TANZANIA COMMUNICATIONS REGULATORY AUTHORY

COMMUNICATION STATISTICS: Quarter ending 30th June 2023

About the Report

This report presents communication statistics for the FOURTH quarter of the financial year 2022/2023. The report covers Telecommunications Services, Mobile Money Services, Internet Services, Broadcasting Services, Postal Services and Other ICT related Statistics from 1st April to 30th June, 2023.

Contents

1. TELECOM SERVICES STATISTICS

Telecom Services Statistics presented here are for Subscriptions, tariffs, Traffic Minutes and SMS. The presentation is on monthly, quarterly and annual basis.

1.1 Telecom Subscriptions

This is a count of all active SIM Cards which have registered an activity or used at least once in the past three months. Table 1.1 presents the number of subscriptions for April, May and June 2023.

Table 1.1 Number of Telecom Subscriptions

	APRIL	MAY	JUNE
VODACOM	18,650,274	18,727,181	19,116,166
AIRTEL	17,084,489	17,272,897	17,505,139
TIGO	16,643,618	16,981,615	17,484,387
HALOTEL	8,267,206	8,313,110	8,410,029
TTCL	1,527,629	1,541,338	1,559,090
SMILE	14,428	14,071	13,840
Total	**62,187,644**	**62,850,212**	**64,088,651**

Table 1.1 shows that the total subscriptions has increased by 3.6% from 61.9 million in March 2023 to 64.1 million as at end of June 2023. On average, this is an increase of 1.5% from April to June compared to an average increase of 0.59% in every month of the last quarter.

1.1.1 Operator's Subscriptions Market Shares as of June 2023

Chart 1.1.1 shows the market shares on subscriptions per operators. The chart shows there is no operator with market share greater than 35% which is a minimum significant level This signifies that there is a healthy competition among the operators in the telecommunication sub sector.

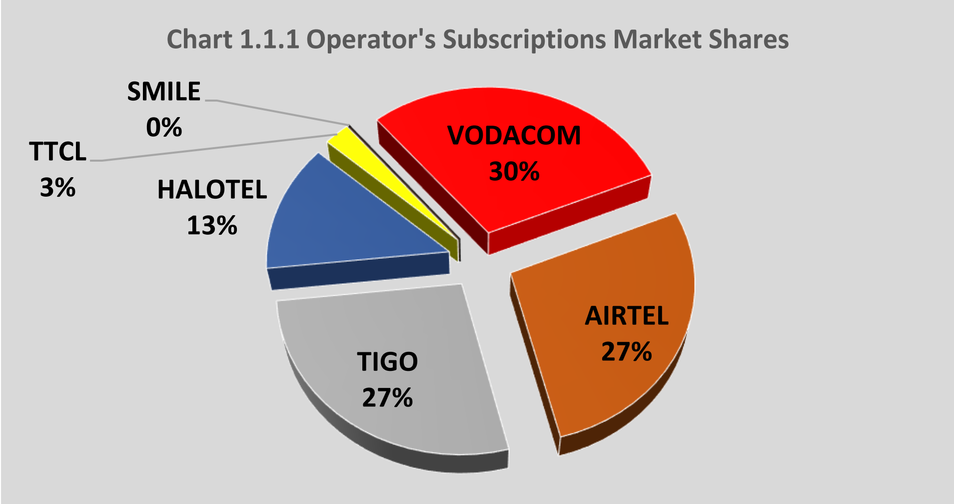


Table 1.1.2 Subscriptions to Mobile and Fixed Network

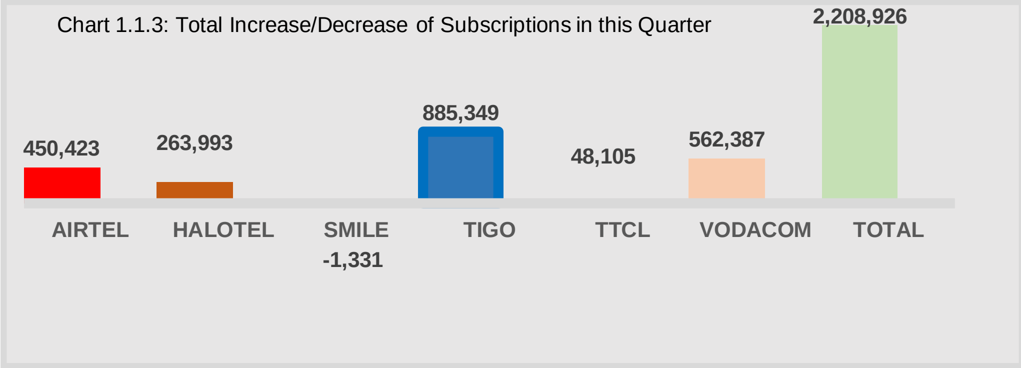
	APRIL	MAY	JUNE
Mobile Subs	62,101,369	62,765,650	64,005,244
Fixed Subs	86,275	84,562	83,407
% of Mobile Subs	99.86%	99.87%	99.87%
% of Fixed Subs	0.14%	0.13%	0.13%

Table 1.1.2 shows the shares of subscriptions on the mobile and fixed networks. Mobile networks subscriber's account for 99.87% of all subscribers in the market while the fixed network has only 0.13%. Note that the fixed market services are only provided by one operator while the mobile services are provided by all six operators.

1.1.3 Increase/Decrease of Subscriptions per Operator in this Quarter

The fourth quarter of 2022/2023 has experienced a significant increase of subscriptions compared to third quarter which had an additional of 1.6 million SM cards compared to 2.2 million additional SIM cards of this quarter.

The reason for the increase is associated with the re-registration of barred SIM cards of the last quarter because of not being verified. The increase might also be associated with increased use of digital services.



1.1.4 Telecom Services Subscriptions per Region as of June 2023

The distribution of SIM cards per region is presented in Chart 1.1.4. The chart shows that Dar es Salaam ranks first by having 18.41% of all active subscriptions (11.8 million SIM Cards), Mwanza ranks second with 6.63% of all active subscriptions (4.2 million SIM cards), Arusha ranks third with 6.02% of all active subscriptions (3.8 million), Mbeya ranks fourth with 5.75% of all active subscriptions (3.7 million SIM cards) and Dodoma ranks fifth in the top ranking regions by having 5.34% of all active subscribers (3.4 million SIM cards).

Regions with the lowest subscriptions are North Unguja with 0.09% of all active subscriptions (58,591 SIM cards), South Unguja with 0.14% of all active subscriptions (88,169 SIM cards) and followed by North Pemba with 0.15% of all active subscriptions (99,065 SIM cards).

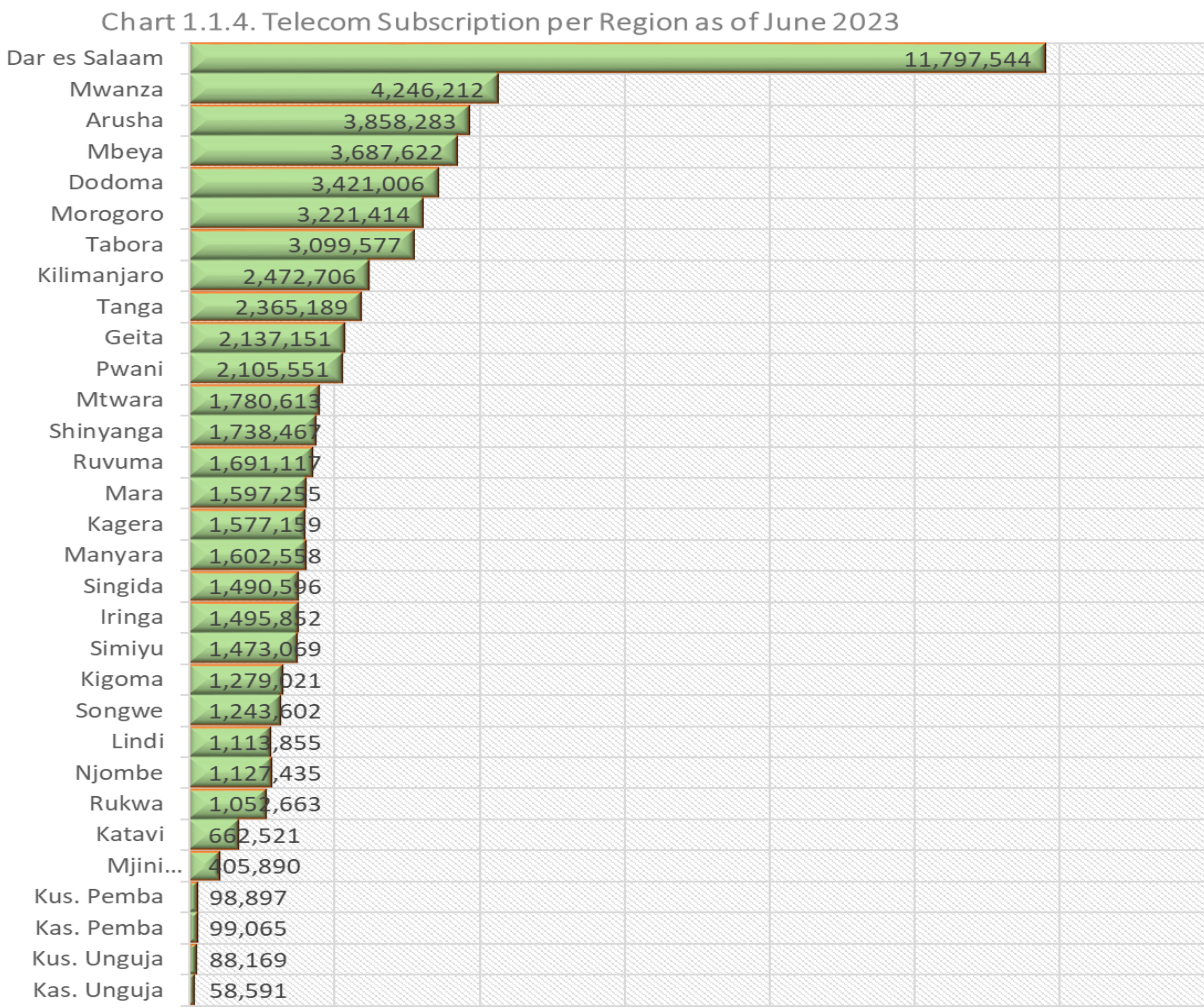
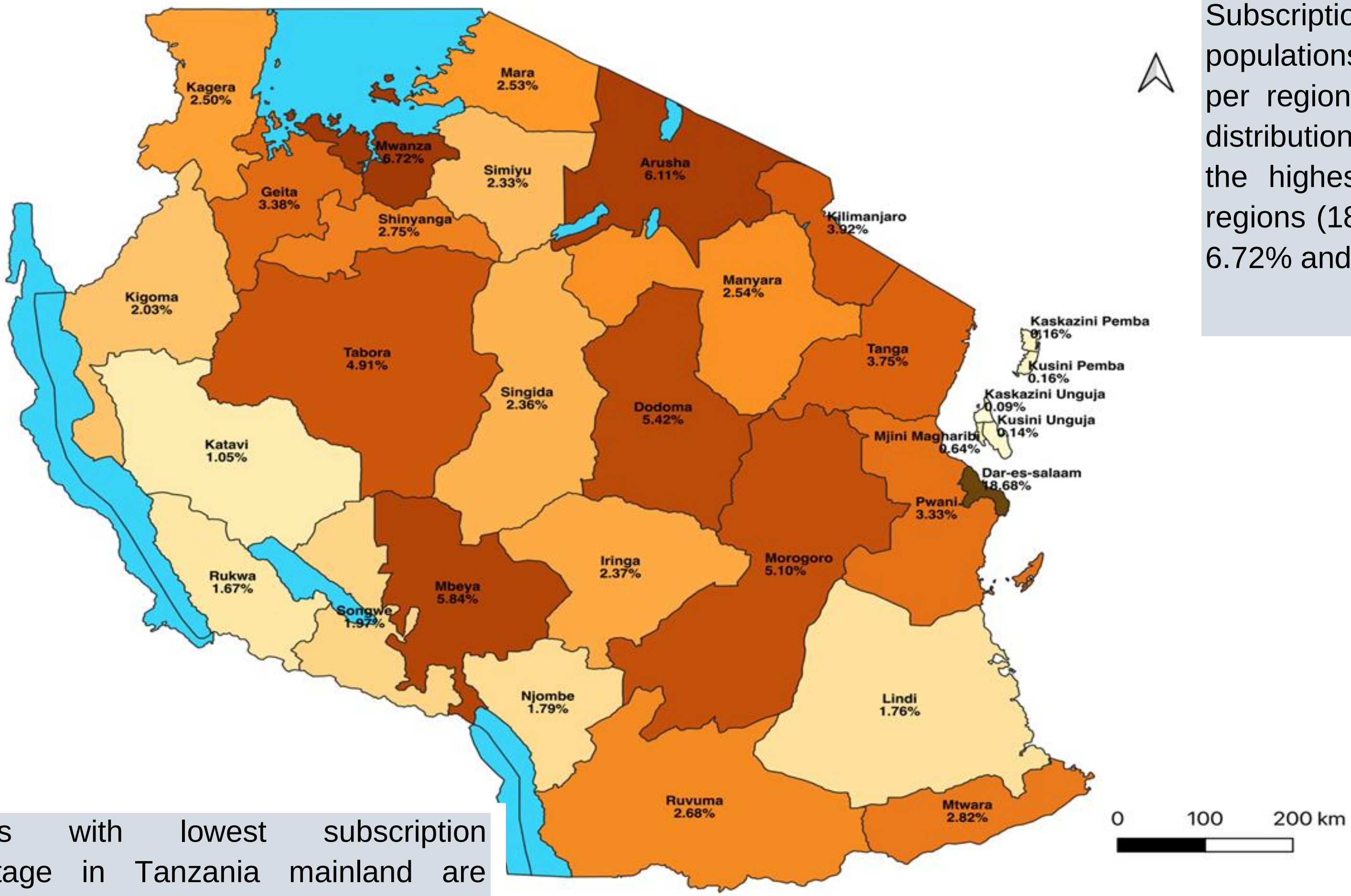


Chart 1.1.4. Telecom Subscription per Region as of June 2023
Dar es Salaam 11,797,544
Mwanza 4,246,212
Arusha 3,858,283
Mbeya 3,687,622
Dodoma 3,421,006
Morogoro 3,221,414
Tabora 3,099,577
Kilimanjaro 2,472,706
Tanga 2,365,189
Geita 2,137,151
Pwani 2,105,551
Mtwara 1,780,613
Shinyanga 1,738,467
Ruvuma 1,691,117
Mara 1,597,255
Kagera 1,577,159
Manyara 1,602,558
Singida 1,490,596
Iringa 1,495,852
Simiyu 1,473,069
Kigoma 1,279,021
Songwe 1,243,602
Lindi 1,113,855
Njombe 1,127,435
Rukwa 1,052,663
Katavi 662,521
Mjini... 405,890
Kus. Pemba 98,897
Kas. Pemba 99,065
Kus. Unguja 88,169
Kas. Unguja 58,591

Map 1.1.4 Region Subscriptions Percentages as of 30th June 2023



Subscriptions per region per total populations (Percentage of Subscriptions per region) is shown on Map 1.1.4. The distribution shows that, Dar es Salaam has the highest percentage compared to all regions (18.68%) followed by Mwanza with 6.72% and Arusha with 6.11%

Regions with lowest subscription percentage in Tanzania mainland are Katavi (1.05%), Rukwa (1.67%), Lindi (1.76%) and Njombe (1.79%)

The overall subscriptions percentage is 101.5% exceeded saturation point (100%).

