

Cost of smartphones continues the digital divide in Tanzania

- ❖ **Tanzania is ranked fourth among 49 African countries when comparing the cheapest 1GB of prepaid mobile data, yet the Internet penetration rate remains low at 30%.**
- ❖ **A nationally representative ICT Survey recently completed by Research ICT Africa (RIA) finds 43% of Tanzanian population does not own a mobile phone.**
- ❖ **The Survey also identifies the cost of smartphone devices to be a major inhibiting factor on Internet take up.**
- ❖ **Voice is still king with 80% of communication expenditure in Tanzania being spent on voice/SMS services.**

Introduction

Tanzania hosts the second largest telecommunications market in east Africa after Kenya. In 2005, the Tanzania Communications Regulatory Authority (TCRA) introduced a converged licensing framework (CLF), which provides separate licences for infrastructure and service industries. In 2012, Tanzania committed to building a single national open access backbone to reduce the duplication of networks and facilities and drive down wholesale costs to ultimately reduce retail prices.

The plan seems to have worked: the low wholesale prices appear to have been passed on to end-users. In 2013, the Tanzania Telecommunication Company Ltd (TTCL) reduced its wholesale data tariffs. The price of 1mbps for wholesale customers dropped from USD900 to USD450 per month. The fall in price was complemented by increased bandwidth speed.¹ Between Q1 2016 and Q2 2017, the reduced cost of wholesale bandwidth from the national carrier network seems to have passed through to consumers with the price of data dropping from TSH 12 800 in Q2 2016 to TSH 5 000 in Q2 2017.

However, prices have been falling even faster in other countries, pushing Tanzania from the top of RIA's Africa Mobile Pricing (RAMP) 1GB Index in Q2 2016 to 4th

¹ See: www.telegeography.com/products/commsupdate/articles/2013/08/08/ttcl-lowers-broadband-tariffs/

position out of 49 African countries one year later. The key to Tanzania being among the top countries in the 1GB basket comparison is undoubtedly the competitiveness of the market, which hosts seven players.

Among these operators, Vodacom, Bharti Airtel and Tigo are the three largest players who have engaged in fierce competition to attract and retain customers – driving down prices to amongst the lowest in Africa. Tigo, TTCL, Vodacom and Smile have further invested in, and are currently offering, 4G/LTE services in major markets within the country.

The mobile telecommunications market in Tanzania is mature with total subscriptions (based on active SIM cards) approaching 40 million in March 2017 – a figure which represents a penetration rate of around 80% (TCRA, 2017). In tandem with this SIM increase is the number of mobile phone users, which has risen dramatically in recent months and yet a large portion of the population remains unconnected to the Internet. Just over 17million people were connected to the Internet in 2016: that is a penetration rate of 40% (TCRA, 2017), much higher than the 5% penetration level reported by ITU in 2016 (TCRA, 2016).

The inconsistency between these two estimates can be attributed to the method used to collect the data as well as the different times when the data was collected. The administrative data from the TCRA is based on the number of active mobile subscribers (measured by active SIMS reported by operators); while the ITU estimate is based on the data received from the operators, which but collected one year earlier. Due to multiple SIM card use, these estimates tend to over-estimate penetration rates. The only way to get accurate and reliable Internet penetration figures in a prepaid mobile environment is through a nationally representative demand-side survey as has recently been undertaken by RIA's Beyond Access Survey, which assesses ICT access and use among individuals, households and businesses in conjunction with its local partner – the University of Dodoma.

The Survey shows that close to 30% of Tanzanians use the Internet – 10% below the latest TCRA estimate mentioned above. Additionally, the 80% mobile phone penetration reported by TCRA opposes the Survey's finding that only 57% of Tanzanians own a mobile phone (see Table 1). The difference between these statistics is evidence that indicators using active SIMs overestimate penetration levels in markets where consumers use multiple SIMs. Of greater concern than this low internet use/access percentage is that fewer women than men access and use the Internet. The Internet gap is even larger between urban and rural areas. With operators targeting urban markets and universal service funds clearly ineffectual regarding the connection of citizens to ICT services, 86% of rural dwellers remain unconnected to the Internet compared to 44.6% in urban areas.

