UGANDA COMMUNICATIONS COMMISSION

IMPACT OF THE CURRENT TELECOMMUNICATIONS TAXATION POLICY ON THE COMMUNICATIONS SECTOR

May 2026

ACRONYMS/ABBREVIATIONS

ARPU	Average Revenue Per User
ASYCUDA	Automated System for Customs Data
BAU	Business As Usual
CAPEX	Capital Expenditure
CEIR	Central Equipment Identity Register
CIPESA	The Collaboration on International ICT Policy for East and Southern Africa
CSOs	Civil Society Organizations
DRMS	Domestic Revenue Mobilization Strategy
EAC	East African Community
ECASA	Eastern, Central and Southern Africa
FDI	Foreign Direct Investment
FGDs	Focus Group Discussions
FTTH	Fibre to the Home (Fixed Internet)
FY	Financial Year
GDP	Gross Domestic Product
GDPR	General Data Protection Regulation
GSMA	Global System for Mobile Communications Association
ICT	Information and Communications Technology
IFC	International Finance Corporation
IoT	Internet of Things
IR	Inception Report
ISPs	Internet Service Providers
ITU	International Telecommunication Union
KIIs	Key Informant Interviews
MTRS	Medium-Term Revenue Strategy
MB	Mega Byte
MDAs	Ministries, Departments and Agencies
MoFPED	Ministry of Finance, Planning and Economic Development
MoICT & NG	Ministry of Information and Communications Technology and National Guidance
MTN	Mobile Telecommunications Network
MSMEs	Micro, Small and Medium Enterprises
NDAs	Non-Disclosure Agreements
NPA	National Planning Authority
OPEX	Operational Expenditure
OTT	Over-The-Top
QAT	Quality Assurance Team
ROI	Return on Investment
SMS	Short Message Service
SPSS	Statistical Package for Social Scientists
ToRs	Terms of Reference
UCC	Uganda Communications Commission

UGX	Uganda Shillings
URA	Uganda Revenue Authority
USD	United States Dollars
USSD	Unstructured Supplementary Service Data
VAT	Value Added Tax

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ACKNOWLEDGEMENT

On behalf of the Uganda Communications Commission (UCC), I extend my sincere appreciation to ECASA Group of Consultants Limited for undertaking this important study on *The Impact of the Current Telecommunications Taxation Policy on the Communications Sector in Uganda*. The assignment was executed with commendable technical rigor, analytical depth, and professionalism, and through a highly consultative and inclusive process that enriched both the evidence base and policy relevance of the study. I particularly acknowledge the dedication and expertise of the ECASA multidisciplinary team of experts-economists, policy analysts, telecommunications engineers, data specialists, and field researchers, whose commitment ensured the delivery of a high-quality and objective assessment aligned to national development priorities.

UCC is also grateful to the various Government Ministries, Departments, and Agencies that provided data, policy insights, and constructive engagement throughout the study period. Their cooperation was instrumental in strengthening the credibility and comprehensiveness of the analysis. We further appreciate the active participation of licensed telecommunications operators and Internet Service Providers (ISPs), whose openness and practical industry perspectives significantly informed the study's findings and recommendations.

Special recognition is extended to consumer associations, telecommunications business owners, and members of the public across the country who participated in surveys and consultations. Their candid contributions provided invaluable insights into the real-world implications of telecommunications taxation on affordability, access, investment, and digital inclusion.

This study reflects a shared commitment among stakeholders to evidence-based policymaking and to fostering a fair, competitive, and growth-oriented communications sector. UCC trusts that the findings and recommendations will meaningfully inform policy dialogue and reforms aimed at strengthening Uganda's digital transformation agenda and advancing the objectives of National Development Plan IV (NDP IV).

Executive Director
Uganda Communications Commission

EXECUTIVE SUMMARY

The telecommunications sector in Uganda has emerged as a pivotal driver of socio-economic transformation, underpinning progress in digital governance, financial inclusion, education, health, and commerce. Over the past decade, the sector has expanded rapidly, registering over 43 million mobile subscriptions and 27 million internet users by 2023, making it one of the fastest-growing industries in the country. However, this growth is unfolding within a complex and heavy taxation environment that threatens affordability, investment, and innovation. Multiple taxes including excise duties, Value Added Tax (VAT), mobile money levies, and import duties on Information and Communications Technology (ICT) devices collectively elevate the cost of access, limit digital participation, and constrain the sector's contribution to Uganda's digital transformation goals under Vision 2040 and the National Development Plan IV (NDP IV).

This study, commissioned by the Uganda Communications Commission and executed by ECASA Group of Consultants, provides a comprehensive assessment of the impact of the current telecommunications taxation policy on the sector's performance, affordability, and competitiveness. Using a mixed-methods approach that combined quantitative analysis, econometric modelling, fiscal scenario simulations, and extensive stakeholder consultations, the study collected both primary and secondary data from over 1,400 respondents across the country, including government institutions, telecom operators, business owners, and consumers. The analysis also benchmarked Uganda's tax regime against regional peers in East Africa to derive comparative insights and best practices.

Findings from the study reveal that Uganda's telecommunications sector operates under one of the most heavily taxed environments in the region. The cumulative tax burden comprising a 12% excise duty on internet data, 18% VAT, mobile money levies of up to 0.5% on withdrawals, and various regulatory fees has significantly increased the cost of telecom services and devices. This, in turn, has suppressed consumer demand, slowed broadband adoption, and constrained the expansion of network infrastructure, particularly in rural areas. Small and medium enterprises and low-income users are disproportionately affected, leading to widening digital and income divides. Despite substantial contributions to government revenue estimated at over 12% of national VAT and 40% of total excise duty collections the sector's relative contribution to Gross Domestic Product (GDP) has declined, signalling that current tax policies may be undermining long-term sustainability.

Stakeholder consultations further revealed that the complexity and unpredictability of tax laws create significant compliance challenges for telecom operators. Frequent amendments, overlapping levies, and inconsistent policy interpretations have eroded investor confidence and reinforced market concentration among the dominant players. Empirical analysis of price elasticity indicates that demand for telecom services in Uganda is moderately elastic, meaning that tax-induced price increases lead to measurable declines in usage and revenue over time. Fiscal scenario simulations demonstrate that reducing excise and VAT on telecom services and devices could substantially enhance sector performance, increase consumer uptake, and stimulate private investment ultimately yielding higher long-term fiscal returns through expanded market activity and economic growth.

