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THE DIGITAL ECONOMY LANDSCAPE IN EAST AFRICA

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EAST AFRICAN TAX AND GOVERNANCE NETWORK

THE DIGITAL ECONOMY LANDSCAPE IN EAST AFRICA

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UNDERSTANDING THE DIGITAL ECONOMY

1.0 Background

Digital transformation is one of the key drivers of the global economy. Digital economy refers to any economic activity that results from online connections among people, businesses, institutions, devices, data etc. It encompasses the broad range of economic activities that involve the utilization of Information and Communication Technologies (ICT) plus the internet which includes trade in electronic transmissions; online platforms or platform-enabled services; supply of ICT goods or services; mobile technology or applications including money transfer, borrowing, and saving services, among others. Digital economy also comprises digital platforms like Google, Facebook and Amazon, platform-enabled services such as car-hailing apps, plus ICT goods and services suppliers. Mobile technology and applications such as money transfer, lending or saving services also constitute the digital economy (Action Aid, 2020).[1] The digital economy thrives on the interconnectedness among people, organizations, and machines that are all enabled by mobile technology, the internet, and the Internet of Things (IoT). By reducing transaction costs, thus improving market efficiency, telecommunication enables economic development (Aker and Mbiti, 2010).[2]

East African countries have been characterized as 'Break Out' economies, according to the Digital Intelligence Index Report by MasterCard and the Fletcher School at Tufts University.[3] This characterization is attributable to the rapid growth in internet penetration and substantive improvements in digital infrastructure in the region's member states. Consequently, the improved digital economy landscape has resulted in a better environment for owners of small businesses to thrive.

Key to the robust and growing digital economy in the region is the telecommunication sector. In Africa, the mobile ecosystem is valued at about USD115 billion and contributes 9% of the continent's GDP.[4] Africa's digital economy is projected to reach a value of about USD712 billion by 2050 while contributing USD200 billion to the continent's GDP as of 2023 compared to an economic value of USD132 Billion in 2020 with tax contributions of USD15 billion. The sector is significant to East Africa's economy. It is estimated that a percentage point increase in the telecom index usage (fixed line, mobile cellular and internet) contributes to a 0.02(%) real per capita growth.[5] With increased investment and technological adoption of advanced technologies, the telecom sector demonstrates significant potential for growth with the likelihood of becoming a crucial and pronounced pillar to the region's economy.

1.1 Rationale for the Study

As with the rest of the world, East African countries acknowledge the fundamental significance of the digital economy in accelerating economic growth. Considering this fact, especially in reference to the telecom sector's value to the region's economy, there is a need for the regional governments to adopt

1. Action Aid, *Taxing the Digital Economy,* Progressive Taxation Policy Brief, January 2020 https://actionaid.org/sites/default/files/publications/Digital%20taxes%20progressive%20tax%20brief%20jan20.pdf
2. Aker J.C., and Mbiti I.M., 'Mobile Phones and Economic Development in Africa', *Journal Of economic Perspectives,* Vol. 24, No. 3, Summer 2010, (pp. 207-32), https://www.aeaweb.org/articles?id=10.1257/jep.24.3.207
3. Kitimo A., 'Kenya, Tanzania and Rwanda rank top for rapid digital growth, demand', *The East African,* 16 December 2020, https://www.theeastafrican.co.ke/tea/news/east-africa/kenya-tanzania-rwanda-rank-top-for-rapid-digital-growth-3230890
4. Herbert G. and Loudon L., *The size and growth potential of the digital economy in ODA-eligible countries,* K4D (Knowledge, Evidence, and Learning for Development) Helpdesk Report, 1 December 2020, https://opendocs.ids.ac.uk/opendocs/bitstream/handle/20.500.12413/15963/915_size_and_growth_potential_of_the_digital_economy_in_ODA-eligible_countries.pdf?sequence=1&isAllowed=y
5. Kedir A., Kawo K.N., and Hasan A., "ICT and Economic Growth in East African Countries: A Panel Data Approach', Journal of Information Engineering and Applications, Vol.9, No.7, December 2019, (PDF) ICT and Economic Growth in East African Countries: A Panel Data Approach

and implement robust policies to govern the sector. More specifically, the governments should consider enforcing a progressive tax regime on the sector to maximize its potential contribution to the economy. However, research currently shows the inefficiencies of the existing taxation models and overall challenges in taxing the telecom sector. There are gaps in policies and regulations, which, it has been argued, provide loopholes for opaqueness in reporting revenue figures by industry players, therefore, allegedly resulting in tax evasion by telecommunication industries. On the government side, there is arguably limited expert knowledge in taxing the telecom sector. There is also weak enforcement of the existing tax regime to ensure full compliance by all players in the sector.

As such, the purpose of this study was to examine the landscape of the digital economy with a narrow focus on the telecoms sector. The study sought to examine the taxation regime in the sector by focusing on gaps in policies and regulations in the sector, the challenges, and opportunities for taxing the telecom sector and the digital economy. The specific objectives of the study were:

1. To examine challenges associated with mobilizing revenues from the telecom sector and the digital economy;
2. To determine opportunities to be leveraged to improve tax revenue mobilization from the telecom sector and digital economy.

THE DIGITAL ECONOMY LANDSCAPE IN EAST AFRICA

2.0 Introduction

This brief looks at the digital economy of East African countries of Kenya, Tanzania, Uganda, Rwanda, and Burundi by taking into consideration the growth trends, economic impact of the telecommunication sector and the global ranking of the sector in terms of internet use and network readiness, and the taxation regime for each country.