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 7% per annum as presented in Table 1.1.5. The telecom penetration level has reached very close to 101%.

Table 1.1.5: Trend of Telecom Subscriptions for the past five years

Year	2019	2020	2021	2022	March.2023	June.2023
Mobile Subs	47,685,232	51,220,233	54,044,384	60,192,231	61,795,208	64,005,244
Fixed Subs	76,288	72,469	71,834	84,696	84,517	83,407
SUBS	**47,761,520**	**51,292,702**	**54,116,218**	**60,276,927**	**61,879,725**	**64,088,651**
PENETRATION	88%	89%	91%	98%	100%	101%

1.2 Telecom Tariffs

These are per minute, SMS and MB charges (Tax inclusive) as of June 2023 without subscribing to a bundle. They are also known as Pay As You Go or Standard tariffs

1.2.1 Voice Tariffs (in TZS)

The voice tariffs are shown in Chart 1.2.1a and 1.2.1b for local and international services**.** They are price of one minute of voice charge when one calls locally and internationally without subscribing to a bundle.

Chart 1.2.1a: Local Voice Tariffs

Operator	On Net -Voice	Off Net -Voice
AIRTEL	30	30
HALOTEL	10	20
SMILE	41	41
TIGO	30	30
TTCL	30	30
VODACOM	30	30
Industry Average	**29**	**30**

Chart 1.2.1b: International Voice Tariffs

Operator	EA -Voice	International -Voice
AIRTEL	750	1,520
HALOTEL	875	1,565
SMILE	1,314	1,490
TIGO	1,020	1,887
TTCL	1,829	2,871
VODACOM	1,119	1,998
Industry Average	**1,151**	**1,888**

Chart 1.2.1a, depicts the same rate of tariff as it was in quarter ended in March, 2023. Halotel charges TZS 10/minute for on net and TZS 20/minute for off net; Smile charges TZS 41/minute for both on net and off net calls; the remaining operators charge TZS 30/minute for both on net and off net calls.

The overall industry average for on net calls is TZS 29/minute and for off net calls is TZS 30/minute

Chart 1.2.1b shows that industry average rate of one minute for making calls to East Africa and other international is TZS 1,151/= and 1,888/ respectively.

The tariff rate for this quarter is the same as of last quarter.

1.2.2 SMS and Data Tariffs (in TZS)

These are per minute, SMS and MB charges (Tax inclusive) without subscribing to a bundle. They are also known as Pay As You Go or Standard tariffs.

Chart 1.2.2a Local and International SMS Tariffs

Operators	Local SMS	International SMS
AIRTEL	8	215
HALOTEL	5	95
SMILE	27	250
TIGO	8	215
TTCL	10	138
VODACOM	8	285
Industry Average	**11**	**200**

Chart 1.2.2b Data Tariffs

Operators	Data (MBs)
AIRTEL	9.35
HALOTEL	9.35
SMILE	3.42
TIGO	9.35
TTCL	9.35
VODACOM	9.35
Industry Average	**8.36**

Industry Average for Local SMS tariff for this quarter is TZS 11 per SMS same as March, 2023. International SMS tariff also remained the same at TZS 200 per SMS same as March 2023. This indicates stability in the tariff charges and hence encourage usage as subscribers can budget for the service.

The figures in Chart 1.2.2b shows that, industry average data tariffs for June 2023 are TZS 8.36 per MB same as that of March, 2023. This indicates stability in the tariff charges and hence encourage usage as subscribers can budget for the service as well.

1.2.3 Disaggregated Bundle Tariffs (in TZS)

These are per unit prices (Tax inclusive) of a minute voice Call, SMS, and 1MB of data for consumers subscribing to bundled services. The bundle tariffs are lower than pay as you go tariffs.

Chart 1.2.3 Disaggregated Bundle Tariffs

Operator	On Net	Off Net	SMS	Data
VODACOM	7.46	5.51	1.33	2.34
TIGO	4.83	6.90	1.24	2.76
AIRTEL	3.54	5.96	1.07	2.05
HALOTEL	2.87	5.92	1.23	2.07
TTCL	7.23	7.23	2.18	2.20
SMILE	0.00	0.00	0.00	2.08
Industry Average	**5.19**	6.30	1.41	2.25

The industry average for on net bundle tariff in this quarter is TZS 5.19 while in March 2023 was TZS 4.66; Off net bundle tariff is TZS 6.30 per minute while in March 2023 was 6.37 per minute; SMS tariff in this quarter is TZS 1.41 per SMS while in March 2023 was TZS 1.34 per SMS. Data tariff in this quarter is TZS 2.25/Mb while in March 2023 was 2.09/Mb. Generally in this quarter there is a decrease in off net tariff while other services experienced slight increase for on net calls, SMS and data tariffs.

1.2.4 Industry Average of Tariffs in all Destinations and Services

These are simple average figures giving pictures of the industry as a whole. The industry average tariffs are shown in Chart 1.2.4a for national and 1.2.4b for international.

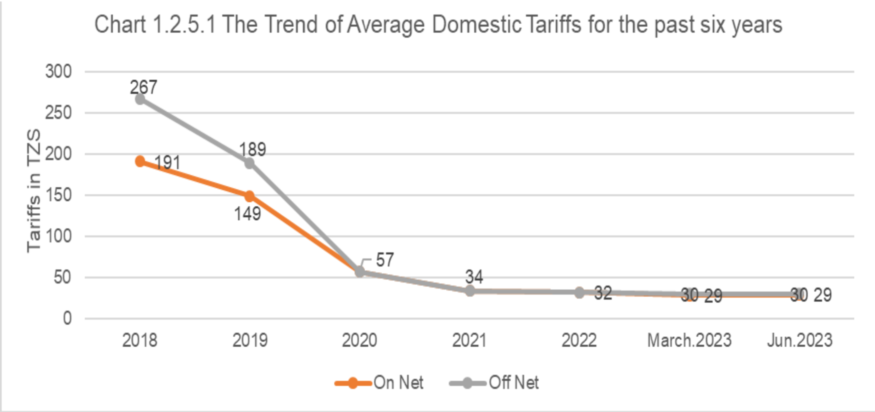
Chart 1.2.4a Industry Average for Basic Tariffs for national

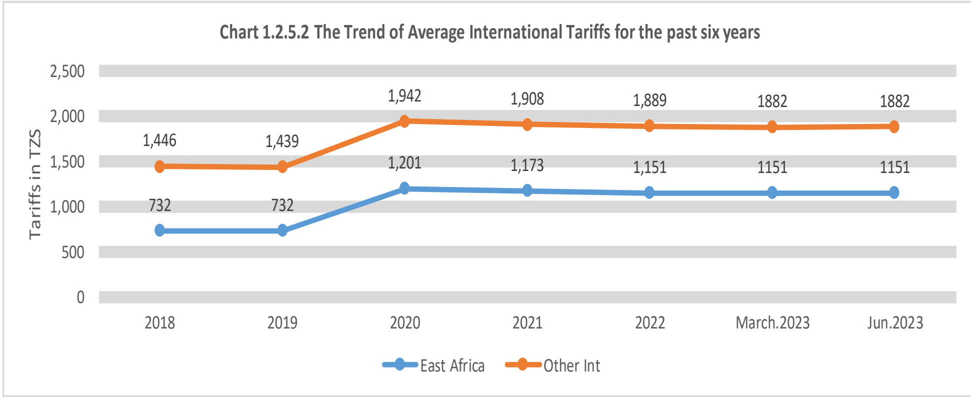
On Net	29
Off net	30
SMS	11
Data	8.36

Chart 1.2.4b Industry Average for Basic Tariffs for International

EA Calls	1,151
Other Int. Ca	1,882
Int. SMS	200

In this quarter, the industry average tariff for on net ,off net, SMS and Data services remain the same as last quarter. The tariff for other international and tariff for EA also remain the same as last quarter ended March, 2023.





As it is shown in Chart 1.2.5.1, the trend of industry average tariffs for on net and off net started to drop from 2019 to date. Convergence of on net and off net tariffs started in 2021.

Tariffs for East Africa and other international has mixed trend over time since its rate depends on rate charged by international carriers

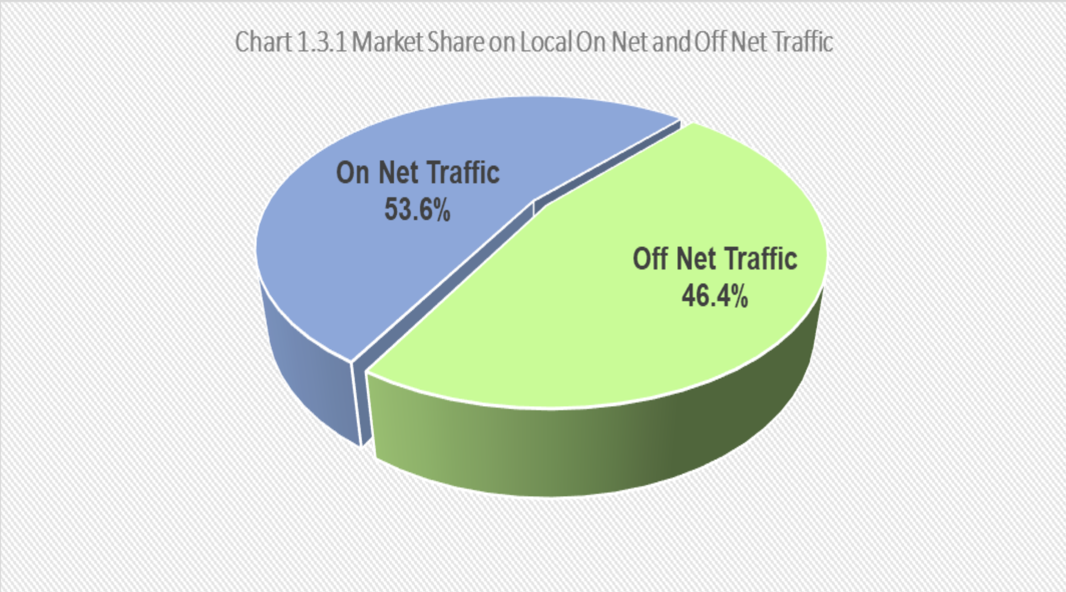
1.3. Telecom Traffic Minutes

1.3.1 Local Traffic

This presents on net and off net voice traffic minutes for calls made locally (within the country). Table 1.3.1 depicts the traffic for the quarter ending June 2023.

Table 3.1.1 On net and Off net Traffic Minutes

	APRIL	MAY	JUNE	TOTAL
On Net Traffic	5,715,456,313	6,311,302,499	6,618,001,500	**18,644,760,312**
Off Net Traffic	5,030,510,867	5,473,669,674	5,662,310,936	**16,166,491,477**
TOTAL	**10,745,967,180**	**11,784,972,173**	**12,280,312,436**	**34,811,251,789**



A total of 34.8 billion minutes were spent in the quarter ending June 2023 compared to 32.0 billion minutes in the quarter ending March 2023.

Chart 1.3.1 shows that there were many traffic minutes within the networks (53.6%) compared to outside the network (46.4%).

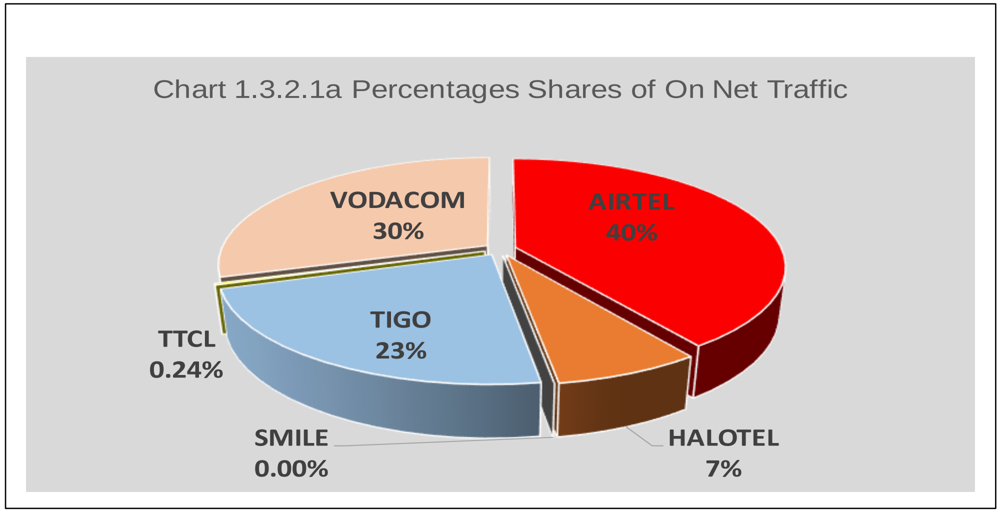
June experienced slightly more traffic minutes than other months of the quarter followed by May and April

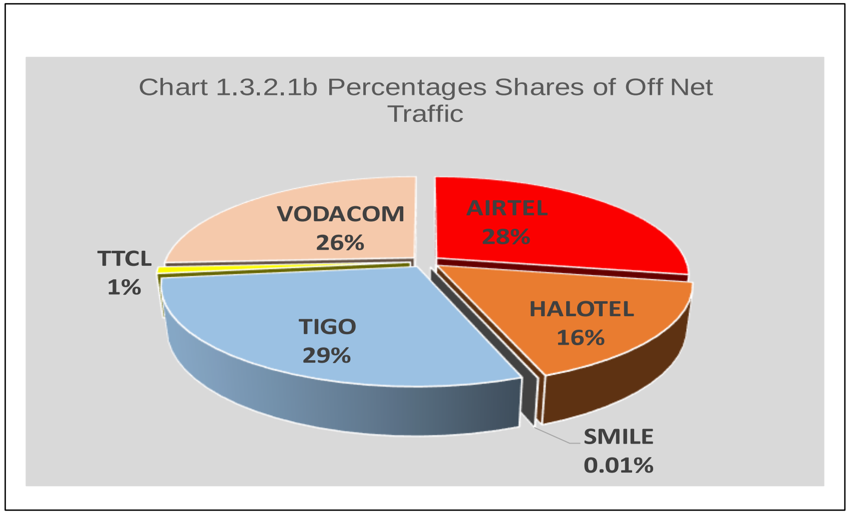
Small differences between On Net and Off Net minutes show the effectiveness of Interconnection rates regulations.