Uganda's telecommunications sector has reached a pivotal moment where tax policy choices will decisively shape the country's digital and economic trajectory under NDP IV and the Digital Uganda Vision. The evidence confirms that telecommunications taxation is not merely a revenue tool but a core development lever with long-term implications for affordability, investment, digital inclusion, and fiscal sustainability. The current high-tax, business-as-usual regime has delivered short-term revenues but has reached its economic limits, constraining usage growth, smartphone adoption, rural connectivity, and the sector's potential contribution to GDP. Econometric and simulation results consistently demonstrate that well-designed reductions in VAT and excise duty expand the user base, stimulate data consumption, crowd in private investment, and ultimately generate higher and more durable government revenues. As Uganda's market has irreversibly shifted from voice to data, taxing smartphones and data services heavily is fiscally counterproductive, while affordability-enhancing reforms unlock broad-based digital participation across education, health, commerce, governance, and financial services. A phased, growth-oriented reform pathway—beginning with moderate tax rationalisation and advancing toward targeted VAT reforms—offers a fiscally credible strategy to align sector performance with Uganda's Tenfold Growth Strategy. By adopting selected best practices from South Korea, including simplified and neutral telecom taxation, reduced reliance on sector-specific excise duties, and investment-friendly tax treatment for digital infrastructure, Uganda can expand its tax base, accelerate digital inclusion, and position telecommunications as a stronger engine of inclusive economic transformation under NDP IV.

Policy Specific Recommendations: The recommendations are informed by empirical findings on affordability, investment, and structural constraints in Uganda's telecommunications sector and are aligned with Uganda Vision 2040, NDP IV, and the 10-Fold Growth Strategy. The recommendations are organised by thematic area and implementation timeframe, with clear institutional responsibilities.

I. Strengthen regulatory, policy, legal and institutional frameworks.

No.	Recommendations	NDP IV Alignment (Programmes)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	Deploy targeted fiscal incentives to reduce the effective price of entry-level 4G and 5G enabled smartphones in order to unlock suppressed demand and accelerate nationwide digital adoption.	Digital Uganda Vision, Digital Transformation Roadmap, NDP IV, the Tenfold Growth Strategy, the Budget Framework Paper, and the Medium-Term Revenue Strategy (MTRS)	MoFPED	URA, UCC, MoICT&NG, Parliament
2	**Develop and operationalise Telecoms Tax Harmonisation Guidelines** to standardise the interpretation and	Digital Transformation;	MoFPED	URA, UCC, MoICT&NG, Parliament

No.	Recommendations	NDP IV Alignment (Programmes)	Lead Entity	Supporting Institutions
	administration of all telecom-related taxes and fees, and to rationalise the telecom tax mix by eliminating overlaps between VAT, excise duty, parafiscal charges, and device-related taxes, thereby reducing the cumulative tax burden on end-users and improving affordability.	Governance & Accountability		
3	**Adopt a phased, rules-based telecommunications tax reform framework** that reorients taxation of type-approved entry-level 4G and 5G enabled smartphones from upfront access taxes to downstream, usage-based revenue mobilisation.	Digital Uganda Vision, Digital Transformation Roadmap, NDP IV, the Tenfold Growth Strategy, the Budget Framework Paper, and the Medium-Term Revenue Strategy (MTRS)	MoFPED	URA, UCC, MoICT&NG, Parliament
4	**Introduce graduated and targeted UCC parafiscal fees and spectrum charges**, applying differentiated rates, discounts, or phased payment schedules to incentivise network rollout in rural and low-income areas and support new market entrants, thereby expanding coverage, and enhancing digital inclusion.	Digital Transformation; Private Sector Development	UCC	MoFPED, MoICT&NG, Operators
5	**Establish Joint Telecoms Fiscal Coordination Committee** comprised of MoFPED, UCC, URA, NPA and Industry Expert representative to review and approve proposed telecom tax or fee changes before implementation.	Digital Transformation; Governance & Accountability	UCC	MoFPED, URA, MoICT&NG, NPA, Industry Experts
6	**Adopt mandatory use of fiscal scenario simulations** (baseline, conservative, aggressive, and combined incentive packages) as part of the approval process for all proposed telecom tax reforms to ensure evidence-based decision-making.	Digital Transformation; Governance & Accountability	MoFPED	UCC, URA, MoICT&NG, NPA
Timeframe: Medium Term (1-3 years)				
7	**Establish a predictable, multi-year telecommunications taxation framework aligned to MTEF and NDP IV**, that limit ad-hoc tax changes and stabilises telecom-related taxes over a defined planning horizon, reducing policy uncertainty and enabling long-term	Digital Transformation; Human Capital Development	MoFPED	Parliament, URA, UCC, MoICT&NG

No.	Recommendations	NDP IV Alignment (Programmes)	Lead Entity	Supporting Institutions
	network investment and infrastructure planning.			
8	**Establish a supportive fiscal and licensing framework** that lowers entry and operational barriers for ISPs, through phased and affordable licensing fees, targeted tax incentives and streamlined tax administration to enable wider service provision and inclusive digital access.	Digital Transformation; Human Capital Development; Private Sector Development	UCC	MoICT&NG, MoFPED
Timeframe: Long Term (3-5 years)				
9	**Integrate digital transformation objectives into all telecom tax related decisions**, ensuring affordability, device access, and connectivity expansion are explicitly assessed before tax changes and fee measures are approved. *Investment impact assessments for telecom taxation should to ensure that long-term fiscal decisions support affordability, universal access, and growth of the digital ecosystem.*	Digital Transformation; Human Capital Development;	MoFPED	UCC, URA, MoICT&NG, Parliament. NPA
10	**Design and implement fiscal reforms that support the growth of digital ecosystem**, ensuring that taxation of telecom support innovation, service expansion, affordability and adoption across services such as fintech, e-commerce, digital payments, online education, and health technology rather than constraining growth through excessive or fragmented levies.	Digital Transformation; Human Capital Development;	MoFPED	MoICT&NG, UCC, URA

