TANZANIA COMMUNICATIONS REGULATORY AUTHORITY

COMMUNICATION STATISTICS: Quarter ending March 2023

About the Report

This report presents communication statistics for the THIRD 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 January to March, 2023.

Contents

1. TELECOM SERVICES STATISTICS

Telecom Services Statisctics 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 for at least once in the past three months. Table 1.1 presents the number of subcriptions for January, February and March 2023.

Table 1.1 Number of Telecom Subscriptions

	JANUARY	FEBRUARY	MARCH
Airtel	16,654,648	16,876,140	17,054,716
Halotel	8,331,614	8,692,536	8,146,036
Smile	15,549	15,274	15,171
Tigo	16,292,808	16,454,470	16,599,038
TTCL	1,498,992	1,498,992	1,510,985
Vodacom	18,364,363	18,445,752	18,553,779
Total	**61,157,974**	**61,983,164**	**61,879,725**

Table 1.1 shows that the total subscriptions has increased by 1.2% from 60.3 Million subscriptions in December 2022 to 61.9 Million as at end of March 2023. On average, this is an incesae of 0.59% in every month of the quarter under review.

1.1.1 Operator's Subscriptions Market Shares as of March 2023

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

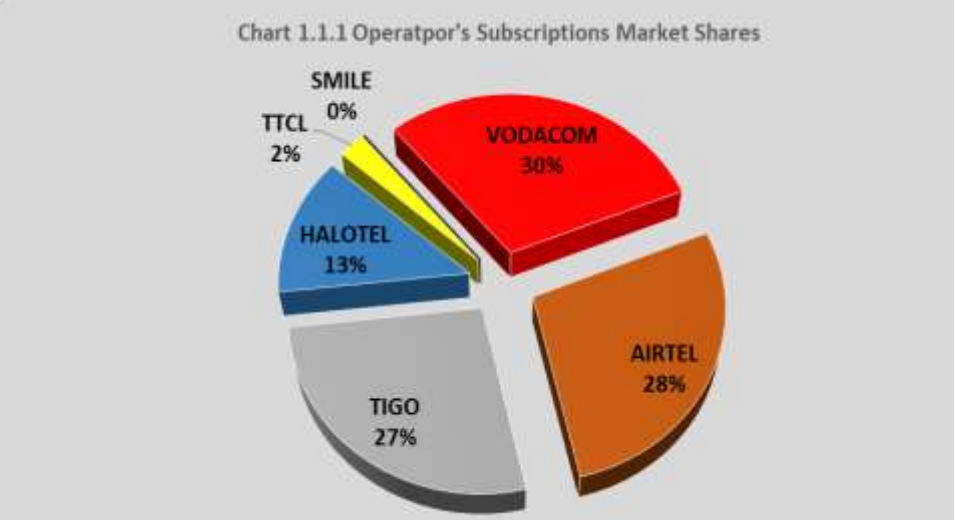


Table 1.1.2 Subscriptions to Mobile and Fixed Network

	JANUARY	FEBRUARY	MARCH
Mobile Subs	61,073,142	61,898,332	61,795,208
Fixed Subs	84,832	84,832	84,517
% of Mobile Subs	99.86%	99.86%	99.86%
% of Fixed Subs	0.14%	0.14%	0.14%

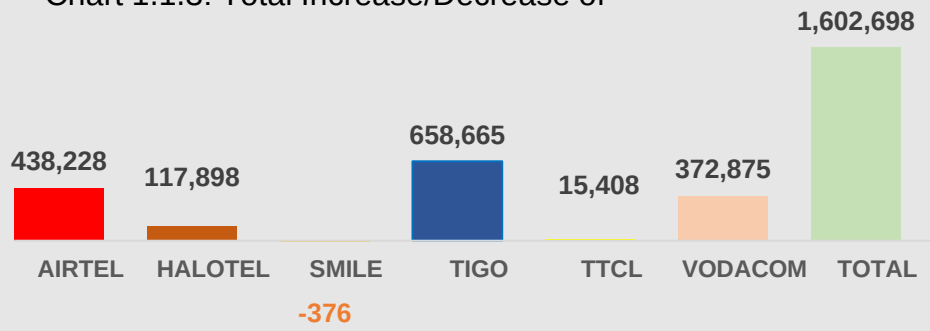
Table 1.1.2 shows the shares of subscriptions on the mobile and fixed networks. Mobile networks suscribers account for 99.86% of all subscribers in the market while the fixed network has only 0.14%. Note that the fixed market services is only provided by one operator while the mobile services are provided by all six operators.

1.1.3 Increase/Decrease of Subscriptions per Operator in this Quarter

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

The reason behind slight decrease may be associated by barring of unverified SIM Cards. The exercise which was implemented in this quarter under review.

Chart 1.1.3: Total Increase/Decrease of

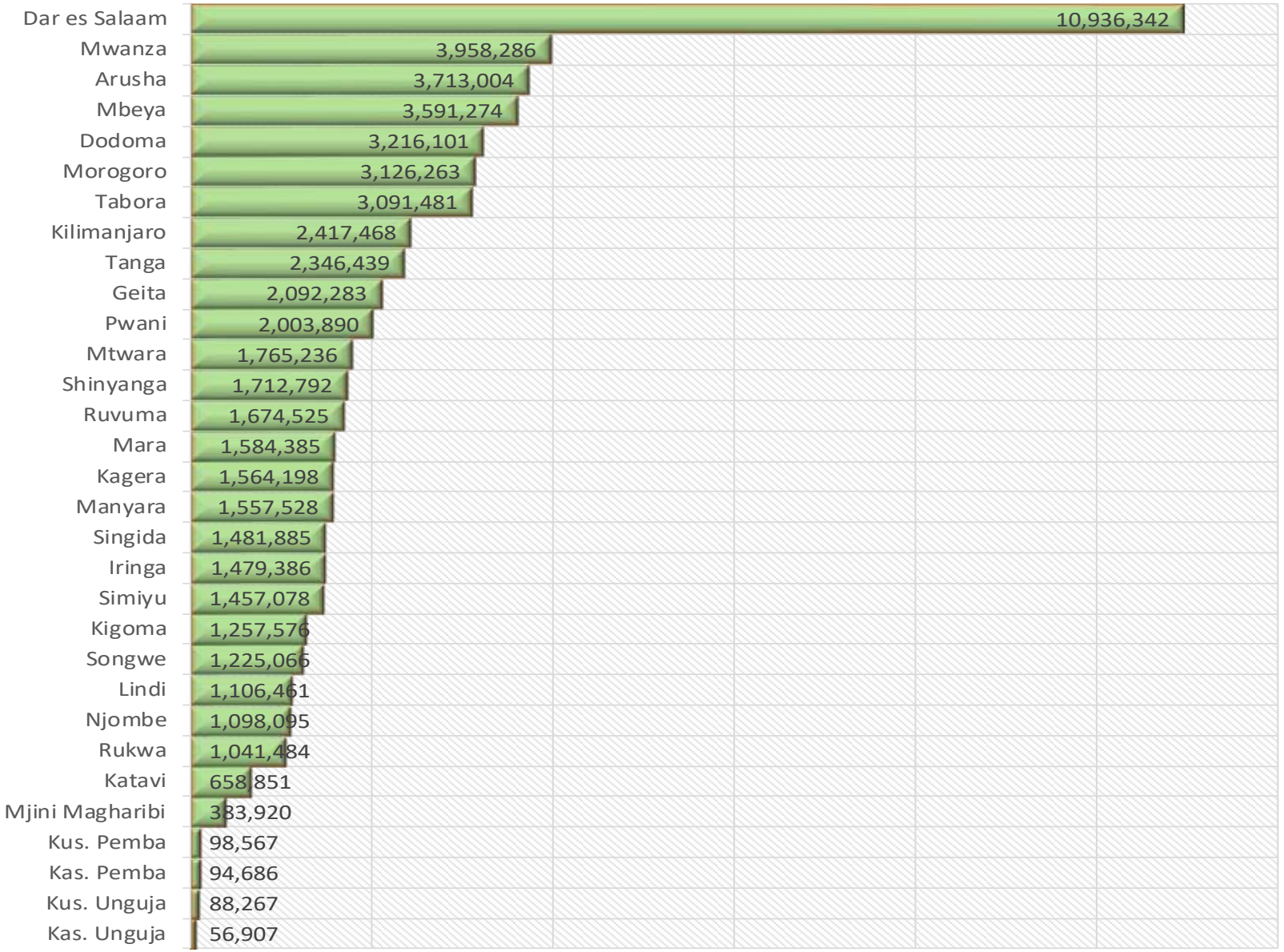


1.1.4 Telecom Services Subscriptions and Penetration by Region as of March 2023

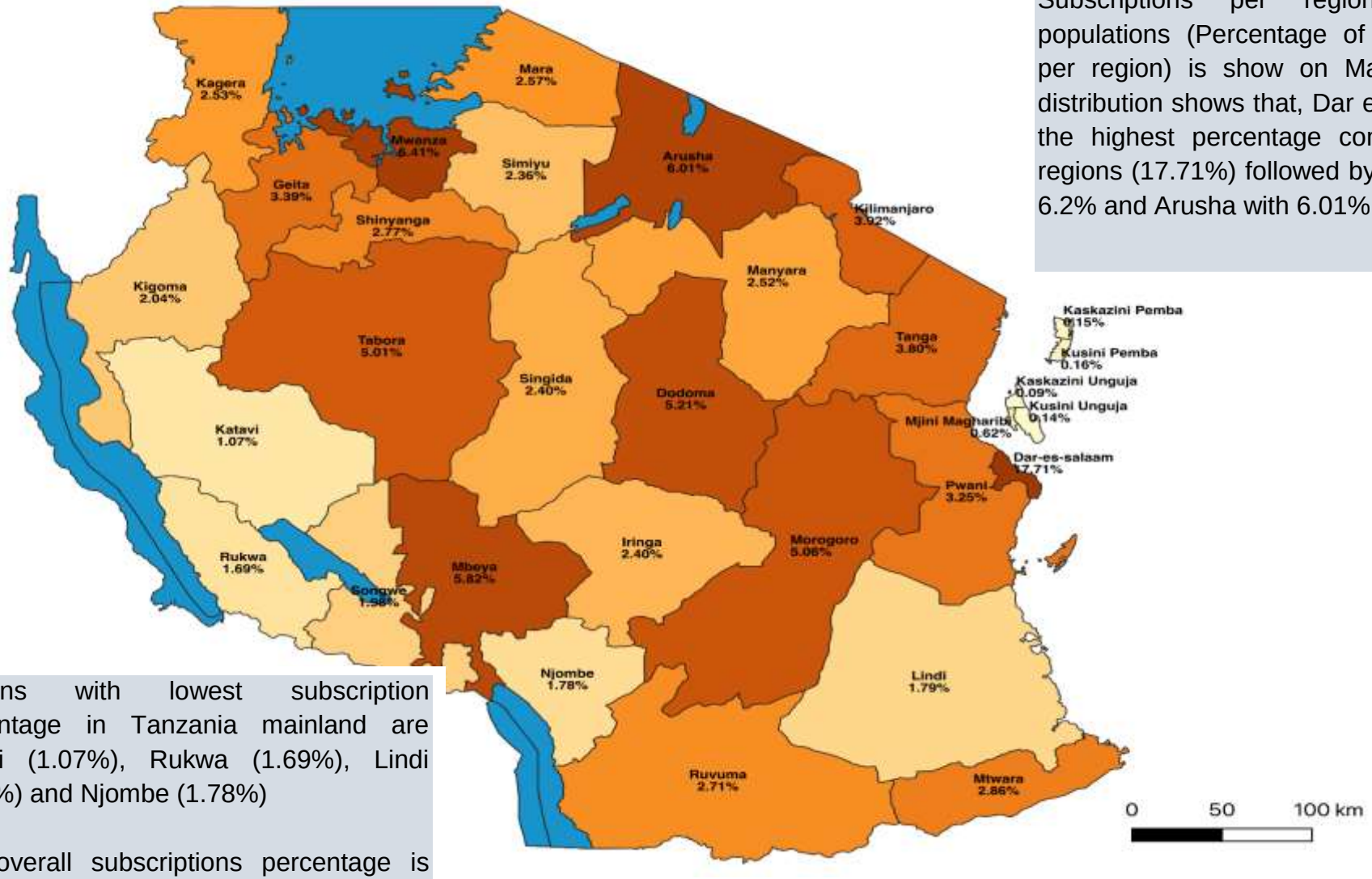
Distribution of SIM Cards per region is presented in chart 1.1.4. The chart shows that Dar es Salaam ranks first by having 18% of all active subscriptions (10.9 million SIM Cards), Mwanza ranks second with 6.4% of all active subscriptions (3.96 million SIM cards), Arusha ranks third with 6.0% of all active subscriptions (3.71 million), Mbeya ranks fourth with 5.8% of all active subscriptions (3.59 million SIM Cards) and Dodoma ranks fifth in the top ranking regions by having 5.2% of all active subscribers (3.22 milion SIM cards).

Regions with lowest subscriptions are North Unguja with 0.09% of all active subscriptions (56,907 SIM Cards), South Unguja with 0.14% of all active subscriptions (88,267 SIM cards) and followed by North Pemba with 0.15% of all active subscriptions (94,686 SIM cards).

Chart 1.1.4. Telecom Subscription per Region as of March 2023



Map 1.1.4 Region Subscriptions Percentages as of March 2023



Subscriptions per region per total populations (Percentage of Subscriptions per region) is show on Map 1.1.4. The distribution shows that, Dar es Salaam has the highest percentage compared to all regions (17.71%) followed by Mwanza with 6.2% and Arusha with 6.01%

Regions with lowest subscription percentage in Tanzania mainland are Katavi (1.07%), Rukwa (1.69%), Lindi (1.79%) and Njombe (1.78%)

The overall subscriptions percentage is 98% close to 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 8% per annum as presented in table 1.1.5 and chart 1.1.5 The telecom penetration has reached very close to 100%.

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

Year	2019	2020	2021	2022	Mar-23
Mobile Subs	47,685,232	51,220,233	54,044,384	60,192,231	61,795,208
Fixed Subs	76,288	72,469	71,834	84,696	84,517
SUBS	**47,761,520**	**51,292,702**	**54,116,218**	**60,276,927**	**61,879,725**
PENETRATION	88%	89%	91%	98%	98%

1.2 Telecom Tariffs

These are per minute, SMS and MB charges (Tax inclusive) as of March 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 1.2.1a, depicts the same rate of tariff as it was in quarter ended in December, 2022. All operators except Smile, sell one minute of voice call at 30/ TZS for both within and outside the network which makes industry average to stand at 32/ TZS per minute

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 1.2.1b shows that industry average rate of one minute for making calls to East Africa and other international is TZS 1,151/= and 1,889/ respectively.