2.1 An Exploration of the Digital Economy in Each East African Country

2.1.1 Kenya

Currently Kenya has one of the most advanced digital economies in the region. The growth of the telecommunications sector has been propelled by various factors, among them being the Kenya Vision 2030 strategy. This is a long-term development plan by the government to make Kenya achieve a middle-income status by the year 2030. In doing so, the government seeks to utilize ICT to strengthen national infrastructure, industry, and public service delivery. The launch of Safaricom's mobile money platform, M-PESA, in 2007 also revolutionized the financial sector and played a crucial role in providing an opportunity for technological innovation in Kenya, which has extended to nearly other all other sectors of the economy.

The government's commitment to strengthen the ICT sector is also evident in the formation of the ICT authority. This is a regulatory body under the Ministry of ICT, Innovation and Youth Affairs, which has been rolling out the National Optic Fiber Backbone since 2007, a project that seeks to ensure connectivity in all the 47 counties. The government has also used strategies such as the Kenya National ICT Masterplan 2017 and the Digital Economy Blueprint to strengthen the ICT sector.

According to the connectivity index score provided by the Groupe Speciale Mobile Association (GSMA) encompassing infrastructure, affordability, customer readiness and content and services, Kenya has a score of 50.5, towering above its peers in East Africa.[6] ICT infrastructure is relatively strong in the country with 93.3% internet penetration as of 2022 99%, with 97% of the population covered by 3G and 4G network respectively.[7,8] In March 2021 Safaricom, Kenya's leading telecom company, launched the fifth-generation network (5G), which demonstrates the country's desire to keep up with global technological advancements.[9]

The number of employees in the telecom sector has increased significantly from 6,178 in 2016 to 8,728 in 2020. Revenue from telecom operators has also increased over the years from KSh 233 billion in 2016 to KSh 285.1 billion in 2020.[10] The sector's contribution to GDP stood at 9.2% in 2019.[11] In terms of global ranking, the Global Innovation Index 2023 ranks Kenya at position 62 in terms of innovation linkages, with a score of 23.2, 92 in terms of ICT access and 111 for ICT use

6. GSMA (Groupe Speciale Mobile Association), *Mobile Connectivity Index,* https://www.mobileconnectivityindex.com/index.html#year=2022
7. Etyang P., 'Internet penetration rises by 62.5 per cent, Oguna says', *The Star,* 30 June 2022, https://www.the-star.co.ke/news/2022-06-30-internet-penetration-rises-by-625-per-cent-oguna-says/
8. GSMA Mobile Connectivity Index 2022. https://www.mobileconnectivityindex.com/index.html#year=2022
9. Oluwole, V. (2021). Kenya's first 5G network launched by Safaricom. *Business Insider Africa.* https://africa.businessinsider.com/local/markets/kenyas-first-5g-network-launched-by-safaricom/fw2evv0
10. GOK (Government of Kenya), *Economic Survey 2021,* KNBS (Kenya National Bureau of Statistics), https://www.knbs.or.ke/wp-content/uploads/2021/09/Economic-Survey-2021.pdf
11. World Bank, *Kenya Digital Economy: Summary Report,* 2019, Washington, DC, https://thedocs.worldbank.org/en/doc/345341601590631958-0090022020/original/DE4AKenyasummarypaperfinal.pdf

with respective scores of 68.5 and 35.2.[12]

2.1.2 Tanzania

Over the last decade, Tanzania's economy has experienced growth averaging between 6% and 7% per year. The country's favorable geographic location and rapidly developing ecosystem favors growth in the ICT sector and integration into the global digital economy. Although agriculture remains to be the main economic activity for a majority of the population, emerging sectors such as finance and communications are propelling the economy forward. Tanzania's ICT sector began in 1977 with the Tanzania Posts and Telecommunications Corporation Act of 1977 incorporating the Tanzania Posts and Telecommunication Corporation (TPTC). It was responsible for providing postal and telecoms services, as well as regulating and controlling radio communications.[13] Further reforms, including privatization and reorganization of telecoms providers and regulators, have since been undertaken.[14]

Tanzania's telecom market is currently the second largest in East Africa and one of the most competitive markets in Sub Saharan Africa. In 2021, there were 7 Telcos operators with Vodacom commanding 29.4% of market mobile subscriptions, Airtel (27.2%), Tigo (24.7%), Halotel (13.3%), TTCL (3.4%), Zantel (2.0%), and Smile (0.02%). As of December 2021, total mobile subscriptions reached 54.1 Million.[15] As of 2019, the number of mobile subscribers was 25 million, representing a mobile penetration rate of 41%.