1.3.2 Percentage Shares of Traffic Minutes Per Operators as of June 2023

1.3.2.1 Local Traffic

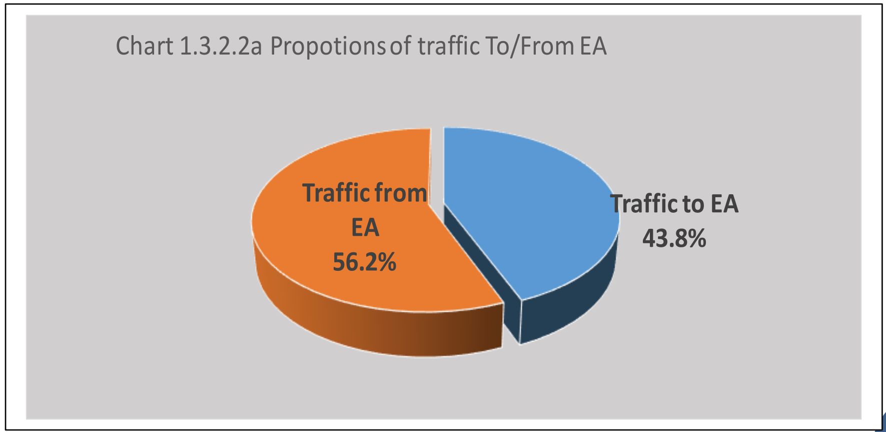
Chart 1.3.2.1a shows Airtel has largest shares (40%) on on net traffic minutes compared to other operators. Vodacom follows with 30%, Tigo with 23% and the remaining goes to Halotel, TTCL and Smile. On the other hand, Tigo leads on off net traffic minutes by having 29% shares as presented in Chart 1.3.2.1b, followed closely by Airtel and Vodacom with 28% and 26%, respectively.

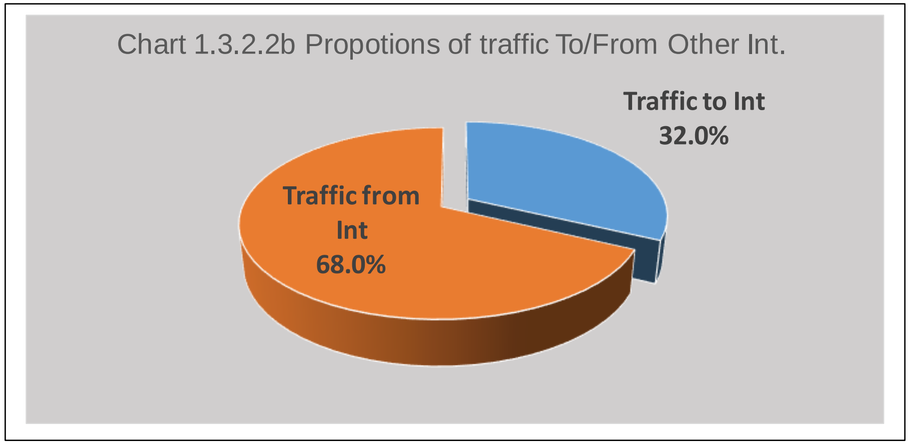




1.3.2.2 International Traffic

This presents voice traffic minutes for calls made to/from Internationals. The proportions of Traffic To/From EA and other Internationals are as shown in Chart 1.3.2.2a and 1.3.2.2b. Traffic from EA and other nations exceed traffic going to those regions.





Market shares on international traffic minutes are as shown on Chart 1.3.2.2c to 1.3.2.2f. Airtel has the largest share for traffic to East Africa by 45% followed by Vodacom with 44% market share while traffic from East Africa, Vodacom has the largest market share of 59%, Airtel 22% and Tigo 17%. Vodacom has the largest market on traffic to other international (42%) while TTCL has 58% market shares of traffic minutes from other international as shown on Chart 1.3.2.2e and 1.3.2.2f.

Chart 1.3.2.2c Pecentage Shares of Traffic to EA

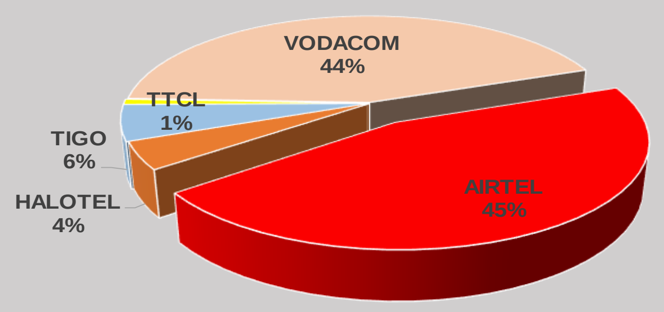


Chart 1.3.2.2d Pecentage Shares of Traffic Incoming from EA

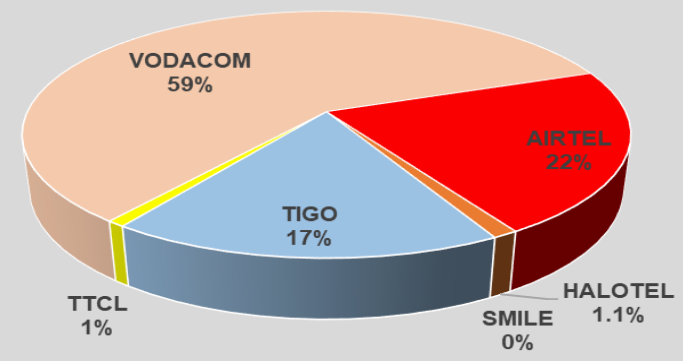


Chart 1.3.2.2e Pecentage Shares of Traffic to other Int.

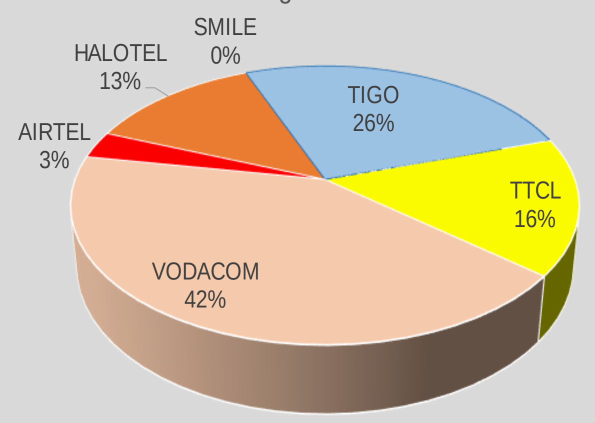
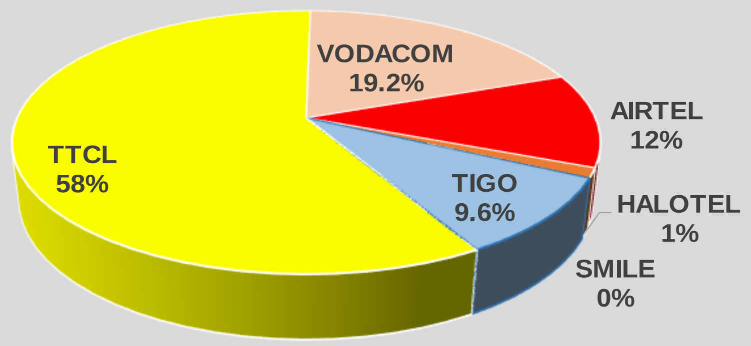


Chart 1.3.2.2f Pecentage Shares of Traffic Incoming from other Int.



These are average minutes used by a subscriber in a month. As shown in Table 1.3.3, a total of 552 minutes were spent by a subscriber per quarter compared to 520 minutes in the quarter ending March 2023. This implies that each subscriber spent an average of 184 minutes per month in this quarter compared to 173 minutes in the last quarter.

Table 1.3.3 Average minutes used by a subscriber in a Month

	APRIL	MAY	JUNE	TOTAL
On Net Traffic	92	100	103	295.59
Off Net Traffic	81	87	88	256.33
Traffic to EA	0.01	0.01	0.01	0.03
Traffic to Int	0.02	0.02	0.02	0.06
TOTAL	**173**	**188**	**192**	**552.01**

On average subscribers call more on the same network than across the network for the quarter under review. Subscribers spent 295.59 minutes for on net calls compared to 256.33 minutes for off net calls. Furthermore, the table shows that, a subscriber spent 0.06 minutes to call other international different from EAC while to EAC a subscriber spent 0.03 minutes only. The quarter trend indicates that more minutes were spent in June than the rest of other months of the quarter.

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 on average of 19% each year from 2019 to 2022. The actual traffic trends are shown in Table 1.3.4

Table 1.3.4 Trend of Local Traffic Minutes for the past five years

Year	2019	2020	2021	2022	June.2023
On Net Traffic	55,812,036,633	54,561,254,851	51,673,651,476	62,678,563,065	35,551,918,515
Off Net Traffic	11,570,993,820	27,084,539,242	43,194,917,029	59,951,594,101	31,297,439,971
TOTAL	**67,383,030,453**	**81,645,794,093**	**94,868,568,505**	**122,630,157,166**	**66,849,358,486**

From the Table 1.3.4, the trend shows that, more traffic minutes were experienced on on-net calls compared to off net calls. The trend shows that the gap between on-net and off-net calls is getting narrower due to continuous decrease of the interconnection tariff, which makes both on-net and off-net calls to have almost similar tariff.

1.3.5 Trend of International Traffic Minutes for the past five years.

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

Year	2019	2020	2021	2022	June 2023
Off Net To EA	14,252,483	9,738,521	9,097,165	8,927,113	5,146,749
Incoming From EA	21,989,062	15,406,649	15,853,362	13,594,473	6,503,413
Off Net To Int	43,297,997	38,014,133	24,856,947	26,034,131	8,136,130
Incoming From Int	45,100,536	45,172,263	49,885,142	33,374,619	14,509,799

As shown in Table 1.3.5, there is more traffic coming from both EA and other internationals than outgoing to the same destinations from our country. The traffic to and from EA has been decreasing and the same to and from other internationals except for the year 2022 where it rose to 26 million from 24.9 million in 2021.

1.4.Telecom SMS Traffic

1.4.1 Local SMS Traffic

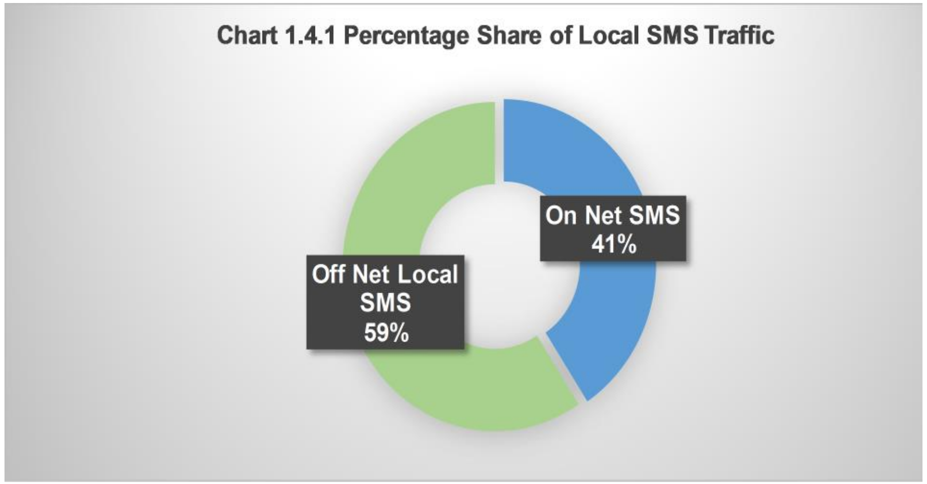
These are number of SMS sent and received in Mobile Networks.

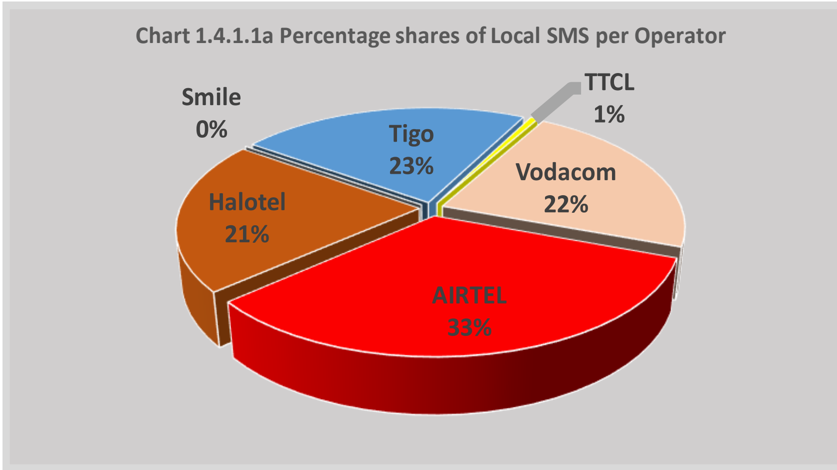
Table 1.4.1 Local SMS Traffic

	APRIL	MAY	JUNE	TOTAL
On Net SMS	6,356,865,497	6,470,253,840	6,676,900,989	19,504,020,326
Off Net SMS	9,259,558,475	9,429,205,273	9,665,401,632	28,354,165,380

Percentage shares of local SMS and per operators are shown on Chart 1.4.1a and Chart 1.4.1b. As for local SMS, Off Net SMS has large shares compared with On Net SMS. This indicates that more SMS are sent across network.

Chart 1.4.1a shows that Airtel has the largest market share of 33%, followed by Tigo with 23% and Vodacom by 22% while TTCL has the smallest market share of 1%.





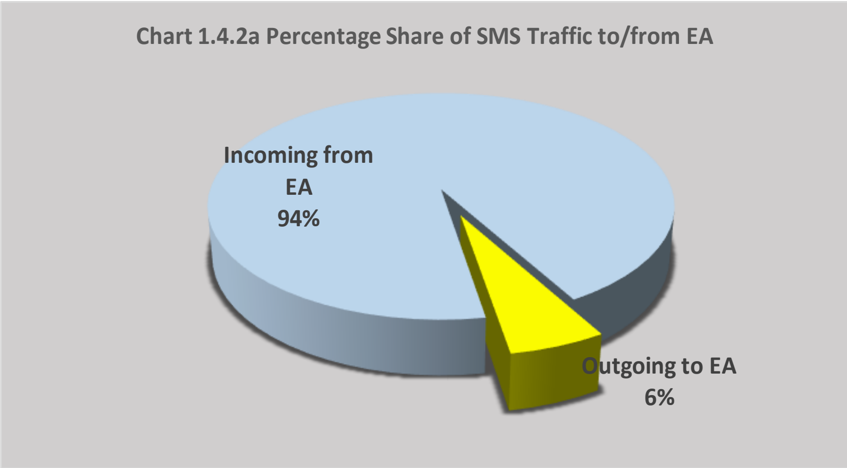
1.4.2 International SMS Traffic

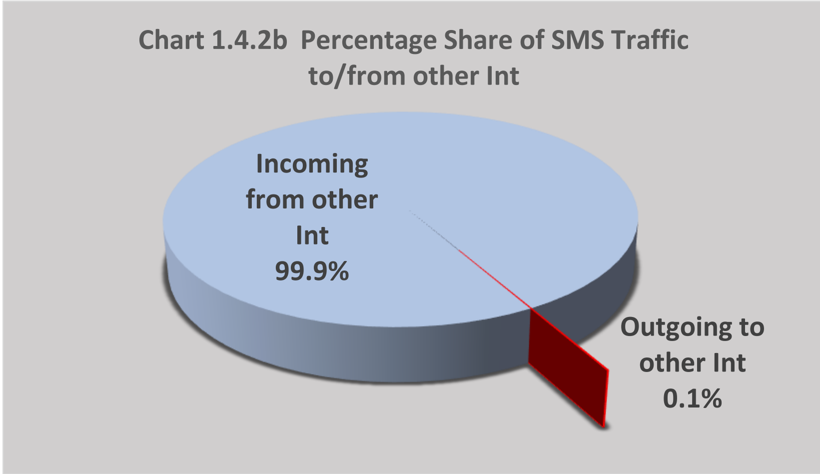
International SMS traffic are shown in Table 1.4.2. The Table shows that more SMS are received from international than sent to.