The chart further shows that, TTCL rates are higher for both East Africa (1,829/) and other international (2,871/) calls compared to other operators. The prices 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	ternational 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 maintained at TZS 11 per SMS same as December, 2022. International SMS tariff also remained the same at TZS 202 per SMS same as December 2022. This indicates stability in the tariff charges and hence encourage usage as subscribers can budget for services.

The figures in chart 1.2.2b shows that, industry average data tariffs for March 2023 is TZS 8.36 per MB same as that of December, 2022. This indicates stability in the tariff charges and hence encourage usage as subscribers can budget for the services 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	6.52	6.82	1.04	2.06
TIGO	3.74	6.78	1.35	2.09
AIRTEL	3.55	5.96	1.07	2.05
HALOTEL	2.28	5.05	1.04	2.07
TTCL	7.23	7.23	2.18	2.19
SMILE	0.00	0.00	0.00	2.08
Industry Average	**4.66**	6.37	1.34	2.09

The industry average for on net bundle tariff in this quarter is TZS 4.66 while in December 2022 was TZS 7.29; Off net bundle tariff is TZS 6.37 per minute while in December 2022 was 8.70 per minute; SMS tariff in this quarter is TZS 1.34 per SMS while in December 2022 it was TZS 3.16 per SMS. Data tariff in this quarter is TZS 2.09 while in December 2022 was 2.08.

Generally in this quarter there is a decrease in tariff for voice and SMS services and slight increase in data tariff.

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

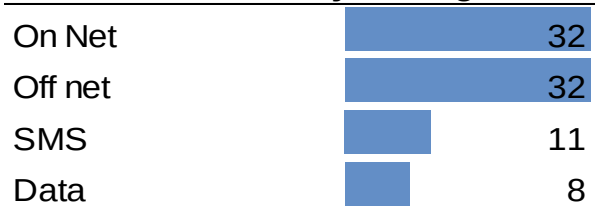
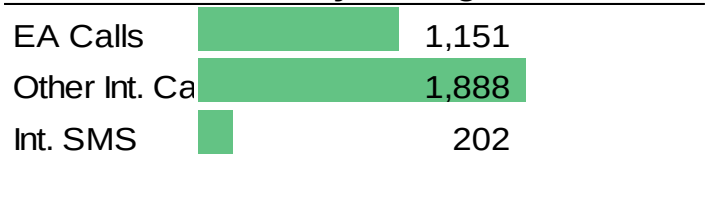


Chart 1.2.4b Industry Average for Basic Tariffs



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 December, 2022.

The last five years trend of domestic and international industry average basic tariffs for voice calls are depicted in charts 1.2.5.1 and 1.2.5.2 respectively.

Chart 1.2.5.1 The Trend of Average Domestic Tariffs per minute in TZS for the past five years

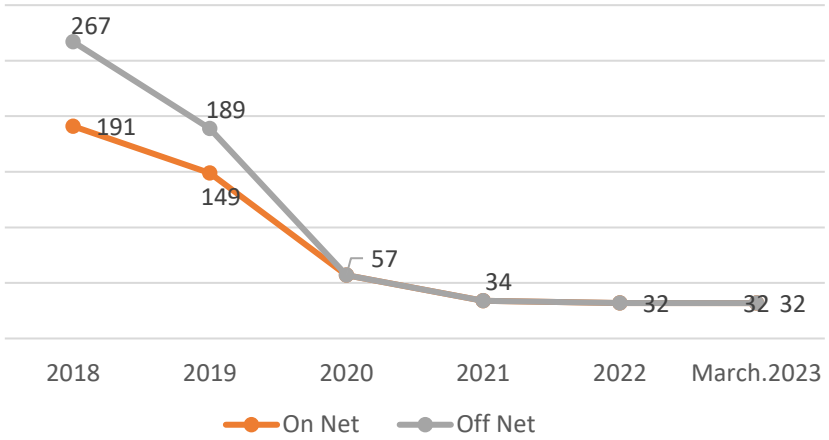
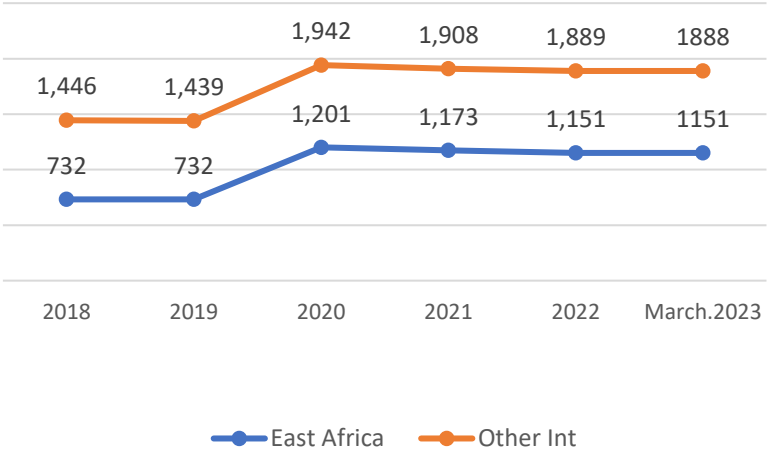


Chart 1.2.5.2 The Trend of Average International Tariffs per minute in TZS for the past five years



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 imposed by international carriers

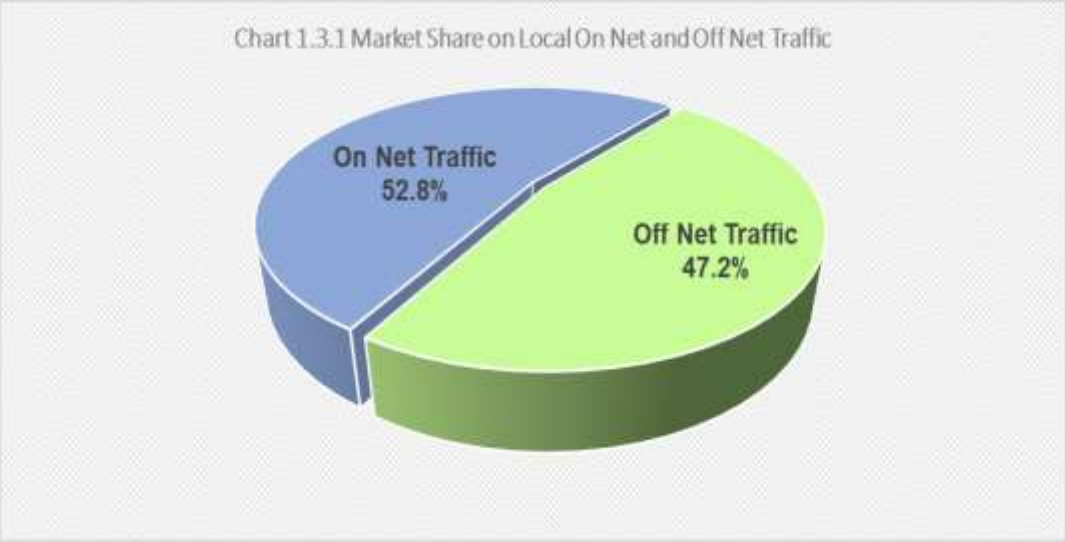
1.3. Telecom Traffic Minutes

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 March 2023.

Table 3.1.1 On net and Off net Traffic Minutes

	JANUARY	FEBRUARY	MARCH	TOTAL
On Net Traffic	5,855,469,004	5,197,384,249	5,854,304,950	**16,907,158,203**
Off Net Traffic	5,254,834,902	4,702,881,869	5,173,231,723	**15,130,948,494**
TOTAL	**11,110,303,906**	**9,900,266,118**	**11,027,536,673**	**32,038,106,697**



A total of 32.0 billion minutes were spent in the quarter ending March 2023 compared to 34.1 billion minutes in the quarter ending December 2022.

Chart 1.3.1 shows that there were many traffic minutes within networks (52.8%) compared to 47.2% of off net traffic.

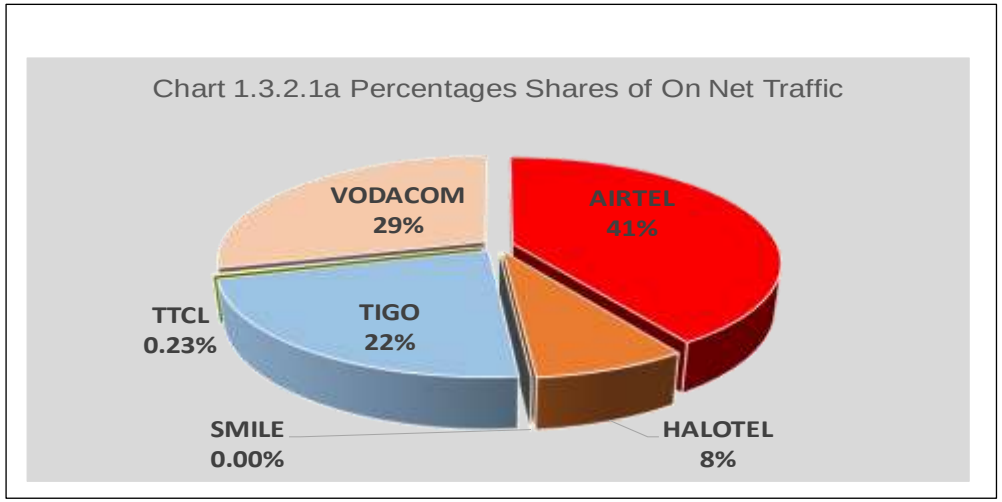
January experienced slightly more traffic minutes than other months of the quarter followed by March and February

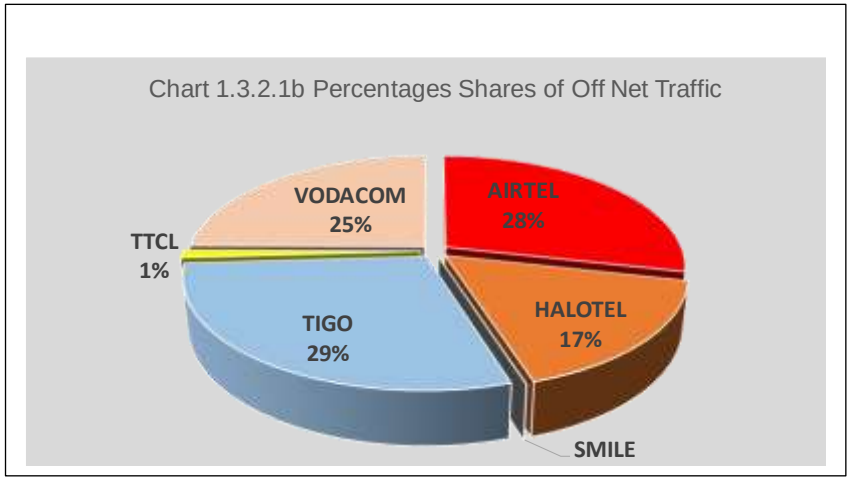
Small differences between On Net and Off Net minutes shows the effectiveness of Interconnection rates regulations.

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

1.3.2.1 Local Traffic

Chart 1.3.2.1a shows Airtel has largest shares (41%) on onnet traffic minutes compared to other operators. Vodacom follows with difference of 12%. 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 25% respectively.

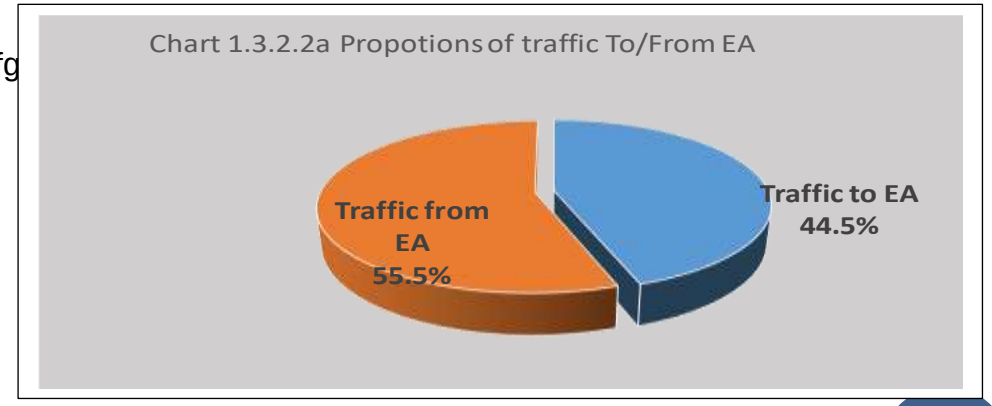


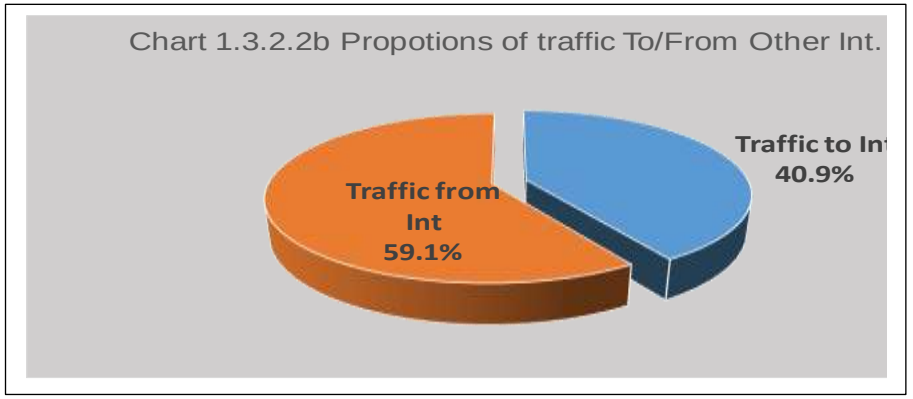


1.3.2.2 International Traffic

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 nad 1.3.2.2b

fg





Market shares on international traffic minutes are as shown on chart 1.3.2.2c to 1.3.2.2f. Vodacom has largest market shares on traffic minutes to and from East Africa countries. Tigo leads the market on shares of traffic minutes to other internationals and from other international as shown on chart 1.3.2.2e and f.

