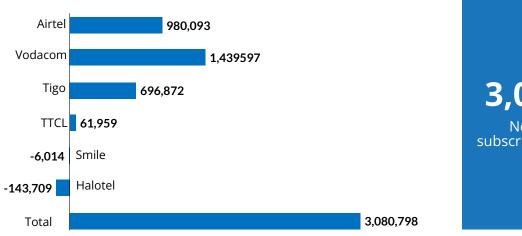
Table 1.1.2 Subscriptions to mobile and fixed network

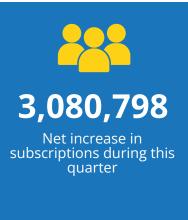
	JULY	AUGUST	SEPTEMBER
Mobile Subs	65,012,568	66,322,246	67,034,338
Fixed Subs	82,662	83,502	83,111
% of Fixed Subs	0.13%	0.13%	0.12%

1.1.3 Change in subscriptions per operator

There was a significant increase in subscriptions in the quarter ending September of around 3.1 million compared to 1.6 million recorded in the quarter ending June 2023.







1.1.4 Telecom services subscriptions and penetration by region

The distribution of subscriptions per region is depicted in Chart 1.1.4. It is shown that Dar es Salaam ranks first by having 18.4% of all active subscriptions (12.4 million subscriptions out of 67,034,338), Mwanza ranks second with 6.6% (4.45 million subscriptions out of 67,034,338), Arusha ranks third with 6.0% (4.04 million subscriptions out of 67,034,338), Mbeya ranks fourth with 5.8% (3.9 million subscriptions out of 67,034,338) and Dodoma ranks fifth in the top ranking regions by having 5.3% of all active subscriptions (3.6 million subscriptions out of 67,034,338).

Regions with the lowest contribution of subscriptions to the country's total subscriptions are North Unguja (0.09%, 61,360 SIM cards out of 67,034,338), South Unguja (0.14%, 92,336 SIM cards out of 67,034,338), and North Pemba (0.15%, 103,571 SIM cards out of 67,034,338).

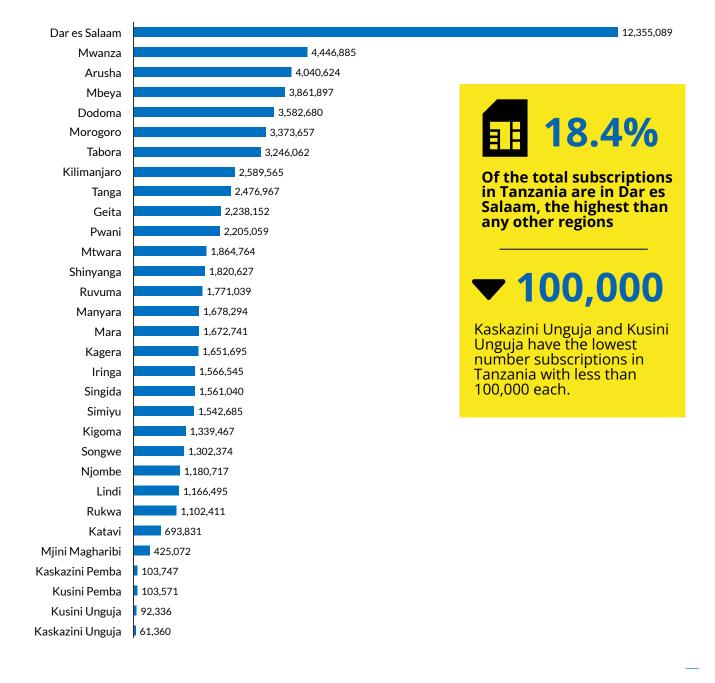
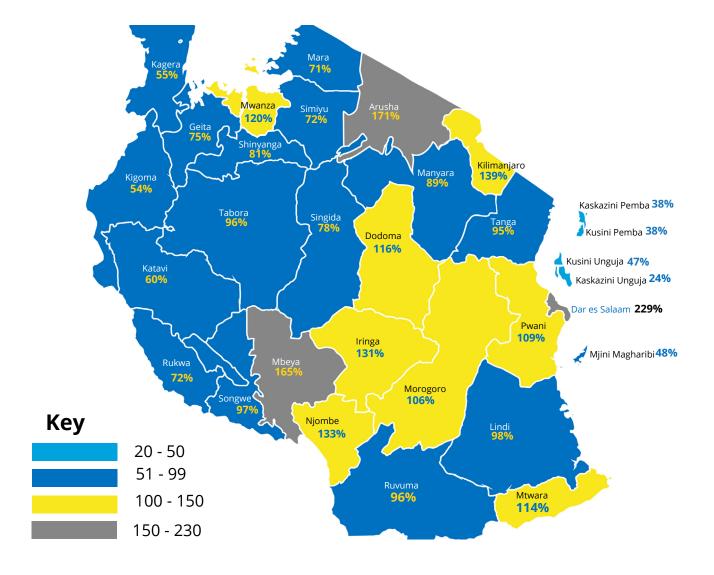


Chart 1.1.4 Telecom services subscriptions and penetration by region



Map 1.1.4 Telecom penetration per region as of September 2023

Telecom (voice) penetration per region is shown in Map 1.1.4, describing the number of subscriptions per population in each region. The distribution indicates that Dar es Salaam has the highest telecom penetration compared to all regions (229%), followed by Arusha with 171% and Mbeya with 165%.

Regions with the lowest penetration in Tanzania mainland are Kigoma (55%), Katavi (60%) and Mara (71%). The overall penetration is 109%, meaning that there are 109 subscriptions per 100 population (people) in Tanzania by September 2023.

1.1.5 Trend of telecom subscriptions for the past five years

The trend of telecom subscriptions for the past five years shows an average increase of 9% per annum, as shown in Table 1.1.5. The penetration as of September 2023 has reached 109%.

	2018	2019	2020	2021	2022	SEPTEMBER 2023
Mobile Subs	43,497,261	47,685,232	51,220,233	54,044,384	60,192,331	67,034,338
Fixed Subs	124,238	76,288	72,469	71,834	84,696	83,111.00
SUBS	43,621,499	47,761,520	51,292,702	54,116,218	60,277,027	67,117,449
PENETRATION	78%	81%	88%	89%	98%	109%

Table 1.1.5 Trend of telecom subscriptions for the past five years

1.2 Telecom tariffs

This section presents telecom services tariffs (Tax inclusive) for voice, SMS and data outside and within a bundle as of September 2023. Tariffs outside the bundle are also called Pay As You Go (PAYG) or standard tariffs.

1.2.1 Voice tariffs (in TZS)

The voice tariffs for the quarter ending September 2023 are shown in Table 1.2.1a and 1.2.1b for local and international services, respectively. These are one-minute voice prices when one calls locally and internationally without subscribing to a bundle.

Table 1.2.1b International voice tariffs

Operator	On-Net Voic	e Off-Net Voice	Operator	EA Voice	Internationa
AIRTEL	30	30	AIRTEL	900	1,170
HALOTEL	10	20	HALOTEL	863	1,185
SMILE	41	41	SMILE	1,210	1,272
TIGO	30	30	TIGO	1,335	1,488
VODACOM	30	30	VODACOM	1,119	1,984
TTCL	30	30	TTCL	1,829	2,242
Industry Average	28.50	30.17	Industry Average	1,209	1,557

Table 1.2.1a Local voice tariffs

Table 1.2.1a shows no difference in charges when calling within and outside the network. All operators sell one minute at 30 TZS, except Halotel and Smile, who sell at 10 TZS (on-net) and 20 TZS (off-net), and TZS 41 (on-net and off-net), respectively.

The industry average for local voice tariff was 28.50 TZS for on-net and 30.17 TZS for off-net. These charges are the same as they were in the quarter ending June 2023.

Table 1.2.1b shows that international call tariffs differ across networks, unlike local tariffs. The industry average rate of one minute for making calls to East Africa and other international are TZS 1,209.00 and 1,557.00, respectively.

It is further shown that while the industry average tariff for calls to East Africa was slightly lower (1,151.00 TZS) in the quarter ending June 2023, the tariff for calls to other countries was higher (1,888.00 TZS) compared to the similar tariff for the quarter ending September 2023.

1.2.2 SMS and data tariffs (in TZS)

Table 1.2.2a Local and international SMS tariffs

The local and international PAYG tariffs (Tax inclusive) for SMS and data, as of September 2023, are shown in Table 1.2.2a and 1.2.2b, respectively.