II. Increase internet connectivity and uptake of digital products and services across the country.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	**Reduce excise duty on data and airtime** (e.g., from 12% to 5%) to improve affordability and stimulate usage. Lowering data costs will encourage the adoption and usage of new	Digital Transformation; Private Sector Development;	MoFPED	URA, Parliament, UCC

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	technologies such as; Artificial Intelligence (AI) to enhance operational efficiency as well as widening the tax base. Do not pursue excise-duty-only reforms in isolation; instead, combine any excise adjustments with VAT reforms for maximum effectiveness.			
2	**Reduce VAT on mobile data (e.g., from 18% to 14%)** in the short term as an initial reform package / option shown by simulations to increase data usage and total revenue through consumption-led growth.	Digital Transformation; Private Sector Development	MoFPED	URA, Parliament
3	**Introduce targeted tax incentives on digital devices and services** (e.g., reduced VAT on devices, lower excise on data bundles under 1 GB) to lower device costs and accelerate smartphone adoption and data use.	Digital Transformation; Private Sector Development;	MoFPED	URA, UCC
4	**Remove or reduce excise and VAT on entry-level smartphones** as simulations show strong gains in adoption, usage, and long-term revenue expansion.	Digital Transformation; Private Sector Development	MoFPED	URA, UCC
5	**Prioritise VAT Reform over Excise Duty Reform for Maximum Impact,** by targeting VAT on mobile data as the primary instrument for deeper reform, including partial or full VAT removal, rather than focusing solely on excise duty adjustments.	Digital Transformation Programme – Affordable access to digital services; Private Sector Development	MoFPED	URA, UCC
6	**Classify internet data as an essential service rather than a luxury good**, in line with global best practices, recognising its critical role in enabling innovation, education, digital inclusion, and economic enhancement.	Digital Transformation; Governance and Accountability	MoFPED	UCC, MoICT&NG
Timeframe: Medium Term (1-3 years)				
7	**Implement tax policies that prioritise the affordability of data and digital devices as essential public goods,** supporting e-education, e-healthcare, e-commerce, e-agriculture, and e-civic participation, while ensuring equitable access for all population groups.	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG
8	**Phase in VAT removal on mobile data as a medium-term growth-enhancing reform,** subject to fiscal transition planning and	Digital Transformation – Universal and	MoFPED	URA, UCC, MoICT&NG, NPA

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	monitoring. Sequence reforms by starting with conservative reductions, followed by targeted VAT reform, while continuously monitoring usage, revenues, and inclusion indicators.	affordable connectivity; Private Sector Development		
9	**Promote consumption-led revenue growth by keeping data prices affordable**, enabling expansion of the subscriber base and increased usage, and boosting tax revenues over the medium term.	Digital Transformation; Private Sector Development	MoFPED	URA, UCC
Timeframe: Long Term (3-5 years)				
10	**Offer long-term and sustained tax incentives**, including accelerated depreciation, and performance-linked rebates to operators expanding coverage for rural and underserved areas	Digital Transformation; Private Sector Development	MoFPED	UCC, MoICT&NG, Operators
11	**Promote digital inclusion through targeted tax reliefs and subsidies for devices and network expansion.** Targeted tax relief on devices would gradually increase smartphone penetration, enabling higher data usage and broader participation in digital services.	Digital Transformation; Private Sector Development	MoFPED	UCC, URA, MoICT&NG, NITA-U

III. Improve efficiency in business processes and public service delivery.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	Leverage telecommunications tax reform as a structural enabler for digitalization of business operations and public service delivery.	Digital Transformation; Human Capital Development	MoFPED	MoFPED, UCC, MoICT&NG
2	**Streamline tax procedures and reporting for SMEs, mobile money agents, and small handset retailers** to reduce compliance burdens, improve formalisation and reliability, and enhance efficiency.	Digital Transformation; Human Capital Development	URA	MoFPED, MoICT&NG, UCC, Bank of Uganda, Parliament
3	**Reform the mobile-money tax design** and introduce simplified revenue or profit-based charge on mobile money providers, while introducing exemptions or minimum thresholds for low-value transactions to reduce compliance burdens, protect inclusion, and improve the efficiency of mobile money	Digital Transformation; Human Capital Development	MoFPED	MoFPED, MoICT&NG, UCC, Bank of Uganda, Parliament

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	business and public service delivery, hence enhancing the formal sector.			
4	**Enhance taxpayer education** through regular publication and wider dissemination of clear and user-friendly guidance notes, digital tax calculators, and targeted awareness campaigns on PAYE, VAT, Excise and WHT obligations to enhance compliance and improve efficiency in service delivery	Digital Transformation; Human Capital Development	URA	MoFPED, UCC
Timeframe: Medium Term (1-3 years)				
5	**Strengthen inter-agency coordination on telecom taxation**, through operationalisation of the established inter-agency coordination committee (MoFPED, MoICT&NG, URA and UCC) to ensure consistent tax application, expedited approvals and strong monitoring to meet service-delivery timelines.	Digital Transformation; Human Capital Development; Public Sector Transformation		
6	**Enhance digitalization and integrate URA and UCC systems** for filing, assessments, audits, and licensing to eliminate duplicate reporting, reduce compliance costs and disputes, and accelerate approvals, thereby improving efficiency in telecom business processes.	Digital Transformation; Human Capital Development; Public Sector Transformation	URA	UCC, NITA-U, MoFPED
7	**Use evidence-based modelling tools** (elasticity analysis, demand forecasting, fiscal scenario modelling) to guide annual telecom tax and regulatory decisions, enabling more efficient policy design, predictable investment planning, and improved delivery of digital public services.	Digital Transformation; Human Capital Development;	MoFPED	URA, UCC, MoICT&NG
8	**Institutionalise Telecom Tax Reforms within the Medium-Term Revenue Strategy (MTRS),** embed telecom tax reforms and fiscal scenario simulations (baseline, conservative, aggressive, combined) into the MTRS and Budget Framework Paper to ensure predictability and credibility.	Digital Transformation; Human Capital Development	MoFPED	URA, UCC
Timeframe: Long Term (3-5 years)				