Tanzania has made progress in terms of hard ICT infrastructure such as submarine cables and the National ICT Broadband Backbone (NICTBB).[16] Other projects have included linking to the SEACOM and Eastern Africa Submarine Cable System (EASSY) networks in 2009-10 and the launch of the National ICT Broadband Backbone (NICTBB), in two phases (2010 and 2012).[17] The initiatives sought to improve the ICT sector by increasing broadband connectivity. Most Tanzanians access internet via their mobile phones. As of 2022, out of 100 inhabitants 48% of them owned mobile phones.[18] By 2022, 83% and 55% of the Tanzanian population was covered by mobile cellular networks with 3G and 4G networks, respectively.[19] As of June 2023, Tanzania had 34.05 million internet subscribers, accounting for an average growth rate of 17% per year since 2018.[20]

12. WIPO (World Intellectual Property Organization), *Global Innovation Index 2023: Innovation in the face of uncertainty,* 2023, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf
13. Oxford Business Group. (2018). Telecoms trends set to continue in Tanzania https://oxfordbusinessgroup.com/overview/upwardly-mobile-country%E2%80%99s-successful-telecoms-legacy-looks-set-continue
14. ITA (International Trade Association), 'Tanzania – Telecommunications', 2022, https://www.trade.gov/country-commercial-guides/tanzania-market-overview
15. Tanzania Communications Regulatory Authority (TCRA). (2021). Communications Statistics Quarter 2 – 2021/2022 December 2021 Report. https://tcra.go.tz/uploads/text-editor/files/Communications%20Statistics%20December%202021_1643809069.pdf
16. UNCTAD (United Nations Conference on Trade and Development), *United Republic of Tanzania Rapid eTrade Readiness Assessment,* 2020, https://unctad.org/system/files/official-document/dtlstict2020d2_en.pdf
17. Esselaar S. and Adam L., Understanding what is happening in ICT, in Tanzania, Evidence for ICT Policy Action, Policy Paper11, 2013, https://researchictafrica.net/research/understanding-what-is-happening-in-ict-in-tanzania/
18. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022&zoneIsocode=TZA&analysisView=TZA
19. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022&zoneIsocode=TZA&analysisView=TZA
20. TCRA (Tanzania Communications Regulations Authority), Communications Statistics: Quarter ending 30th June 2023, https://www.tcra.go.tz/uploads/text-editor/files/Communication%20Statistics%20for%20Q4%202023_1689602781.pdf

The telecoms sector has a direct impact on productivity by facilitating cross-border trade and the expansion of Tanzanian businesses. Through mobile services other industries that form part of the mobile ecosystem such as engineering and maintenance are supported. Taxes on the industries in this sector earn revenue for the government. The ICT sector recorded the highest growth (13.7%) in 2022. In 2019, mobile market revenues were estimated at USD 1.1 billion, and the sector contributed 1.9% to Tanzania's GDP. Tanzania was ranked 125th and 119th on ICT access and ICT use, respectively, in the 2023 Global Innovation Index.[21] In terms of innovation capabilities compared to other countries, Tanzania was ranked 44th with a score of 28.6.[22]

2.1.3. Uganda

Uganda aims to achieve a middle-income country status in 2040 and in attempts to do so it has established the Uganda Vision 2040, also known as the third National Development Plan (NDP III). Achieving this status would rely on a strong focus on leveraging digital technologies. The digital space in Uganda has grown exponentially since the onset of the COVID-19 pandemic in 2020. The increased use of digital technologies during and after the lockdown such as mobile money, online shopping, online education, digital disease surveillance and monitoring, and dissemination of public health messages, shows great potential to support the growth of the digital economy.[23]

This continuous expansion and improvement of the digital infrastructure in Uganda plays a major role in the country's economic development. The sector has been instrumental in providing direct and indirect employment opportunities to more than 2 million citizens with a majority of them being the youth. However, the ICT sector's contribution to GDP in Uganda is still low as evident in the financial year 2019/2020 when it was 1.8% of the GDP.[24] The sector is projected to contribute 3.2% to the country's GDP by 2050.[25]

Various improvements and upgrades of data infrastructure such as installation of fiber optic cables and mobile towers have also contributed to the growth of the digital economy in Uganda. As of 2023, Uganda's 3G network coverage extended to 77% of the population and 53% of the country's land, while 4G network coverage reached 31% of the population and 24% of the geographical area.[26] Uganda Communication Commission (UCC) recorded 27 million internet subscriptions as of March 2023, accounting for 1.2 million new subscriptions.[27] Mobile money transactions continued to rise with counts of 1.44 billion as of March 2023 with telecom companies recording revenues

21. WIPO (World Intellectual Property Organization), *Global Innovation Index 2023: Innovation in the face of uncertainty,* 2023 Page 205, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf
22. WIPO (World Intellectual Property Organization), *Global Innovation Index 2023: Innovation in the face of uncertainty,* 2023 Page 205, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf
23. World Bank, 'Digital Technologies Could Help Uganda's Economy Recover Faster', *Press Release,* 8 July 2020, https://www.worldbank.org/en/news/press-release/2020/07/08/digital-technologies-could-help-ugandas-economy-recover-faster
24. Research ICT Solutions, *Taxation for the Digital Era,* March 2022, https://researchictsolutions.com/home/wp-content/uploads/2022/04/Uganda-policy-brief.pdf
25. Ministry of Information, Communications Technology and National Guidance, Vision for a Digital Uganda 2040: Digitalization for Uganda's Socio-economic Transformation, September 2022. https://ict.go.ug/site/documents/digital-vision-uganda-2040.pdf
26. Mbugua C., 'Spectrum assignment moves Uganda closer to national broadband targets', *Spectrum,* 24 July 2023, https://www.gsma.com/spectrum/spectrum-assignment-moves-uganda-closer-to-national-broadband-targets/
27. UCC (Uganda Communications Commission). UCC Market Performance Report, March 2023. NOTE: This report has been blocked from access on the UCC Website, however the statistics in the cited sentence may be replaced with information in UCC Market Report for December 2023 FY 2023/24 (October – Dec 2023). https://www.ucc.co.ug/wp-content/uploads/2024/09/UCC-Market-Report-for-December-2023-FY-2Q23-final.pdf

of UGX 1.3 Trillion (USD 343 Million) and tax contributions of UGX 430.9 Billion (USD 113.92 Million).[28]