Table 1.2.2b Data tariffs

perator	Local SMS	International SMS	Operator	Data (Ml
TEL	8	215	AIRTEL	9
LOTEL	5	95	HALOTEL	9
MILE	27	250	SMILE	3
GO	8	215	TIGO	9
ODACOM	8	285	VODACOM	9
TCL	10	138	TTCL	9
ndustry Average	11	200	Industry Average	8

The industry average tariff for Local SMS for September 2023 is maintained at TZS 11 per SMS, the same as in June 2023. The average tariff for international SMS remained the same at TZS 200 per SMS, as in the previous quarter.

Table 1.2.2b shows that the industry average data tariffs for the quarter ending September 2023 was TZS 8 per MB, the same as for June 2023.

1.2.3 Disaggregated bundle tariffs (in TZS)

The disaggregated bundle tariffs (per unit prices — Tax inclusive) of one voice minute, SMS and one MB of data for consumers subscribed to bundled telecom services are shown in Table 1.2.3.

Significant changes
were in off-net tariff

June 2023 **TZS 6.3 per minute**

September 2023 TZS 5.2 per minute

Table 1.2.3 Disaggregated bundle tariffs

	On-net	Off-net	SMS	Data
Vodacom	6.4	6.9	1.4	2.2
Tigo	4.9	6.5	1.3	2.1
Airtel	3.6	6	1.1	2.1
Halotel	2.3	4.7	1	2.1
TTCL	7.2	7.2	2.2	2.2
Smile	-	-	-	2.1
Industry Average	4.88	6.26	1.4	2.1

Generally the industry average tariffs for the disaggregated bundled services are lower than PAYG tariffs.

The industry average for on-net bundle tariff in the quarter ending September 2023 is TZS 4.88, while in the quarter ending June 2023 was TZS 5.1. The off-net unit tariff in a bundle is TZS 6.26 per minute, while in the quarter ending June 2023, it was 6.3 per minute. SMS tariff in this quarter was TZS 1.4 per SMS, which remained the same as for June 2023. Data tariff in this quarter stands at TZS 2.1, while in June 2023, it was 2.3. Generally, in this quarter, there is a decrease in tariff for all three services — voice, SMS and data compared to the quarter ending June 2023.

1.2.4 Industry average of tariffs in all destinations and services

The industry average tariffs for basic and bundled telecommunications services are shown in Table 1.2.4.

	Average Basic Tariffs	Average Bundle Tariffs
On-Net	29	5
Off-Net	30	6
SMS	11	1
Data	8	2

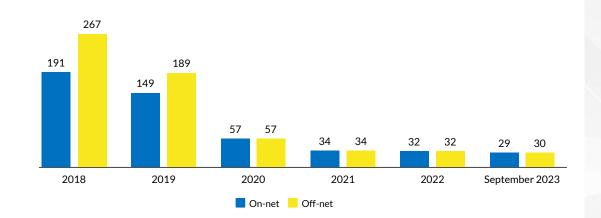
Table 1.2.4 Industry average for basic and bundle tariffs

It is shown that average tariffs for all PAYG and bundled telecom services remained unchanged compared to the quarter ending June 2023.

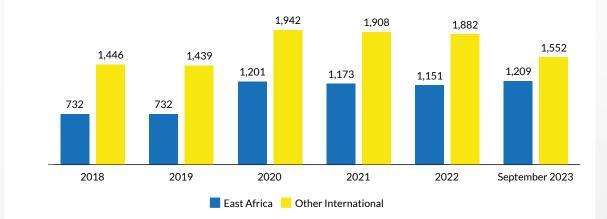
1.2.5 Trend of industry average basic tariffs

In the past five years, the trend of domestic and international industry average basic tariffs for voice calls is shown in Chart 1.2.5a and 1.2.5b, respectively.





It is shown in Chart 1.2.5a that the trend of industry average tariffs for on-net and off-net calls dropped significantly between 2018 and September 2023, and they started converging in 2020. Convergence between on-net and off-net tariffs continued from 2020 to September 2023, though the on-net tariff was slightly lower than off-net in September 2023. The noted alignment between on-net and off-net tariffs is linked to a significant drop in the interconnection charges during the same period.





While the trend for local tariffs shows a close convergence, the tariffs for East Africa and other countries, as shown in Chart 1.2.5b, have different trends over time as they depend on rates imposed by international carriers.

1.3 Telecom traffic minutes

1.3.1 Local traffic

The local on-net and off-net voice traffic for the quarter ending September 2023 is shown in Table 1.3.1.

	JULY	AUGUST	SEPTEMBER	TOTAL
On-Net Traffic	7,082,166,172	7,184,783,845	7,047,888,724	21,314,839,281
Off-Net Traffic	5,995,833,342	5,845,460,837	5,913,398,438	17,754,692,617
Total	13,078,000,054	13,030,244,682	12,961,287,162	39,069,531,898

Table 1.3.1 On-net and off-net traffic minutes

It is shown in Table 1.3.1 that a total of 39.1 billion minutes were spent in the quarter ending September 2023 compared to 34.8 billion minutes in the quarter ending June 2023. However, there was slightly lower traffic in September than in July and August. Also, the on-net traffic was significantly higher than off-net traffic throughout the quarter. On-net and off-net traffic minutes **Sept 2023**

39.1 billion

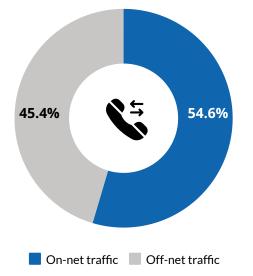
On-net and off-net traffic minutes **June 2023**

34.8 billion

1.3.2 Percentage shares of traffic minutes

1.3.2.1 Local traffic

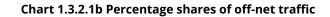
Chart 1.3.2.1 Percentage shares of traffic minutes as of September 2023

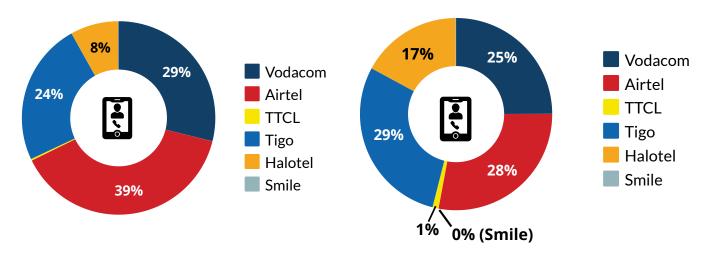


It is shown in Chart 1.3.2.1 that more voice minutes were spent for on-net calls (54.6%) than for off-net calls (45.4%).

Also, shares of traffic minutes per operator for on-net and off-net traffic calls shown in Chart 1.3.2.1a and Chart 1.3.2.1b indicate that more on-net traffic was generated in Airtel network (39%) while less on-net traffic was generated in Smile network (0%).

Chart 1.3.2.1a Percentage shares of on-net traffic

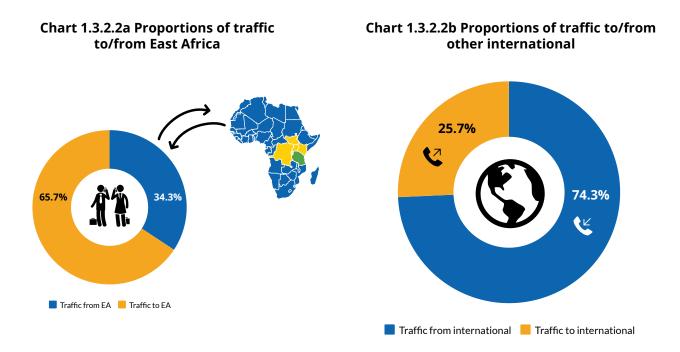




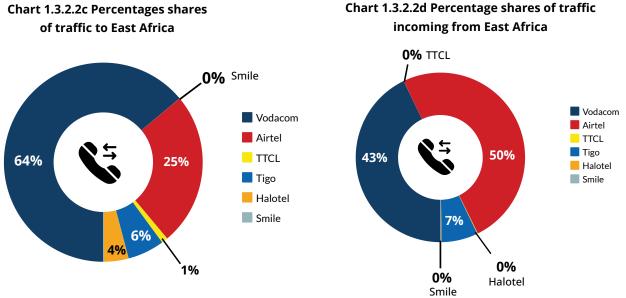
On the other hand, off-net traffic was higher in the Tigo network (29%) than in other networks, while the least off-net traffic was in the Smile network (0.01%).