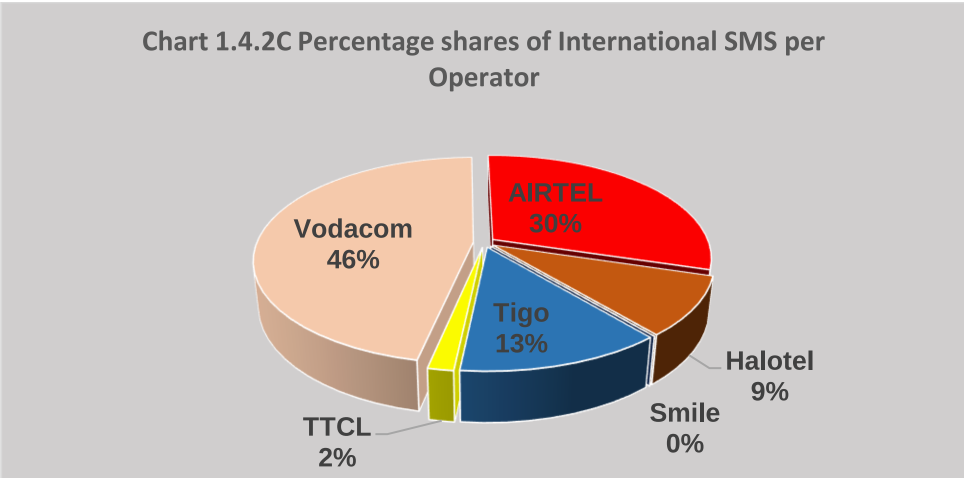
Table 1.4.2 International SMS Traffic

	APRIL	MAY	JUNE	TOTAL
Outgoing to EA	152,279	155,028	160,302	467,609
Outgoing to other Int	239,824	263,574	360,870	864,268
Incoming from EA	2,438,237	2,531,993	2,784,005	7,754,235
Incoming from other Int	488,944,958	376,543,002	333,443,583	1,198,931,543

More details of proportion of SMS sent and received are shown in chart 1.4.2a and 1.4.2b







International traffic trend shows that, incoming traffic is larger than outgoing traffic due to the fact that Tanzania population is less compared to the rest of the world and therefore less outgoing traffic is experienced than incoming as presented in Chart 1.4.2a & b.

Chart 1.4.2c shows Vodacom has the largest market share for on SMS traffic going to international destinations compared to other operators.

1.4.3 Average Number of SMS per Subscriptions

Table 1.4.3 shows average number of SMS per subscription per month in the quarter under review.

	APRIL	MAY	JUNE	TOTAL
On Net SMS	102	103	104	309
Off Net Local SMS	149	150	151	450
Outgoing to EA	0	0	0	0
Outgoing to other Int	0	0	0	0

Table 1.4.3 shows that, there are 759 SMS sent by a subscriber per quarter compared to 725 SMS sent in the quarter ending March 2023. The average SMS per subscriber per month is 253 in this quarter compared to SMS 242 in the last quarter.

1.4.4 The Trend of Local SMS

The trend of local SMS over the past five years are shown in Table 1.4.4 and Table 1.4.5

Table 1.4.4 Trend of Local SMS Traffic in the past five years

Year	2019	2020	2021	2022	June.2023
On Net SMS Traffic	53,787,444,093	61,971,569,487	58,875,779,663	65,358,270,089	37,904,681,699
Off Net SMS Traffic	51,650,529,287	71,072,186,913	78,200,512,436	88,668,287,300	54,679,612,265

As it is seen in Table 1.4.4, shows an average increase of 5% and 22% for on net and off net SMS respectively.

Table 1.4.5 Trend of international SMS Traffic in the past five years

Year	2019	2020	2021	2022	June 2023
Outgoing to EA	3,850,602	1,235,692	1,425,624	1,667,990	973,183
Outgoing to other Int	6,834,308	2,718,443	3,191,041	3,574,957	1,731,229
Incoming from EA	48,376,608	50,880,982	89,717,530	58,344,672	15,633,193
Incoming from other Int	3,201,524,787	3,935,379,714	4,599,468,894	4,664,200,079	2,522,100,199

2. MOBILE MONEY SERVICES STATISTICS

This section present statistics on Mobile Money Services in terms of subscriptions (Number of mobile money accounts) and number of transactions.

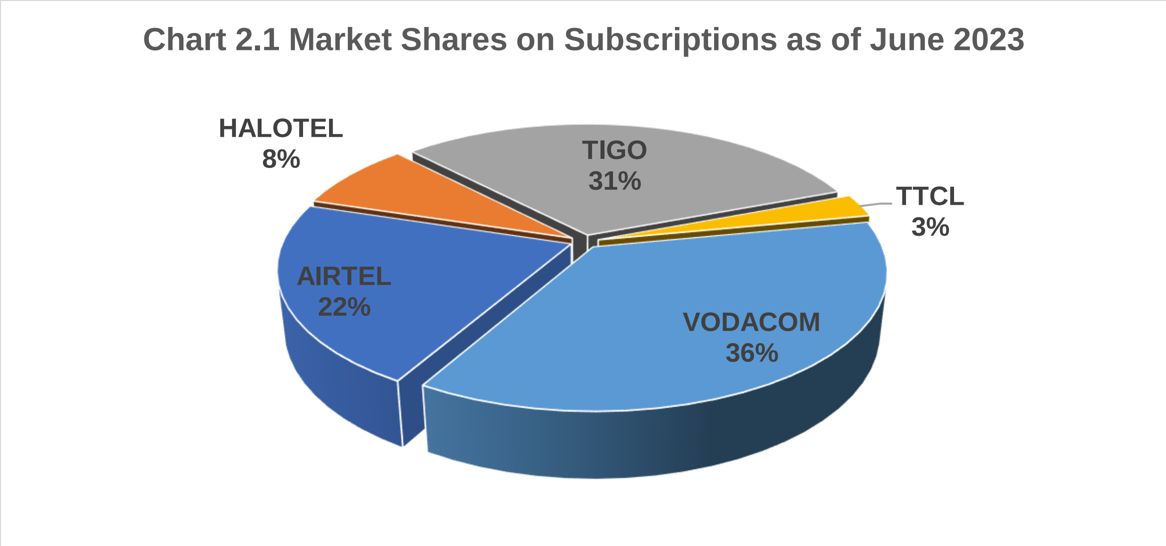
2.1 Mobile Money Subscriptions

It is a 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 44.4 million accounts in the quarter ending March, 2023 to 47.3 million accounts in June, 2023.

Table 2.1 Mobile Money Service subscriptions (Number of Accounts)

	APRIL	MAY	JUNE
AIRTEL	9,557,937	9,792,291	10,149,367
HALOTEL	3,743,942	3,749,012	3,790,326
TIGO	13,957,565	14,354,268	14,855,524
TTCL	1,259,484	1,272,508	1,287,318
VODACOM	16,421,513	16,613,246	17,193,125
TOTAL	44,940,441	45,781,325	47,275,660

The number of mobile money accounts are increasing at an average increase of 2.6% in this quarter compared to an average increase of 0.97% in the quarter ending March 2023.



The Chart 2.1 shows that, Vodacom has larger market share of 36% of mobile money accounts in the market, followed by Tigo with 31%, Airtel with 22%, Halotel with 8% and the last one is TTCL with market share of 3%.

2.2 Total Number of Subscriptions and Transactions

Table 2.2 Total Number of Subscriptions and Transactions

	APRIL	MAY	JUNE
No. of Subscriptions	44,940,441	45,781,325	47,275,660
No. of Transactions	407,480,068	428,596,950	420,675,884
Average No. of Transaction/subscriber	9	9	9

Table 2.2 shows that number of transactions increases as number of subscriptions increases. More transactions are experienced in the month of May compared to other months of the quarter. The number of mobile money accounts for this quarter has been growing at the average rate of 2.6%.

Trend of Mobile Money subscriptions and transactions in the past four years is as shown in the Table 2.3.

2.3 Trend of Mobile Money Transactions in the past four years

Year	2020	2021	2022	June 2023
No. of Transactions	3,412,210,062	3,752,084,894	4,195,899,414	2,429,262,756
No. of Subs	32,268,630	35,285,767	40,953,496	47,275,660

Table 2.3 shows that the number of transactions has been increasing for the past three years from 3.4 billion in 2020 to 4.2 billion in 2022. Number of subscriptions have also been increasing at the average rate of 13% per year while annual average transactions per subscription has also been increasing at an average of 11% per year.

3. INTERNET SERVICES STATISTICS

3.1 Internet Subscription

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

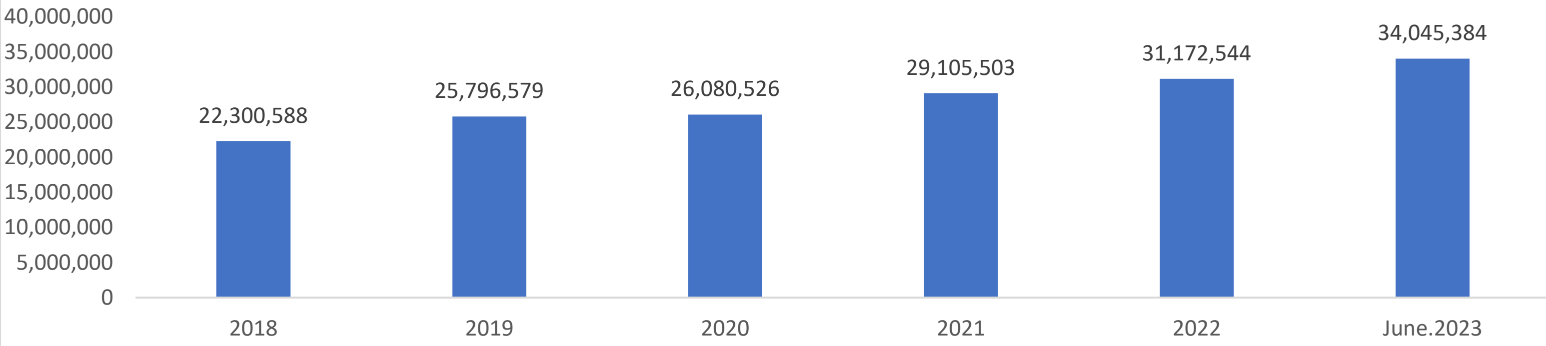
Table 3.1 Monthly Internet Subscriptions

Time/Type of Subs	2023		
	APRIL	MAY	JUNE
Mobile Wireless Subs	33,120,759	33,468,642	33,967,699
Fixed Wireless Subs	7,312	7,307	7,496
Fixed Wired Subs	71,785	69,346	70,189
TOTAL	**33,199,856**	**33,545,295**	**34,047,407**

3.2 Trend of Subscriptions for the past Six Years

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

Chart 3.2 Trend of Internet Subscriptions for the past six years



The annual internet subscription presented in Chart 3.2 shows an average growth rate of 17% per year. In 2018 there were 23,808,942 subscriptions which increased to 34,045,384 subscriptions at the end of June 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, 1Petabyte =1024^3 Megabytes)

Table 3.3 Amount of Data used for the past three months

Month	2023		
	Apr	May	Jun
Data Traffic (Petabytes)	78	81	83
MBs/Subs/Month	**2,366**	**2,632**	**2,476**

Data traffic in petabytes presented in Table 3.3 shows that more data were used in June followed by May and the last month is April with an average of 2,491 MB per subscriber per month compared to 2,195 MB in the quarter ending March, 2023.

3.4 International Link Capacity

The outgoing and incoming international links capacity supports internet usage locally and internationally. Table 3.4 shows that,the country has enough available capacity for new activations.

Table 3.4: International internet capacity as of June 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 land and accessed by people as shown in Table 3.5.

Table 3.5: Network Coverage and Quality of Internet Speed for Mobile and Fixed as of June 2023

S/N	Indicator	Category	June 2023	
1.	Percentage of the population covered by a mobile broadband network signal (3G, 4G or higher)	3G	77%	
		4G	65%	
2.	Percentage of Geographical coverage by mobile network signal (3G, 4G or higher)	3G	62%	
		4G	50%	
3.	Network Quality Indicator: Average download and upload speeds (in Mbit/s)		Upload speed	Download speed
		Mobile broadband	7.23 Mbps	14.35 Mbps
		Fixed broadband speed	22.76 Mbps	26.09 Mbps

3.6 Top 10 Internet Services with Most Bandwidth Usage (In Gb) as of June 2023

During the quarter ending June 2023, the services that used more bandwidth (in GBs) was YouTube with a total of 50.18 million GBs because video streaming services consumed more bandwidth than other services. The second is Facebook with 49.49 million GBs mostly due to video services. Figure 3.6 presents the top 10 internet services with the most bandwidth consumption.