Affordability is clearly a factor affecting both Internet take-up and its use. Considering that mobile data prices are reasonably low, the 30% Internet penetration rate is an indication that the affordability of the input device – Internet-enabled phones – in Tanzania remains a challenge. Of those that access the Internet, 70% are doing so from smartphones, indicating a strong preference for such devices. Furthermore, the government's high taxes on telecommunication services are undermining their own efforts to ensure affordable universal access. For example, there is airtime excise on mobile phone use of 17% (the highest in Africa), which increases the cost of airtime consumption and communication.

Table 1: Mobile phone and Internet penetration in Tanzania (individuals aged 15+)				
	Mobile phone ownership	Knowing what the Internet is	Internet use	Use social media use
Tanzania	57%	44,6%	29,8%	11,9%
Male	62,7%	51,3%	31,5%	14,3%
Female	52,0%	38,7%	27,8%	9,8%
Urban	72,6%	59,2%	55,4%	28,9%
Rural	50,5%	38,6%	13,6%	4,8%

Source: RIA's Beyond Access Survey, 2017.

Tanzania's pricing baskets

There are multiple methods of measuring prices, the best known for international comparison being those used by the OECD and based on that of the ITU. Generally these baskets, although graduated for low, middle and high users, are not based on the assumptions underlying and usage patterns of the predominantly prepaid mobile markets that characterise communications in Africa. RIA has worked with these measures and devised others that better reflect local usage patterns to assess the cost of communication; it can now map the African mobile prepaid pricing trends with a Voice and SMS basket, a 1GB data basket and the Bundled Value for Money Index. Both the Voice/SMS basket and the 1GB basket methodologies calculate the minimal price for consumers and allow comparison of the cost of mobile telecommunications across countries.

Methodology:

Voice/SMS basket (OECD basket): 30 voice calls for a total of 50 minutes and 100 SMSs per basket per month.

1GB basket: monthly cost of 1GB of mobile data based on prepaid data top-ups or bundled top-ups.

Voice and SMS basket

The prices of standard telecommunication services in Africa has been declining over the past few decades and, in Tanzania specifically, the competition and regulatory policies aim to make telecommunication services more affordable and inclusive. Using the OECD basket methodology to collect and compile voice and SMS prices in Q2 2017, Tanzania ranked 6th out of 49 African countries. In comparison with other East Africa Community (EAC) countries Tanzania ranked 2nd, as shown in Figure 1.