Despite the tremendous growth in this sector there are still a few challenges and limitations. Accessibility to the internet in most parts of the country, especially in the countryside, is still low and the average cost of broadband is still high.[29] In terms of global ranking, Uganda ranks 123 and 120 in terms of ICT access and ICT use with a rank of 90 and a score of 17 in innovation linkages, according to the Global Innovation Index for 2023.[30]

2.1.4 Rwanda

The history of the telecom sector in Rwanda dates back to 1963 when telegraph, telephone and telex services were opened between Kigali and Brussels. By then, the country's telecom system was operating within the Common Telecommunications Agency of Burundi and Rwanda (ATCBR). Further advancements in Rwanda's telecoms network happened in the late 1970s and early 1980s. But it was the period after the 1994 genocide that marked a moment of fundamental change in the country's telecommunication sector. The Telecommunication Law (Law No. 44/2001 and Law No. 39/2001) established a regulator, Rwanda Utilities Regulatory Agency (RURA). The liberalization of Rwanda's ICT sector and other advancements such as the laying of the SEACOM and TEAMS submarine cables have seen the sector grow over the years.

In 2020, the ICT sector contributed 2% of GDP and created employment for approximately 8,962 workers (0.26% of employment), with the country aiming to maximize ICT sector contribution to GDP to 5% by 2024.[31] Within the ICT sector, telecoms contribute 75% of the sector's share of the GDP, which is the largest among the various stakeholders in the ICT sector with 2 licensed telecommunication operators, 1 network service provider, 4 internet service providers, 23 retail internet service providers, 2 network facility providers and 3 application service providers.[32] According to GSMA, in 2022, 99.39% and 99% of the population was covered by 3G and 4G network respectively.[33] In terms of the Global Innovation Index 2023, a measure of innovation linkages, Rwanda was ranked 55th with a score of 24.9 while on ICT access and use, the country was ranked at number 115 for both indicators.[34]

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28. UCC (Uganda Communications Commission). UCC Market Performance Report, March 2023. NOTE: This report has been blocked from access on the UCC Website, however the statistics in the cited sentence may be replaced with information in UCC Market Report for December 2023 FY 2023/24 (October – Dec 2023). https://www.ucc.co.ug/wp-content/uploads/2024/09/UCC-Market-Report-for-December-2023-FY-2Q23-final.pdf
29. Gillwald, A., Mothobi, O., Tusubira, F., & Ndiwalana, A. The State of ICT in Uganda (Policy Paper No. 8; Series 5: After Access – Assessing Digital Inequality in Africa) 2019, Page 8 - 9 . Research ICT Africa. https://researchictafrica.net/research/the-state-of-ict-in-uganda/
30. WIPO (World Intellectual Property Organization), Global Innovation Index 2023: Innovation in the face of uncertainty,2023 Page 201, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf
31. RDB (Rwanda Development Board), *ICT Skills Snapshot,* April 2022, https://rdb.rw/wp-content/uploads/2022/07/ICT-Sector-Labour-Market-Brief.pdf
32. RURA (Rwanda Utilities Regulatory Agency), *Licensed Telecom Operators, Network Service Providers, Internet Service Providers and Retailer Internet Service Providers,* June 2019, https://rura.rw/fileadmin/publication/Licensed_Telecom_Operators_as_June_2019.pdf
33. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022&zoneIsocode=RWA
34. WIPO (World Intellectual Property Organization), Global Innovation Index 2023: Innovation in the face of uncertainty,2023 Page 183, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf

2.1.5 Burundi

The growth of the telecoms sector in Burundi was propelled by the liberalization of the sector in 1997 after the enactment of the Law No. 1/011,[35] which allowed the licensing of private telecoms companies to compete with the state-owned corporation. The Telecommunication Regulation and Control Agency was also established in 1997 to regulate the sector. Since then, there has been growth in the use and access to ICTs and at the end of 2018, the country had 10 internet service providers with internet penetration rate of 7.4%.[36] The government also initiated the broadband project in 2018 to deliver nationwide connectivity by 2025. The ICT's sector contribution to the country's GDP has also increased over the years from 1.8% in 2007 to 3.3% in 2015.[37]

According to the International Telecommunications Union (ITU) statistics on digital development indicators in 2022, 97% of the Burundian population is covered by a mobile cellular network with 51% being covered by 3G and 32% by 4G.[38] Nonetheless, the country recorded low performance on indicators such as households access to internet at home and households with a computer at home. In 2020 only 18% of households had access to internet at home with just about 8% having a computer at home.[39]

Despite the growth witnessed in the ICT sector, it still faces numerous challenges. The state of internet freedom in the country has declined in recent years. This is as a result of the government adopting measures such as internet shutdowns and instructing telecom operators to block access to social media platforms.[40] Most mobile connections are also still at 2G speeds, which is relatively slow compared to the advanced internet speeds of 4G and 5G.[41] Globally, Burundi was ranked 130 and 132 in terms of ICT access and ICT use, respectively, in the Global Innovation Index for 2023. The country had a score of 14.4 and a rank of 99 on innovation linkages.[42]

Based on the country reviews, each of the selected member states of the East African Community (EAC) has made efforts to grow their digital economies, which in turn support the growth of telecoms companies. The Table 1 provides a summary of the key ICT indicators, which further supports arguments for the potential for transformation of the digital economy and telecommunication sectors in East Africa.