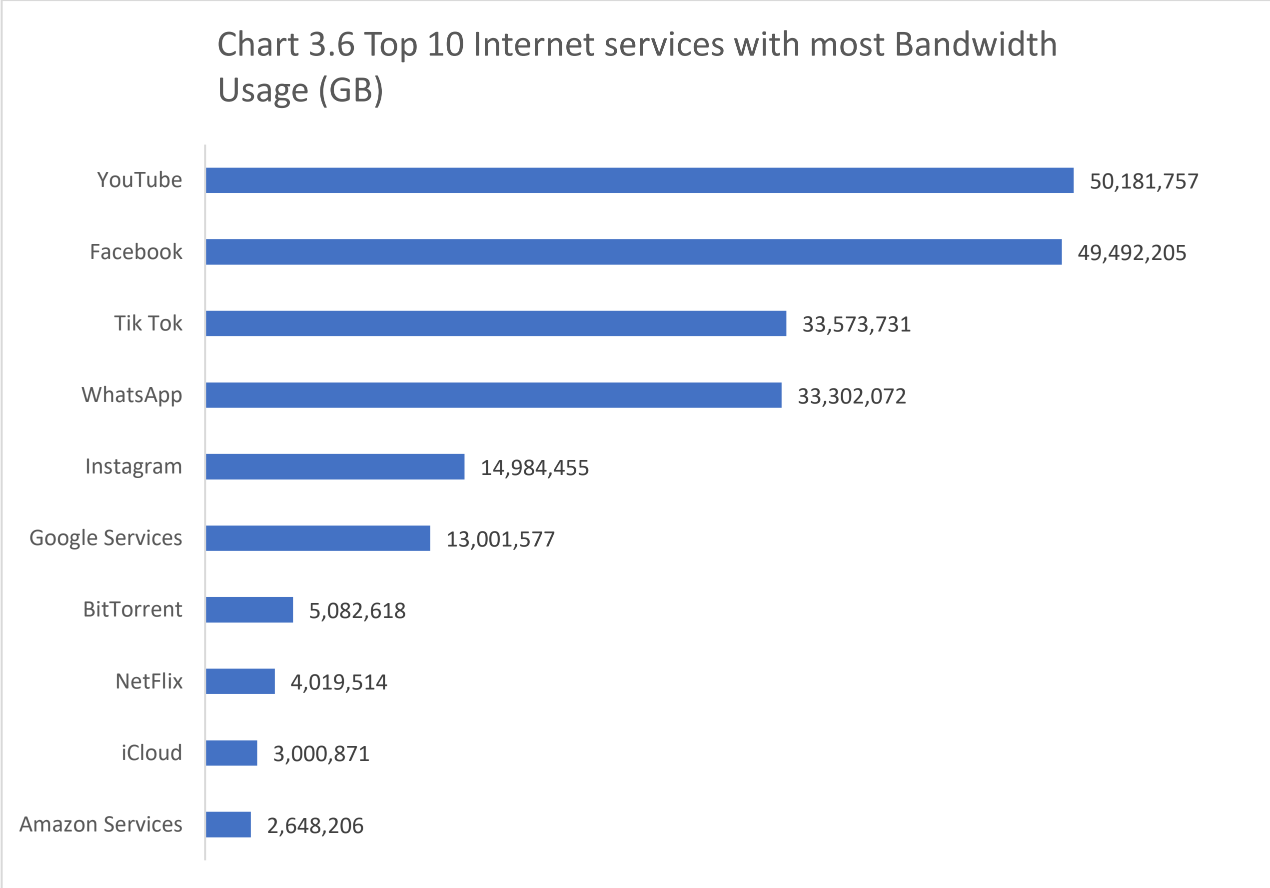


Chart 3.6 Top 10 Internet services with most Bandwidth Usage (GB)
YouTube
Facebook
Tik Tok
WhatsApp
Instagram
Google Services
BitTorrent
NetFlix
iCloud
Amazon Services
50,181,757
49,492,205
33,573,731
33,302,072
14,984,455
13,001,577
5,082,618
4,019,514
3,000,871
2,648,206

4. BROADCASTING SERVICES STATISTICS

Statistics presented here are for Pay TV decoders and Cable TV subscriptions.

4.1 Active Decoders

Refers to sold and functional set boxes for TV broadcasting services. It is a count of only functional decoders up to that period.

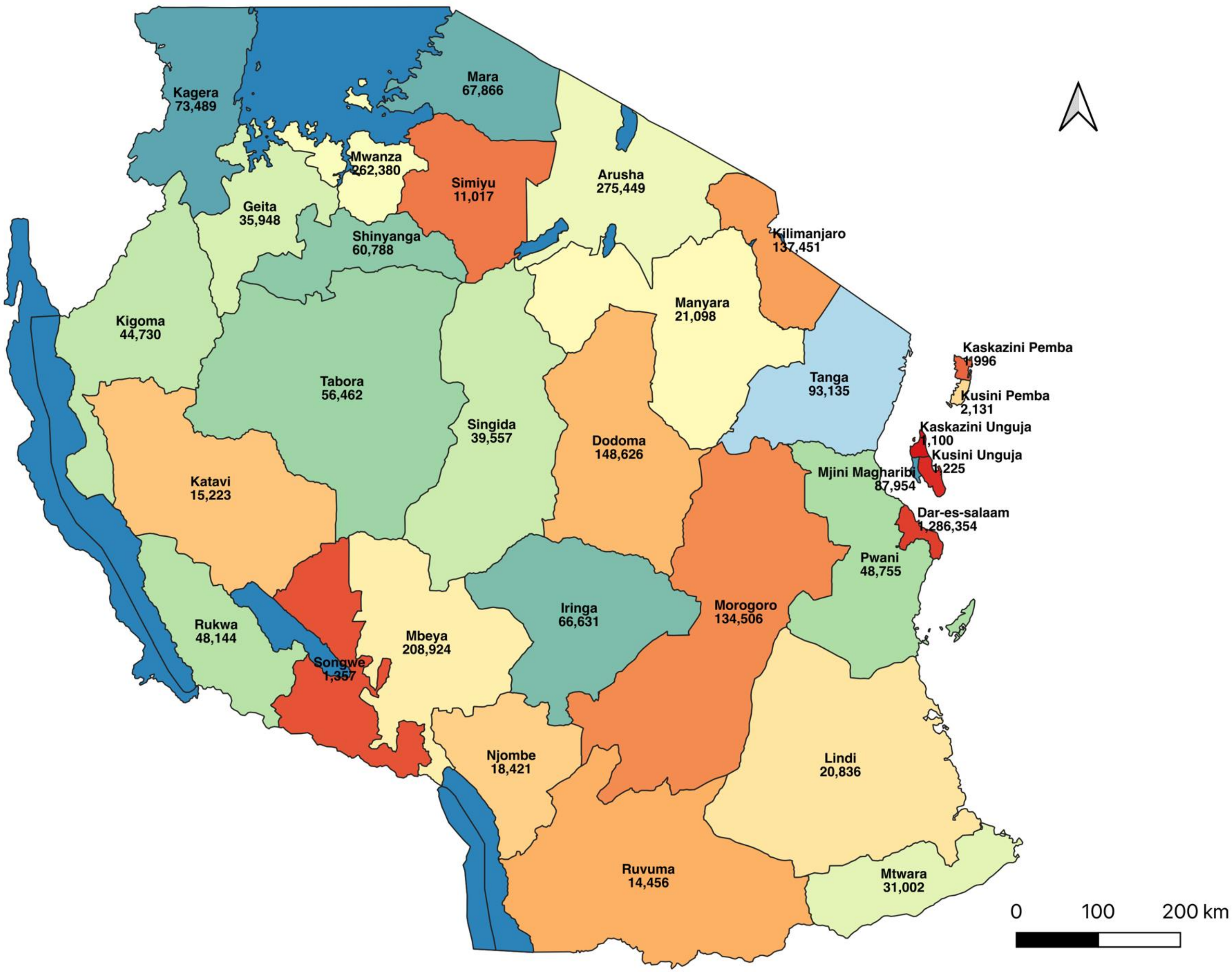
Table 4.1 Number of Active Decoders per Operators as of June 2023

Operator	DTT	DTH	TOTAL
Agape	2,023	1,978	4,001
Azam	127,569	735,047	862,616
Contineta l	39,137	27,615	66,752
DiGiTek	17,392	0	17,392
DSTv	0	227,066	227,066
Star Times	1,514,084	619,073	2,133,157
Zuku	0	31,642	31,642
TOTAL	**1,700,205**	**1,642,421**	**3,342,626**

Table 4.1 shows that, for DTT subscriptions, Star Times is leading by having more subscriptions than other operators. On the DTH platform, Azam is leading by having more subscriptions followed by Star Times.

Based on the regional distribution presented on Map 4.1, Dar es Salaam is ranked first, Arusha ranked second, Mwanza the third and Mbeya ranked fourth and other regions are as presented in the map. The regions in Tanzania mainland fewer active decoders are Songwe, followed by Katavi.

Map 4.1 Number of Decorders in all Regions of Tanzania as of June 2023



4.2 Active decoders in the last five Years

The active decoders in the last five years and the number of persons per decoder are shown in Table 4.2

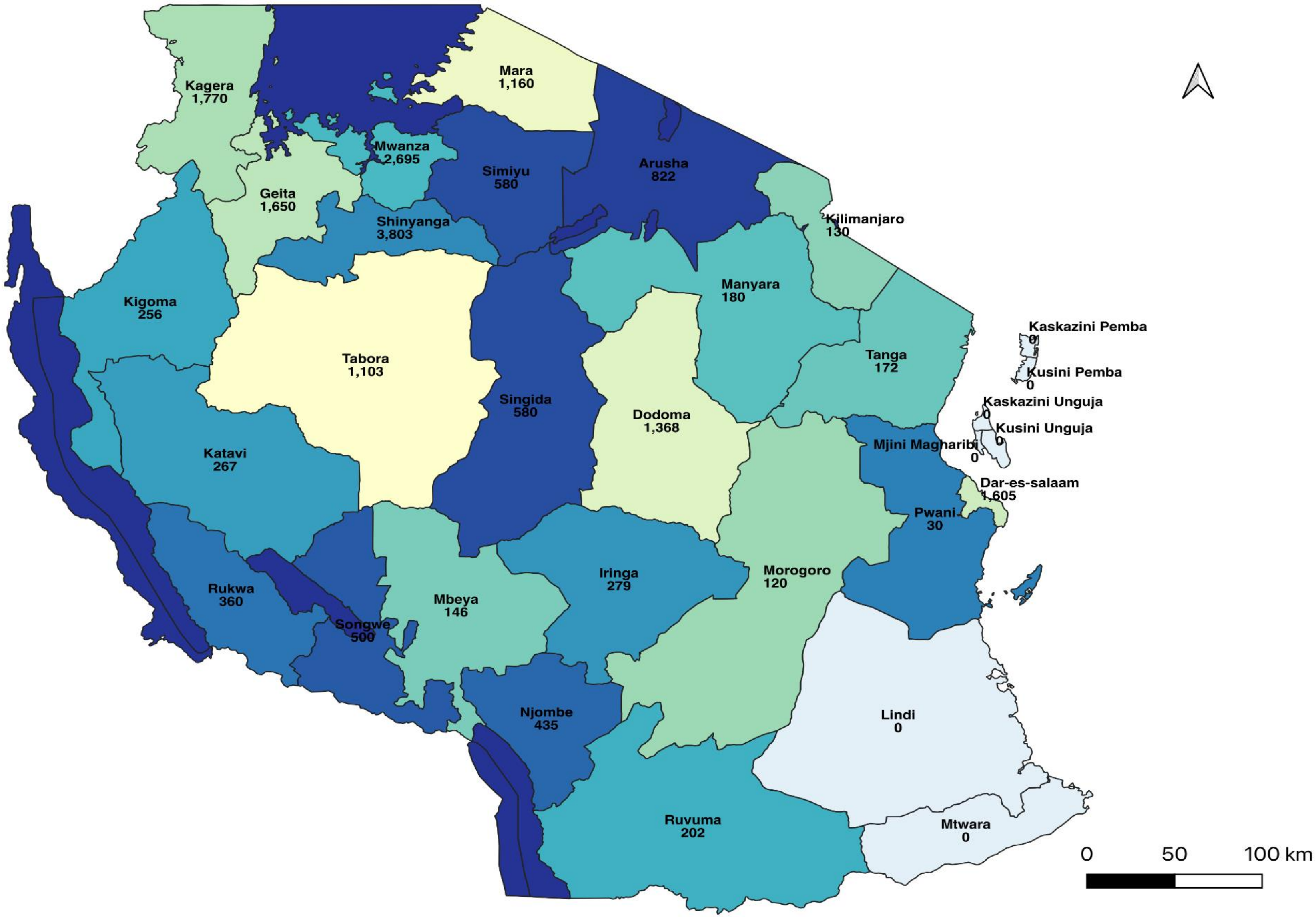
4.2 Active decoders in the last five Years and Number of Persons per Decoder

Year	2019	2020	2021	2022	June 2023
Active Decoders	2,525,289	2,814,003	3,190,346	3,370,342	3,342,626
One Decoder/Persons	22	20	19	18	18

4.3 Cable TV Subscriptions

These are subscriptions by consumers on television services provided via radio frequency (RF) signals transmitted through coaxial cables, or fiber-optic cable.

Map 4.3: Cable TV Subscribers in Tanzania as of June 2023



4.3.1 Trend of Cable Subscribers

The trend of cable subscriptions over the past six years is shown in Table 4.3.1

Table:4.3.1 Number of Cable Subscriptions for past Six Years

Year	2018	2019	2020	2021	2022	June.2023
Subscriptions	16,786	15,245	14,350	42,822	22,295	20,213

Cable TV subscription has been increasing over time as seen from Table 4.3.1. The distribution of cable TV subscribers is mainly around the lake zone lead by Shinyanga region with total of 3,803 subscribers followed by Mwanza with total of 2,695 subscribers. The total subscription remains the same as that of quarter ending March, 2023

5. POSTAL AND COURIER SERVICES STATISTICS

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

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

5.1 Posted Items

These are items such as mails, parcels and documents posted within the country (local), to East African Countries (EAC) and the Rest of the World (RoW).

Table 5.1 Posted Items in the Quarter Apr-Jun2023

	Mails	Parcels	Documents	TOTAL
Local	232,598	69,071	134,719	436,388
EA	134,719	2,310	6,422	143,451
RoW	4,450	78,412	4,034	86,896

Table 5.1 shows that more items were posted to local market, followed by East Africa countries .

5.2 Delivered Items

Delivered items are from EAC and the rest of the world is presented in table 5.2. More items were delivered from the rest of the world compared to East Africa countries.

Table 5.2 Delivered Items from EA and RoW			Apr-Jun 2023
	Mails	Parcels	Packets
EA	3,592	4,847	418
RoW	50,633	12,424	4,448

5.3 Annual Posted Items for the past six years

Table 5.3: Annual Posted Items for the past six years

Year	2018	2019	2020	2021	2022	June.2023
To Domestic	7,065,527	9,280,229	4,024,371	2,745,674	2,160,905	878,753
To International	3,753,746	2,873,312	1,116,069	564,528	260,394	454,257
TOTAL	**10,819,273**	**12,153,541**	**5,140,440**	**3,310,202**	**2,423,321**	**1,333,010**

The trend on Table 5.3 shows that more items are posted to domestic destination than to international destination. However, the posted traffic has been decreasing over time as presented in the table.

5.4 Annual International Posted and Delivered Items for the past six years

5.4 Annual International Posted and Delivered Items for the past six years						
Year	2018	2019	2020	2021	2022	June 2023
Posted to Int	3,753,746	2,873,312	1,116,069	564,528	260,394	454,257
Delivered from Int	7,999,942	3,927,692	1,391,829	958,121	394,152	96,097

Table 5.4 shows the trend of posted and delivered items to and from international destinations. Posted items to international destinations have been decreasing from 5,098,728 items in 2018 to 937,124 items in 2022. On the other side, delivered items experienced the same trend of dropping down. The trend indicates at any point more items have been posted to international than delivered from international.

6. QUALITY OF SERVICES & FRAUDS PRACTICES STATISTICS

6.1 Quality of Service (QoS)

QoS measurements were conducted considering the QoS parameters and measurement methods specified in the Electronic and Postal Communications (Quality of Service) Regulations 2018.

6.1.1 Quality of Service Results

The following is the summary on quality of service results for Mobile Network Operators in Tanzania for the period of April to June, 2023.