Chart 1.3.2.2c Pecentage Shares of Traffic to EA

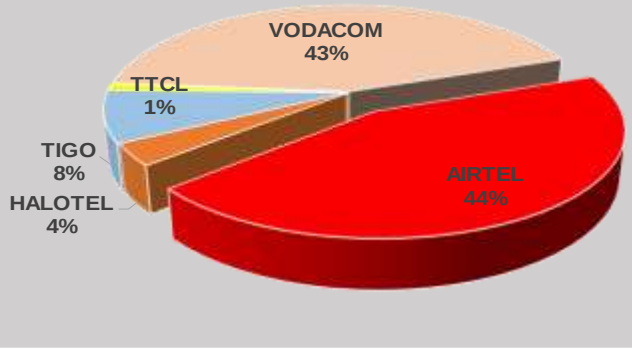


Chart 1.3.2.2d Pecentage Shares of Traffic Incoming from EA

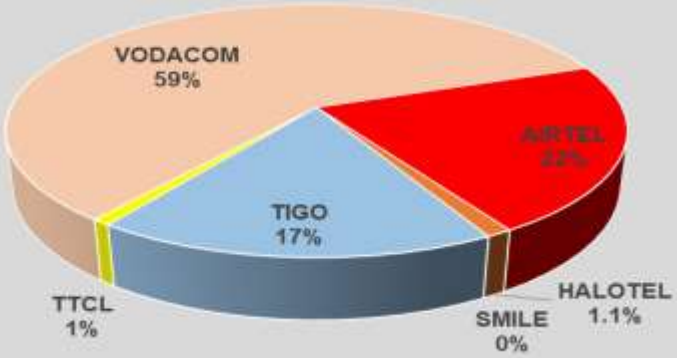


Chart 1.3.2.2e Pecentage Shares of Traffic to other Int.

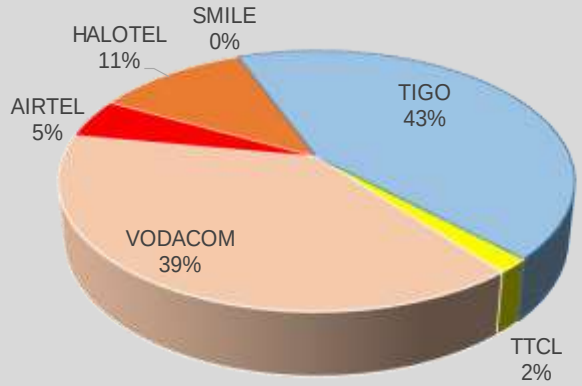
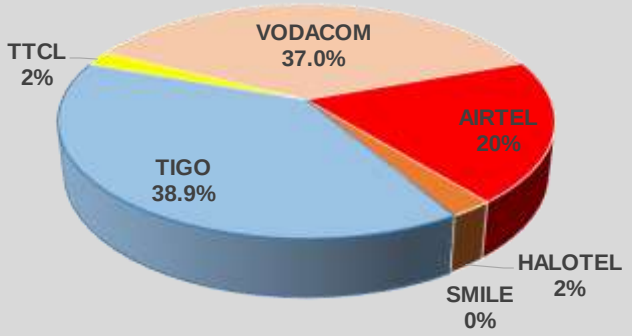


Chart 1.3.2.2f Pecentage Shares of Traffic Incoming from other Int.



1.3.3 Minutes used per Subscriptions (Minutes of Use)

These are average minutes used by a subscriber in a Month. As shown in Table 1.3.3, a total of 520 minutes were used by one subscriber in this quarter ending March 2023 implying that each subscriber used an average of 173 voice call minutes per month in this quarter.

Table 1.3.3 Average minutes used by a subscriber in a Month

	JANUARY	FEBRUARY	MARCH	TOTAL
On Net Traffic	96	84	95	274
Off Net Traffic	86	76	84	245
Traffic to EA	0.01	0.01	0.01	0.04
Traffic to Int	0.02	0.02	0.02	0.07
TOTAL	**182**	**160**	**178**	**520**

On average subscribers call more on the same network than across the network for the quarter under review. Subscribers spent 274 minutes for on net calls compared to 245 minutes for off net calls. Furthermore, the table shows that, a subscriber spent 0.07 minutes to call other international different from EAC while to EAC a subscriber spent 0.04 minutes only. The quarter trend indicates that more minutes were spent in January 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 traffic 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	Mar-23
On Net Traffic	55,812,036,633	54,561,254,851	51,673,651,476	62,678,563,065	16,907,158,203
Off Net Traffic	11,570,993,820	27,084,539,242	43,194,917,029	59,951,594,101	15,130,948,494
TOTAL	**67,383,030,453**	**81,645,794,093**	**94,868,568,505**	**122,630,157,166**	**32,038,106,697**

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.

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	Mar-23
Off Net To EA	14,252,483	9,738,521	9,097,165	8,927,113	2,527,326
Incoming From EA	21,989,062	15,406,649	15,853,362	13,594,473	3,149,982
Off Net To Int	43,297,997	38,014,133	24,856,947	26,034,131	4,180,070
Incoming From Int	45,100,536	45,172,263	49,885,142	33,374,619	6,049,474

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

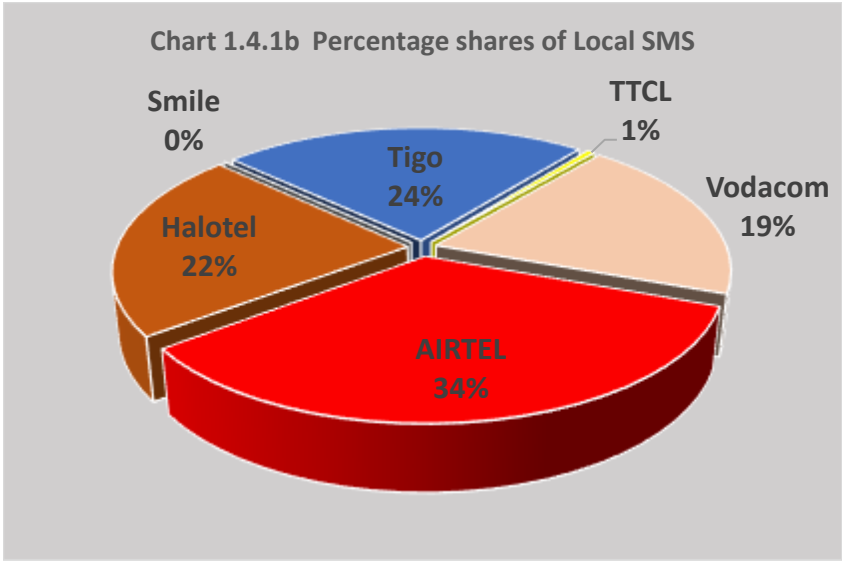
These are number of SMS sent and received in Mobile Networks.

Table 1.4.1 Local SMS Traffic

	JANUARY	FEBRUARY	MARCH	TOTAL
On Net SMS	6,674,957,812	5,457,538,913	6,268,164,648	18,400,661,373
Off Net Local SMS	9,270,327,799	7,918,637,953	9,136,481,133	26,325,446,885

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

As for share of SMS per operator, Airtel controls the market with 34% followed by Tigo with 24%. TTCL has the lowest (1%) shares of all networks on SMS



1.4.2 International SMS Traffic

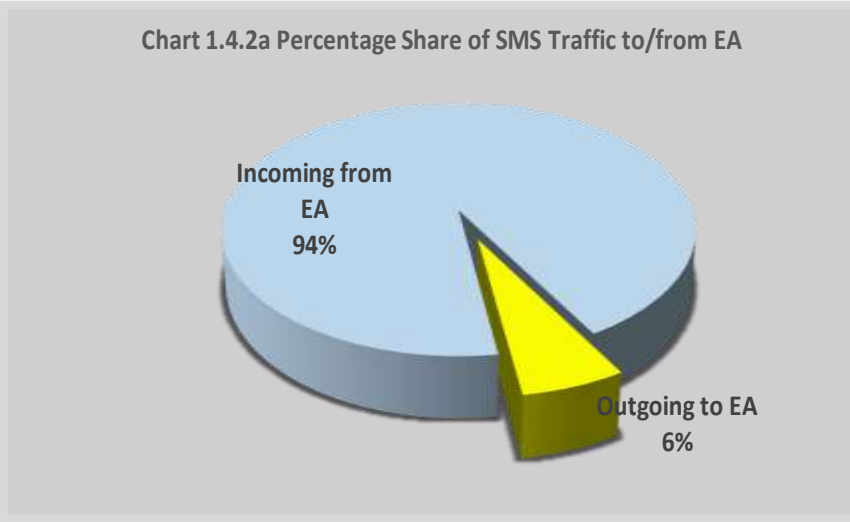
International SMS traffic are shown in Table 1.4.2. The Table shows that more SMS are received from international than sent to. As it was expected more SMS were sent and received in March compared with other months of the quarter.

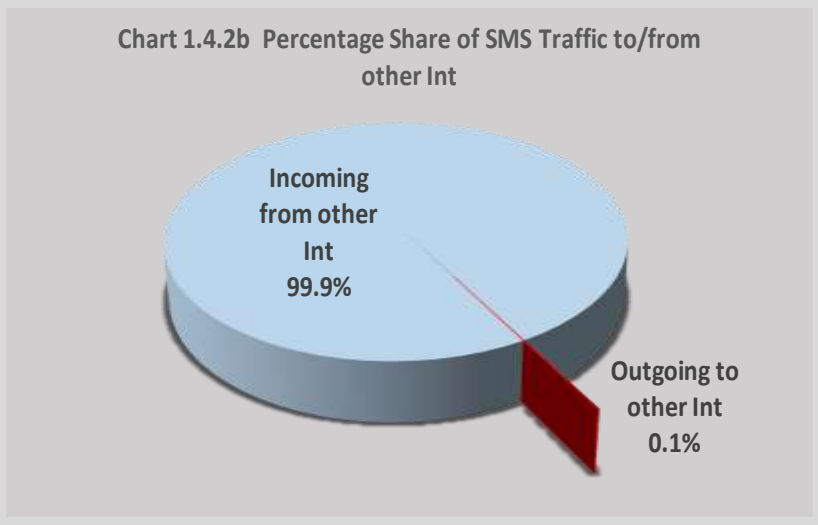
Table 1.4.2 International SMS Traffic

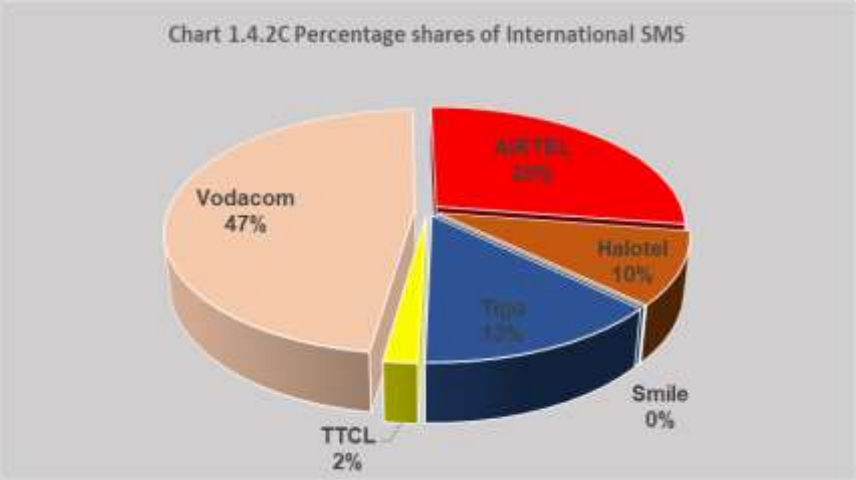
	JANUARY	FEBRUARY	MARCH	TOTAL
Outgoing to EA	168,575	156,214	180,549	505,338
Outgoing to other Int	314,078	282,062	271,710	867,850
Incoming from EA	2,870,942	2,493,926	2,514,090	7,878,958
Incoming from other Int	439,729,432	409,484,815	473,954,409	1,323,168,656

Table 1.4.2 shows more SMS were sent in March than any other month of the quarter. It is also shown in the table that more SMS were sent outside the country than received.

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.

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.

	JANUARY	FEBRUARY	MARCH	TOTAL
On Net SMS	109	88	101	298
Off Net Local SMS	152	128	148	427
Outgoing to EA	0	0	0	0
Outgoing to other Int	0	0	0	0
TOTAL	**261**	**216**	**249**	**725**

From the Table 1.4.3, there were 725 SMS sent in total for the quarter ending March 2023 per subscriber with an average of 242 SMS sent per month per subscriber. The trend further shows that more SMS were sent by each subscriber in January than any other month of the quarter, followed by March.

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	March.2023
On Net SMS Traffic	53,787,444,093	61,971,569,487	58,875,779,663	65,358,270,089	18,400,661,373
Off Net SMS Traffic	51,650,529,287	71,072,186,913	78,200,512,436	88,668,287,300	26,325,446,885

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	March.2023
Outgoing to EA	3,850,602	1,235,692	1,425,624	1,667,990	505,338
Outgoing to other Int	6,834,308	2,718,443	3,191,041	3,574,957	867,850
Incoming from EA	48,376,608	50,880,982	89,717,530	58,344,672	7,878,958
Incoming from other Int	3,201,524,787	3,935,379,714	4,599,468,894	4,664,200,079	1,323,168,656

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.

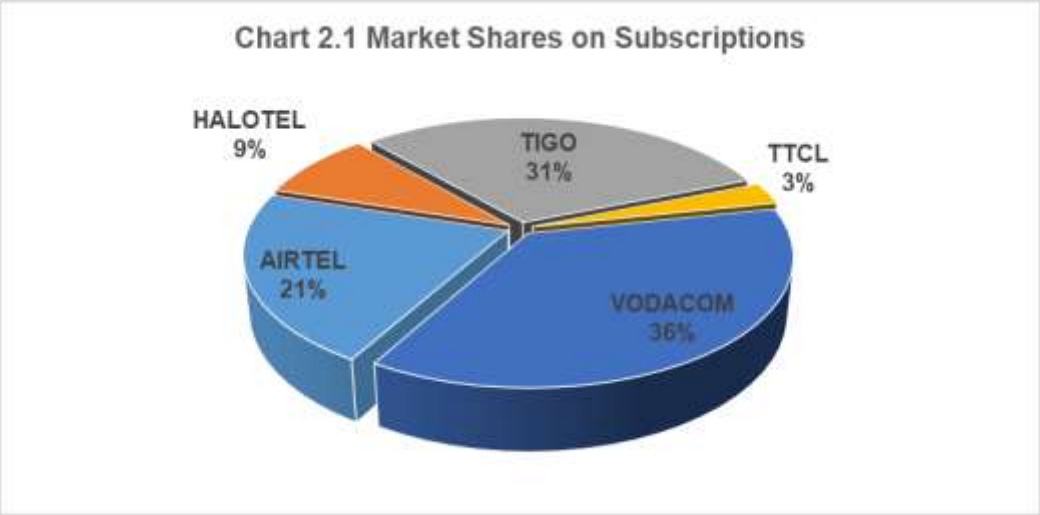
2.1 Mobile Money Subscriptions

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 42.1 million accounts in January, 2023 to 44.4 million accounts in March, 2023

Table 2.1 Mobile Money Service subscriptions (Number of Accounts)

	JANUARY	FEBRUARY	MARCH
AIRTEL	9,269,854	9,431,960	9,507,726
HALOTEL	3,784,491	3,821,098	3,821,098
TIGO	11,915,435	12,716,534	13,608,203
TTCL	1,174,756	1,213,122	1,221,065
VODACOM	15,975,909	15,990,200	16,195,476
TOTAL	42,120,445	43,172,914	44,353,568

The number of mobile money accounts are increasing at an average rate of 0.97% in the quarter under review



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 21%, Halotel with 9% 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

	JANUARY	FEBRUARY	MARCH
No. of Subscriptions	**42,120,445**	**43,172,914**	**44,353,568**
No. of Transactions	380,561,622	370,853,274	421,094,958
Average No. of Trans/Person	**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 March compared to other months of the quarter. The number of mobile money accounts for this quarter has been growing at the average rate of 5%.