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
9	**Adopt a balanced taxation framework** that meets short-term revenue needs, while supporting long-term sector growth and investment, as well as efficient business operations.	Digital Transformation; Human Capital Development; Private Sector Development	MoFPED	URA, UCC
10	**Integrate telecom taxation with e-government,** by aligning telecom tax policy with national digital platforms to streamline processes, reduce service delivery costs, and enhance the efficiency and reliability of public services.	Digital Transformation; Public Sector Transformation		
11	**Implement sector-wide performance monitoring** to measure the impact of tax reforms on service quality, coverage, affordability, and economic output, enabling data-driven policy decisions that improve business efficiency and public service delivery.	Digital Transformation; Human Capital Development;	UCC	MoFPED, URA, MoICT&NG

IV. Reduce vulnerability, gender inequality and inequity in the telecommunications services.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	Explicitly use fiscal policy to lower digital entry barriers for vulnerable and underserved populations through targeted exemptions on entry-level smartphones.	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
2	**Design and implement targeted tax relief schemes for the marginalised underserved groups** (youth, students, women, older persons, PWDs) such as zero-rating educational platforms and assistive devices or providing subsidised low-cost data packages.	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
Timeframe: Medium Term (1-3 years)				
3	**Reduce CAPEX-related costs** through lower import duties on network equipment, providing tax credits and rebates for rural infrastructure investments to expand	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	affordable connectivity and reduce vulnerability and geographical inequities in telecommunications services.			
4	**Enhance digital literacy and awareness support,** through targeted digital and financial literacy programs for women, youth, PWDs, orders persons, and rural communities. Explicitly recognise telecom tax policy as a lever for digital inclusion, education, innovation, and productivity growth—not solely as a revenue instrument.	Digital Transformation; Human Capital Development	UCC	MoICT&NG, MoGLSD, MoLG
5	**Expand tax incentives for innovations that promote social inclusion,** such as R&D tax credits, for telecom operators, digital service providers, and fintech innovators that develop inclusive solutions to reduce vulnerability, gender inequality, and inequitable access to telecommunications services	Digital Transformation; Human Capital Development; Private Sector Development	MoFPED	URA, MoICT&NG, UCC
Timeframe: Long Term (3-5 years)				
6	**Ring-fence telecom revenues for digital inclusion** by allocating a portion of sector revenues to support inclusion programs, such as rural connectivity, digital and financial literacy, affordable devices, and gender equality initiatives to ensure equitable access to digital services.	Digital Transformation; Governance and Accountability	MoFPED	UCC, URA, MoICT&NG, Parliament
7	**Undertake annual sector-wide performance monitoring** to assess cumulative tax burden and ensure it does not compromise affordability or increase vulnerability, thereby safeguarding Uganda's universal access to ICT services.	Digital Transformation; Human Capital Development	MoFPED	URA, UCC, MoICT&NG
8	**Implement a universal access strategy,** adopting risk mitigation, targeted subsidies and incentives, and demand creation to enhance telecom investments in rural and hard-to-reach areas to promote equitable access.	Digital Transformation; Human Capital Development	UCC	MoICT&NG, MoFPED, Operators

Recommendations to promote the use of mobile money services as part of Uganda's transition to a cashless economy

Introduce a Targeted Tax Incentive & Digital Ecosystem Support Framework to Expand Mobile Money Usage

1. **Implement Tiered Transaction Tax Incentives:** Reform mobile money taxation to reduce the cost burden on low- and medium-value transactions. This can involve applying **Zero tax/no withdrawal charges** on transactions below a defined threshold (e.g., UGX 5,000–1000,000). This threshold has been informed by the current amount that the government is providing to individuals under the PDM. Under this arrangement, MoFPED can send the money directly to verified beneficiaries on their mobile phones without involving the parish committee staff who have been accused of corruption practices. The Ministry can then introduce **gradual tax increase** on higher transaction bands to balance revenue needs just as is the case with PAYE.

The justification is that lower costs encourage uptake among low-income users who transact small amounts daily, removing a key barrier to adoption and also promoting financial inclusion. The expected outcome is that more users transacting digitally, particularly lower-income and rural populations thereby expanding the tax base.

2. **Subsidize Merchant Mobile Money Fees:** Introduce **merchant fee rebates or tax credits** for businesses that adopt mobile money payments. This requires the Government offsetting a portion of the mobile money merchant fee (e.g., 25–50% rebate) prioritizing adoption in key sectors of the economy such as retail, agriculture, transport, and utilities. This reduces the cost of accepting digital payments, incentivizing businesses to shift from cash and accelerating ecosystem growth.
3. **Support Agent Network Expansion & Liquidity:** Ensure strong agent presence and float availability across underserved areas by providing **tax breaks or micro-grants** to agents in low-density districts and encouraging local banks/telecoms to adopt shared agent models. This is because Agents are critical touchpoints for cash-in/out and trust building; strong networks reduce barriers to mobile money use.

Alignment with Telecommunications Tax Policy Reform

This recommendation **balances revenue objectives with financial inclusion** by:

- Reducing tax barriers that inhibit usage (especially for small/value transactions).
- Leveraging targeted incentives rather than blanket taxation.
- Aligning sector incentives (telecoms, financial services, government payments) toward a unified digital payments agenda.

1 INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION

Uganda's telecommunications sector has become a foundational driver of national development, enabling digital transformation across government service delivery, commerce, education, health, and financial inclusion. Over the past decade, rapid expansion in mobile connectivity, broadband penetration, and digital financial services has positioned the sector as a key pillar for achieving Vision 2040, the Digital Uganda Framework, and the National Development Plan IV (NDP IV).

However, this growth trajectory unfolds within a complex and increasingly demanding fiscal environment. Uganda's telecom ecosystem is characterized by a wide range of taxes and regulatory fees, including excise duties, VAT, mobile-money levies, device import taxes, and spectrum charges, that collectively shape pricing, investment, and the overall cost of digital participation. While these taxes play an essential role in domestic revenue mobilization, concerns have increasingly emerged regarding their cumulative effects on affordability, digital inclusion, market competitiveness, and long-term sector sustainability.

Recent reforms, such as the introduction of a 12% excise duty on internet data in place of the OTT tax, have intensified debate on whether the current tax structure advances or constrains Uganda's digital transformation ambitions. In particular, rising consumer costs, slowed network expansion in rural areas, and constrained innovation among service providers point to the need for a rigorous, evidence-based policy review.