6.1.1.1 Network Availability

This is a measure of how well the mobile network is available when consumers want to use mobile network services. The threshold for compliance is greater than 99%. Vodacom and Airtel passed the target in all seven (7) measured service areas, MIC-Tigo failed to reach target only in Kahama, MIC-Zantel failed to reach target only in kahama, Halotel failed to reach target only in Rukwa while TTCL failed to reach target only in Kigoma as shown in chart 6.1.1.1

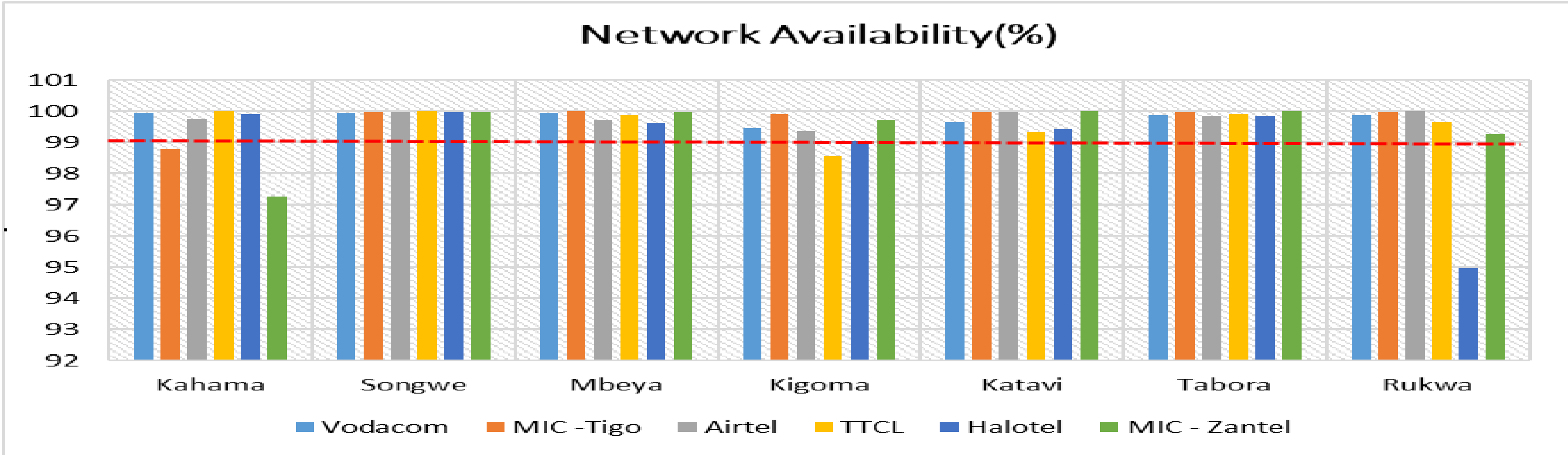


Chart 6.1.1.1: Network Availability (%)

6.1.1.2 Call Connection Failure Rate

This is a measure of percentage of calls failed to connect after dialing due to technical reasons. The threshold for compliance is less than 2%. Vodacom failed to reach target only in Rukwa, MIC-Tigo failed to reach target only in kahama while MIC-Zantel failed to reach target in Kahama, Kigoma and Tabora. Halotel failed to reach target in Mbeya, Songwe and Katavi, Airtel failed to reach target in four (4) service areas while TTCL failed to reach target in five (5) service areas as shown in chart 6.1.1. 2.

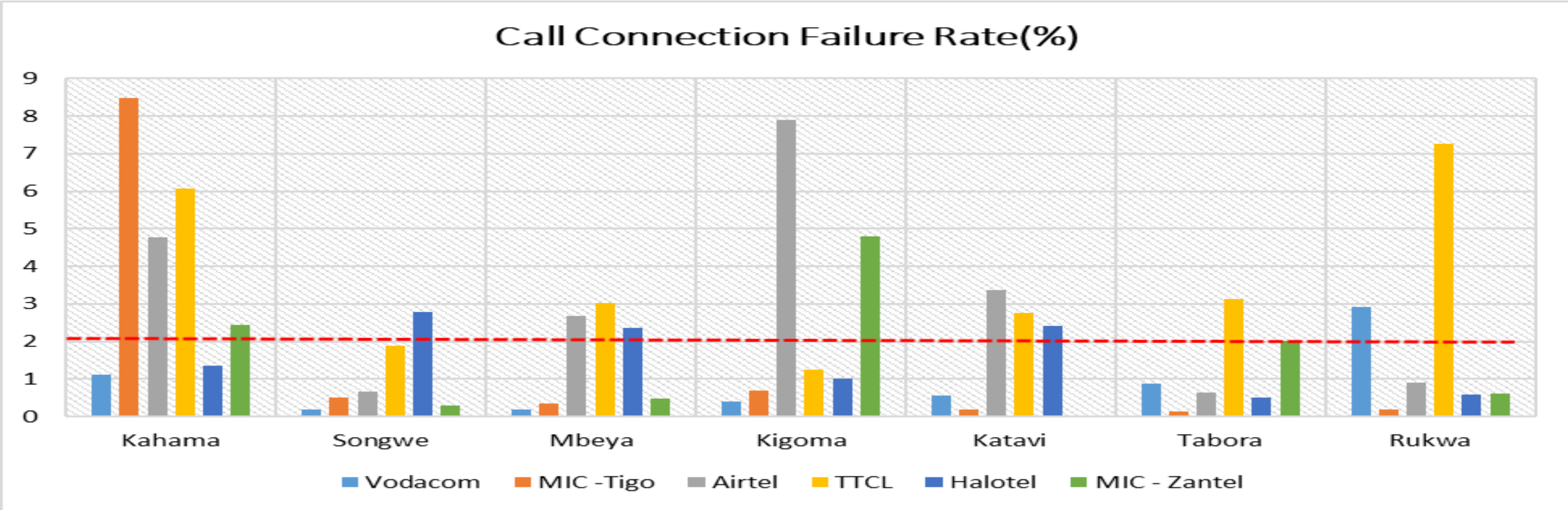


Figure 6.1.1.2: Comparative results on the Call Connection Failure Rate

6.1.1.3 Call Drop Rate

This is a measure of percentage of calls which were cut off due to technical reasons before the speaking parties finish their conversation and before one of them hang up (dropped calls). The threshold for compliance is less than 2%. Vodacom, MIC-Tigo TTCL, Halotel and MIC-Zantel passed target in all seven (7) measured service areas, while Airtel failed to reach target in Tabora and Mbeya as shown in Figure 6.1.1.3.

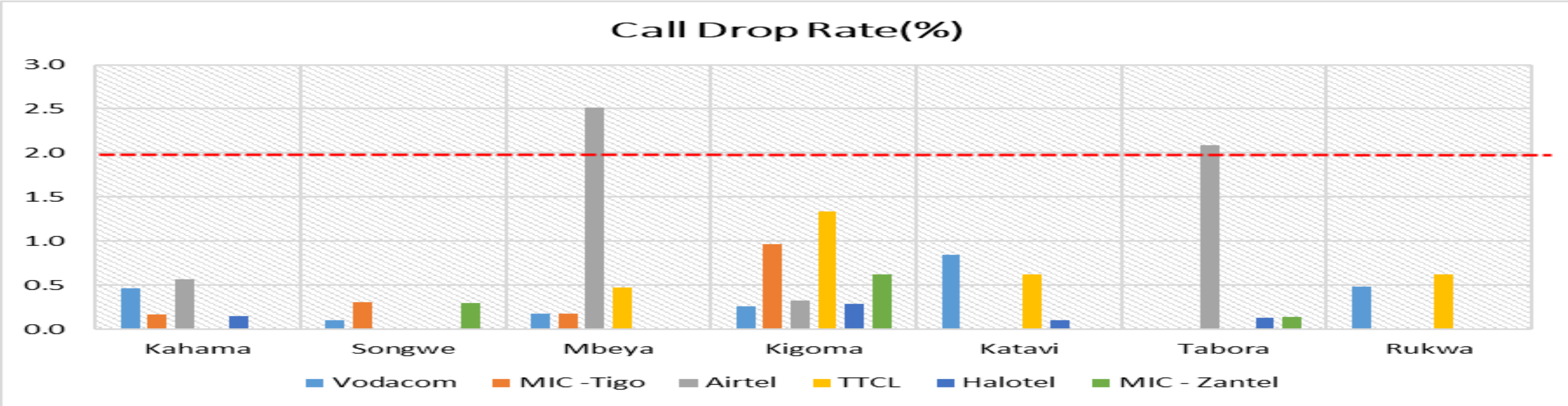


Figure 6.1.1.3: Comparative results on the Call Drop Rate

6.1.1.4 2G Service Coverage

This is a measure of how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. In areas with no coverage or very poor coverage, consumers cannot get mobile network services. Threshold for compliance for 2G technologies is -85 dBm. MIC –Tigo, Airtel, Vodacom, Halotel and MIC -Zantel passed target in all seven (7) measured service areas while TTCL failed to reach target only in Mbeya as shown in Figure 6.1.1.4.

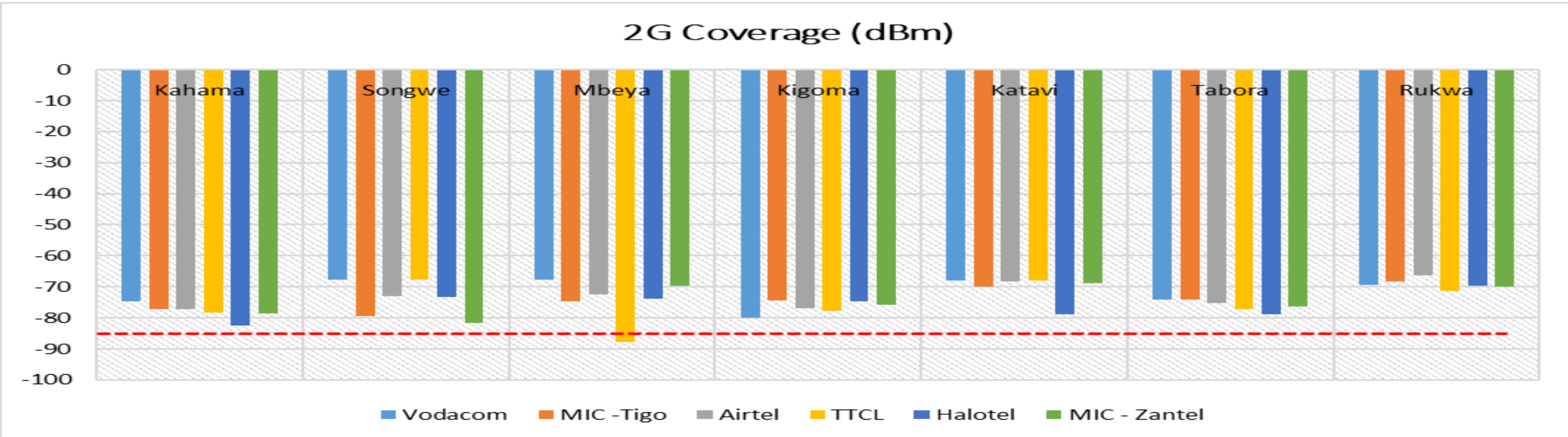


Figure 6.1.1.4: Comparative results on 2G Coverage

6.1.1.5 3G Service Coverage

This is a measure of how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. In areas with no coverage or very poor coverage, consumers cannot get mobile network services. Threshold for compliance for 3G technologies is -85 dBm. Vodacom, MIC-Tigo TTCL, Halotel, TTCL and MIC-Zantel Halotel passed target in all seven (7) measured service areas as shown in Figure. 6.1.1.5

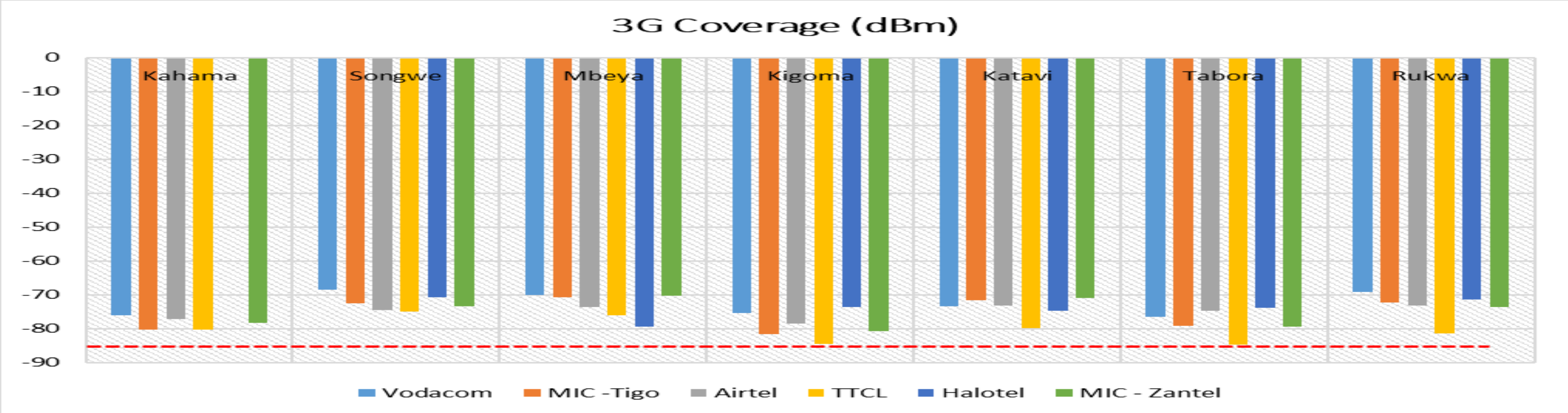


Figure . 6.1.1.5: Comparative results on 3G Coverage

6.1.1.6 4G Service Coverage

This is a measure of how well service areas are covered by a particular mobile network operator signal for consumers to get mobile network service. In areas with no coverage or very poor coverage, consumers cannot get mobile network services. Threshold for compliance for 4G technologies is -95 dBm. Vodacom, MIC-Tigo, MIC-Zantel, Halotel and Airtel passed target in all seven (7) measured service areas, while TTCL failed to reach target only in Katavi as shown in Figure 6.1.1.6

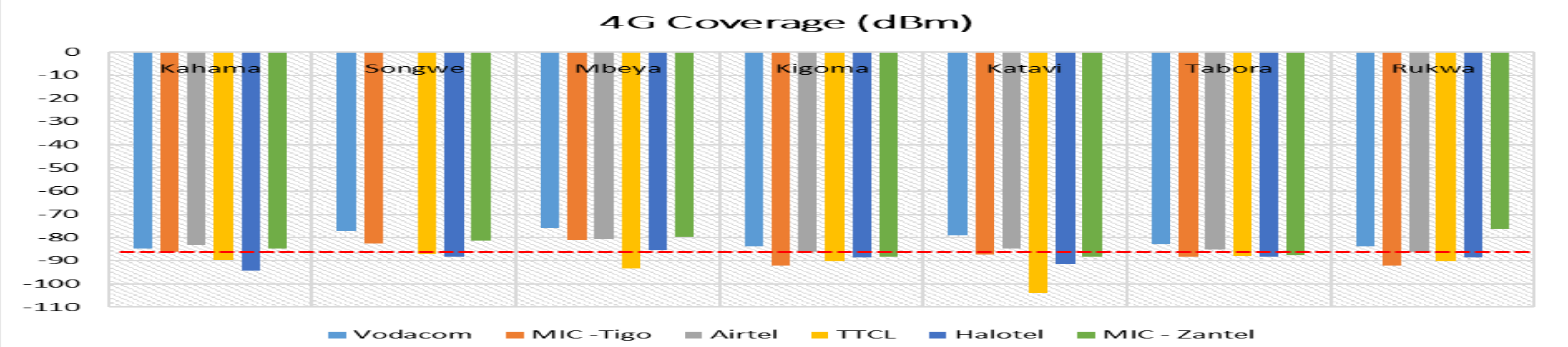


Figure 6.1.1.6: Comparative results on 4G Coverage

6.1.1.7 Voice Quality (MOS)

This 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. Threshold for compliance is an average of all Voice Quality (MOS) measurements samples being greater than 3.5. Vodacom, MIC-Tigo, TTCL, Airtel, Halotel and MIC-Zantel passed target in eighteen (18) measured service areas as shown in Figure 6.1.1.7.