Trend of Mobile Money subscriptions and transactions in the past three years is as shown in the table 2.3 below:

Table 2.3 Trend of Mobile Money Transactions in the past three years

Year	2020	2021	2022	March.2023
No. of Transactions	3,412,210,062	3,752,084,894	4,195,899,414	1,172,509,854
No. of Subscriptions	32,268,630	35,285,767	40,953,496	44,353,568

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

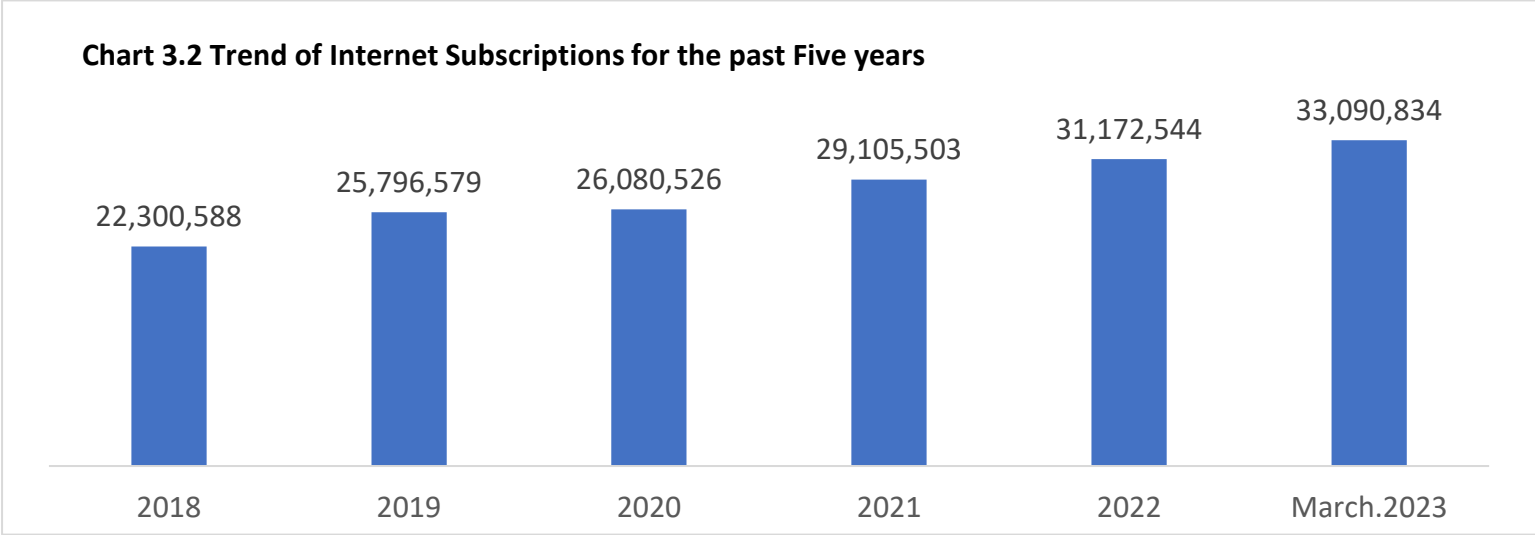
The subscriptions are either through cable modem, DSL, fibre-to-the-home/business, other fixed (wired) broad band subscriptions, satellite broadband, terrestrial fixed wireless broadband, handset-based, computer-based (USB/dongles) and mobile-broadband. Mobile broadband means a total number of SIM cards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

Table 3.1 Monthly Internet Subscriptions

	JANUARY	FEBRUARY	MARCH
Mobile Wireless Subscriptions	32,143,454	31,822,054	33,010,793
Fixed Wireless Subscriptions	5,964	6,746	6,475
Fixed Wired Subscriptions	69,762	69,357	73,566
TOTAL	32,219,180	31,898,157	33,090,834

3.2 Trend of Subscriptions for the past five Years

Number of subscriptions for the past five years is as shown in chart 3.2



The annual internet subscription presented in Chart 3.2 shows and average growth rate of 17% per year. In 2018 there were 23,808,942 subscriptions and increased to 33,090,834 subscriptions at the end of March 2023.

3.3 Internet Usage Per Month

Internet usage is counted as amount of data traffic (in Petabytes) used in a given time period. (Note that, 1Petabyte =1024^3 Megabytes)

Table 3.3 Amount of Data used for the past three months

	Jan	Feb	Mar
Data Traffic (Petabytes)	73	67	74
MBs/Subs/Month	**2,258**	**2,085**	**2,240**

Data traffic in petabytes presented in Table 3.3 shows that more data were used in March followed by January and the last month is February with an average of 2,195 MB per subscriber per month.

3.4 International Link Capacity

For international links, the outgoing capacity and incoming 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

	Outgoing capacity (Gbps)	Incoming capacity (Gbps)
Total/Owned	4,750	4,750
Activated	1,008	1,008
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 rollout of mobile broadband network covering land and accessed by people as presented in Table 3.5.

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

S/N	Indicator	Category	March 2023	
1.	Percentage of the population covered by a mobile broadband network signal (3G, 4G or higher)	3G	74%	
		4G	58%	
2.	Percentage of Geographical coverage by mobile network signal (3G, 4G or higher)	3G	59%	
		4G	40%	
3.	Network Quality Indicator: Average download and upload speeds (in Mbit/s)		Upload speed	Download speed
		Mobile broadband	5.84 Mbps	12.56 Mbps
		Fixed broadband speed	29.43 MBps	32.76 Mbps

3.6 Top 10 Internet Services with Most Bandwidth Usage (In Gb)

During the quarter ending March 2023, the services that used more bandwidth (in GBs) is **Facebook** with total of **48.99 Million GBs** which mostly is due to Facebook video services. The second is **YouTube** with total of **35.96 Million GBs**, thi is because video streaming services have shown a great consumption of bandwidth than other services. Figure 3.6 represent the top 10 of internet services with most bandwidth consumption.

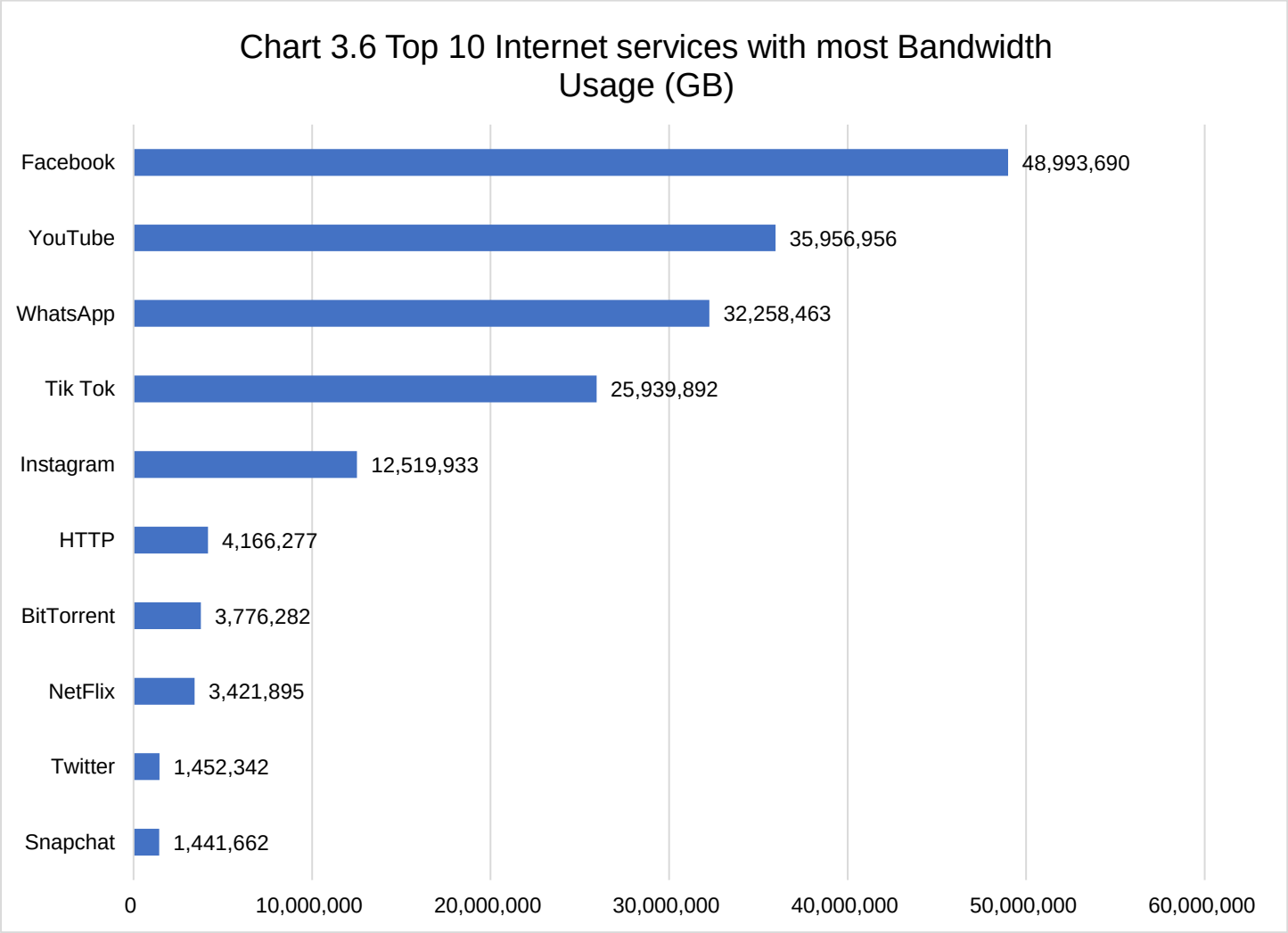


Chart 3.6 Top 10 Internet services with most Bandwidth Usage (GB)
Facebook
48,993,690
YouTube
35,956,956
WhatsApp
32,258,463
Tik Tok
25,939,892
Instagram
12,519,933
HTTP
4,166,277
BitTorrent
3,776,282
NetFlix
3,421,895
Twitter
1,452,342
Snapchat
1,441,662
0
10,000,000
20,000,000
30,000,000
40,000,000
50,000,000
60,000,000

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 time period.

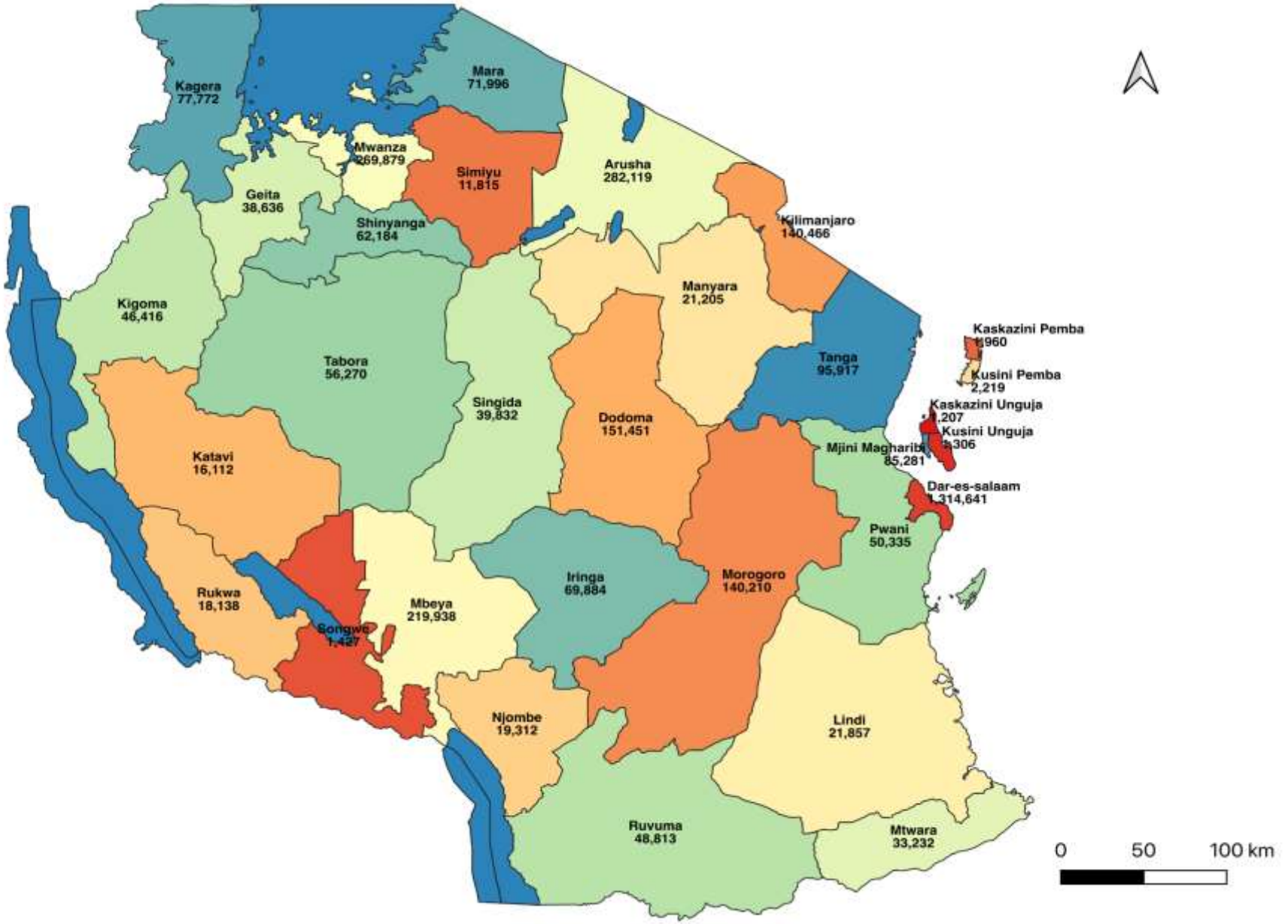
Table 4.1. Number of Active Decoders per Operators as of March 2023

Operator	DTT	DTH	TOTAL
Agape	2,023	1,978	4,001
Azam	120,814	777,644	898,458
Continetal	39,137	27,290	66,427
DiGiTek	17,392	0	17,392
DSTv	0	280,043	280,043
Star Times	1,507,757	608,737	2,116,494
Zuku	0	33,196	33,196
TOTAL	**1,687,123**	**1,728,888**	**3,416,011**

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

Based on 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 with smaller number of active decoders is Songwe followed by Katavi.