Table 1: Digital Transformation Indicators in East Africa

35. Republic of Burundi Telecommunications Regulatory and Control Agency. Decree-Law No.1/011 of September 1997 on Organic Provisions on Telecommunications. https://arct.gov.bi/2012/03/15/decret-loi-n-1-011-du-4-septembre-1997-portant-dispositions-organiques-sur-les-telecommunications/
36. CIPESA. Status of Internet Freedom in Burundi, 2020, Page 7 https://cipesa.org/wp-content/files/State-of-Internet-Freedom-in-Burundi-2019.pdf
37. CIPESA. Status of Internet Freedom in Burundi, 2020, Page 7 https://cipesa.org/wp-content/files/State-of-Internet-Freedom-in-Burundi-2019.pdf
38. ITU Data Hub. Infrastructure and Access, 2022. https://datahub.itu.int/data/?e=BDI
39. ITU Data Hub. Infrastructure and Access, 2022. https://datahub.itu.int/data/?e=BDI
40. CIPESA. Status of Internet Freedom in Burundi, 2020, Page 4 https://cipesa.org/wp-content/files/State-of-Internet-Freedom-in-Burundi-2019.pdf
41. World Bank Group, *Burundi Digital Economy Assessment,* 2020, Washington DC, https://thedocs.worldbank.org/en/doc/094ae7e492b4b741f58747465021caf0-0200022021/original/DE4A-Burundi-EN.pdf
42. WIPO (World Intellectual Property Organization), Global Innovation Index 2023: Innovation in the face of uncertainty,2023 Page 100, Geneva, https://www.wipo.int/edocs/pubdocs/en/wipo-pub-2000-2023-en-main-report-global-innovation-index-2023-16th-edition.pdf

Framework Category	Indicator	Source	Current Figures				
			Burundi	Kenya	Rwanda	Tanzania	Uganda
Connectivity (ICT Development)	Index score (Infrastructure Affordability, Consumer readiness, and Content Services	GSMA, 2022[43]	23.1	50.5	41.6	45.6	43.2
Connectivity (infrastructure)	3G network coverage - as % of population	GSMA, 2022[44]	50.6	99	99.39	83	92
Connectivity (infrastructure)	4G network coverage - as % of population	GSMA, 2022[45]	32.18	97	99	55	82
Connectivity (services)	Mobile Phone Ownership - as % based on per 100 inhabitants	GSMA 2022[46]	33.18	55.73	46.87	48	44.34
Connectivity (Services)	Internet Subscriptions	Relevant Communication Authorities 2022[47, 48, 49, 50]	1.61 Million	47.96 Million	8.327 Million	31.17 Million	23.7 Million
Data (data protection and privacy)	Data protection and privacy law	UNCTAD, 2021[51]	No Data	Yes	Yes	Draft	Yes
Online services (digital payments)	Mobile money usage - as % of adults over the age 15 with mobile money accounts	Findex, 2021, [52,53]	No Data	68.66	No Data	44.58	65.91
Enabling environment (digital leadership and institutions)	Capacity - based on Africa Capacity Index	African Capacity Building Foundation, 2016[54]	53.4	55.2	68.2	68.8	54

43. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022&zoneIsocode=BDI
44. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022&zoneIsocode=BDI
45. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022
46. GSMA (Groupe Speciale Mobile Association), Mobile Connectivity Index, 2022. https://www.mobileconnectivityindex.com/index.html#year=2022
47. CAK (Communication Authority of Kenya), Third quarter sector statistics report for the financial year 2022/2023 (31stJanuary – 31st March 2023), 2022. https://www.ca.go.ke/sites/default/files/2023-09/Sector%20Statistics%20Report%20Q4%202022-2023.pdf
48. Uganda Communications Commission. (2022). Market Performance Report 1Q 2022. https://www.ucc.co.ug/download/ucc-market-performance-report-march-2022/
49. TCRA (Tanzania Communications Regulatory Authority), Communications Statistics Report: Quarter ending December 2022, https://tcra.go.tz/uploads/text-editor/files/2nd%20Quarter%20Communications%20Statistics%20Report%202022-2023%20(1)_1675441316.pdf
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53. World Bank, The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19, http://documents1.worldbank.org/curated/en/099833507072223098/pdf/IDU0f917b4120aa0f042270bbd10c8b257c99a54.pdf
54. World Bank, The Global Findex Database 2021: https://digitalfinance.worldbank.org/country

2.2 Taxation Regime for the Telecom Sector in East Africa

2.2.1 Trends in Telecoms Taxation in East Africa

Governments in East Africa have subjected the telecommunications sector to taxation through regulatory fees based on turnover, procurement of mobile devices and surtaxes on corporate income[55] in the past. For uniformity in taxation of the digital sector in East Africa, the region's countries subscribed to the Africa Tax Administration Forum (ATAF), a platform that plays a critical role in addressing and harmonizing taxation at the continental level. Kenya, as the chair of ATAF's technical committee, plays an important role in steering the efforts of ATAF members in managing digital taxation. The committee provides advisory support to the OECD on digital economy, and through it the digital economy draws policy attention and action necessary for expanding digital economy within the tax bracket.[56] In a virtual meeting held on 11th November 2020, tax authorities in the EAC united on how to tax the digital economy and developed strategies to improve revenue performance and trade facilitation within the region.[57] These strategies targeted widening the tax base and generating additional revenues by leveraging on the emergence of digital businesses within the region. Indirect taxation on mobile voice and data services has been the latest trend on taxation, with Uganda leading the East Africa region in levying this indirect tax. Kenya and Tanzania recently joined Uganda in taxing the telecoms sector.[58]