1.3.2.2 International traffic

Proportions of traffic to/from EA and other international are shown in Chart 1.3.2.2a and 1.3.2.2b.

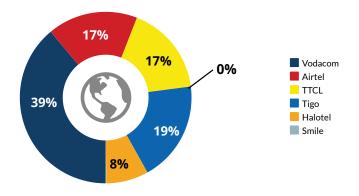


It is shown in Chart 1.3.2.2c that Vodacom has the largest share (64%) for the voice traffic to EA than other Mobile Network Operators (MNOs), while Smile has the most negligible share (0%).



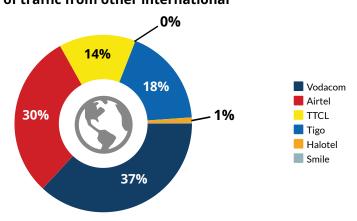
On the other hand, Airtel has the largest share of voice traffic (50%) from EA compared to the rest of the MNOs, while Smile and Halotel have the least share (0%) compared to other MNOs, as shown in Chart 1.3.2.2d.

Chart 1.3.2.2e Percentages shares of traffic to other international



Similar observations are noted for the traffic to other countries, where Vodacom has the largest share of traffic to other countries (39%) compared to other MNOs, as shown in Chart 3.2.2e. In contrast, Smile has the least share of traffic to other countries (0%) compared to other MNOs.

Chart 1.3.2.2f Percentages shares of traffic from other international



On the contrary, the share of traffic from other countries is different for traffic from EA, where Vodacom has larger traffic from other countries (37%) than the other MNOs. Smile recorded negligible traffic from other countries (0%), as shown in Chart 1.3.2.2f.

1.3.3 Minutes used per subscriptions (minutes of use)

On average, every subscription spent 592 voice minutes in the quarter ending September 2023, as shown in Table 1.3.3, while spent 202, 196, and 193 minutes in July, August and September 2023, respectively. This observation implies that each subscription used an average of 197 voice call minutes per month this quarter.

	JULY	AUGUST	SEPTEMBER	TOTAL
On-net Traffic	110	108	105	323
Off-net Traffic	93	88	88	269
Traffic to EA	0.01	0.18	0.01	0.20
Traffic to Int	0.03	0.03	0.04	0.10
TOTAL	202	196	193	592

Table 1.3.3 Average minutes used by a subscriber in a month

Besides, subscribers called more on the same network than across the networks during the quarter under review. Subscribers spent 323 minutes for on-net calls compared to 269 minutes for off-net calls. Further, a subscriber spent 0.10 minutes calling other countries while spending 0.2 minutes to EAC. Generally, more minutes were spent in July than in other quarter months.

1.3.4 Trend of local traffic minutes for the past five years

The trend of traffic minutes over the past five years has been increasing by an average of 19% each year from 2019 to 2022. The traffic growth trend is shown in Table 1.3.4.

Table 1.3.4 Trend of local traffic minutes for the past five years

	2018	2019	2020	2021	2022
On-net Traffic	52,582,949,873	55,812,036,633	54,561,254,851	51,673,651,476	62,678,814,642
Off-net Traffic	9,643,966,008	11,570,993,820	27,084,539,242	43,194,917,029	60,064,367,493
TOTAL	62,226,915,881	67,383,030,453	81,645,794,093	94,868,568,505	122,743,182,135

It is shown in Table 1.3.4 that more traffic minutes were from on-net calls compared to off-net calls. Also, the gap between on-net and off-net calls is getting narrower due to continuous reduction in interconnection charges, which makes both on-net and off-net calls have almost similar tariffs.

1.3.5 Trend of international traffic minutes

The trend of traffic minutes for international calls is shown in Table 1.3.5.

Table 1.3.5 Trend of international traffic minutes for the past five years

	2018	2019	2020	2021	2022
Outgoing To EA	15,777,208	14,252,483	9,738,521	9,097,165	8,927,113
Incoming From EA	26,161,712	21,989,062	15,406,649	15,853,362	13,594,473
Outgoing To Int	59,106,315	43,297,997	38,014,133	24,856,947	26,034,131
Incoming From Int	54,933,170	45,100,536	45,172,263	49,885,142	33,374,619

As shown in Table 1.3.5, more traffic is coming from both EA and other countries than outgoing to the same destination countries from our country. However, the traffic to and from EA has been decreasing and the same trend is noted for the traffic to and from other internationals except for 2022, when it rose to 26 million from 24.9 million in 2021.

Total outgoing traffic to international **2022**



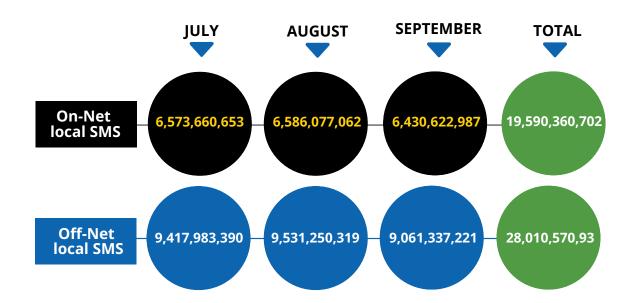
Total incoming traffic from international 2022



1.4 Telecom SMS traffic

1.4.1 Local SMS traffic

Table 1.4.1 Local SMS traffic



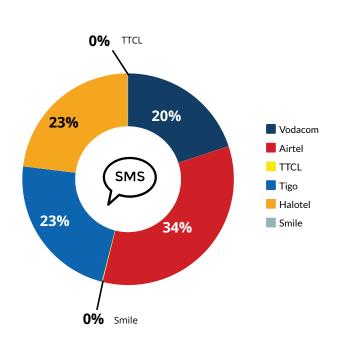
Local SMS traffic peaked in August 2023 and was at its lowest in September 2023, as shown in Table 1.4.1.

Also, the off-net SMS share was more significant (59%) than the on-net share, as shown in Chart 1.4.1a, indicating that more SMSs are sent across networks. Generally, Airtel had the largest local SMS share (34%) compared to other MNOs, while Smile and TTCL had a negligible share (0%), as shown in Chart 1.4.1b.

41%



On-Net local SMS – Off-Net local SMS





59%

1.4.2 International SMS traffic

The trend of international SMS traffic is shown in Table 1.4.2.

1.4.2 International SMS traffic

	JULY	AUGUST	SEPTEMBER	TOTAL
Outgoing to EA	176,518	174,531	175,908	526,957
Outgoing to other Int	459,627	481,874	755,265	1,696,766
Incoming from EA	3,214,303	2,974,210	2,794,491	8,983,004
Incoming from other Int	356,497,995	463,819,319	359,457,478	1,179,774,792

It is shown in Table 1.4.2 that more SMSs were received from other countries than were sent to other countries. Also, more international SMSs were sent in September, while more SMS were received in August 2023 compared to other months of the quarter. More details of the proportion of SMS sent and received are shown in Chart 1.4.2a and 1.4.2b.

Proportions of traffic to/from EA and other countries are shown in Chart 1.3.2.2a and 1.3.2.2b.

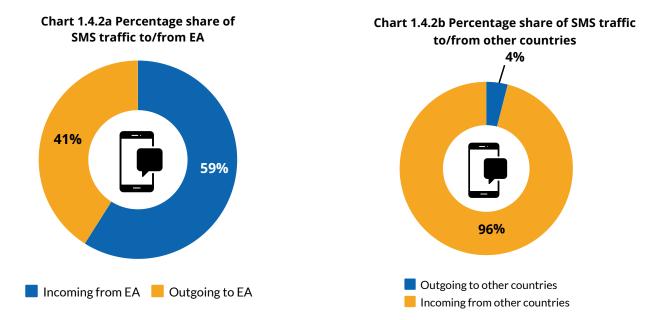


Chart 1.4.2c Percentage share of international SMS traffic



Vodacom handles more international SMS traffic than other MNOs, while Smile handles negligible traffic, as shown in Chart 1.4.3b.

1.4.3 Average number of SMS per subscription

The average number of SMS per monthly subscription in the quarter under review is shown in Table 1.4.3.