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



4.2 Active decoders in the last three Years

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

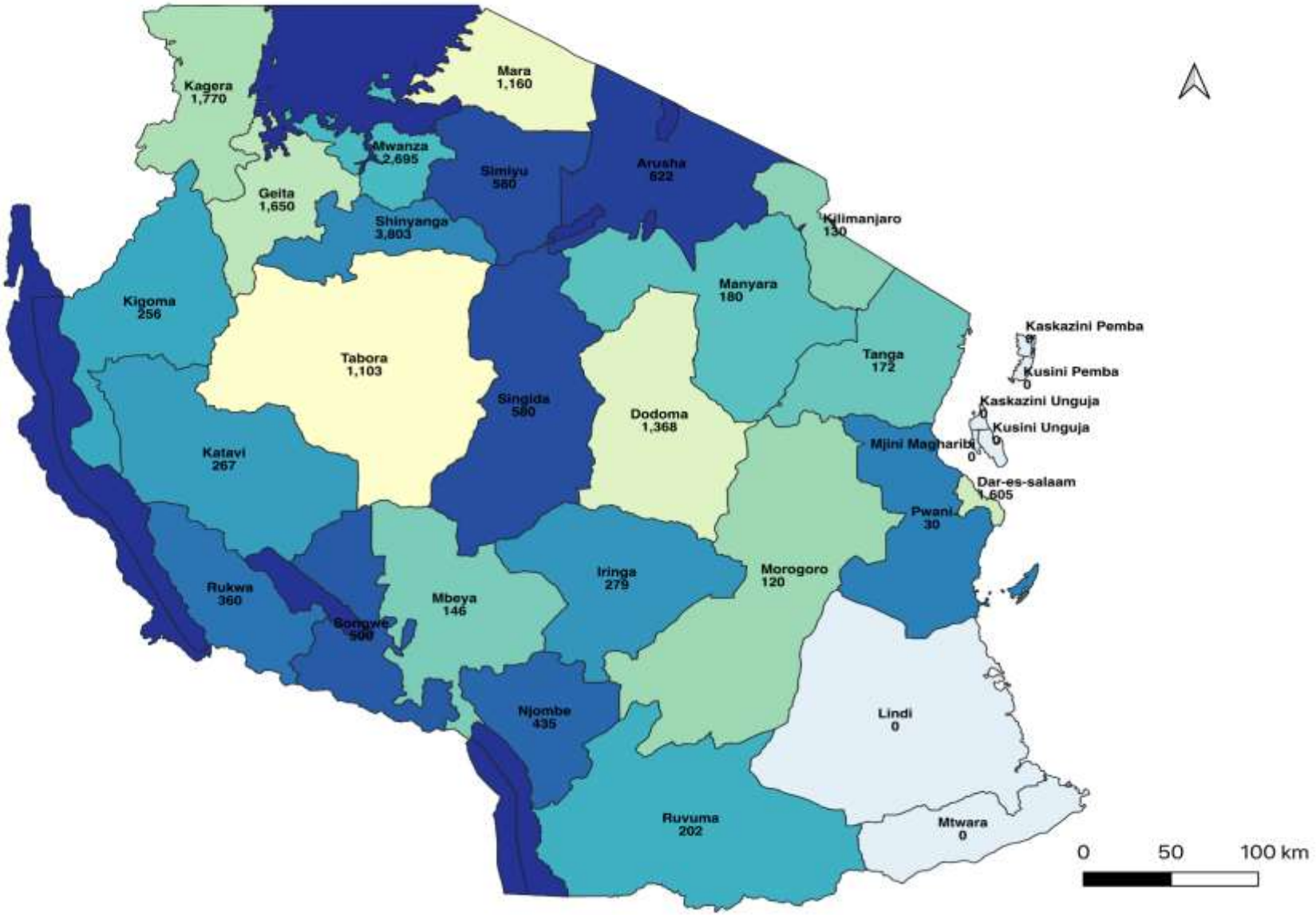
4.2 Active decoders in the last three Years and Number of Persons per one Decoder

Year	2019	2020	2021	2022	March.2023
Active Decoders	2,525,289	2,814,003	3,190,346	3,370,342	3,416,011
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 in more recent systems, light pulses through fiber-optic cables.

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



4.3.1 Trend of Cable Subsribers

The trend of cable subscriptions over the past five years is shown in table 4.3.1

Table:4.3.1 Number of Cable Subscription for past Five Years

Year	2018	2019	2020	2021	2022	March.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.

5. POSTAL AND COURIER SERVICES STATISTICS

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

This section presents statistics for such items as mails, parcels and documents 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 to the Rest of the World (RoW).

Table 5.1. Posted Items in the Quarter ending March 2023

	Mails	Parcels	Documents	TOTAL
Local	234,631	70,409	137,325	442,365
EA	137,325	2,059	6,399	145,783
RoW	4,436	69,590	4,101	78,127

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. The data shows that, from domestic to the rest of the world, they posted a total of 156254 items but from international a total of 81,290 items were delivered to our domestic market. This shows that more items were delivered than posted.

Table 5.2. Delivered Items from EA and RoW for quarter ending March 2023

	Mails	Parcels	Packets
EA	3,432	4,748	485
RoW	62,796	14,017	4,477

5.3 Annual Posted Items for the past five years

Table 5.3: Annual Posted Items for the past five years

Year	2018	2019	2020	2021	2022	March.2023
To Domestic	7,065,527	9,280,229	4,024,371	2,745,674	2,160,905	442,365
To International	3,753,746	2,873,312	1,116,069	564,528	260,394	223,910
TOTAL	**10,819,273**	**12,153,541**	**5,140,440**	**3,310,202**	**2,423,321**	**666,275**

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 five years

Table 5.4 Annual International Posted and Delivered Items for the past five years

Year	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

Table 5.4 shows the trend of posted and delivered items to and from international destinations. Posted items to international destination has been decreasing from 5,098,728 items in 2017 to 937,124 items in 2022. On the other side, delivered items experienced the same trend of droping 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 Serives (QoS)

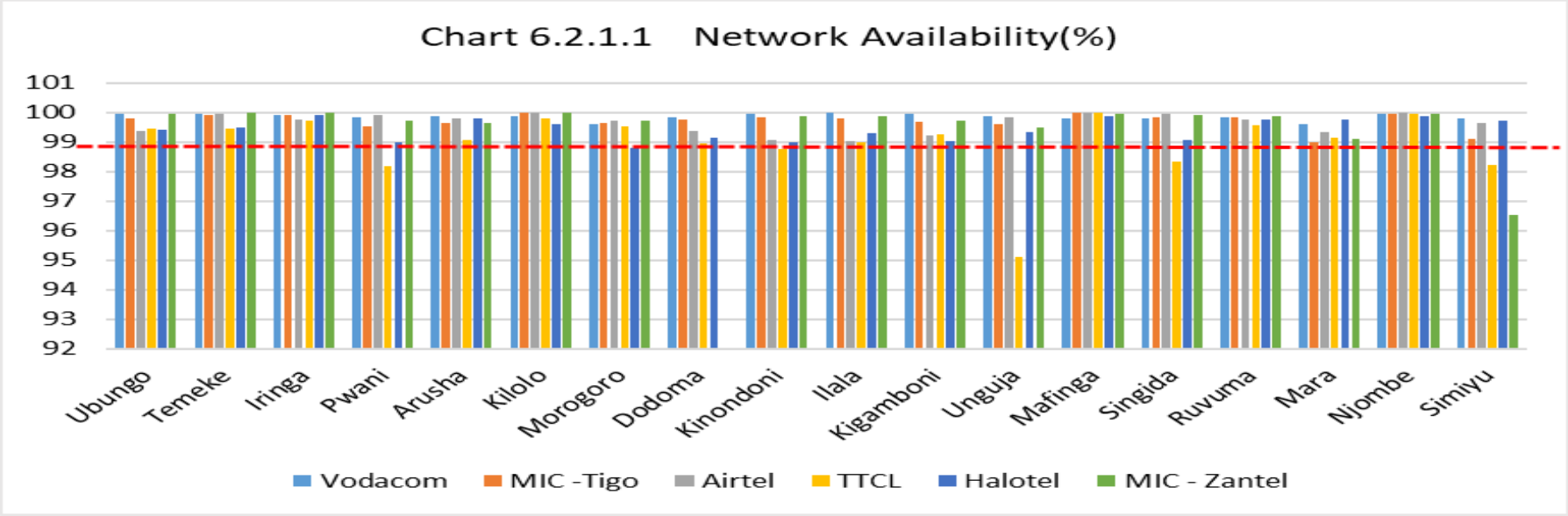
QoS measurements were conducted considering the QoS parameters and measurements methods as specified in the schedules to the Electronic and Postal Communications (Quality of Service) Regulations 2018.

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 January to March, 2023.

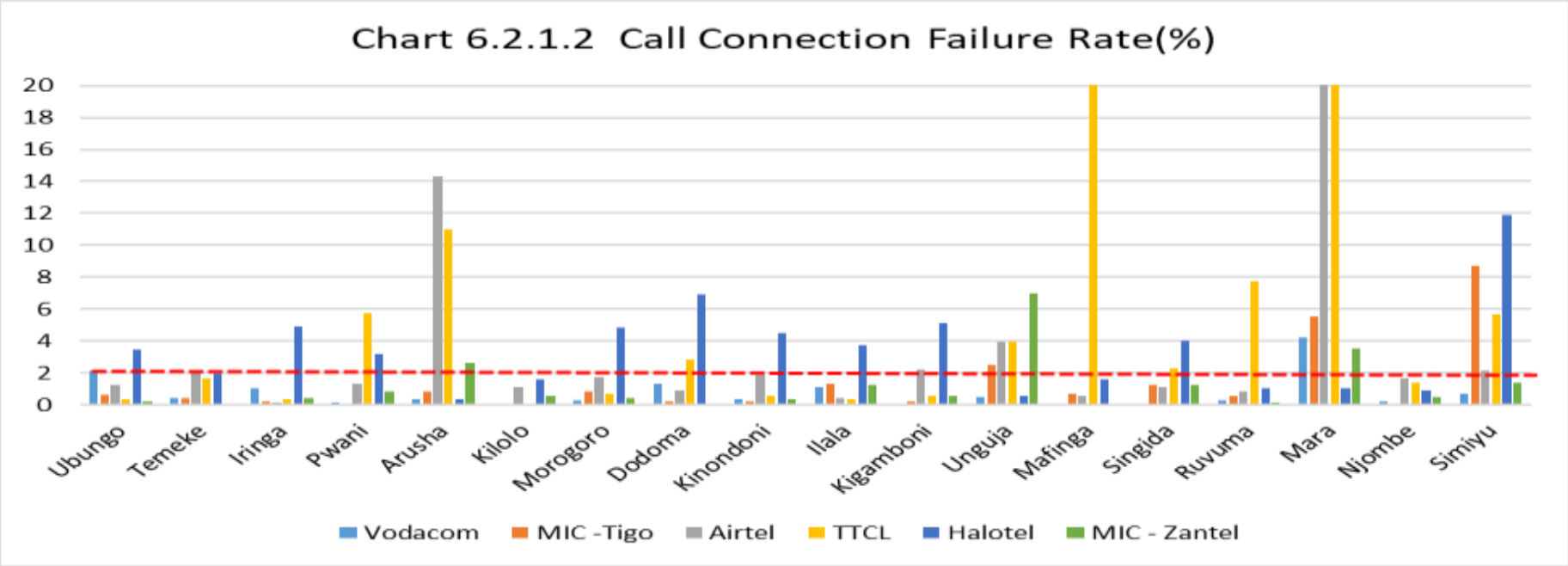
6.1.1.1 Network Availability

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%. Airtel and Vodacom passed the target in all eighteen (18) measured service areas, MIC-Tigo failed to reach target only in Mara, MIC-Zantel failed to reach target only in Simiyu region, Halotel failed to reach target in Pwani, Morogoro and Kinondoni while TTCL failed to reach target in seven (7) service areas as shown in Chart 6.2.1.1.



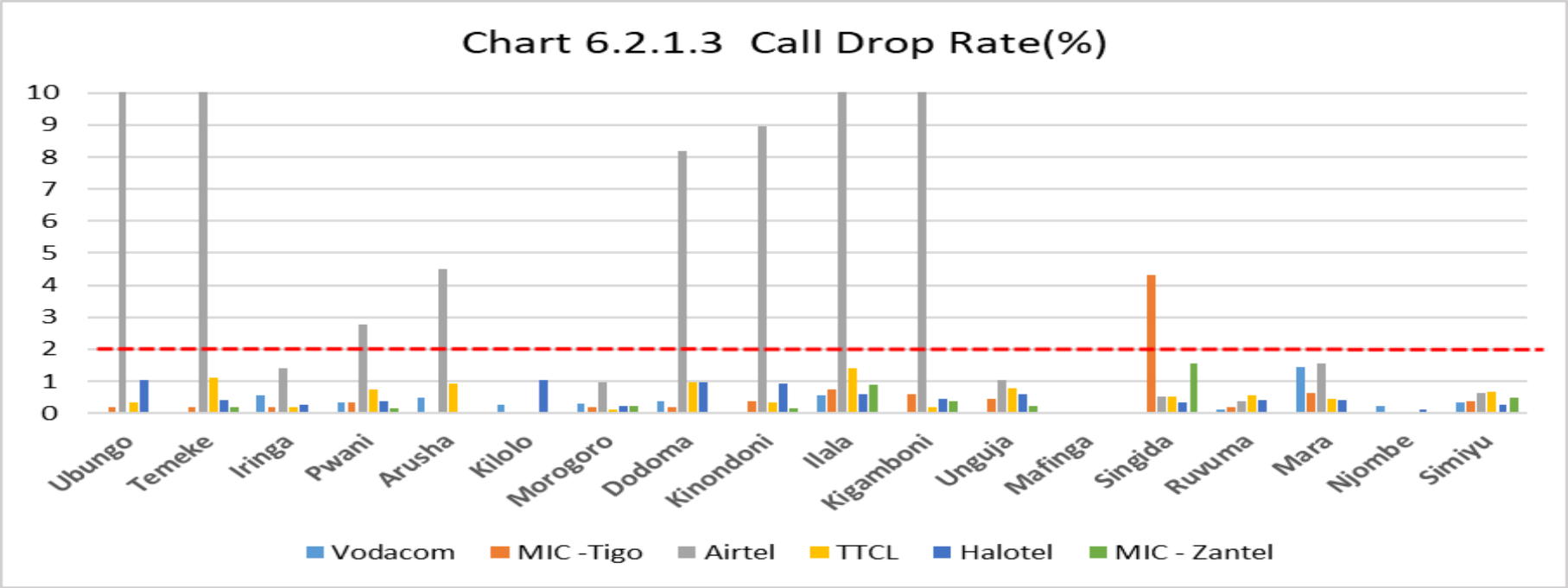
6.1.1.2 Call Connection Failure Rate

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 in Ubungo and Mara, MIC-Tigo failed to reach target in Ubungo, Mara and Simiyu while MIC-Zantel failed to reach target in Arusha, Unguja and Mara. Halotel failed to reach target in ten (10) service areas, Airtel failed to reach target in six (6) service areas while TTCL failed to reach target in nine (9) service areas as shown Chart 6.2.1.2.