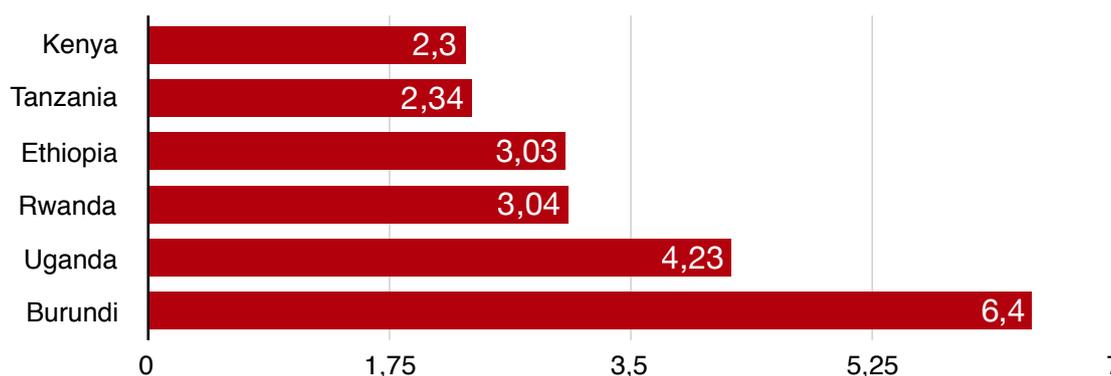


FIGURE 1: CHEAPEST OECD BASKET PRICES IN AFRICAN COUNTRIES (USD); SOURCE: RAMP INDEX, 2017

Vodacom, the largest operator,² offers the cheapest voice/SMS basket compared to the seven other operators in the market, followed by TTCL and Tigo. Vodacom's new Ongea Deilee product offers a flat calling rate of TSH60 per minute with a TSH10 SMS charge to create the cheapest OECD basket offering at TSH 5 157. Since 2016 Q1, Vodacom's prices have been relatively affordable in comparison to other operators and its new bundle puts it in pole position. The second cheapest voice/SMS product is offered by TTCL, which also has a new bundle called Serereka Bando offering 500MB, 1000 SMSs and 535 calling minutes (only 35 minutes are valid for other network calls) for TSH 6 400.

Price trends in the data market

With changes in current market dynamics resulting from the shift in consumer demand from voice/SMS services to data services, operators in Tanzania have amended their pricing competition strategies accordingly. The advent of 3G and 4G/LTE mobile broadband services has led to an increase in internet penetration.³

² Vodacom controls 31% of the market share. (TCRA, 2016)

³ Following the launch of mobile broadband services, the mobile network operators have become the leading Internet service providers (see <https://www.budde.com.au/Research/Tanzania-Telecoms-Mobile-Broadband-and-Digital-Media-Statistics-and-Analyses>)

This has made the mobile operators significant role-players in universal service policies.

Zantel, which adopted a flat pricing strategy for 1GB, offered the cheapest 1GB package for most of the period since 2014. However, the market observed a number of pricing swings with the most significant occurring in Q2 2016 when TTCL, which at that time had the most expensive package, reduced its 1GB price to TSH 1 920 (USD 0,89). This is partly due to TTCL rebranding and reentering the mobile market after acquiring 4G/LTE spectrum and expanding its market beyond the sluggish fixed-line sector. Although this price went up in Q3 2016, it was reduced to TSH 6 400 in Q4 2016 where it has since been overtaken by Tigo in a competitive bid to offer the cheapest 1GB of data: coming down to TSH 5 000 in Q1 2017.

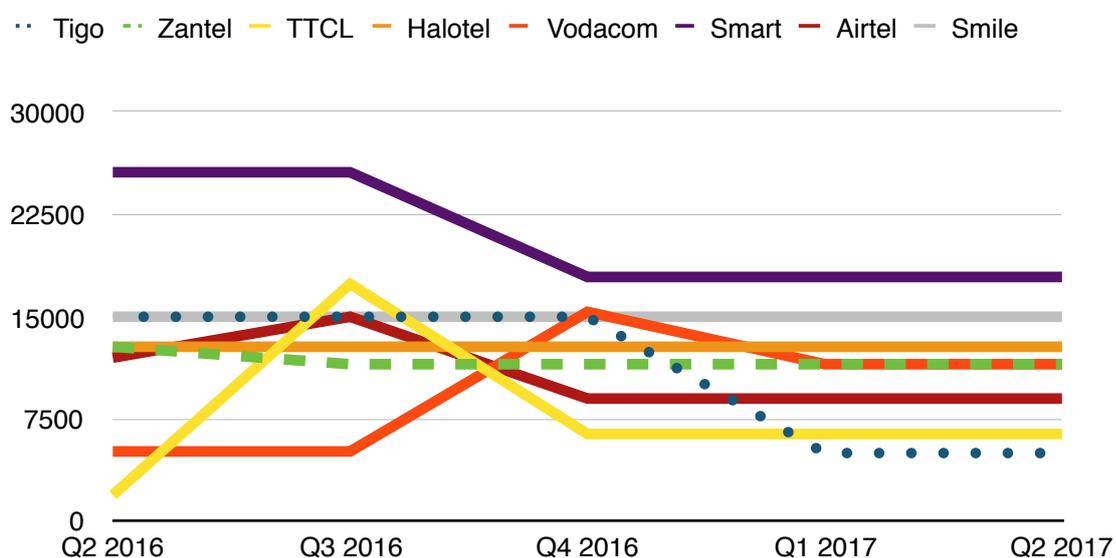


FIGURE 2: CHEAPEST 1GB (TSH) PRICE PER QUARTER FOR TANZANIAN OPERATORS; SOURCE: RAMP INDEX, 2017

Smart previously used competitive data pricing as its entrance strategy, but has since adjusted and is now recording the highest price since Q2 2016. The company has expanded its presence across the country and has restructured its data bundle validity to shorter periods lasting one day or week – a tactic that clearly targets low-income earners but which is not supported by its high price increases.