Against this backdrop, this study provides a comprehensive assessment of how telecommunications taxation affects sector performance, consumer behaviour, investment incentives, and Uganda's broader digital economy. Drawing on quantitative analysis, economic modelling, comparative regional benchmarking, and extensive stakeholder consultations, the report offers actionable insights to guide government ministries, regulatory agencies, operators, and development partners toward a balanced, progressive, and growth-enhancing tax framework.

1.2 BACKGROUND AND RATIONALE

Over the past decade, Uganda's Information and Communications Technology (ICT) sector has experienced substantial growth, emerging as the fastest-growing sector of the national economy. The sector has grown at an average rate between 14.8 % and 19.7 % annually in recent years[1]. The sector expanded from an estimated market size of USD $175 million in 2009 to approximately USD $730 million by 2022. Over the same period, its contribution to Gross Domestic Product (GDP) more than doubled, rising from 0.7% in 2009 to 1.7% in 2022[2]. Despite

[1] Ministry of ICT and National Guidance (2023). Digital Transformation Roadmap 2023/24–2027/28. Kampala: Ministry of ICT & National Guidance.

[2] Uganda Bureau of Statistics (UBOS), Key Performance Indicators, 128th Issue: Q2 2022/23, March 2023

these gains, recent trends indicate a decline in the sector's proportional contribution to GDP, suggesting potential constraints to sustained growth, including policy and regulatory challenges.

Regional and global analyses underscore the transformative potential of digital economies. The International Finance Corporation (IFC) and Google, in their e-Conomy Africa 2020 report, estimated that Africa's internet economy could contribute up to USD $180 billion to the continent's GDP by 2025, representing 5.2%, and rise to USD $712 billion or 8.5% by 2050[3]. Complementing this outlook, the Mobile Economy 2022 report revealed that mobile technologies and services globally generated USD $4.5 trillion in economic value in 2021 (5% of global GDP), with projections surpassing USD $5 trillion by 2025 due to increasing adoption of mobile services.

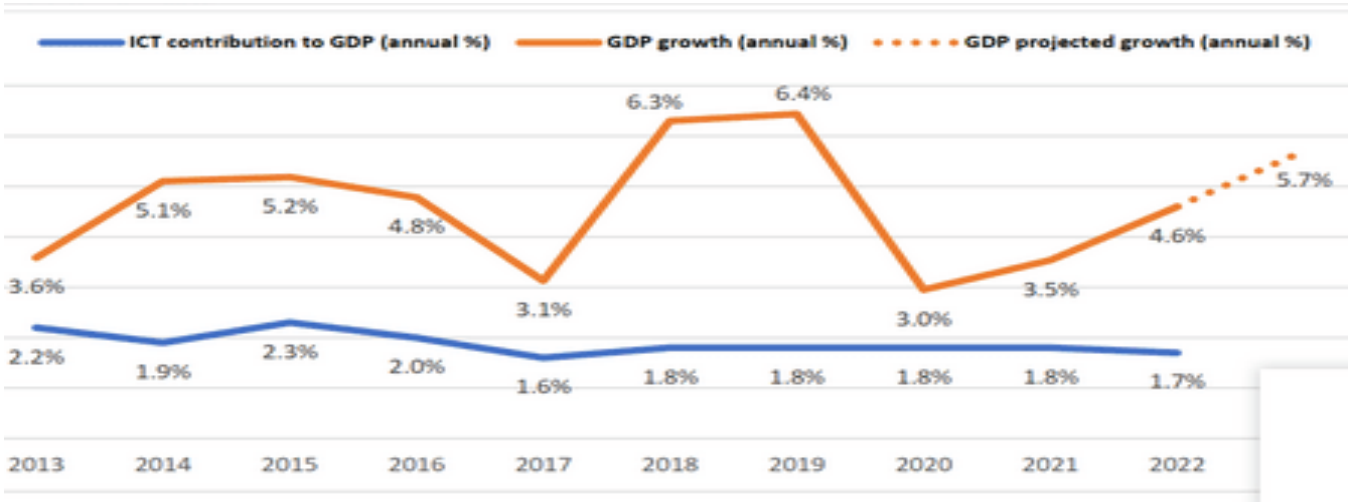
Further, the International Telecommunication Union (ITU) has highlighted the catalytic role of digital technologies in enabling innovation, boosting productivity, and stimulating economic transformation. ITU's 2019 research found that a 10% increase in mobile broadband penetration in Africa could raise GDP per capita by 2.5%. Moreover, a 10% reduction in mobile broadband costs could boost adoption by over 3.1%, underscoring the strong correlation between affordability and digital inclusion.

In Uganda, however, a number of studies (e.g. CIPESA, 2025; Research ICT Solutions, 2022; Rukundo and Magumba, n.d; ITU, 2015; ITU, 2021; Global System for Mobile Communications Association, GSMA, 2008; The World Bank and Digital Development Partnership, 2023; Shinyekwa, 2013; Niesten, 2024; and Pushkareva, 2021) among others suggest that high taxation on the ICT sector is a major impediment to economic growth. Research conducted by Research ICT Solutions (2018)[4] and CIPESA (2022)[5] identified sector-specific taxes-particularly on digital devices and internet usage as key barriers to access and expansion. The imposition of excise duties, the Over-The-Top (OTT) tax, and other levies have contributed to high costs for consumers, thereby limiting usage and stifling sectoral growth. These rates include; VAT on telecom services at 18%; Excise Duty on Voice/Data/SMS at 12%; OTT/OTT-equivalent Tax at 5% (on data; previously OTT repealed); Import Duties on Devices/Infrastructure that ranges between 10-25%; Income Tax at 30%; and License/Spectrum Fees which are charged annually plus bidding fees.

This is further illustrated by the sector's diminishing contribution to GDP-from a peak of 2.3% in 2015 to 1.8% in 2020-despite significant tax contributions as demonstrated in Figure 1[6]. In FY 2019/2020, major telecom operators MTN and Airtel contributed 12.7% of total VAT revenue and accounted for 40% of total excise duty revenue, signalling the sector's fiscal importance. Nonetheless, this fiscal burden appears to be undermining the sector's broader developmental potential.