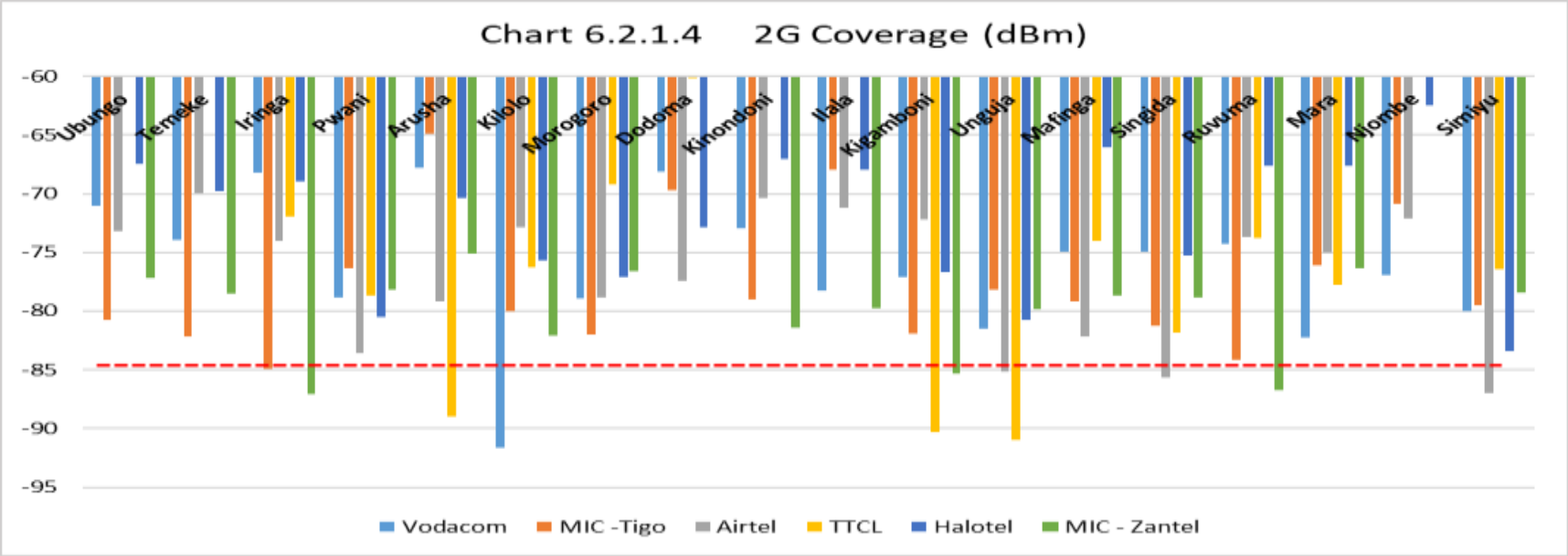
6.1.1.3 Call Drop Rate

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, TTCL, Halotel and MIC-Zantel passed target in all eighteen (18) measured service areas, MIC-Tigo failed to reach target only in Singida while Airtel failed to reach target in eight (8) service areas as shown in Chart 6.2.1.3.



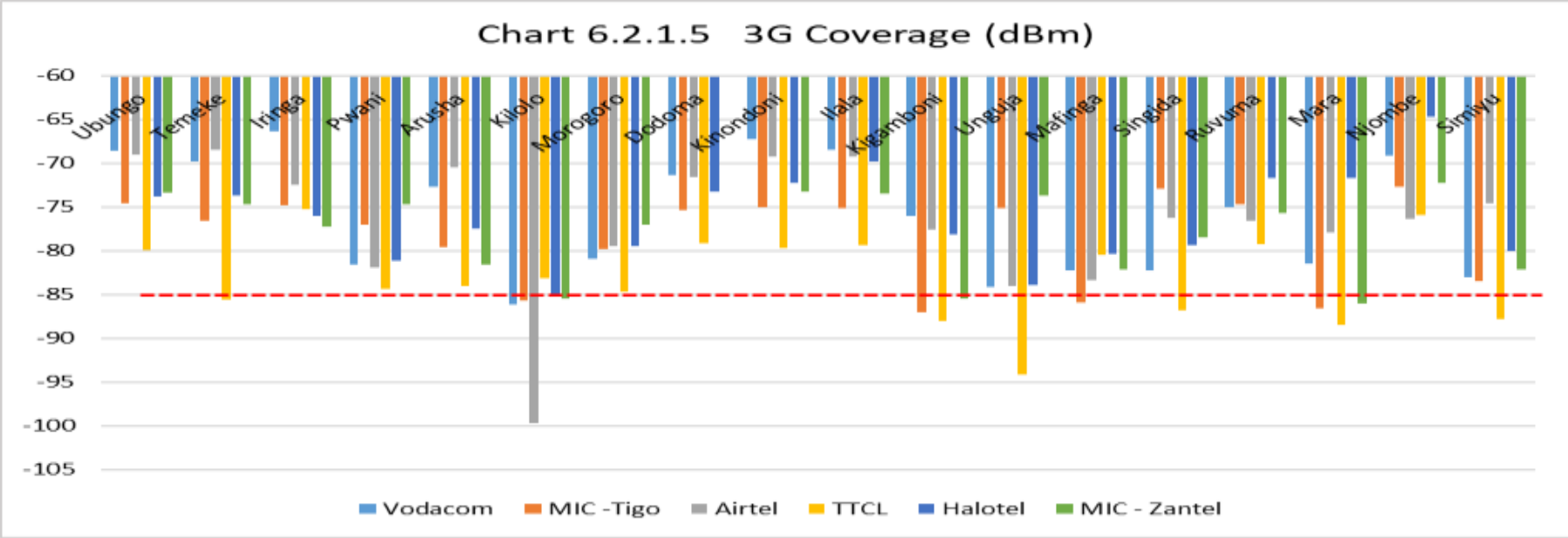
6.1.1.4 2G Service Coverage

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. Halotel and MIC -Tigo passed target in all eighteen (18) measured service areas, Vodacom failed to reach target only in Kilolo, Airtel failed to reach target in Singida, Simiyu and Unguja, TTCL failed to reach target in Arusha, Kigamboni and Unguja while MIC-Zantel failed to reach target in Iringa, Kigamboni and Ruvuma as shown in Chart 6.2.1.4.



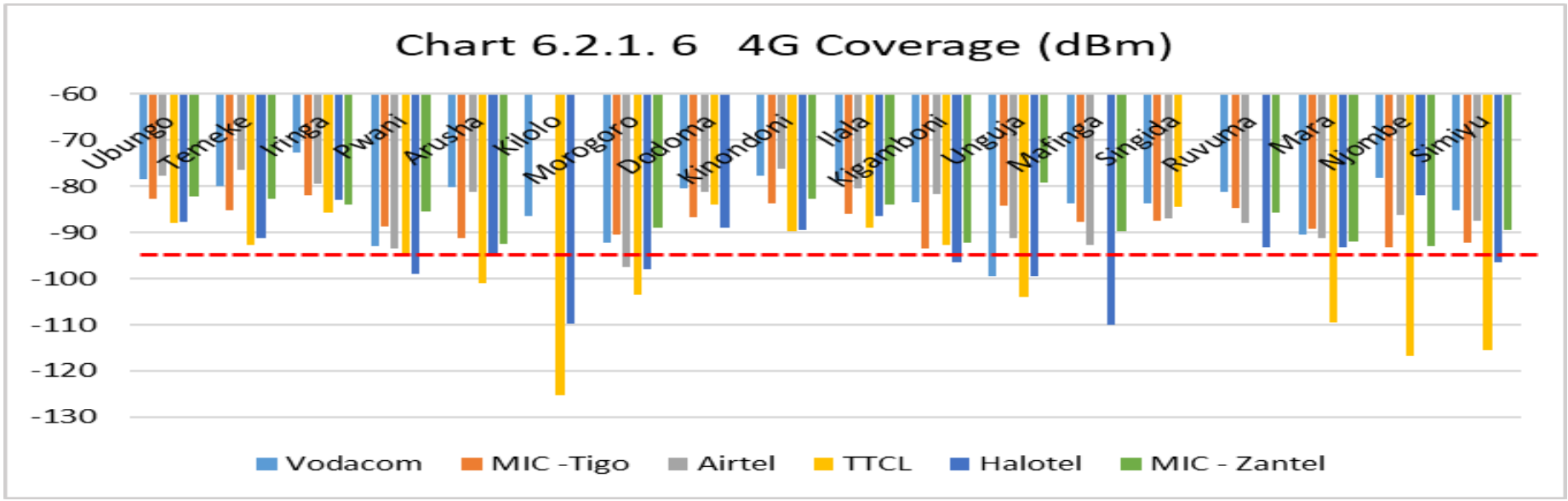
6.1.1.5 3G Service Coverage

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. Halotel passed target in all eighteen (18) measured service areas, Vodacom and Airtel failed to reach target only in Kilolo, MIC- Zantel failed to reach target in Mara, Kigamboni and Kilolo, MIC- Tigo failed to reach target in Mara, Kigamboni, Mafinga and Kilolo while TTCL failed to reach target in Temeke, Kigamboni, Unguja, Singida, Mara and Simiyu as shown in Chart 6.2.1.5.



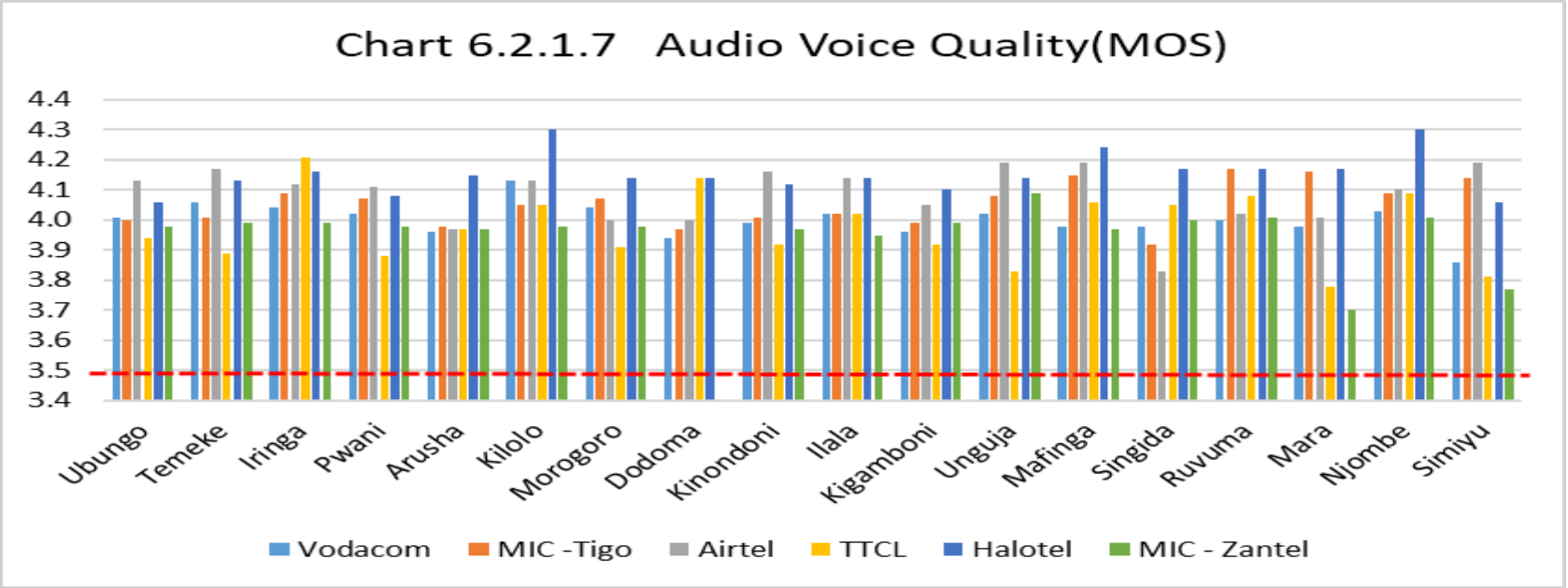
6.1.1.6 4G Service Coverage

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. MIC-Tigo and MIC-Zantel passed target in all measured service areas, Vodacom failed to reach target only in Unguja, Airtel failed to reach target only in Morogoro, Halotel failed to reach target in seven (7) service areas while TTCL failed to reach target in eight (8) service areas as shown in Chart 6.2.1.6.