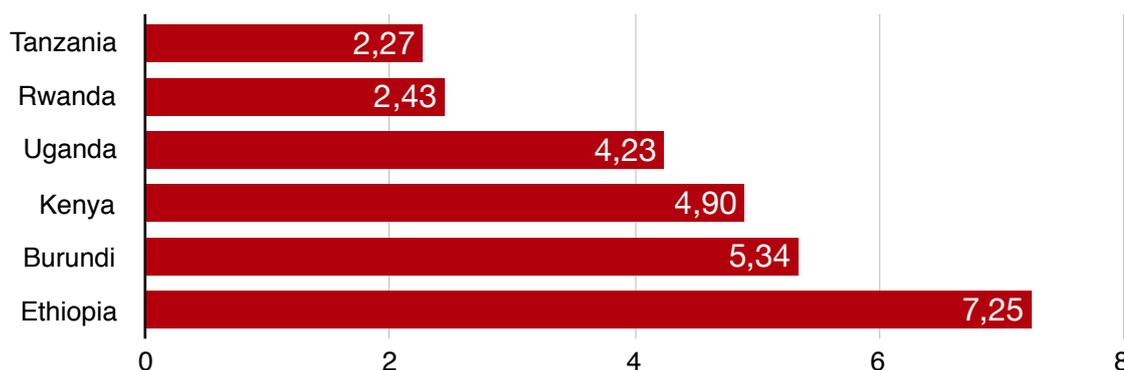


FIGURE 3: REGIONAL COMPARISON OF CHEAPEST 1GB (USD) PREPAID MOBILE DATA PRICES (USD); SOURCE: RAMP INDEX, 2017

In Q2 2017, the level of mobile data pricing competition in Tanzania ranks it fourth among 49 African countries; and its price of USD2.27 for 1GB of prepaid mobile data makes it the best price among east African countries too (see Figure 3).

Smartphone devices seem to be the main obstacle to Internet penetration in the country. The RIA Survey shows that 70.2% of the population has no access to the Internet. Of those, 62.5% reported that the main hindrance to Internet access is smartphones being unaffordable. The Survey further shows that only 2% of non-Internet users consider data prices to be high (see Figure 4). This is in line with the RAMP 1GB Index which shows Tanzania to be among the countries with the cheapest data packages.