Tanzania started taxing its digital economy with the introduction of the Electronic and Postal Communications Regulations, 2018. Digital taxes account for nearly 35% of the total cost of mobile ownership in Tanzania (GSMA & Deloitte, 2015). In addition to regulatory fees and charges, mobile operators in Tanzania are subjected to other taxes such as the Universal Service Obligation of 0.3% of total revenues and Surtax on International Incoming Traffic (SIIT) that fixes international termination rates. These operators contribute 11% of the total tax revenue in Tanzania (US$ 540 million annually).[59] Within the last three years, the airtime excise on calls, SMS and data has increased three-fold, currently standing at 17%. In 2013, the Tanzanian government introduced a TZS 1000 monthly tax on active SIM cards. This tax was later abolished but there are indications that it might be reintroduced.[60] In addition to VAT, an excise tax of 10% is also subjected to mobile money transfer fees in Tanzania. A government license fee for bloggers was also introduced in Tanzania in March 2018.[61]

The telecoms sector in Kenya has grown significantly in the last two decades with mobile technology rising from 37% in 2014 to 49.6% in 2019.[62] Factors that have led to the enhanced connectivity in the country include consumer readiness and experience, and ample infrastructure coverage.[63] The

55. The African Capacity Building Foundation. (2016). Africa Capacity Indicators. ACR2017 English.pdf
56. Vasques S., *Telecom taxes in Africa: A wake-up call,* ITR (International Tax Review), 11 June 2021. https://www.internationaltaxreview.com/article/2a68rfy5bw2ycq1ybghqy/telecom-taxes-in-africa-a-wake-up-call
57. https://www.kra.go.ke/en/media-center/blog/1162-east-african-revenue-authorities-seek-a-united-front-on-taxing-digital-economy
58. KRA (Kenya Revenue Authority). East African Revenue Authorities Seek A United Front On Taxing Digital Economy, 2021. https://kra.go.ke/news-center/news/1162-east-african-revenue-authorities-seek-a-united-front-on-taxing-digital-economy
59. GSMA (Groupe Speciale Mobile Association), Digital inclusion and mobile sector taxation in Tanzania, Deloitte, February 2015. https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2016/09/GSMA2015_Report_DigitalInclusionAndMobileSectorTaxationInTanzania.pdf
60. https://www.thecitizen.co.tz/tanzania/news/-phone-users-brace-for-new-sim-card-levy-in-august-3477308
61. The Monitor. Tanzanians brace for new phone sim card levy starting August, 2021. Tanzanians brace for new phone sim card levy starting August | Monitor
62. CIO Africa. Bloggers have to pay over $900 to operate in Tanzania, 2018. https://cioafrica.co/bloggers-have-to-pay-over-900-to-operate-in-tanzania/
63. Syekei J., 'Kenya: Overview of Data Infrastructure in East Africa', *Bowmans,* 6 April 2021, https://www.bowmanslaw.com/insights/technology-media-and-telecommunications/data-infrastructure-in-east-africa/

presence of five fibre optic international submarine cables, namely SEACOM, East Africa Marine Cable System, East Africa Submarine Cable System (EASsy), Madagascar-linked Lion2, and Djibouti Africa Regional Express (DARE 1) has led to a significant reduction in the cost of phone calls and internet in the country[64]. In an effort to scale up the network capacity in Kenya, the Communications Authority (CA) issued 329 telecom licenses in the Financial Year 2018/2019. Telecom operators received licenses in June 2020 to commence 5G testing in Kenya. Safaricom activated 5G network in Nairobi, Kisii, Kisumu and Kakamega counties by March 2021. Kenya introduced the Digital Service Tax (DST) and the Value Added Tax (Digital Marketplace Supply) Regulations in 2020.[65]

Uganda introduced an Over the Top (OTT) services tax in 2018 of about USD 0.05 per person per day on social media use in an attempt to widen the country's tax base. In reaction to this, the majority of social media users abandoned internet subscriptions and resorted to Virtual Private, Networks (VPNs) to access social media platforms. The government was thus, unable to raise its anticipated revenue. In July 2021, the government introduced a 12% tax on internet data to replace the social media use tax. Telecom companies in Uganda currently pay an additional VAT of 18% for airtime, bringing the total tax to 30%.[66]

Rwanda has had rapid technological growth over a five-year span. By 2019, it had 95% internet coverage throughout the country[67] because of its investment in a national fibre optic backbone, 4G and other digital infrastructure. The consumption tax on telecom services has increased from 8% to 10% over the years, while the prices of 3G internet have dropped significantly.[68]

The digital economy ecosystem in Burundi is largely characterized by a regulatory vacuum that hinders digital adoption and innovation.[69] The government of Burundi previously employed retrogressive measures that led to internet slavery as a way of achieving political dominance and control of the citizen's freedom of expression.[70] This situation was well-captured when ARCT, the telecoms regulator, instructed all telecom operators to block social media access for around 10 days in April 2015.[71] The enactment of the law No 1/011 of 4th September 1997, however, had allowed the licensing of private communication agencies, which had led to healthy communication with the state-owned corporation. By 2018, the country had 10 internet service providers and the