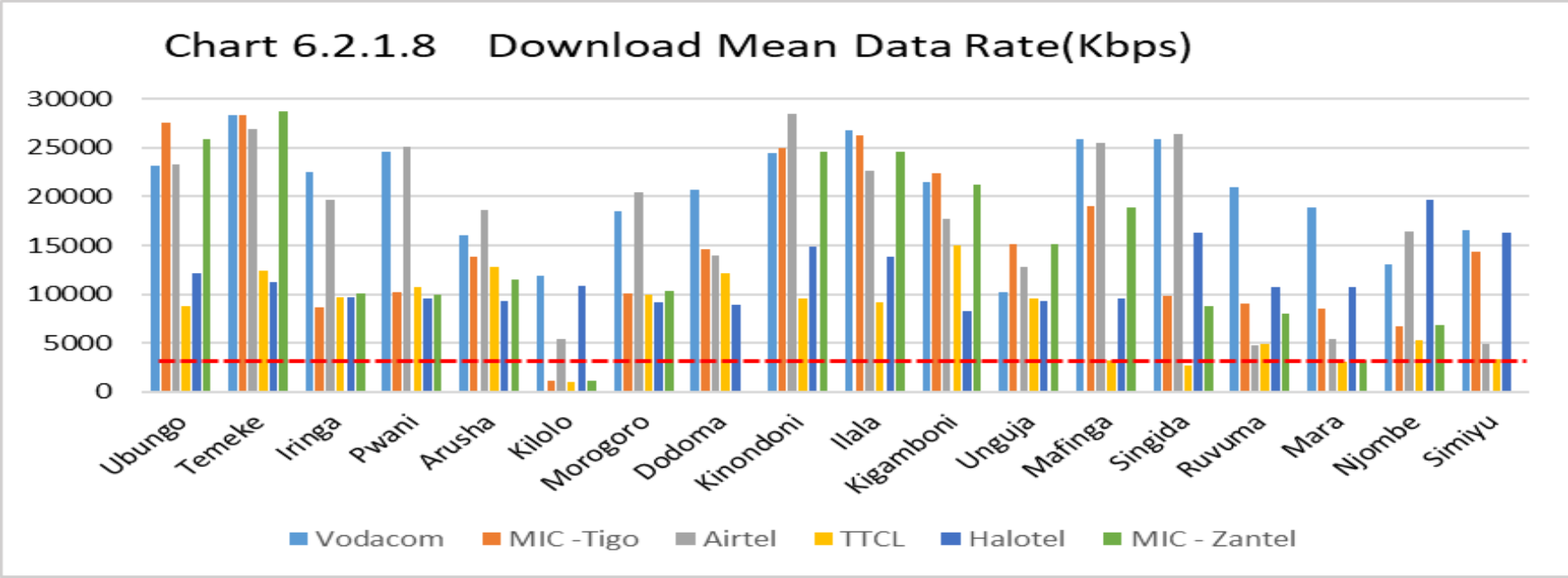
6.1.1.7 Voice Quality (MOS)

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 Chart 6.2.1.7.



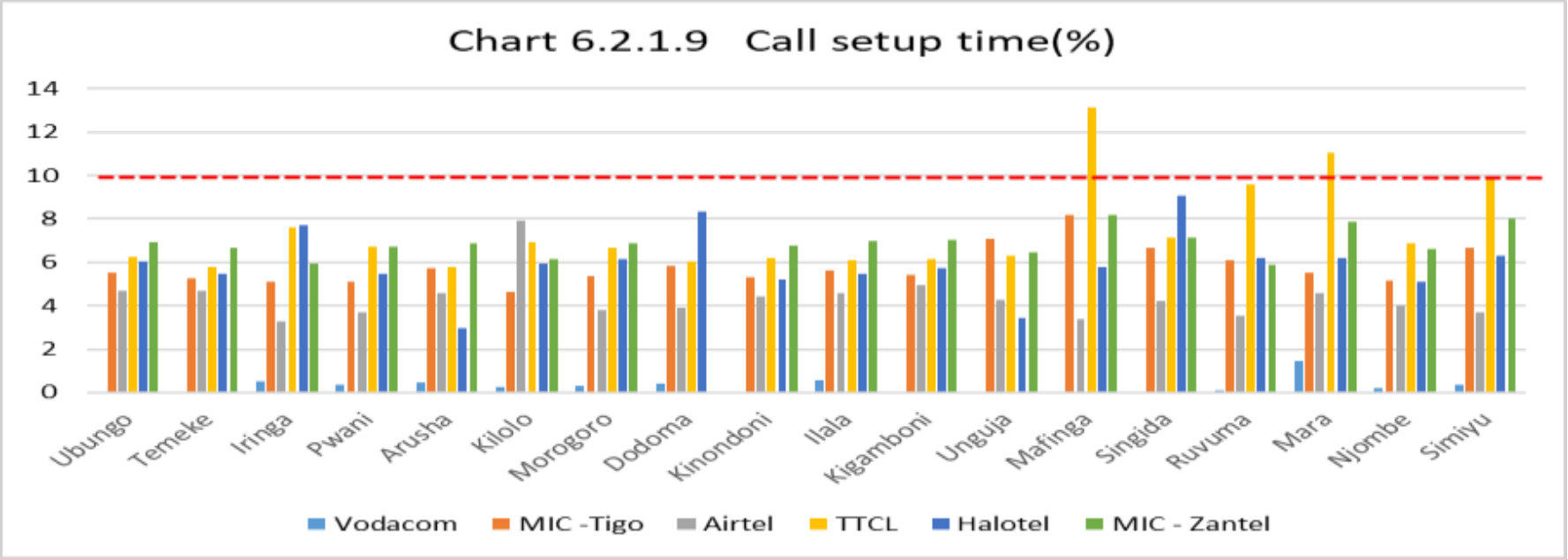
6.1.1.8 Download Mean Data Rate

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, Airtel and Halotel passed target in all eighteen (18) measured service areas, MIC-Tigo failed to reach target only in Kilolo, MIC- Zantel failed to reach target in Kilolo and Mara while TTCL failed to reach target in Kilolo, Mafinga, Singida, Mara and Simiyu as shown in Chart 6.2.1.8.



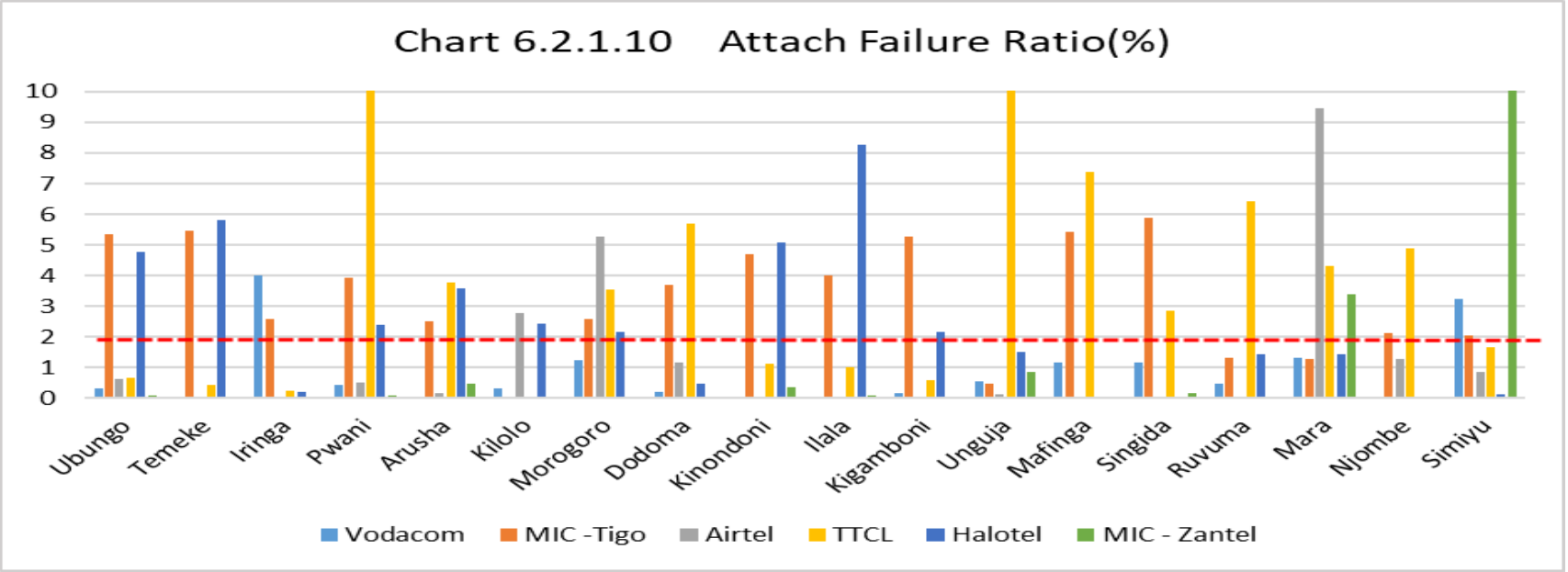
6.1.1.9 Call setup time

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, Halotel and MIC-Zantel passed target in eighteen (18) measured service areas while TTCL failed to reach target in Mafinga and Mara as shown in Chart 6.2.1.9.



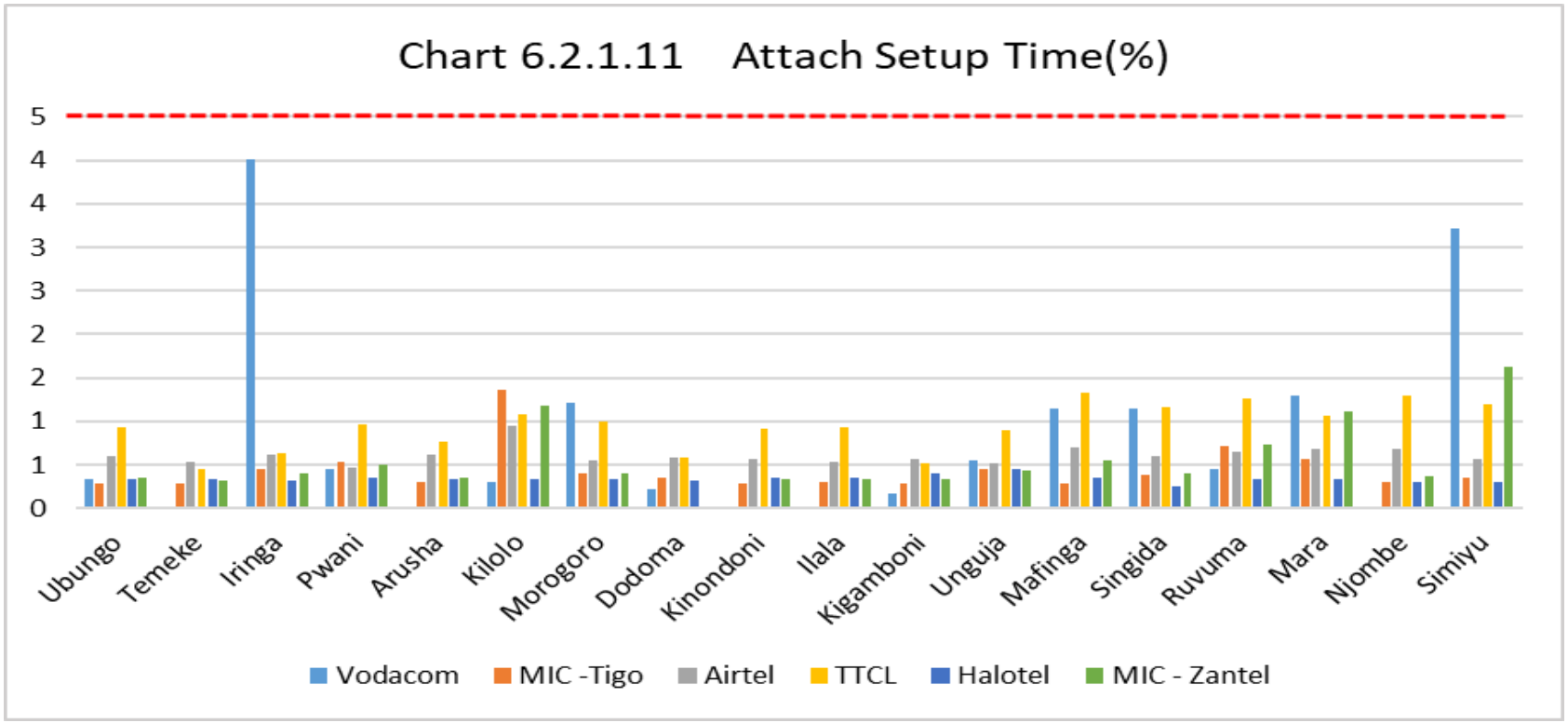
6.1.1.10 Attach Failure Ratio

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%. Vodacom failed to meet target in Simiyu and Iringa, MIC-Zantel failed to reach target in Mara and Simiyu, Airtel failed to reach target in Morogoro, Kilolo and Mara, Halotel failed to meet target in nine (9) areas, TTCL failed to reach target in ten (10) areas while MIC-Tigo failed to meet target in fourteen (14) areas as shown in Chart 6.2.1.10.



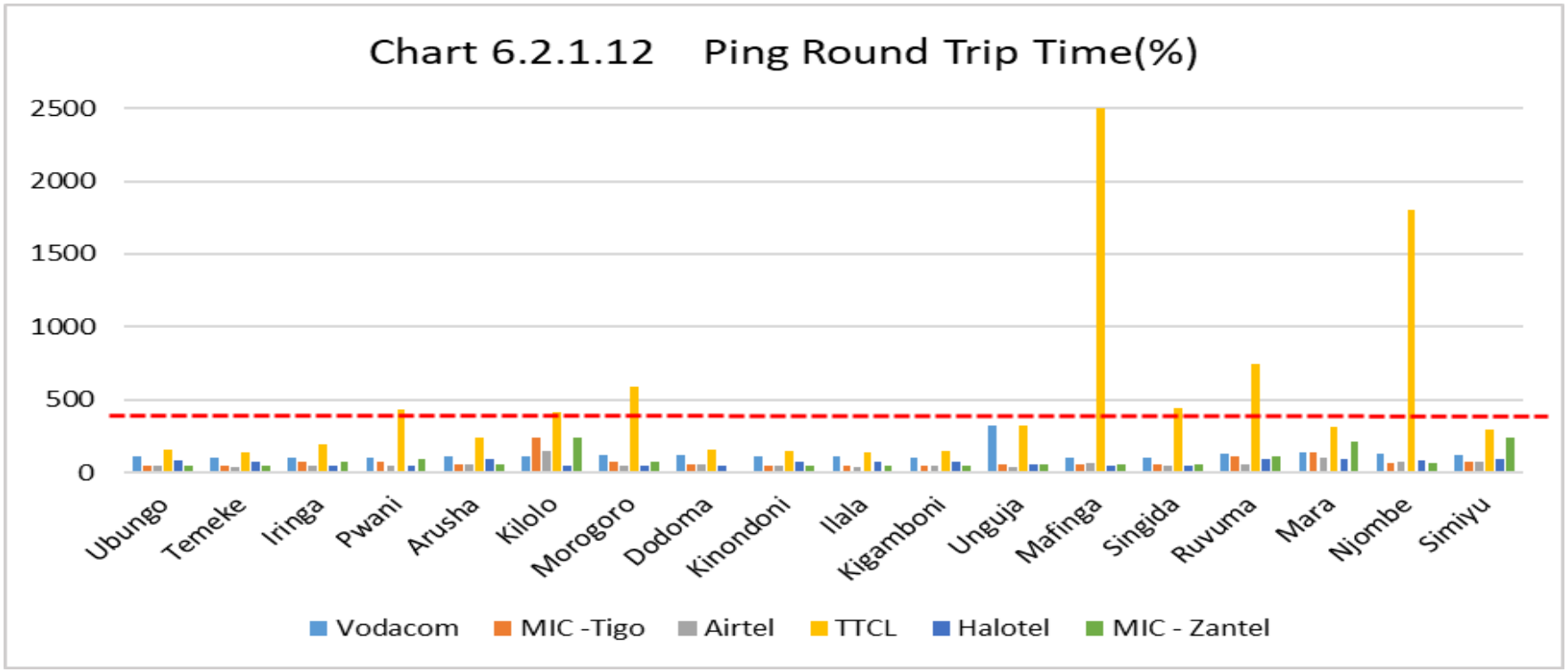
6.1.1.11 Attach setup time

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 eighteen (18) measured service areas as shown in Chart 6.2.1.11.