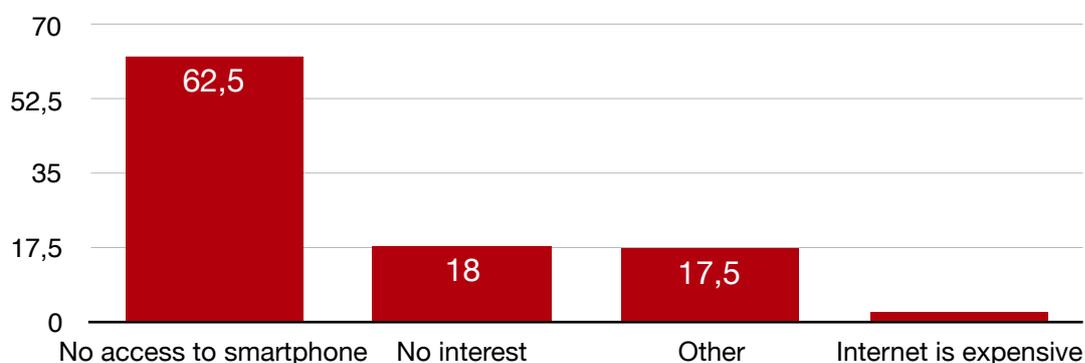


FIGURE 4: FACTORS INHIBITING THE USE OF INTERNET IN TANZANIA (%); SOURCE: RIA BEYOND ACCESS SURVEY, 2017

While the markets are transforming from traditional service provision to data-dominated markets, the Survey results show that Tanzanians are still spending a larger portion of their communication expenditure on voice/SMS services. On average, Tanzanian subscribers are spending TSH 8 013.10 (USD4) on mobile communication: and close to 20% (TSH 1 573.12) of this is spent on data products (see Figure 5). This is evidence of how cheap data services are in comparison to traditional services.

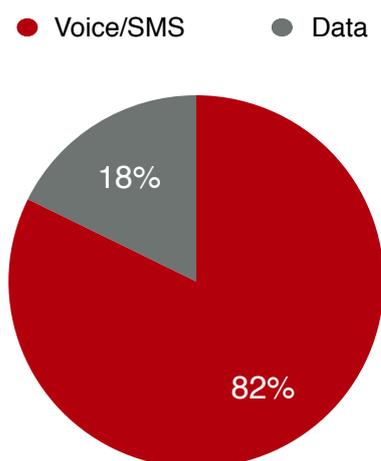


FIGURE 5: COMMUNICATIONS EXPENDITURE FOR TANZANIAN CITIZENS; SOURCE: RIA BEYOND ACCESS SURVEY, 2017

Bundle Value for Money Index (VMI)

New pricing innovations that include two or more services are also new to the market. RIA created the Value Money Index (VMI) as a means to capture the value of combined data, SMS and voice packages on offer. Given the complexity and high number of products on the market, only bundles offering data, or application-specific data, combined with voice and/or SMSs are captured. The higher the index score the better the product. The following results are based on Q2 2017 calculations as the index calculation is determined by foreign exchange collected at the end of the quarter.

Tanzania's VMI score was the 4th-highest when compared to other African countries and ranked below rivals Rwanda and Uganda, as represented in Figure 6.

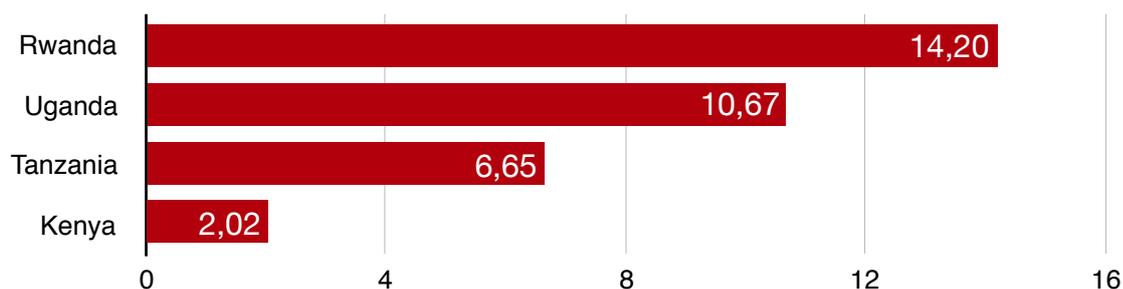


FIGURE 6: VMI SCORES COMPARISON BETWEEN EAST AFRICAN COUNTRIES; SOURCE: RAMP INDEX⁴, 2017

What is more noteworthy is that Smile and Smart were the two operators in Tanzania who did not use bundling as a pricing strategy in the prepaid market. Up until Q2 2016, Smart offered combined bundles which, in fact, had the highest scores in Q4 2015 and Q1 2016 (see Figure 7). Following Smart’s “exit” from the bundle market in Q2 2016, Halotel offered the best-combined bundles by default and, in Q2 2017, TTCL’s new Bando la Kijanja took the lead by providing 4GB of data, 200 on-net minutes and 60 off-net minutes per month for TSH 15 000.