	JULY	AUGUST	SEPTEMBER	TOTAL
On-Net SMS	102	99	96	297
Off-Net Local SMS	146	144	135	424
Outgoing to EA	98	97	99	295
Outgoing to other Int	143	142	144	429

The trend shows that more SMS were sent by each subscriber in July than in any other month of the quarter, followed by August.

1.4.4 The trend of local SMS

The trend of local SMS over the past five years, as shown in Chart 1.4.4, indicates an average increase of 5% and 22% for on-net and off-net SMS, respectively.

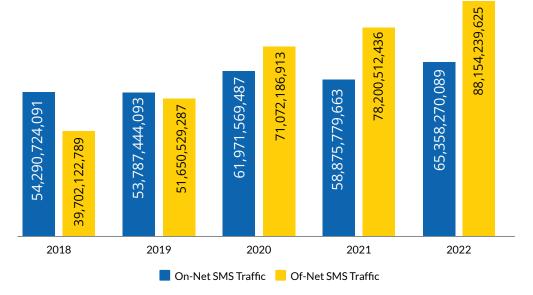


Chart 1.4.4 Trend of local SMS traffic in the past five years

1.4.5 The trend of international SMS

The trend of international SMS for the past five years is shown in Table 1.4.5.

Table 1.4.5 Trend of international SMS traffic in the past four years

	2019	2020	2021	2022
Off-net To EA	3,850,602	1,235,692	1,425,624	1,700,525
Incoming From EA	6,834,308	2,718,443	3,191,041	3,574,956
Off-net To Int	48,376,608	50,880,982	89,717,530	58,344,672
Incoming From Int	3,201,524,787	3,935,379,714	4,599,468,894	4,664,200,079

1.5 User devices

User devices are the key driver in promoting the usage of telecommunication/ICT services. The status of devices attached to operators' networks is shown in Table 1.5.1.

Table	1.5.1	User	devices
-------	-------	------	---------

Device type	Number of devices	Penetration
Mobile Phone/Feature phone	51,655,454	83.66%
Smartphone	18,958,050	30.71%
Handheld	1,698,654	2.75%
Modem	562,325	0.91%
Portable (including PDA)	81,522	0.13%
Tablet	397,494	0.64%
Module	59,359	0.10%
WLAN Router	101,546	0.16%
Dongle	94,108	0.15%
IoT Device	81,863	0.13%
Vehicle	17,323	0.03%
Wearable	4,779	0.01%
Device for the Automatic Processing of Data (APD)	825	0.0013%

As of September 2023, the penetration of featured phones was 83.66%, smartphones 30.71%, while the penetration for other devices is indicated in Table 1.5.1.

2. Mobile Money Services **Statistics**

This section presents statistics on mobile money ervices in terms of subscriptions (number of mobile money accounts) and number of transactions.

2.1 Mobile money subscriptions

Mobile money subscriptions refer to the count of all active SIM cards with mobile money service accounts which have registered an activity/have been used at least once in the past three months. The subscription has increased from 47.3 million accounts in the quarter ending June 2023 to 51.4 million accounts in the quarter ending September 2023.

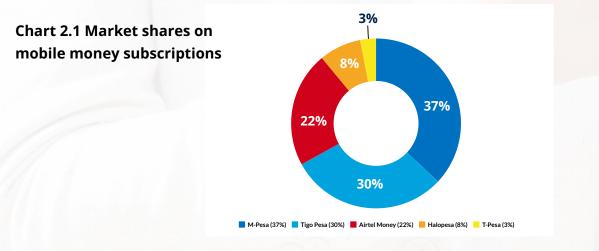


September 2023 51.4 million

Table 2.1 Mobile money service subscriptions (number of accounts)

	JUNE	JULY	AUGUST	SEPTEMBER
Airtel Money	10,149,367	10,506,755	10,836,557	11,244,936
Halo Pesa	3,790,326	3,845,790	3,910,434	3,940,299
Tigo Pesa	14,855,524	15,115,622	15,465,750	15,407,273
T-Pesa	1,287,318	1,566,405	1,332,000	1,596,544
M-Pesa	17,193,125	17,639,122	18,462,872	19,180,295
TOTAL	47,275,660	48,673,694	50,007,613	51,369,347

It is shown in Table 2.1 that mobile money accounts are increasing at an average rate of 2.7% in the quarter under review.



Also, it is shown in Chart 2.1 that M-Pesa has a larger share of 37% of mobile money accounts in the market, followed by Tigo Pesa at 30%, Airtel Money at 22%, Halopesa at 8%, while T-Pesa has the market share of 3%. Smile does not offer mobile money services.

2.2 Total number of subscriptions and transactions

Table 2.2 shows that more mobile money transactions were done in August 2023 compared to other quarter months.

Table 2.2 Total number and value of transactions

	JUNE	JULY	AUGUST	SEPTEMBER
No. of Subscriptions	47,275,660	48,673,694	50,007,613	51,369,347
No. of Transactions	420,675,884	405,105,701	456,958,283	422,390,546
Average No. of Trans/Subs	9	8	9	8

The number of mobile money transactions for this quarter has been growing at an average of 3% per month. Also, mobile money transactions increased from 420,675,884 in June to 422,390,546 in September 2023, recording a 0.4% growth.

The trend of mobile money subscriptions and transactions in the past three years is shown in Table 2.3.

Table 2.3 Trend of mobile money transactions in the past three years

	2020	2021	2022
No. of Subs	32,268,630	35,285,767	40,953,496
No. of Transactions	3,412,210,062	3,752,084,894	4,195,899,414

It is shown in Table 2.3 that the number of transactions has increased for the past three years from 3.4 billion in 2020 to 4.2 billion in 2022. The number of subscriptions has also been growing at an average rate of 13% per annum, while annual average transactions have been increasing at around 11%.

Number of Transactions







3. Internet Services Statistics

3.1 Internet subscription

The subscriptions are through cable modem, DSL, fibre-to-the-home/business, other fixed (wired), satellite, terrestrial fixed wireless, handset-based, computer-based (USB/dongles) and mobile wireless. Mobile internet subscriptions refer to the total number of SIM cards accessed and used internet services in the last three months regardless of data speeds (i.e., through GPRS, 3G, 4G or 5G).

Table 3.1 Monthly internet subscriptions

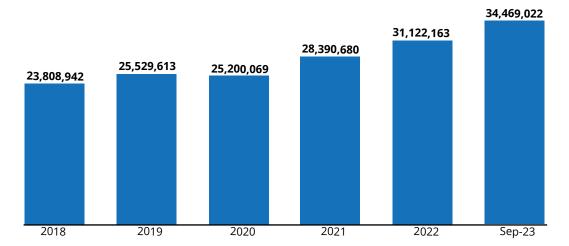
	JUNE	JULY	AUGUST	SEPTEMBER
Mobile Internet Subs	33,967,699	34,333,224	34,000,269	34,393,866
Fixed Wireless Internet Subs	7,496	7,156	8,098	21,574
Fixed Wired Internet Subs	70,189	52,809	55,313	53,582
TOTAL	34,047,407	34,393,189	34,063,680	34,469,022

Generally, mobile internet subscriptions grew by 1.3% in the quarter ending September compared to the quarter ending June 2023.

3.2 Trend of subscriptions for the past five years

The number of subscriptions for the past five years is shown in Chart 3.2.





It is generally shown in Chart 3.2 that there is an average growth rate of 7.8% per year in internet subscriptions. There were 23.8 million subscriptions in 2018, which increased to 34.5 million in September 2023.

3.3 Internet usage per month

Internet usage is counted as the amount of data traffic (in Petabytes) used in a given period. (Note that 1 Petabyte =1000³ Megabytes).

Table 3.3 Amount of data used for the past three months

	JUNE	JULY	AUGUST	SEPTEMBER
Data Traffic (Petabytes)	83	88	91	92
MBs/Subs/Month	2,476	2,569	2,677	2,662

Data traffic in petabytes shown in Table 3.3 indicates that more data were used in September, followed by August, and July, with an average of 2,662 MB per subscriber per month compared to 2,476 MB in the quarter ending June 2023.

3.4 International link capacity

For international links, the outgoing and incoming capacity support internet usage locally and internationally. Table 3.4 shows that the country has a 3,742 Gbps duplex capacity available for new activation.