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, Airtel, Halotel, MIC- Tigo and MIC - Zantel passed target in eighteen (18) measured service areas while TTCL failed to meet target in seven (7) service areas as shown in Chart 6.2.1.12.



6.1.2 Ranking of Mobile Network Operators

The quality of service measurements results for the period January to March 2023 revealed that the leading brand in provision of quality service is Vodacom with performance score of 96.83%, followed by MIC-Zantel with performance score of 93.59%, followed by MIC-Tigo with performance score of 89.24%, followed by Airtel with performance score of 88.05%, followed by Viettel(Halotel) with performance score of 86.06% and last one is TTCL with performance score of 74.29% as shown in Table 6.2.2.

Table 6.2.2 Ranking of Mobile Network Operator on QoS Results

S/N	Licensee	Total KPIs instance	Number of KPIs instance pass	Failed Instances	Performance score
1	Vodacom Tanzania PLC	252	244	8	96.83%
2	MIC Tanzania PLC - Zantel	234	219	15	93.59%
3	MIC Tanzania PLC - Tigo	251	224	27	89.24%
4	Airtel Tanzania Limited	251	221	30	88.05%
5	Viettel Tanzania PLC	251	216	35	86.06%
6	Tanzania Telecommunication Corporation	245	182	63	74.29%

6.2 Fraudulent Practices

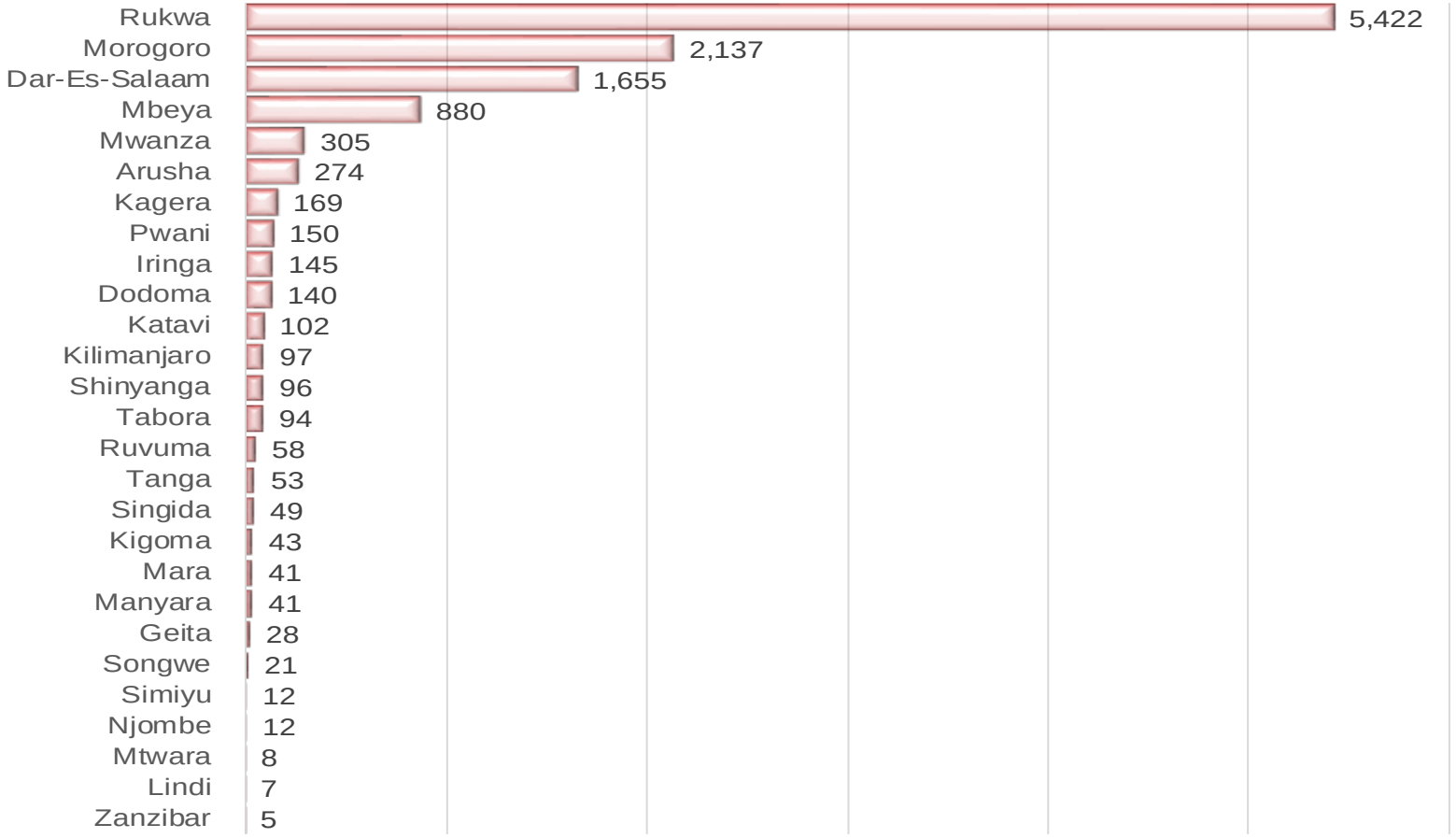
The Table 6.2 shows fraudulent practices per region per operators. While regionwise, Rukwa committed more frauds than any other region in Tanzania, networkwise, more fraudulent practices occurred at Tigo network than other MNOs.

Table 6.2 Fraudulent Practice per Region and MNOs as of March 2023

Region	Airtel	Halotel	Tigo	TTCL	Vodacom	TOTAL_REGION
Zanzibar	1	1	0	0	3	**5**
Lindi	1	2	0	2	2	**7**
Mtwara	6	1	0		1	**8**
Njombe	0	3	0	1	8	**12**
Simiyu	0	3	1	0	8	**12**
Songwe	0	3	0	18		**21**
Geita	0	8	1	0	19	**28**
Manyara	4	2	21	8	6	**41**
Mara	1	3	19	0	18	**41**
Kigoma	1	3	19	4	16	**43**
Singida	6	2	29	2	10	**49**
Tanga	19	2	19	1	12	**53**
Ruvuma	2	4	35	9	8	**58**
Tabora	11	13	21	8	41	**94**
Shinyanga	8	3	44	0	41	**96**
Kilimanjaro	2	3	74	0	18	**97**
Katavi	0	15		7	80	**102**
Dodoma	26	4	94	1	15	**140**
Iringa	3	1	135	0	6	**145**
Pwani	36	6	77	2	29	**150**
Kagera	2	11	66	0	90	**169**
Arusha	43	3	182	5	41	**274**
Mwanza	21	5	122	0	157	**305**
Mbeya	175	9	369	16	311	**880**
Dar-Es-Salaam	608	22	488	9	528	**1,655**
Morogoro	816	121	782	3	415	**2,137**
Rukwa	2,125	57	1,565	223	1,452	**5,422**
TOTAL_MNO	**3,917**	**310**	**4,163**	**319**	**3,335**	**12,044**

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 **45%,** followed by Morogoro with **18%**, Dar es Salaam with **14%** and Mbeya with **7%**. Regions of Mwanza and Arusha, Dodoma, Pwani and Kagera committed fraudulent practice of **1%** and 3% while the rest of regions committed fraudulent practices of **less than 1%.** 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

Chart 6.2 Frudulent Practices per Regions as of March 2023



Map 6.2: Distribution of Fraudulent Practices Per Region from January-March, 2023

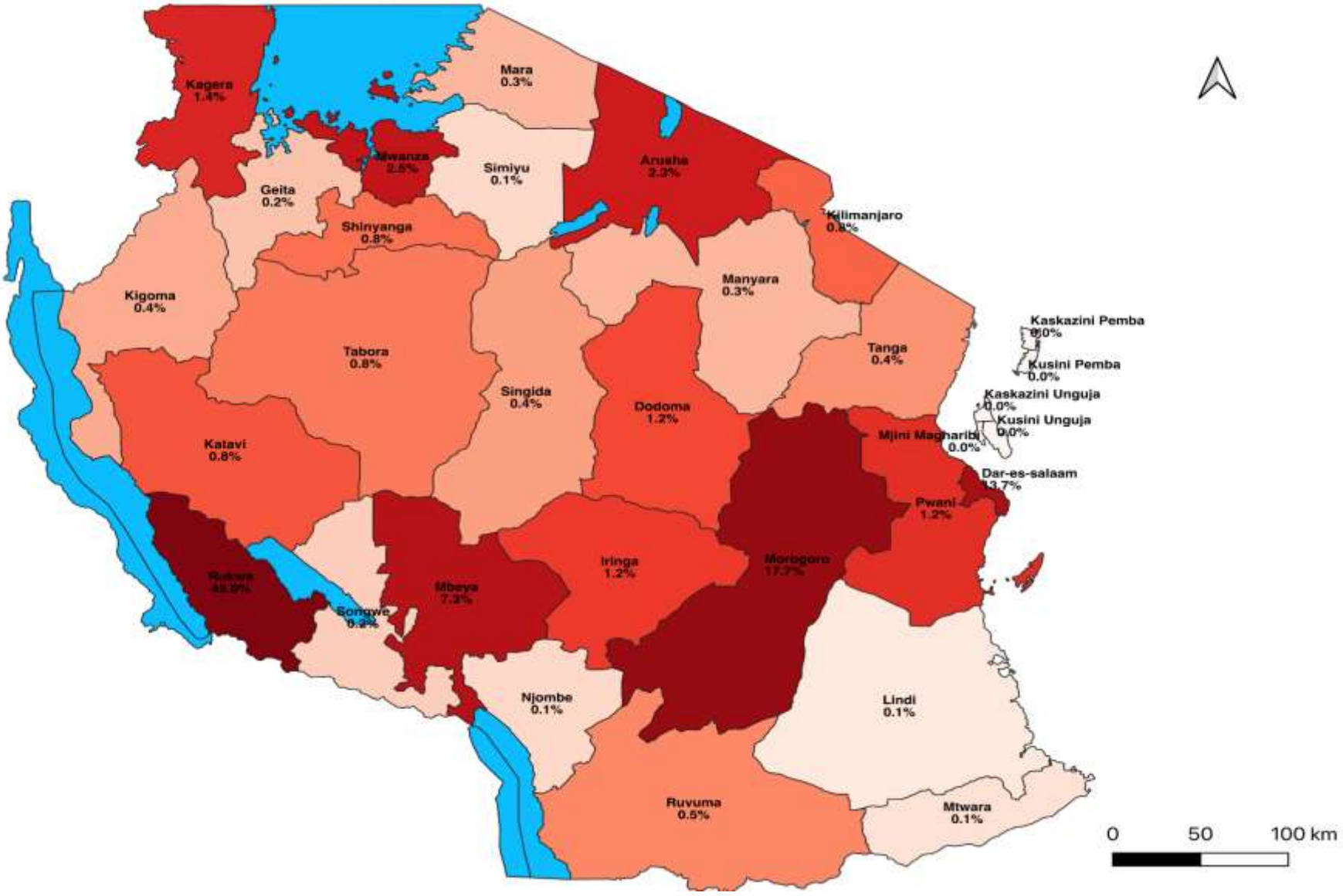
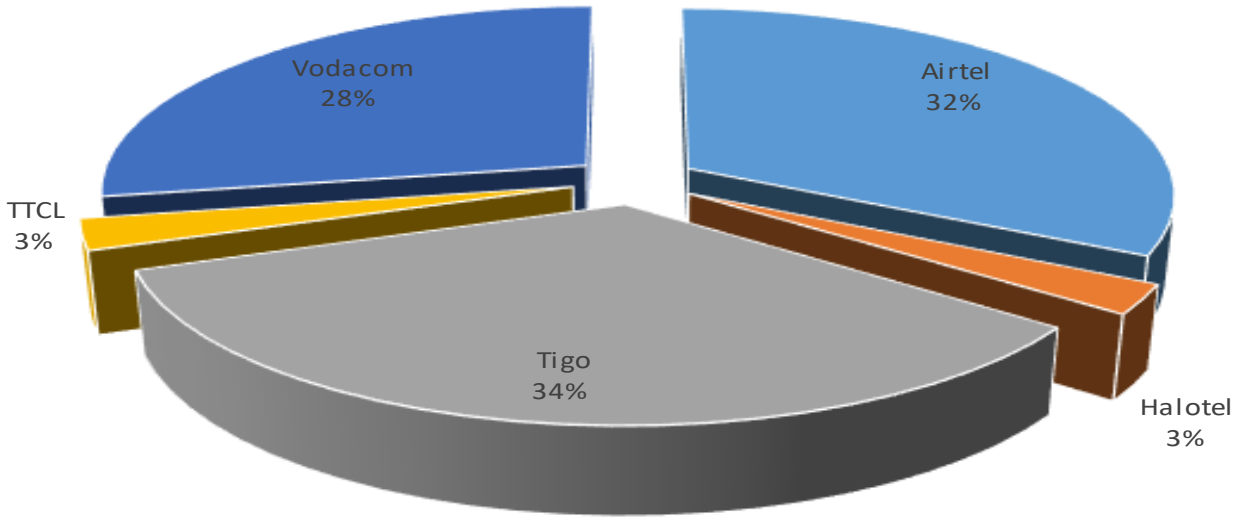


Chart 6.3 Percentage of Fraudulent Practice Per MNO



Tigo leads on fraudulent practice with 34% of all frauds incedences occurred in quarter ending March 2023. Airtel follows closely with 32% and Vodacom with 28%. Few (only 3%) frauds occurred in TTCL network

Contact Us

Mamlaka ya Mawasiliano Tanzania
Mawasiliano Towers, Na. 20 Barabara ya Sam Nujoma,
S. L. P 474, Dar Es Salaam
+255 22 2199760 - 9 / +255 22 2412011 - 2 / +255 784558270 - 1
dg@tcra.go.tz | barua@tcra.go.tz