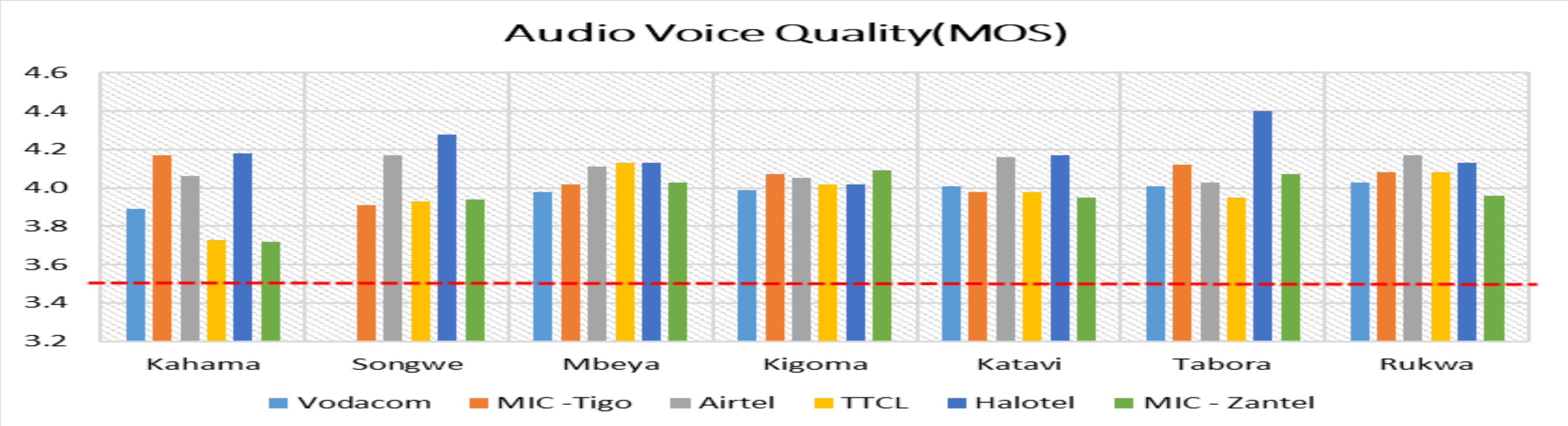


Figure 6.1.1.7: Comparative results on Voice Quality

6.1.1.8 Download Mean Data Rate

This 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. It is measured in kilobits per second (kbps) and the threshold for compliance is average being greater or equal to 4000 kbps. Vodacom, MIC-Tigo and Halotel passed target in all seven (7) measured service areas, MIC-Zantel o failed to reach target only in Kahama, while Airtel and TTCL failed to reach target in Kahama and Katavi as shown in Figure 6.1.18.

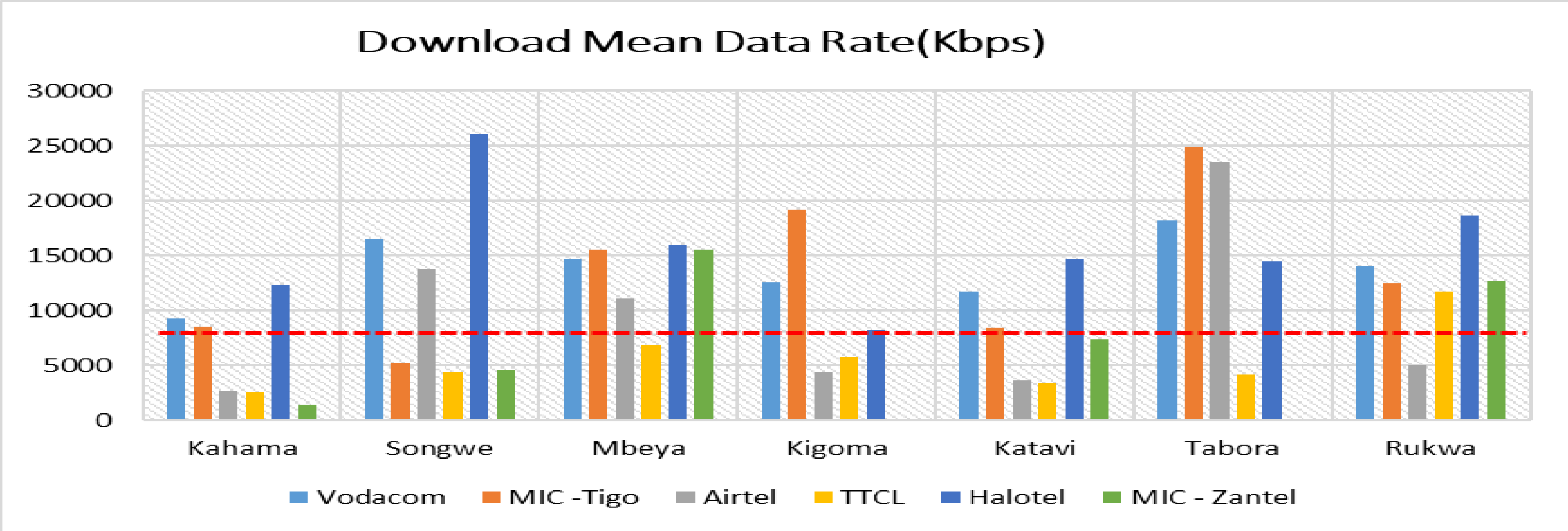


Figure 6.1.1.8: Comparative results on Download Mean Data Rate

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6.1.1.9 Call setup time

This is a measure of time taken for a call to connect after dialing. The threshold for compliance is less than 10 seconds. Vodacom, MIC-Tigo, Airtel and Halotel passed target in all seven (7) measured service areas, MIC-Zantel TTCL failed to reach target in Kigoma and Tabora while TTCL failed to reach target in Kahama, Songwe and Rukwa as shown in Figure 6.1.1.9.

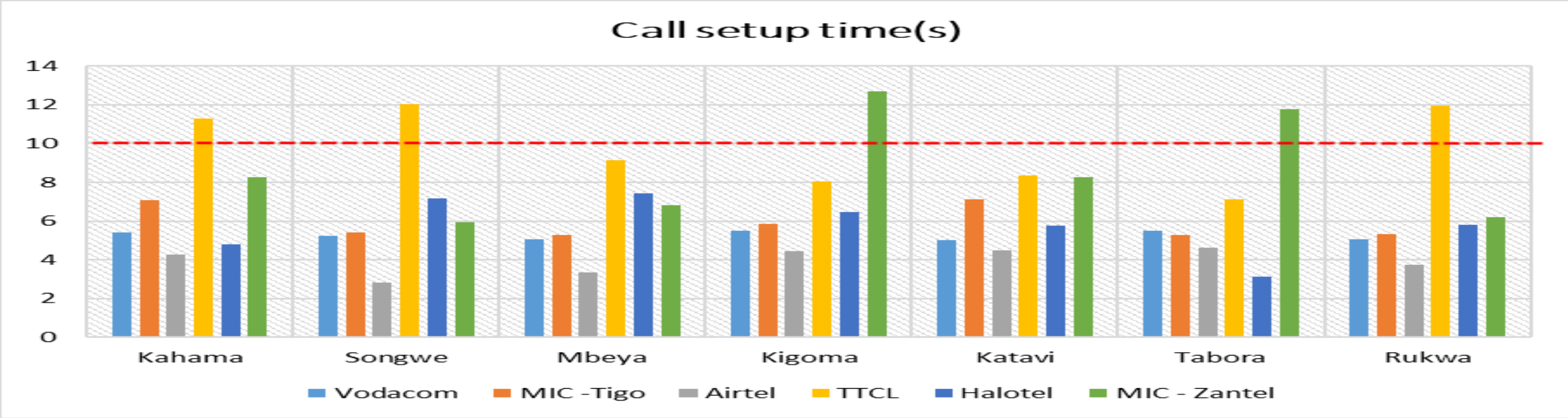
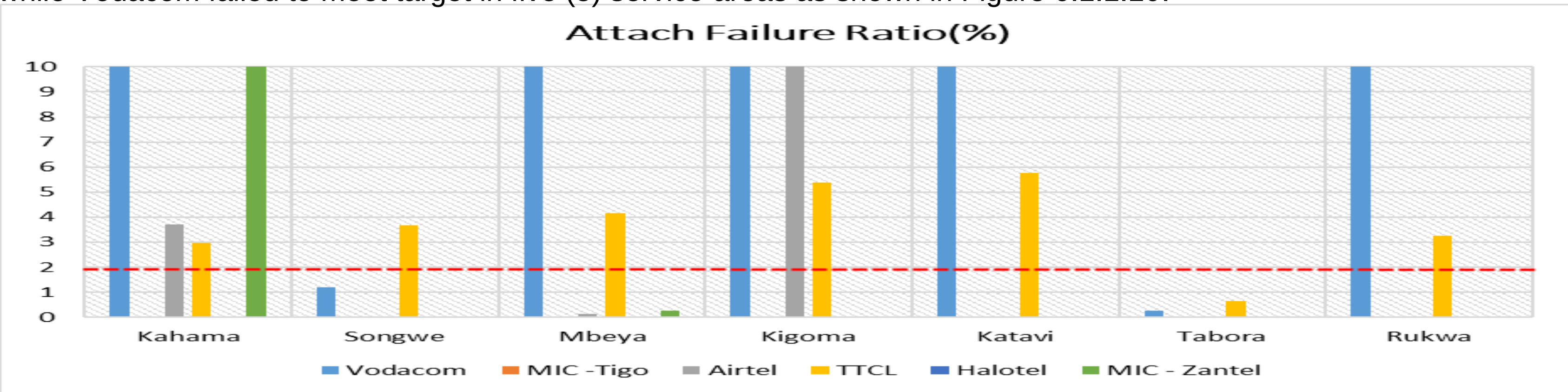


Figure 6.1.1.9**:** Comparative results on Call setup time

6.1.1.10 Attach Failure Ratio

This is a is a percentage of failures when a mobile phone fail to connect to network when powered ON or flight mode turned OFF. The threshold for compliance is less than 2%. MIC-Tigo and Halotel passed target in all seven (7) measured service areas, MIC-Zantel failed to reach target only in Kahama, Airtel failed to reach target in Kigoma and Kahama, TTCL failed to reach target in six (6) service areas while Vodacom failed to meet target in five (5) service areas as shown in Figure 6.1.1.10.



6.1.1.10: Comparative results on Attach Failure Ratio

6.1.1.11 Attach setup time

This is a measure of time taken mobile phone to connect to network when powered ON or flight mode turned OFF. The threshold for compliance is less than 5 seconds. Vodacom, MIC-Tigo, TTCL, Airtel, Halotel and MIC-Zantel passed target in all seven (7) measured service areas as shown in Figure 6.1.1.11.

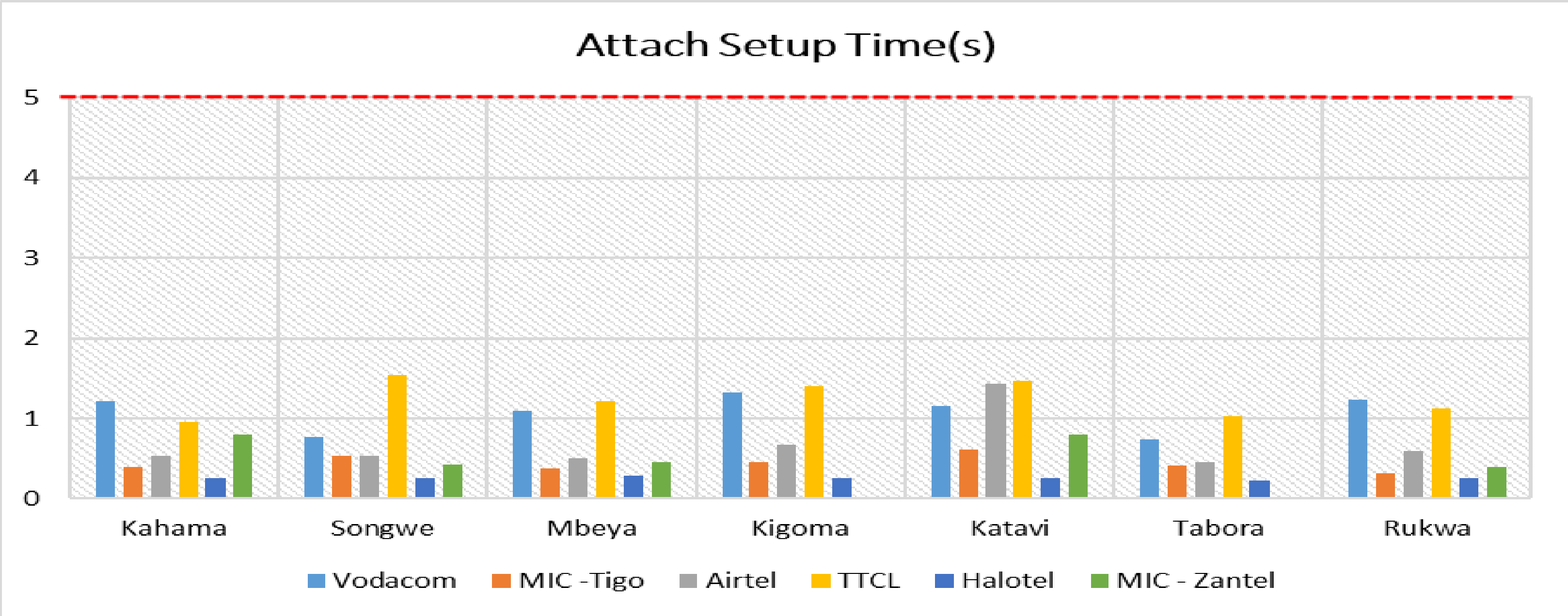


Figure 6.1.1.11: Comparative results on Attach setup time

6.1.1.12 Ping Round Trip Time

This is the length time it takes for a data packet to be sent to a destination plus the time it takes for an acknowledgment. The threshold for compliance is less than 400 milliseconds. Vodacom, MIC-Tigo, MIC- Zantel and Halotel passed target in all seven (7) measured service areas, Airtel failed to reach target only in Katavi while TTCL failed to reach target in five (5) service areas as shown in Figure 6.1.1.12.