[3] IFC and Google (2020). e-Conomy Africa 2020: Africa's $180 billion Internet economy future
[4] Research ICT Solutions (2018). ICT Sector Taxes in Uganda
[5] CIPESA (2022). Digital Taxation in Uganda: A Hindrance to Inclusive Access and Use of Digital Technologies
[6] MoICT&NG (2023). Concept Paper: Reduce the Cost of ICT Infrastructure Rollout-Increase Uptake of Broadband Services, Increase Government Tax Revenue

Figure 1: Direct ICT Contribution to GDP at Market Prices



Source: *Ministry of ICT and National Guidance, 2023*

Recognizing the importance and need for creating a more enabling environment for the sector growth and sustainability, the Uganda Communications Commission (UCC) as the regulator of the communications sector seeks to undertake a comprehensive assessment of the impact of the current telecommunications taxation policy. This study will provide empirical evidence and policy-relevant insights into how taxation affects sector performance, investment, affordability, and digital inclusion.

It is against this background that UCC commissioned a competent and independent consulting firm to conduct this study. The findings informed recommendations for a balanced and progressive tax policy framework that supports sector development while safeguarding fiscal sustainability.

1.3 PURPOSE

The main objective of this study is to evaluate the impact of the current taxation Policies and their effects on pricing, affordability and penetration patterns of telecommunication services in Uganda.

1.4 OBJECTIVES

The specific objectives of the study as per the ToRs include;

1. Conduct an in-depth review of Uganda's tax policy (fiscal regime), encompassing both general and sector-specific taxes, on the Telecoms Industry.

2. Evaluate and estimate the impact of the general and ICT sector specific taxes[7], on the entire value chain of the telecommunications sector (Telecom services and products), from investment decisions to the final adoption of services or products by end consumers.
3. Identify and analyze challenges faced by telecommunications companies in complying with the tax policy, including any ambiguities or complexities in the regulations that may hinder full compliance.
4. Investigate the empirical evidence regarding the own-price elasticity of telecom service demand and analyze how telecommunication excises on both services and handsets influence demand and if such taxes are justified by arguing that the demand for telecom services is inelastic.
5. Conduct a comparative analysis of Uganda's telecommunications tax policy with those of other East African countries, focusing on successful models that have positively influenced sector growth, investment, and affordability.
6. Investigate the perspectives of various stakeholders, including government bodies, telecommunication companies, consumers, and industry experts, to gain insights into their perceptions of the current tax policy and its impact on the sector.
7. Investigate and analyze the holistic effects of tax-related price increases on key indicators such as penetration rates, affordability, traffic volume, total turnover within the telecommunications sector, and the subsequent impact on investment and explore how these increases may influence consumer behaviour, market dynamics, and the overall economic landscape of the industry.
8. Develop and simulate fiscal scenarios based on potential reductions of fiscal obligations to provide policymakers with useful inputs on stimulating the development of the telecommunications market. In the simulations, any used Models should consider reduced tax burdens to encourage adoption (achieving universalization of the telecommunications service) and investment (maximizing network deployment), including scenarios such as Base scenario, Reducing Cost of Access, and Usage[8], Reducing Cost of Rolling out Infrastructure, etc.
9. Based on the findings, suggest policy recommendations to optimize the telecommunications sector's contribution to Uganda's economic development. Consider adjustments to taxation policies that promote growth, spur uptake and penetration of telecom services, promote investment, and equitable access while ensuring fair revenue collection.

1.5 Structure of the Report

This report is organised into thirteen chapters, each addressing a critical component of the analysis on the impact of telecommunications taxation in Uganda. Together, these chapters provide a comprehensive and evidence-based assessment to guide policymakers in developing

[7] ICT sector-specific taxes (on airtime, mobile data, VAS, Mobile money fees, Mobile money transaction value etc.) and other general business taxes (VAT, PAYE taxes, Corporate Income taxes etc.)

[8] Suspension of a major part of ICT-sector specific taxes for at least two years and the resultant changes in volume of usage and government revenue, Waive import duty and VAT on low-cost smartphones within a set ceiling, provision of subsidies for the most marginalized etc.)

a telecom tax framework that balances revenue needs with affordability, innovation, and inclusive sector growth.

Chapter 1 presents the introduction and background, outlines the study objectives, scope, and methodology, and situates the analysis within Uganda's broader digital and fiscal policy context.

Chapter 2 reviews the global and regional literature on telecommunications taxation, highlighting theoretical perspectives, international trends, and comparative experiences relevant for Uganda.

Chapter 3 describes the methodological approach used in the study, including data sources, analytical techniques, sampling strategies, economic modelling procedures, and limitations.

Chapter 4 provides an overview of the telecommunications sector in Uganda, covering market structure, key players, service uptake trends, and the existing fiscal and regulatory landscape.

Chapter 5 presents the socio-demographic characteristics of telecom business operators and consumer respondents, offering context for interpreting subsequent findings.

Chapter 6 analyses the impact of general and sector-specific taxes across the telecom value chain, including effects on pricing, adoption, usage, investment, and market dynamics.

Chapter 7 examines compliance challenges within the current tax regime, including administrative barriers, legal ambiguities, and stakeholder experiences with tax enforcement.

Chapter 8 estimates the own-price elasticity of demand for telecom services and evaluates how excise duties and other levies influence consumption patterns.

Chapter 9 provides a comparative assessment of Uganda's telecom tax policy within the East African region, drawing lessons and best practices from neighbouring countries.

Chapter 10 synthesises stakeholder perspectives from national-level actors, telecom operators, SMEs, and consumers, providing qualitative insights into how taxes affect the sector.

Chapter 11 evaluates the effects of tax-induced price changes on affordability, traffic volumes, investment behaviours, and the sector's contribution to GDP.

Chapter 12 presents fiscal scenario simulations—base case, reduced cost of access, reduced infrastructure cost, and combined incentive models—to inform policy options for optimising sector growth.

Chapter 13 outlines policy recommendations, offering actionable short- and medium-term reforms aimed at promoting digital inclusion, enhancing investment, simplifying compliance, and aligning taxation with Uganda's digital transformation agenda.

2 APPROACH AND METHODOLOGY

2.1 TASKS AND ACTIVITIES OF THE ASSIGNMENT

The assessment was successfully undertaken by following the logical flow of tasks outlined in the ToRs and illustrated in Figure 2, ensuring a clear and timely progression of activities and delivery of all outputs.