Table 3.4 International internet capacity as of September 2023

	Outgoing capacity (Gbps)	Incoming capacity (Gbps)
Total/Owned	4,790	4,790
Activated	1,048	1,048
Available for New Activation	3,742	3,742

3.5 Roll out of mobile broadband network and quality of internet speed

Investment in the telecommunication infrastructure has increased the rollout of mobile broadband networks covering a vast land accessed by people, as shown in Table 3.5.

S/N	Indicator	Category	June 2023		September 2023	
1	Percentage of the population covered by a mobile broadband	3G	77%		83%	
	network signal (3G, 4G or higher)	4G	65%		74%	
2	Percentage of Geographical coverage by mobile network	3G	62%		67%	
	signal (3G, 4G or higher)	4G	50%		55%	
3	Network Quality Indicator: Average download and upload		Upload speed	Download speed	Upload speed	Download speed
	speeds (in Mbit/s)	Mobile broadband	7.23 Mbps	14.25 Mbps	6.86 Mbps	10.81 Mbps
		Fixed broadband speed	22.76 Mbps	26.09 Mbps	23.07 Mbps	24.29 Mbps

Table 3.5 Network coverage and quality of internet speed for mobile and fixed as of September 2023.

There are significant achievements attained in the sector during this quarter, as shown in Table 3.5, including the expansion of 3G and 4G coverage to attain population coverages of 83% and 74%, compared to 77% and 63% attained in the quarter ending June 2023, respectively.

4. Broadcasting Services Statistics

This section presents statistics for the number of radio and TV stations as well as Pay TV and Cable TV subscriptions.

4.1 Radio and TV Stations

Licensed television stations decreased from 343 in June to 309 in September 2023, as shown in Table 4.1(a). In contrast, licensed radio stations increased from 228 in June to 239 in September 2023, as shown in Table 4.1(b).

Table 4.1 (a) Television stations

Category	June 2023	September 2023
National	39	42
District	27	29
Online TV	277	238
Total	343	309

Table 4.1 (b) Radio stations

Category	June 2023	September 2023
National	12	13
Regional	20	24
District	179	183
Community	10	12
Online Radio	7	7
Total	228	239

4.2 Active decoders

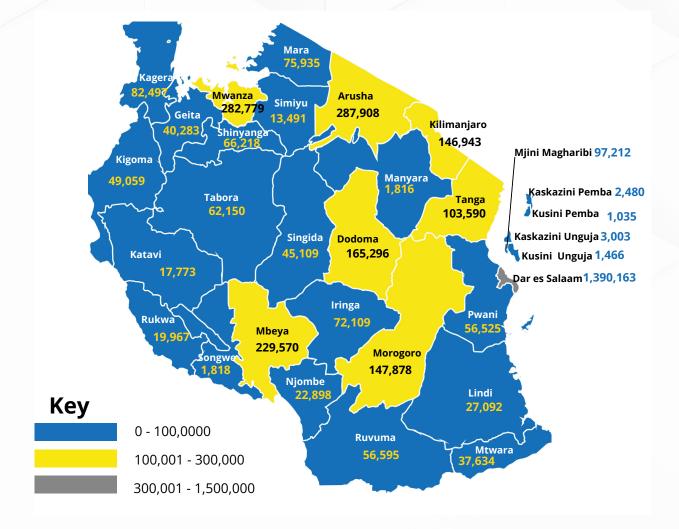
The number of active (functional) decoders (set-top boxes) accessing TV broadcasting services during the quarter under review is shown in Table 4.2.

Operator	DTT	DTH	TOTAL	
Agape Associates Ltd	2,023	1,978	4,001	
Azam	210,545	893,323	1,103,868	
BTL	17,392	0	17,392	
Continental	39,137	27,615	66,752	
MultiChoice	0	256,220	256,220	
Star Media	1,519,993	629,498	2,149,491	
ZUKU	0	33,925	33,925	
TOTAL	1,789,090	1,842,559	3,631,649	

Table 4.2 Number of active decoders per operators as of September 2023

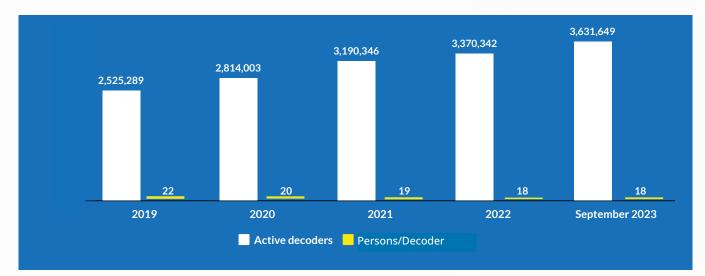
It is shown in Table 4.2 that Star Media has a large number of active decoders (subscriptions) in the DTT category compared to other players, followed by Azam. In contrast, Azam has more subscriptions for DTH than other players, followed by Star Media. Also, the total number of DTH subscriptions is slightly higher than that of DTT.

Based on the regional distribution of active decoders (subscriptions) shown on Map 4.2, Dar es Salaam is ranked first, Arusha is second, Mwanza is third, Mbeya is ranked fourth, and other regions are as shown on the map. The region in Tanzania mainland with the smallest number of active decoders is Manyara, followed by Songwe.



Map 4.2 Number of decorders in all regions of Tanzania as of September 2023

4.3 Active decoders in the past four years

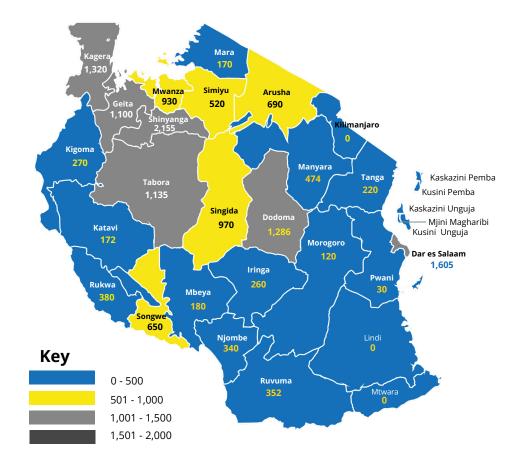


The active decoders in the last four years and number of persons per decoder are shown in Chart 4.3.

There is a growing trend in DTT and DTH subscriptions, as shown in Chart 4.3, from year to year, where September 2023 recorded the highest number of subscriptions.

4.4 Cable TV subscriptions

The distribution of the number of cable TV subscriptions in the country during the quarter under review is shown in Map 4.4.



Map 4.4 Cable TV subscriptions in Tanzania as of September 2023

Among all regions of Tanzania mainland, Shinyanga leads by having 2,155 Cable TV subscriptions, followed by Dar es Salaam with 1,605, Kagera with 1,320, Dodoma with 1,286, while Lindi and Mtwara recorded 0 subscriptions.

4.4.1 Trend of cable TV subscriptions in the past five years

The trend of cable TV subscriptions over the past five years is shown in Table 4.4.1.

Table 4.4.1 Number of cable subscriptions for the past five years.

	2018	2019	2020	2021	2022	SEPTEMBER 2023
Subscriptions	16,786	15,245	14,350	19,313	22,295	15,329

Cable TV subscriptions have increased over time, especially between 2020 and 2021, and decreased between 2021 and September 2023, as shown in Table 4.4.1. The decrease in subscriptions might be attributed to the increased penetration of DTT and DTH in the country.

5. Postal & Courier Services Statistics

Postal and Courier Services statistics include but not limited to posting and delivering postal and courier items.

This section presents statistics for posted and delivered items, such as mail, parcels and documents, to and from local (Domestic), East Africa (EA) and the Rest of the World (RoW).

5.1 Posted items

The number of posted mails, parcels and documents within the country (local), to East African Countries (EAC) and the Rest of the World (RoW) are shown in Table 5.1.

		Mails	Parcels	Documents	TOTAL
	ТРС	233,321	<mark>1,8</mark> 94	177,346	412,561
Local	COURIER	9,405	75,292	25,085	109,782
	ТРС	177,346	1,264	178	178,788
EA	COURIER	25,085	1,022	6,565	32,672
5.11/	TPC	64	60271	244	60,579
RoW	COURIER	4262	600	5268	10,130
Total Posted	TPC	410,731	63,429	177,768	651,928
ltems	COURIER	38,752	76,914	36,918	152,584

Table 5.1 Posted items in the quarter ending September 2023.