64. Syekei J., 'Kenya: Overview of Data Infrastructure in East Africa', *Bowmans,* 6 April 2021, https://bowmanslaw.com/wp-admin/admin-ajax.php?action=generate_acf_pdf_insight&post_id=50568&nonce=525c-32c07b
65. https://www.kra.go.ke/en/media-center/blog/1162-east-african-revenue-authorities-seek-a-united-front-on-taxing-digital-economy
66. Akello, L. East African Revenue Authorities Seek a United Front on Taxing Digital Economy, April 2021. https://kra.go.ke/news-center/news/1162-east-african-revenue-authorities-seek-a-united-front-on-taxing-digital-economy
67. Mwazighe A., 'Excise duty on airtime rings up gloom across EA region', *The East African,* 15 July 2021, https://www.theeastafrican.co.ke/tea/business-tech/excise-duty-on-airtime-rings-up-gloom-across-ea-region-3473946
68. Emmanuel, B. Overcoming Obstacles and Advancing Rwanda's Rising Tech Scene, May 2025, https://rightforeducation.org/2025/05/29/overcoming-obstacles-and-advancing-rwandas-rising-tech-scene/
69. The East African, Taxes hindering growth of mobile services in Africa, new report says, 6 August 2016, https://www.theeastafrican.co.ke/tea/business-tech/taxes-hindering-growth-of-mobile-services-in-africa-new-report-says--1353562
70. World Bank Group, Burundi Digital Economy Assessment Page 26, 2020, Washington DC, http://documents1.worldbank.org/curated/en/605991608528899689/pdf/Burundi-Digital-Economy-Assessment.pdf
71. Nkurunziza J.P., and Ndikumana A., *Update on the State of Internet Freedom in Burundi,* CIPESA (Collaboration on International ICT Policy for East and Southern Africa), 16 June 2015, https://tinyurl.com/snmgsx9

internet penetration rate stood at 7.4%,[72] with the broadband project operationalized to deliver nationwide connectivity in the country by 2025.

2.2.2. Overview of Tax Guidelines and Requirements

The telecom sector is subject to general taxes such as value added tax (VAT) and corporation tax, and several sector-specific taxes and regulatory fees that apply either directly to the mobile industry or apply at higher rates than in other sectors of the economy. Such taxes and fees in the telecom sector are highlighted in Table 2.

Table 2: Taxes in the Telecom Sector

Taxes on Consumers		
Tax Base		**Tax Type**
Handsets and other devices		Sales Tax
		Sector-specific taxes
		Customs Duty
Services	Activation	Sales Tax
		Sector-specific taxes
	Usage	Sales Tax
		Sector-specific taxes
Operator Taxes and Fees		
General Taxes	Profits	Corporation Tax
	Revenues	Turnover Tax
		Other revenue taxes
	Network equipment	Customs Duty
Regulatory fees and other payments	Fixed amounts	One-off license fee
		One-off spectrum fee
	Revenues	Universal service obligation
		Variable license fee
		Variable spectrum fee

Source: GSMA Intelligence, Deloitte/GSMA 2015: Digital inclusion and mobile sector taxation 2015[73]

In an effort to regulate global taxation, a set of principles that constitute an effective tax system, which international organizations such as the World Bank, IMF and OECD abide by were instituted. These principles work to reduce potential inefficacies and negative impacts of taxation. These best-

72. http://www.arct.gov.bi/images/observatoiremarche/observatoirei4.pdf
73. CIPESA. Status of Internet Freedom in Burundi, 2020, Page 7 https://cipesa.org/wp-content/files/State-of-Internet-Freedom-in-Burundi-2019.pdf

practice principles of taxation state that:[74]

i. Taxation should be broad-based.
ii. Taxation should not proportionately fall on those with lower income.
iii. The tax and regulatory system should be simple, easily understandable, and enforceable.
iv. Taxes should account for sector and product externalities.
v. Different taxes should have different economic properties.

East African countries have set several requirements and guidelines for the telecom sector to enable them achieve revenues necessary for their budgetary requirements. The Table 3 outlines each country's tax guidelines for the telecom sector.

74. GSMA (Groupe Speciale Mobile Association), Digital inclusion and mobile sector taxation 2015, Deloitte, https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2016/09/GSMA2015_Report_DigitalInclusionAndMobileSectorTaxation2015.pdf

Table 3: Overview of the taxation guidelines in the telecommunication sector

Country	Taxation Guidelines and Requirements	
Kenya[75, 76, 77, 78, 79]	**Corporate Income Tax**	30% on taxable income.
	Excise Duty	1. 20% on airtime and data; 2. 15% on the value of mobile services; 3. 12% on mobile money transaction fees.
	Employment Taxes	NSSF contribution – 6% on monthly salary to the maximum of 200Ksh.
	Value Added Tax (VAT)	16% on sales.
	Regulatory Fees	1. Universal service fund (USF)-0.5% on gross annual revenue; 2. Annual operating license (AOL)-0.4% on gross annual revenue; and 3. County deployment fees (branding and marketing activities, business permits).
	Spectrum license fees	One-off annual (based on transmitters/bandwidth/coverage).
	Annual Operating Fee	0.4% of Annual Gross Turnover.