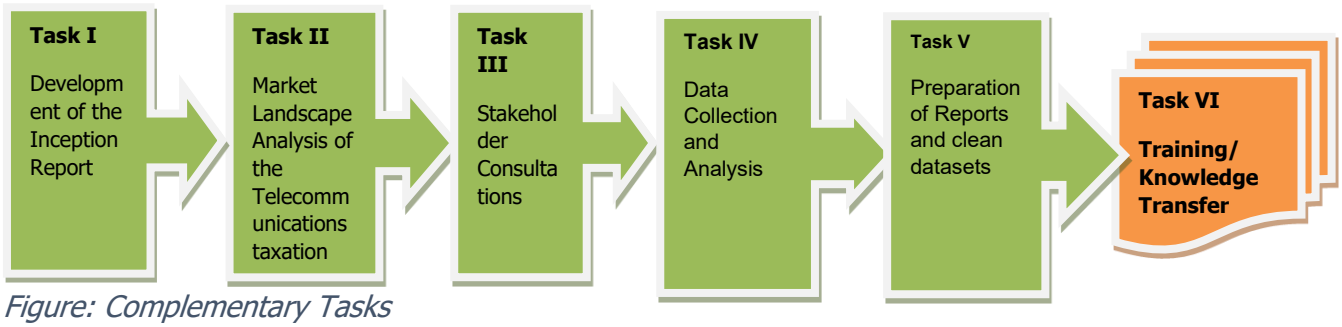


Figure: Complementary Tasks

2.2 OVERALL APPROACH AND METHODOLOGY

The overall approach was grounded in a rigorous, evidence-based assessment that combined both qualitative and quantitative methodologies. This mixed-methods approach provided comprehensive coverage of all dimensions of the telecommunications taxation policy-including tax types and instruments, tax rates and structures, incentives and exemptions-and their multifaceted impacts on the sector. The methodology was structured to align with the nine core objectives outlined in the ToRs and was informed by insights from the initial desk review and the pre-inception discussions with the client (UCC). The assessment was executed through five main complementary phases:

1. Desk Review and Contextual Analysis
2. Stakeholder Engagement and Data Collection
3. Economic and Policy Impact Analysis
4. Comparative Regional Review and Scenario Simulation
5. Synthesis and Development of Policy Recommendations

2.2.1 Mixed-Methods Approach

The assessment combined:

a) **Quantitative methods**, focusing on the collection and analysis of quantitative data; both primary and secondary. This included financial records, industry performance metrics, tax revenue data, number of devices, and consumer behaviour statistics. A survey was carried out on three categories of stakeholders of the telecommunication sector. These included Consumers of telecommunication services, businesses owners and telecommunication operators; and

b) **Qualitative methods**, aimed at capturing stakeholder insights, contextual factors, perceptions and perspectives that may not be adequately reflected through quantitative data alone.

This integrated approach ensured triangulation and enhanced the validity, reliability and depth of findings.

2.2.2 Data Collection Methods

Both primary and secondary data were collected using the following data collection methods:

a) **Document Review:** The study commenced with a comprehensive and systematic review of Uganda's fiscal regime, focusing on both general and telecommunications-specific taxation, including direct and indirect taxes, excise duties, VAT, import tariffs, handset import volumes, handset types and origins, and regulatory levies. The study conducted an in-depth analysis of policy documents, legal and regulatory frameworks, tax schedules, compliance guidelines, previous studies, statistical reports, and academic literature to build a strong understanding of the tax ecosystem as it applies to the telecommunications sector and its evolution over time. This review established the policy context and identified the full range of applicable taxes and fees affecting the sector. Additionally, the study undertook a comparative analysis at the regional, continental, and global levels to identify best practices and successful models that informed the formulation of context-appropriate and forward-looking policy recommendations for Uganda.
b) The following methods were used for collection of primary data:
    1) **Key Informant Interviews (KIIs):** The study conducted in-depth interviews with strategically selected stakeholders at multiple levels, including government officials, regulatory agencies, telecom operators, consumer groups, distributor organisations, and tax authorities. The selection of informants was carried out in consultation with and approved by UCC. This process was guided by a stakeholder mapping and engagement approach validated by the UCC.
    2) **Focus Group Discussions (FGDs):** FGDs were held with diverse consumer groups across different regions to gather perspectives on how taxation influences access, affordability, and usage of telecommunications services.
    3) **Surveys:** Structured surveys targeting telecom service users, small and medium enterprises (SMEs), consumer advocacy groups and industry associations were conducted to gather quantitative data on consumer behaviour, service usage patterns, and the perceived impact of current taxation policies.

A complete set of the data collection tools is provided under Annex I of this report.

2.2.3 Stakeholder Engagement

Meaningful stakeholder engagement was central to the study. The study ensured the active involvement of key actors throughout the process, including:

- Relevant Government Ministries, Departments and Agencies
- Telecommunications companies and industry associations
- Civil Society Organizations (CSOs)
- The Academia
- Consumer rights and advocacy organizations
- The general public
- The media

Engagement was done through interviews, consultations, validation workshops, and feedback sessions. A detailed Stakeholder Engagement Roadmap was developed to guide this process. This participatory approach ensured that diverse voices and perspectives are considered, and that findings are grounded in the realities of stakeholders.

2.2.4 Sampling Strategy

The study employed a multistage sampling approach using cluster random sampling, stratified random sampling, snowball sampling, and purposive sampling to determine the appropriate sample size. Cluster random sampling was used to create subgroups according to subregions, with each subregion forming a cluster due to the heterogeneity of the population within a shared geographical area. Within these clusters, the team applied stratified random sampling by dividing the population into distinct strata based on characteristics such as rural/urban location, age, gender, and type of business. Proportional random sampling was then conducted within each stratum to obtain a representative sample, ensuring adequate representation across all key segments and enabling meaningful comparisons and generalization of results.

In addition, snowball and purposive sampling techniques were applied to identify and recruit key stakeholders with specialised knowledge relevant to the study. These stakeholders participated in surveys and interviews, providing valuable qualitative insights that enriched the overall analysis.