It is shown in Table 5.1 that a total of 651,928 and 152,584 items were posted through TPC and Courier, respectively. It is further shown that more items were posted to local destinations, followed by East Africa and then the RoW.

5.2 Delivered items

The number of delivered items from EAC and the rest of the world is shown in Table 5.2.

Table 5.2 Delivered items from EA and RoW for the quarter ending September 2023.

		Mails	Parcels	Documents	TOTAL
EA	ТРС	2,156	220	398	2,774
EA	COURIER	1,212	5,923	0	7,135
_	ТРС	72,078	17,005	1,956	91,039
Row	COURIER	773	0	5,426	6,199
TOTAL	ТРС	74,234	17,225	2,354	93,813
TOTAL	COURIER	1,985	5,923	5,426	13,334

It is shown in Table 5.2 that there were more delivered items from the RoW (97,238) than from EAC (9,909). It is further shown that the majority of items were delivered through TPC.

5.3 Annual posted items for the past five years

The trend of posted items over the past five years is shown in Table 5.3.

Table 5.3 Annual posted items for the past five years

	2018	2019	2020	2021	2022
To Domestic	7,065,527	9,280,229	4,024,371	2,745,674	2,371,970
To International	3,753,746	2,873,312	1,116,069	564,528	937,124
TOTAL	10,819,273	12,153,541	5,140,440	3,310,202	3,309,094

It is shown in Table 5.3 that more items were posted to domestic destinations than to international destinations. However, the number of posted items has decreased over time, as shown in Table 5.3.

5.4 Annual international posted and delivered items for the past five years

Table 5.4 depicts the number of items posted and delivered from the international during the past five years.

Table 5.4 Annual international posted and delivered items for the past five years.

	2018	2019	2020	2021	2022
Posted to Int	5,098,728	2,873,312	1,116,069	564,528	937,124
Delivered from Int	7,999,942	3,927,692	1,391,829	958,121	394,152

It is shown in Table 5.4 that the number of posted items to international destinations has been decreasing from 5,098,728 items in 2018 to 937,124 items in 2022. On the other hand, delivered items experienced the same decreasing trend. However, more items have been posted to other countries than delivered from other countries.

International posted items







6. Quality of Services & Frauds Practices Statistics

6.1 Quality of services

The following is the summary of the results on the quality of service (QoS) of mobile networks in Tanzania from July to September 2023. Measurements were conducted considering the QoS parameters and measurement methods specified in the Electronic and Postal Communications (Quality of Services) Regulations 2018.

6.1.1 Network availability

Network Availability measures how well the mobile network is available when consumers want to use mobile network services. The threshold for compliance is greater than 99%.

Airtel passed the target in all the measured service areas. Vodacom, Honora-Tigo, Halotel, and Honora-Zantel passed the target in sixteen areas, while TTCL passed the target in eight areas, as shown in Chart 6.1.1.

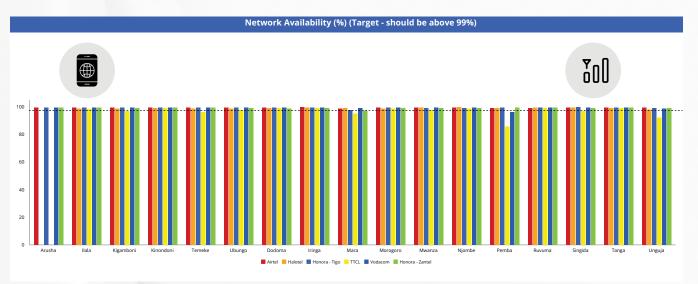


Chart 6.1.1 Network Availability (%) (Target is above 99%)

6.1.2 Call Connection Failure Rate (CCFR)

The Call Connection Failure Rate measures the percentage of calls that failed to connect after dialling due to technical reasons. The threshold for compliance is less than 2%.

Halotel, Honora-Tigo, Vodacom and Honora-Zantel passed the target in fourteen areas. Airtel passed the target in eleven areas, while TTCL passed the target in four service areas, as shown in Chart 6.1.2.

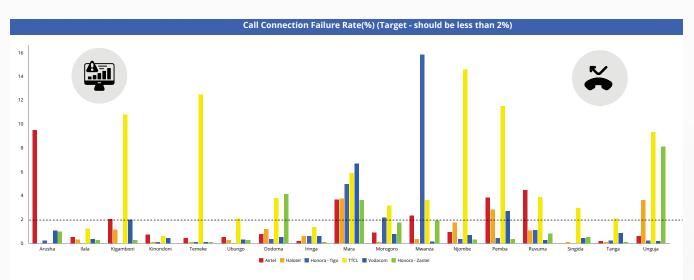
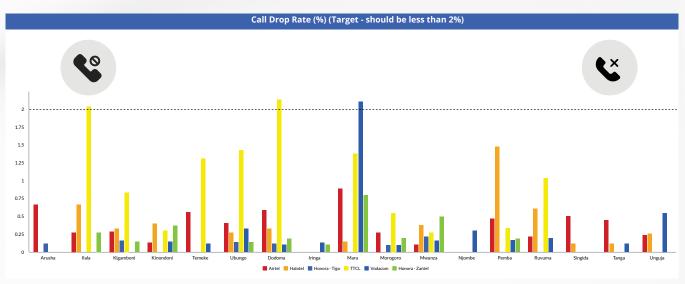


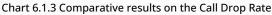
Chart 6.1.2 Comparative results on the Call Connection Failure Rate

6.1.3 Call drop rate

Call Drop Rate measures the percentage of calls cut off due to technical reasons before the speaking parties finish their conversation and one of them hangs up (dropped calls). The threshold for compliance is less than 2%.

Airtel, Halotel, Honora-Tigo and Honora-Zantel passed the target in all the measured service areas. Vodacom and TTCL passed the target sixteen areas, as shown in Chart 6.1.3.





6.1.4 2G Service coverage

2G Service Coverage indicates how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. Consumers cannot get 2G mobile network services in areas with no coverage or very poor coverage. The threshold for compliance for 2G technologies is -85 dBm.

Airtel passed the target in fifteen service areas. Halotel and Honora-Zantel passed the target in fourteen areas, and Vodacom passed the target in thirteen areas. Honora-Tigo passed the target in twelve areas, while TTCL passed the target in eleven service areas, as shown in Chart 6.1.4.

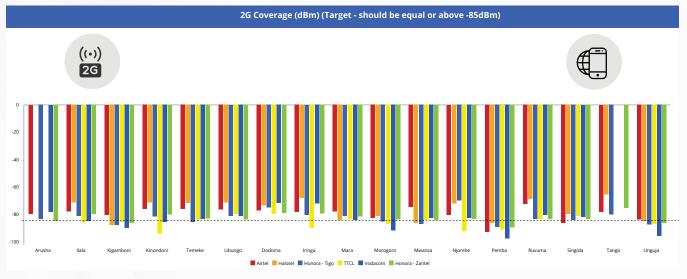


Chart 6.1.4 Comparative results on 2G Coverage

6.1.5 3G Service coverage

The 3G Service Coverage indicates how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. Consumers cannot get 3G mobile network services in areas with no coverage or very poor coverage. The threshold for compliance for 3G technologies is -85 dBm.

Airtel, Halotel, Honora-Tigo and Vodacom passed the target in sixteen service areas. Honora-Zantel passed the target in fifteen areas while passed the target in seven service areas, as shown in Chart 6.1.5.

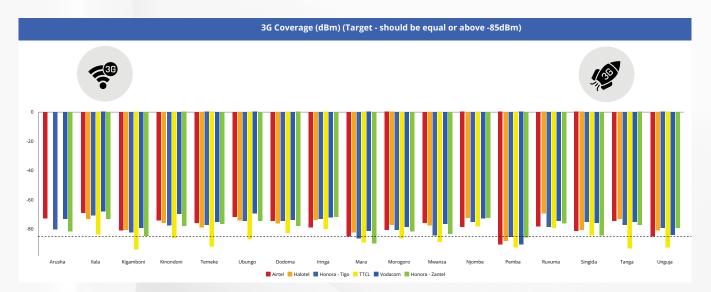


Chart 6.1.5 Comparative results on 3G Coverage

6.1.6 4G Service coverage

4G Service Coverage indicates how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. Consumers cannot get 4G mobile network services in areas with no coverage or very poor coverage. The threshold for compliance for 4G technology is -95 dBm.