75. GSMA (Groupe Speciale Mobile Association), Mobile Taxes and Fees – A Toolkit of Principles and Evidence, Deloitte, February 2014, https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2016/09/GSMA2014_Report_MobileTaxesAndFees-AToolkitOfPrinciplesAndEvidence-1.pdf ;also read GSMA (Groupe Speciale Mobile Association), Digital Inclusion and Mobile Sector Taxation 2016- The impacts of sector-specific taxes and fees on the affordability of mobile services, Deloitte, 2016, https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2016/09/GSMA2016_Report_DigitalInclusionAndMobileSectorTaxation2016.pdf
76. THE INCOME TAX ACT Specifics* which Edition etc.
77. Kenya Law. Income Tax Act, 2024 Cap.470: Section 1A. https://new.kenyalaw.org/akn/ke/act/1973/16/eng@2024-01-01/source
78. Omondi D., 'KRA to track mobile money transactions in tax cheats purge', Business Daily, 19 January 2023, https://www.businessdailyafrica.com/bd/economy/kra-to-track-mobile-money-transactions-in-tax-cheats-purge-4091688
79. CAK (Communications Authority of Kenya), *Telecommunications Market Structure Under the Unified Licensing Framework*, October 2021, https://www.ca.go.ke/sites/default/files/CA/Telecom%20Market%20Structure/Market%20Structure%20Under%20the%20Unified%20Licensing%20Framework%20October%202021.pdf

Country	Taxation Guidelines/Requirements	
Tanzania[80, 81, 82, 83]	**Corporation Tax**	30% on profits.
	Excise Duty	1. 17% on electronic communication service;[84] 2. 10% of the total amount collected clients in the form of money transfer service fee; 3. Mobile money transaction levy rate between 7 to 7,000 TZS. Depending on amount transacted.[85]
	Value Added Tax	18% on imported network equipment.
	Customs Duty	1. 0 to 25% on imported network equipment; 2. 25% on airtime vouchers; 3. 10% on SIM cards.
	Local Service Levy	0.3% on revenues.
	Municipal Advertising Tax	Varies with area.
	Annual Regulatory Fees	1. 0.8% variable license fee; 2. 0.3% Universal Service Obligation.
	Digital Service Tax	2% on the turnover.
	Surtax on International Incoming Traffic	48% on incoming international calls.
Uganda[86]	**Corporation Tax**	30% on profits.
	Value Added Tax	1. 18% on equipment supplied; 2. 12% on airtime and data; 3. 0.5% on mobile money withdrawals.

80. CAK (Communications Authority of Kenya), Telecommunications Market Structure Under the Unified Licensing Framework, October 2021, https://www.ca.go.ke/sites/default/files/CA/Telecom%20Market%20Structure/Market%20Structure%20Under%20the%20Unified%20Licensing%20Framework%20October%202021.pdf
81. GSMA (Groupe Speciale Mobile Association), Digital inclusion and mobile sector taxation 2015, Page 37 Deloitte, https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2016/09/GSMA2015_Report_DigitalInclusionAndMobileSectorTaxation2015.pdf
82. TRA (Tanzania Revenue Authority), Taxes and Duties at a Glance 2023/2024, https://www.tra.go.tz/images/uploads/public_notice/swahili/TAXES_AND_DUTIES_2023_-_2024.pdf
83. Ibid.
84. TRA (Tanzania Revenue Authority), *Excise Duty on Electronic Communication,* https://www.tra.go.tz/index.php/excise-duty/242-excise-duty-on-electronic-communication
85. TRA (Tanzania Revenue Authority), Taxes and Duties at a Glance 2023/2024, https://www.tra.go.tz/images/uploads/public_notice/swahili/TAXES_AND_DUTIES_2023_-_2024.pdf
86. Abuya, K. Mobile money users in Tanzania are going back to cash payments to avoid high transaction charges, Techcabal, 2023, https://techcabal.com/2023/10/22/tanzania-mobile-money-usage-drops/

Country	Taxation Guidelines/Requirements	
Rwanda[87]	**Corporation Tax**	30% on profits.
	Excise Duty	10% on telephone communication equipment.
Burundi[88]	**Corporation Tax**	30% on profits.
	Value Added Tax	18% on products.
	License fee	Depends on the services and network coverage (fixed amount).
	Annual Royalty	2% of the annual turnover of the electronic communication operator.
	Termination Tax for incoming international traffic	USD 0.16 per minute.
	Specific Tax on national traffic for mobile communication	BIF 52 per minute.
	Ad Valorem Tax	12% on GSM electronic communications.

87. PwC, *Rwanda: Corporate - Other taxes,* 18 July 2023, https://taxsummaries.pwc.com/rwanda/corporate/other-taxes

88. United Nations Economic Commission for Africa. Digital Trade Regulatory Integration: Country Profile Burundi. https://www.uneca.org/sites/default/files/ATPC/cp/Digital%20trade%20regulatory%20integration%20-%20Country%20profile%20-%20Burundi-%20ENG_Rev.pdf ; Also read: Law Gratis. Tax Laws Burundi, 2025. https://www.lawgratis.com/blog-detail/tax-laws-burundi#:~:text=Below%20are%20the%20key%20elements%20of%20tax%20laws,corporate%20income%20tax%20rate%20in%20Burundi%20is%2030%25.

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