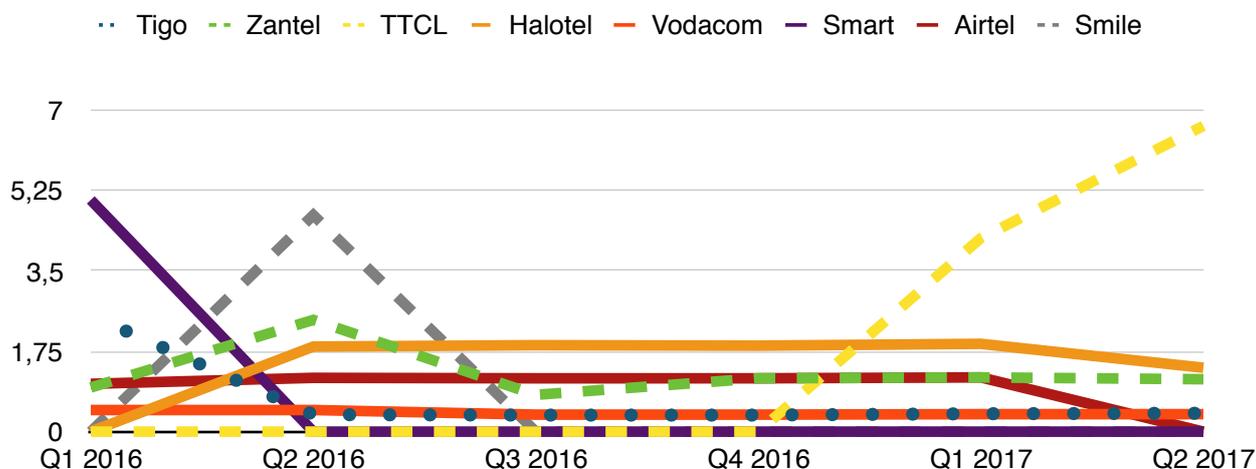


FIGURE 7: VMI SCORE COMPARISON AMONG TANZANIAN OPERATORS; RAMP INDEX, 2017

The price fluctuations in Tanzania’s prepaid bundles have stagnated over the last year with lower value contained than that in other African markets. Tanzania’s multi-services bundles could therefore benefit from a little injection of value – either by reducing the prices or filling up with minutes/SMSs/MB, but it remains unlikely that this would adequately contribute to reducing digital inequality in Tanzania.

⁴ Note: Bundles in Burundi and Ethiopia do not contain sufficient data to be eligible for basket comparison.

Conclusion

The Tanzanian mobile market has been one of the most vibrant markets on the continent as a result of higher competition and an enabling wholesale cost environment. Consumers have been the beneficiaries of fierce pricing strategies yet this dynamism has now been stultified by operators' continued efforts to extract revenues from traditional services where prices remain relatively high. Although competition in Tanzania's prepaid mobile data market keeps the overall cost of communicating low, the country has slipped from first position in the last quarter to fourth out of 49 African countries in the RAMP Index. Although prices are lower than many other African countries, the prices are still unaffordable for many Tanzanians, limiting efforts at digital inclusivity and the associated dividends.

RIA recently conducted its nationally representative ICT Access and Use Survey in Tanzania simultaneously to those currently on going in eight other African countries. The Survey findings show that mobile phone subscribers are spending a large portion of their communication budget on traditional voice/SMS services. Only 20% of their communication budget is spent on data despite evidence that data products provide cheaper alternatives to traditional communication services.

The Survey shows that even though data prices are relatively low, they remain unaffordable to most people and the high cost of Internet-enabled devices compounds the problem. About 70.2% of Tanzanians do not have access to the Internet, with more than half of non-Internet users reporting that smartphone devices are unaffordable. An immediate policy intervention that could reduce the cost of smart phones instantly by 20% would be to remove the excise duty placed on smartphones. This will result in increased uptake and use of data services. In turn, that would make companies more profitable, with an increase in company taxes quickly making up for any shortfalls from the removal of excise duties. In addition the positive social and economic multipliers associated with increased connectivity, such a move would contribute more broadly to economic growth and development.

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