Honora-Tigo and Honora-Zantel passed the target in all measured service areas. Vodacom passed the target in fifteen areas. Airtel and Halotel passed the target in fourteen areas, while TTCL passed the target in nine service areas, as shown in Chart 6.1.6.

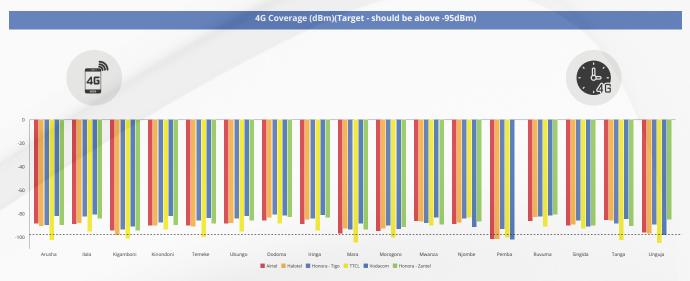
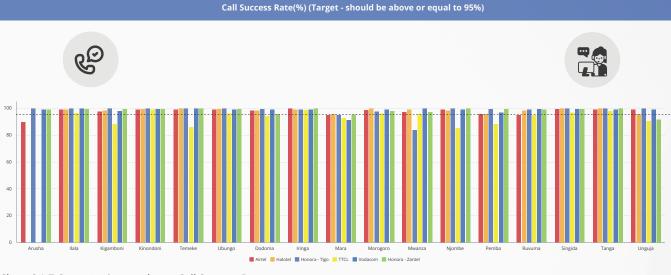


Chart 6.1.6 Comparative results on 4G Coverage.

6.1.7 Call Success Rate

Call Success Rate is a measure of the percentage of calls completed successfully after dialling such that was neither blocked nor dropped. The threshold for compliance is equal to or greater than 95%.

Halotel passed the target in all measured service areas. Airtel, Vodacom and Honora-Zantel passed the target in sixteen areas. Honora-Tigo passed the target in fifteen areas, while TTCL passed the target in nine service areas, as shown in Chart 6.1.7.





6.1.8 Handover Success Rate

Handover Success Rate measures how well voice calls are transferred from one communication tower to another without dropping while the user moves. The threshold for compliance is equal to or greater than 98%.

Airtel, Halotel, Honora-Tigo, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, while TTCL passed the target in fifteen (15) areas, as shown in Chart 6.1.8.

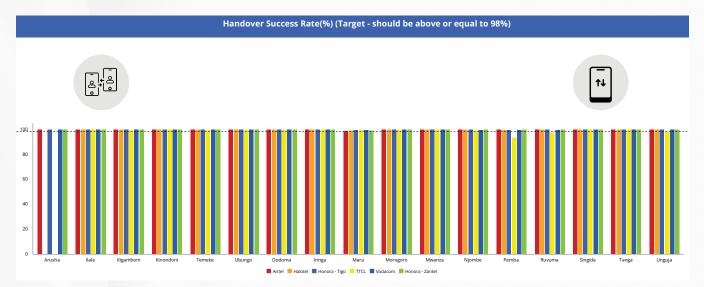


Chart 6.1.8 Comparative results on Handover Success Rate.

6.1.9 Voice Quality (MOS)

Voice Quality (MOS) is a measure of the perception of the audio quality of the conversation during a call. The MOS Score scale ranges from 1 to 5, with 1 being poor and 5 being excellent audio quality. The threshold for compliance is an average of all Voice Quality (MOS) measurement samples being greater than 3.5.

Airtel, Halotel, Honora-Tigo, TTCL, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, as shown in Chart 6.1.9.

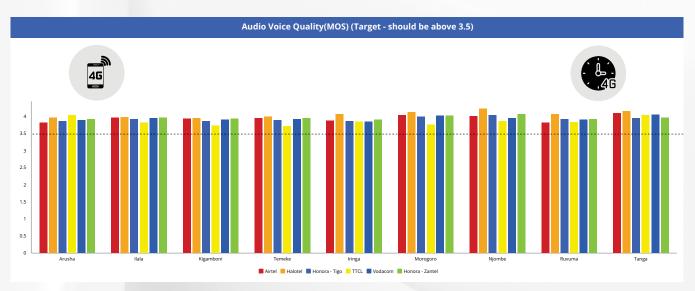
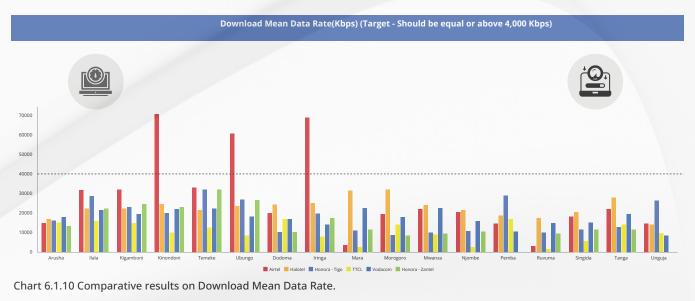


Chart 6.1.9 Comparative results on Voice Quality.

6.1.10 Download Mean Data Rate

Download Mean Data rate is a measure of the rate of data transfer on a network. It measures how fast data is transferred from a file transfer protocol (FTP) server to a mobile device. The compliance threshold is average, greater or equal to 4000 kbps.

Halotel, Honora-Tigo, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, Airtel passed the target in fifteen (15) areas, while TTCL passed the target in fourteen (14) service areas, as shown in Chart 6.1.10.



6.1.11 Ping Round Trip Time

Ping Round Trip Time measures the user equipment's duration to send a request and receive a response from the server. The threshold for compliance is average, being less than 400 ms. Airtel, Halotel, Honora-Tigo, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, while TTCL passed the target in sixteen (16) service areas, as shown in Chart 6.1.11.

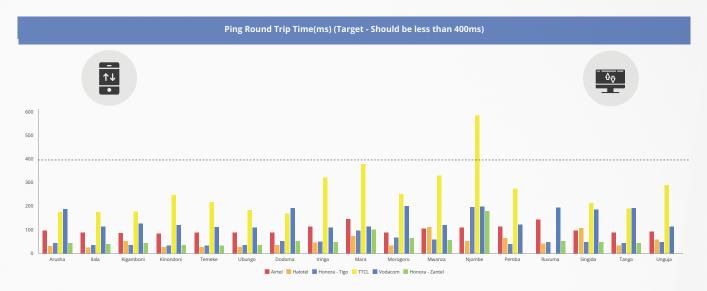


Chart 6.1.11 Comparative results on Ping Round Trip Time.

6.1.12 Attach Failure Ratio

Attach Failure Ratio refers to the percentage of failures when a mobile phone fails to connect to the network when powered ON or flight mode is turned OFF. The threshold for compliance is less than 2%.

Airtel passed the target in sixteen service areas. Honora-Tigo, Vodacom and Honora-Zantel passed the target in fifteen service areas. Halotel passed the target in fourteen areas, while TTCL passed the target in four service areas, as shown in Chart 6.1.12.

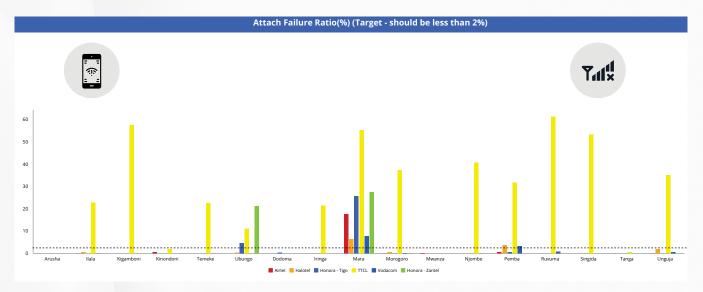


Chart 6.1.12 Comparative results on Attach Failure Ratio.

6.1.13 Attach Setup Time

Attach Setup Time refers to the measure of time a mobile phone takes to connect to the network when powered ON or flight mode turned OFF. The threshold for compliance is less than 5 seconds.

Airtel, Halotel, Honora-Tigo, TTCL, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, as shown in Chart 6.1.13.