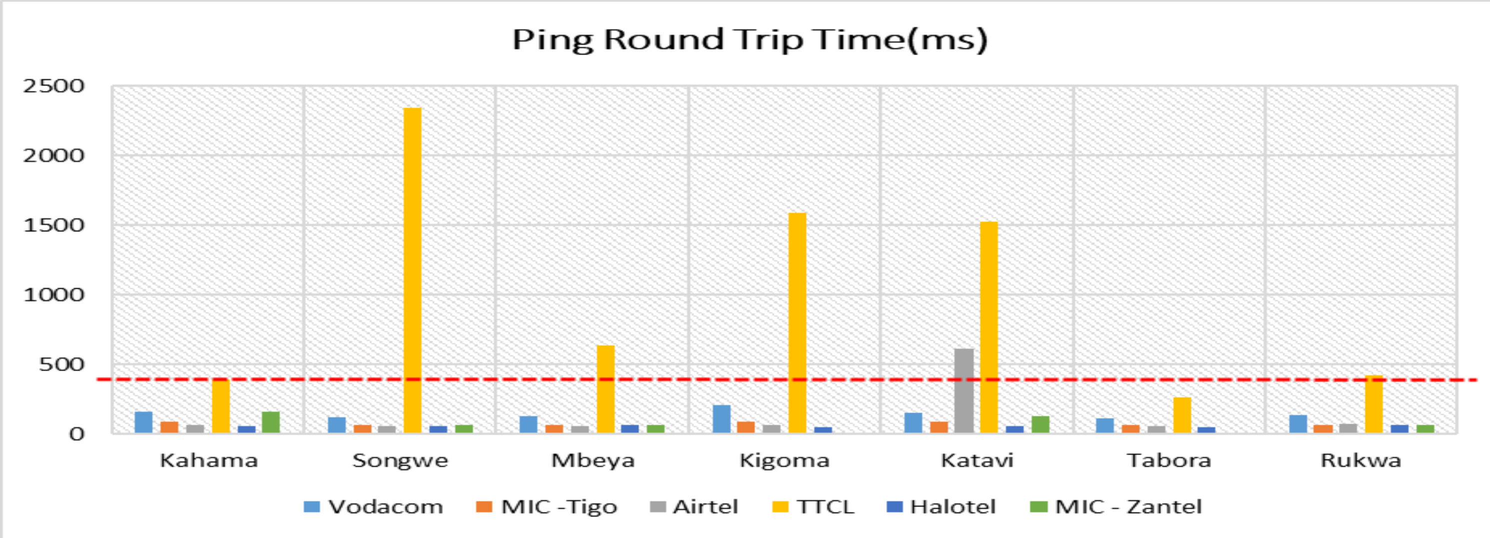


Figure 6.1.1.12.: Comparative results on Ping Round Trip Time

6.2 Fraudulent Practices

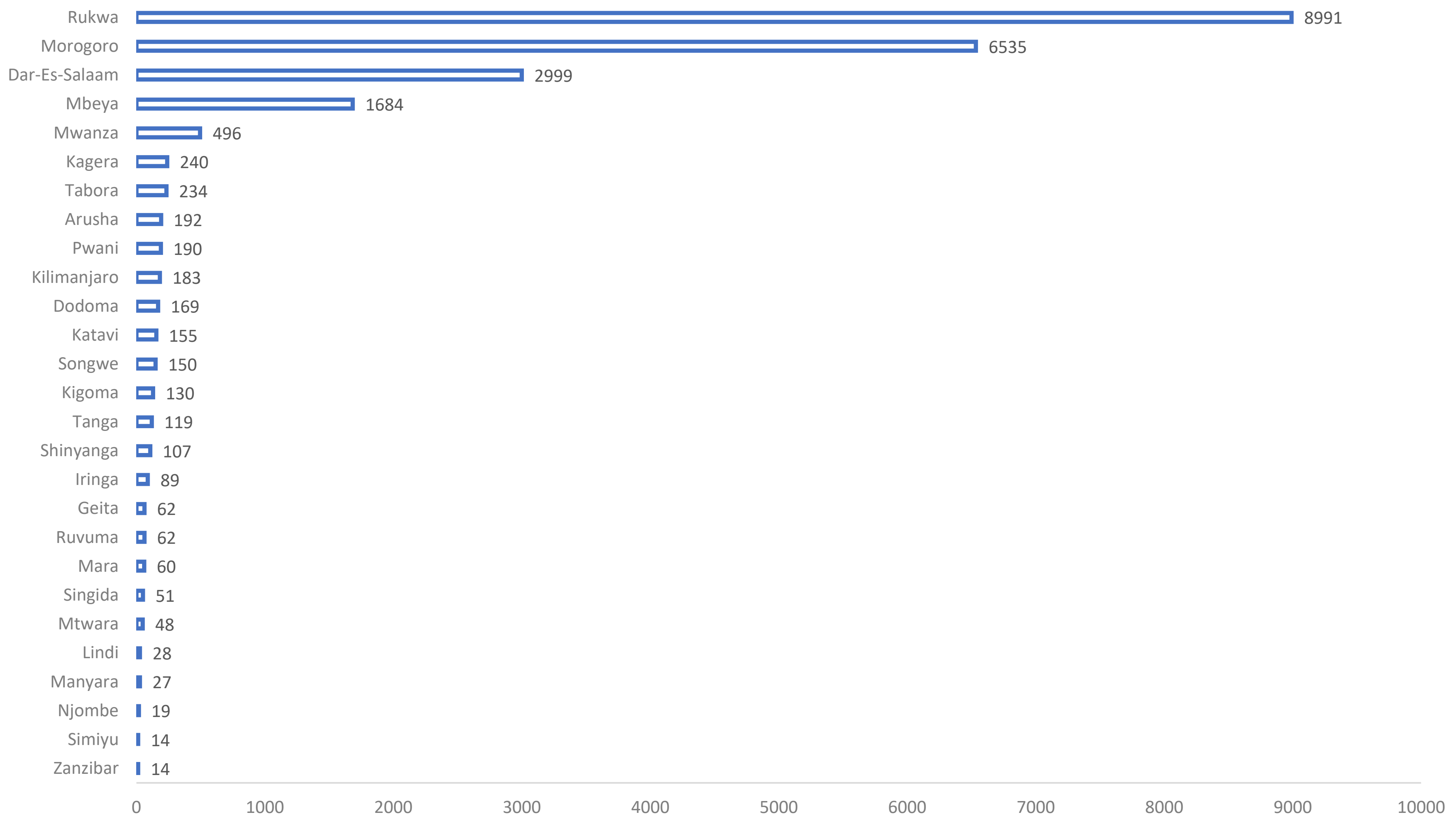
The Table 6.2 shows fraudulent practices per region per operators. While regionwise, Rukwa committed more frauds than any other region in Tanzania, networkwise, more fraudulent practices occurred at Airtel network than other MNOs.

Table 6.2 represents fraudulent practice per Mobile network operator in each region

Region	Airtel	Halotel	Tigo	TTCL	Vodacom	Grand Total
Rukwa	5293	126	2471	292	809	8991
Morogoro	2165	211	3268	4	887	6535
Dar-Es-Salaam	1608	34	732	5	620	2999
Mbeya	552	19	516	71	526	1684
Mwanza	115	16	91	0	274	496
Kagera	20	18	37	0	165	240
Tabora	44	19	43	46	82	234
Arusha	52	5	71	5	59	192
Pwani	50	8	55	1	76	190
UNKNOWN	33	0	5	0	148	186
Kilimanjaro	11	8	123	1	40	183
Dodoma	26	7	95	6	35	169
Katavi	0	25	7	45	78	155
Songwe	0	4	58	88	0	150
Kigoma	50	5	11	2	62	130
Tanga	45	4	49	2	19	119
Shinyanga	20	10	23	8	46	107
Iringa	17	4	39	5	24	89
Ruvuma	4	7	39	3	9	62
Geita	0	6	7	3	46	62
Mara	11	7	5	2	35	60
Singida	2	4	18	0	27	51
Mtwara	7	3	8	28	2	48
Lindi	4	1	17	0	6	28
Manyara	0	3	12	4	8	27
Njombe	0	2	2	1	14	19
Zanzibar	4	1	5	0	4	14
Simiyu	0	3	0	5	6	14

The summary of fraudulent practices in percentage per region and per MNO are shown in Chart 6.1 and Chart 6.2 respectively. Rukwa region is still leading by **38.7%,** followed by Morogoro with **28.13%**, Dar es Salaam with **12.91%** and Mbeya with **7.25%**. The number and percentage of fraudlent distributions per region are shown in Chart 6.2 and Map 6.2 and per MNO in Chart 6.3

Figure 6.2.1: Fraudulent Incidents per Regions



Map 6.2: Percentage Distribution of Fraudulent Practices Per Region from April-June, 2023

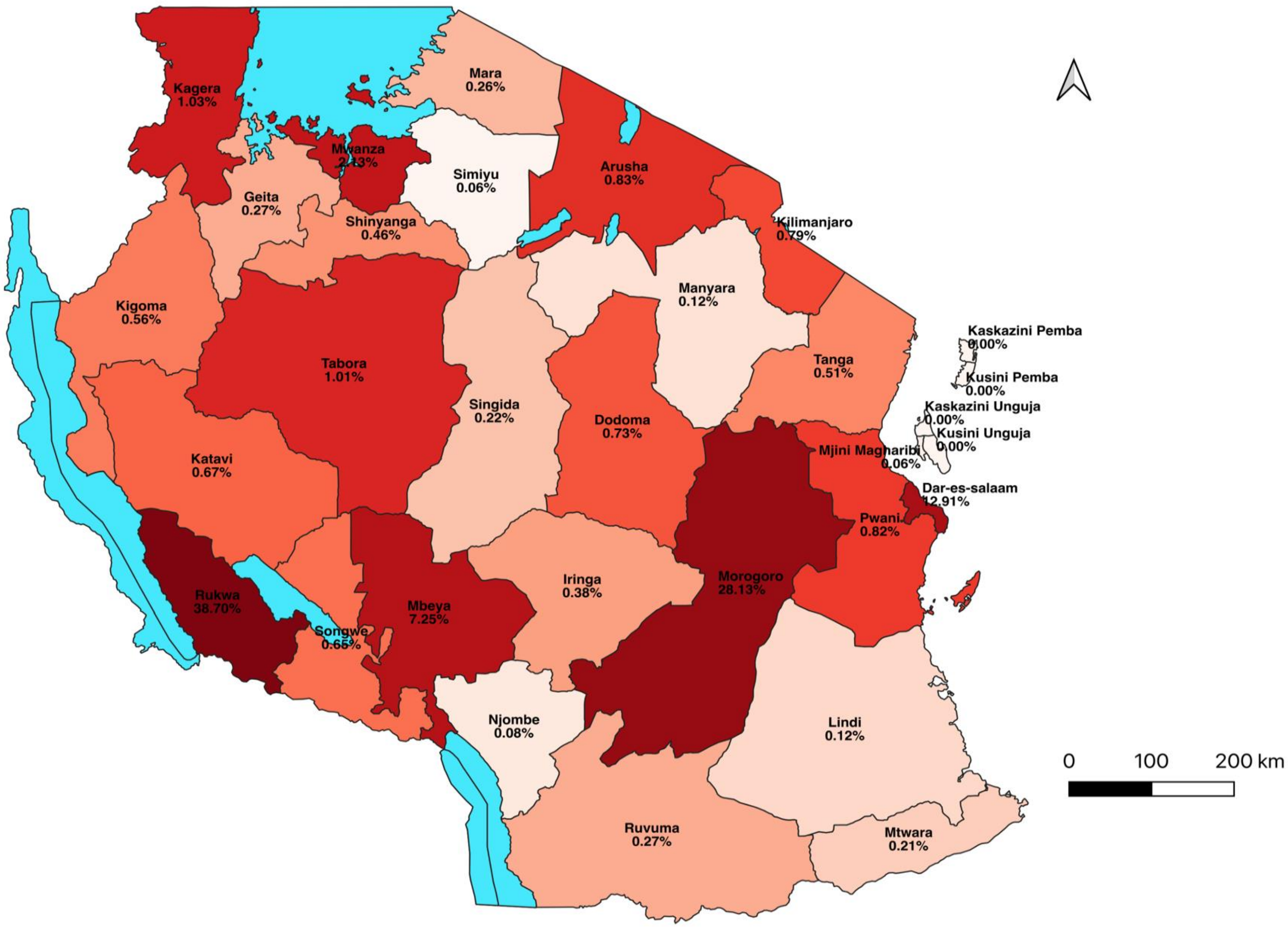
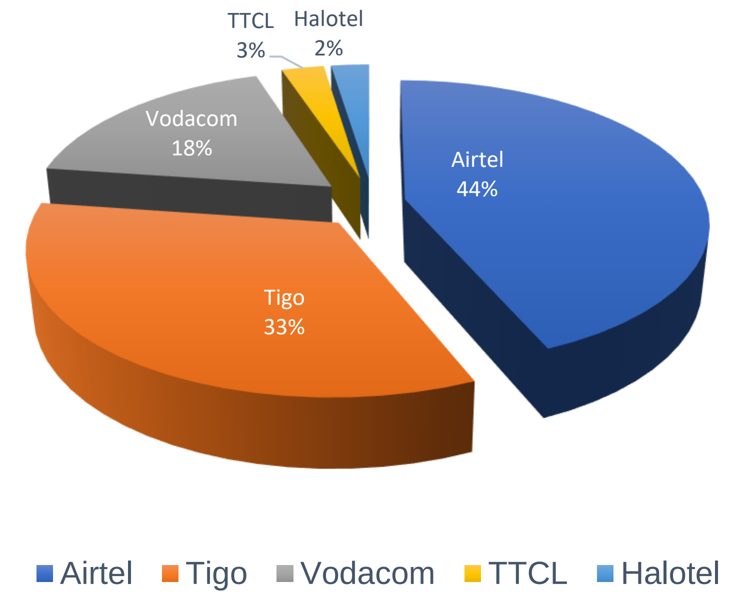


Figure 6.2.2: Fraudulent Incidents per Operator



Airtel leads on fraudulent practice with 44% of all frauds incidences occurred in quarter ending June 2023. Tigo follows closely with 33% and Vodacom with 18%. Few (only 3%) frauds occurred in TTCL network

7.0 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 dot TZ domain name registry. The registry management is governed by the Electronic and Postal Communications (Domain Name Management) Regulations, 2020.

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

Domain name means a unique name that identifies internet resources such as websites that is registered as second level and/or third level domain under .tz Country Code Top Level Domain (ccTLD).

The total cumulative number of domain names registered has increased from **27,844** at the end of March 2023 to **28,076** at the end of June 2023 as presented in table 7.1.

Table 7.1: Domain Names Statistics as of June 2023			
S/N	**ZONE**	**NUMBER OF DOMAIN NAMES END OF MARCH,2023**	**NUMBER OF DOMAIN NAMES END OF JUNE ,2023**
1.	co.tz	22,083	22,204
2.	or.tz	2,350	2,353
3.	ac.tz	984	999
4.	go.tz	864	871
5.	tz	1250	1,343
6.	sc.tz	227	231
7.	ne.tz	45	37
8.	me.tz	13	12
9.	info.tz	8	6
10.	hotel.tz	4	4
11.	mobi.tz	5	5
12.	tv.tz	7	7
13.	mil.tz	4	4
TOTAL		**27,844**	**28,076**

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