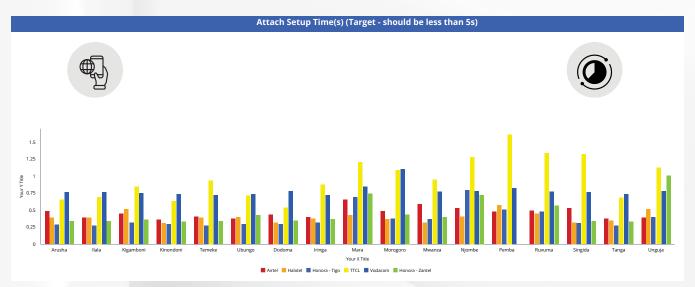


Chart 6.1.13 Comparative results on Attach Setup Time.

6.1.14 Call Setup Time

Call Setup Time measures the time a call takes to connect after dialling. The threshold for compliance is less than 10 seconds.

Airtel, Halotel, Honora-Tigo, Vodacom and Honora-Zantel passed the target in all seventeen (17) measured service areas, while TTCL passed the target in fifteen (15) service areas, as shown in Chart 6.1.14.

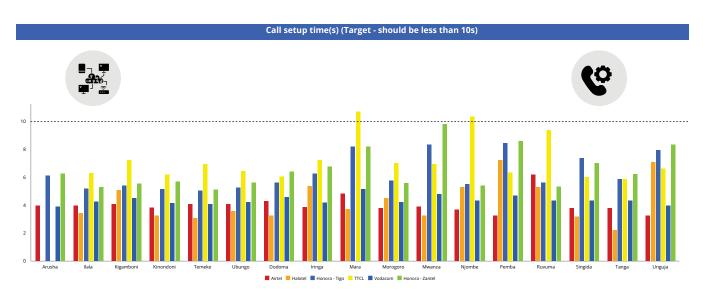


Chart 6.1.14 Comparative results on Call Setup Time.

The general quality of service results for July to September 2023 indicate that Honora-Zantel scored 94.17%, Halotel 94.12%, Honora-Tigo 93.93%, Vodacom 93.90%, Airtel 93.52%, and TTCL scored 66.53% in perfomance, as shown in Table 6.1.

Table 6.1 Summary score of the quality of service parameters per operator

S/N	Licenses	Total KPIs instance	Number of KPIs instance pass	Performance score
1	Honora Tanzania PLC - Zantel	240	226	94.17%
2	Viettel Tanzania PLC	238	238 224	
3	Honora Tanzania PLC - Tigo	247	232	93.93%
4	Vodacom Tanzania PLC	246	231	93.90%
5	Airtel Tanzania Limited	247	231	93.52%
6	Tanzania Telecommunication Corporation	236	157	66.53%

The overall compliance of the MNOs has increased, with the majority of the MNOs passing more than 90% of the measured KPIs.

6.2 Fraudulent attempts

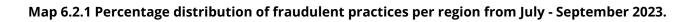
Table 6.2.1 shows fraudulent attempts per region per operator.

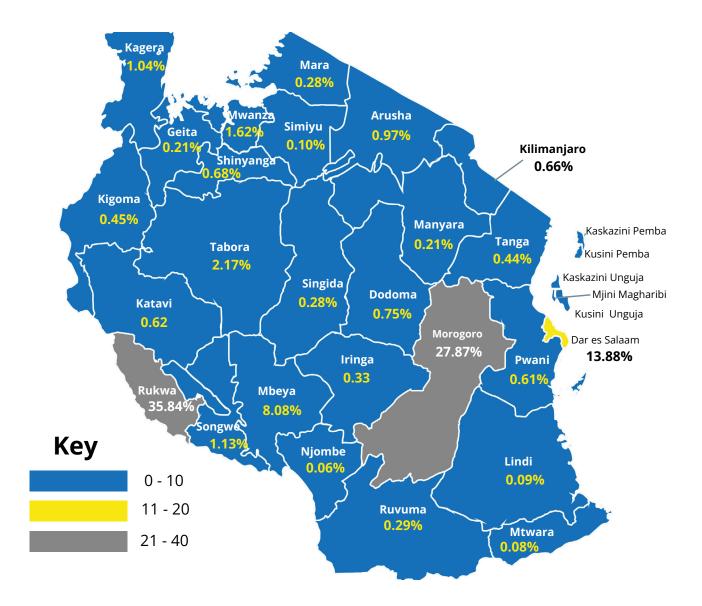
Table 6.2.1 Fraudulent attempts per mobile network operator in each region.

Region	Tigo	Airtel	Vodacom	TTCL	Halotel	Grand Total
Rukwa	2392	3961	854	800	443	8450
Morogoro	3925	1387	1113	12	134	6571
Dar es Salaam	703	1594	758	56	162	3273
Mbeya	670	597	405	119	114	1905
Tabora	25	28	92	307	59	511
Mwanza	91	32	235	15	9	382
Songwe	30	-	-	196	41	267
Kagera	77	13	145	1	10	246
Arusha	97	67	43	12	10	229
Dodoma	98	20	12	18	29	177
Shinyanga	34	26	65	25	10	160
Kilimanjaro	107	6	31	6	5	155
Katavi	5	-	57	28	56	146
Pwani	44	16	45	27	12	144
Kigoma	21	35	35	6	9	106
Tanga	59	5	22	7	11	103
Iringa	38	8	13	11	8	78
Ruvuma	44	1	14	1	9	69
Singida	39	1	14	12	1	67
Mara	20	7	33	1	5	66
Geita	12	-	19	7	12	50
Manyara	16	9	8	15	2	50
Mjini magharibi	35	2	2	1	3	43

Region	Tigo	Airtel	Vodacom	TTCL	Halotel	Grand Total
Simiyu	2	-	7	9	5	23
Lindi	12	-	2	5	3	22
Mtwara	12	2	2	1	3	20
Njombe	-	-	12	1	2	15
TOTAL	8,608	7,817	4,038	1,699	1,167	23,328

The percentage distribution of fraudulent attempts per region are shown in Map 6.2.1.





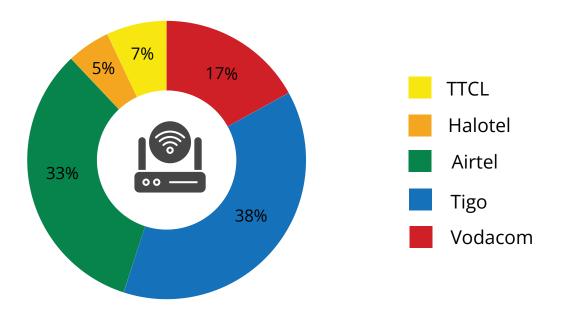


Chart 6.2.1 Fraudulent attempts per operator

The percentage distribution of fraudulent attempts per mobile network is as shown in Chart 6.2.1.

7. Country Code Top Level Domains

TCRA is the sponsoring entity delegated by the Internet Corporation for Assigned Names and Numbers (ICANN) to administer and manage the DotTZ domain name registry. The Electronic and Postal Communications (Domain Name Management) Regulations, 2020 and its ammendments govern registry management.

Registries across the globe have adopted a 3R model, where registries and registrars collaborate in day-today operations to serve registrars. Like other registries globally, the DotTZ registry uses accredited registrars to register domains on behalf of the registry. The accredited registrars are the main and only distribution channel of the DotTZ domain names. They are strategic partners to the registry as they sell services that add value and bring domain names to life.

Domain name refers to unique names identifying Internet resources such as websites registered as secondlevel and/or third-level domains under DotTZ Country Code Top Level Domain (ccTLD).

The total cumulativ e number of registered domain names increased from 28,076 at the end of June 2023 to 28,601 at the end of September 2023, as shown in Table 7.1.

S/N	ZONE	NUMBER OF DOMAIN NAMES AS OF JUNE 2023	NUMBER OF DOMAIN NAMES AS OF SEPTEMBER 2023
1	co.tz	22,204	22,677
2	or.tz	2,353	2,440
3	ac.tz	999	993
4	go.tz	871	879
5	.tz	1,343	1,318
6	sc.tz	231	228
7	ne.tz	37	31
8	me.tz	12	12
9	info.tz	6	5
10	hotel.tz	4	4
11	mobi.tz	5	5
12	tv.tz	7	5
13	mil.tz	4	4
	TOTAL	28,076	28,601

Table 7.1 Number of domain names as of September 2023

8. Conclusion

The presented communication statistics show a significant growth in subscription and usage of communication services and healthy competition among market players, leading to the overall decrease in retail services tariff in this quarter compared to the previous quarter. Notable achievement has also been recorded in terms of increased 3G and 4G services population coverage, paving the way for future growth in the sector and digital economy.



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