Table 1: Sampling Approach and Sample Size Determination

Sampling Level	Description	Sampling Method	Justification
National (17 sub-regions)[9]	Kampala, Buganda, Busoga, Bugisu, Bukedi, Sebei, Teso, Lango, Karamoja, Acholi, Madi, West Nile, Bunyoro, Tooro, Ankole, Rwenzori, Kigezi	Applied Cluster and Stratified Sampling in sample selection. Sample size determined based on Krejcie and Morgan (1970) table	Ensures geographic and demographic representation and logistical management
Urban/Rural	Strata	Stratified sampling was used to subdivide the clusters into Rural and Urban. Additionally, Krejcie and Morgan (1970) table for sample size determination.	Ensure representation of the rural and urban since the population in each stratum is expected to be homogeneous

[9] Uganda Bureau of Statistics 2024: The National Population and Housing Census 2024 – Final Report - Volume I (Main), Kampala, Uganda

Sampling Level	Description	Sampling Method	Justification
		The UBOS (2020) business census report was used to provide the population size	
Urban/Rural split	Proportional allocation	Proportional random sampling for consumers, Purposive and snowball sampling for others	Captures urban-rural tax impact differentials

Table 2: Sample Size and Distribution Table

Target Group	Targeted Sample Size	Achieved Samples	Sampling Method	Regions Covered
Surveys				
Mobile and internet consumers	1207 (284 per region)	992 (82%)	Stratified random sampling	Kampala, Buganda, Busoga, Bugisu, Bukedi, Sebei, Teso, Lango, Karamoja, Acholi, Madi, West Nile, Bunyoro, Tooro, Ankole, Rwenzori, Kigezi
Handset sellers (retailers/importers)	150	125 (83%)	Purposive & snowball sampling	Kampala (80), Border towns (40), Regional towns (30)
Key Informants				
URA, MoICT, MoFPED (Tax Policy Department), UCC, Telecom Operators, BOU	30	22	Purposive sampling	Kampala-based
Focus Group Discussions				
Youth (urban & rural)	4	4	Purposive sampling	Central, Northern, Eastern and Western Uganda
Women-led households	4	4	Purposive sampling	Western Uganda, Central
Persons with disabilities (PWDs)	4	4	Purposive sampling	Eastern Uganda
Male Persons	4	4	Purposive sampling	Western Uganda
Handset importers association / major dealers	8	8	Purposive	Kampala

Sampling Notes

- **Consumers:** Participants were drawn from National Population and Housing Census clusters and telecom usage databases obtained through UCC/telecom operators. These datasets enabled the team to determine the final sample size using an empirical formula by Krejcie and Morgan (1970).

- **Handset Dealers:** Snowball sampling was applied to reach informal and unregistered traders who were not captured in UCC or URA registries.
- **KIIs and FGDs:** Selection prioritised individuals with relevant experience, policy influence, and diverse perspectives on the fiscal, legal, regulatory, and development implications of the current taxation framework.

2.2.5 Economic and Policy Impact Analysis

To assess the economic implications of the current tax regime, the study undertook the following activities:

i) **Value Chain Impact Assessment:** The team analysed the full telecommunications value chain-from infrastructure development to consumer access—to determine how taxation influences investment decisions, service pricing, innovation, and overall market uptake.
ii) **Elasticity Modelling:** An empirical analysis of own-price elasticity of demand for telecom services and handsets was conducted using the available data. This provided insights into how consumers respond to tax-induced price changes and whether the existing tax measures are economically justifiable.
iii) **Compliance and Administrative Burden Analysis:** The team mapped challenges related to tax compliance through regulatory review and stakeholder feedback, identifying ambiguities, inefficiencies, and administrative burdens within the current system.

2.2.6 Comparative Regional Analysis

The study conducted benchmarking through desk reviews and key informant interviews to compare Uganda's telecom taxation policy with those of selected East African countries and other relevant jurisdictions (including Kenya, Rwanda, Tanzania, Ethiopia, and South Korea). The analysis focused on:

- Taxation structures
- Regulatory and Fiscal Frameworks
- Impact on sector performance (revenue contribution, penetration, investment, consumer prices and affordability, compliance and public acceptance etc.)
- Sustainability and predictability of the tax regime
- Lessons learned and best practices relevant to Uganda

2.2.7 Fiscal Scenario Simulation

Using tax and sectoral data, the study developed simulations of various fiscal scenarios to generate evidence-based policy recommendations. These simulations included:

i) **Base Scenario:** Continuation of current policy-Business As Usual (BAU).
ii) **Reduced Cost of Access and Usage Scenario:** Modelling reductions in excise and VAT on services and devices.

iii) **Reduced Cost of Network Roll-out Scenario:** Simulating tax incentives for infrastructure investment.

Each scenario was assessed based on its potential impact on sector penetration, affordability, revenue generation, and investment attractiveness.

2.3 DATA ANALYSIS AND MANAGEMENT

Following data collection, the study undertook a structured and rigorous data analysis process to ensure that the findings accurately reflected the realities of Uganda's telecommunications sector and provided a solid basis for policy recommendations. The team first conducted a preliminary review of all data to identify and address errors, omissions, or inconsistencies, including final coding of open-ended responses and classification of emerging themes. The dataset was then cleaned using a combination of visual inspection and computer-aided procedures in SPSS version 23 and STATA version 17 to ensure data quality and reliability. Qualitative data was analysed using Atlas.ti.

2.3.1 Quantitative Data Analysis

The study subjected quantitative data to descriptive, inferential and econometric analysis. Econometric analysis was used to evaluate the direct and indirect impacts of the current telecommunications taxation policy. Additionally, the study carried out fiscal simulations. The simulations helped in forecasting what would happen under different tax variations. The analysis included modelling the effects of various tax instruments on key sector indicators such as investment levels, service pricing and affordability, and consumer behaviour. Ordinary regression analysis was carried out to establish the elasticity of telecommunication services. This was useful in quantifying the degree of responsiveness of demand to price.

Key indicators analysed included:

i) **Investment indicators:** Annual capital investment in telecom infrastructure, FDI inflows to the telecom sector.
ii) **Affordability indicators:** Effective price of mobile services (per minute, per MB), handset prices.
iii) **Access and penetration indicators:** Mobile and internet penetration rates, subscriber growth, usage volumes (voice minutes, data consumption).
iv) **Government Revenue generated from telecom:** Total government revenue by the sector, Average Revenue Per User (ARPU).
v) **Mobile data traffic:** Changes in access patterns, switching behaviour towards mobile data internet
vi) **Voice bundle traffic:** Effective tax induced price on voice bundle such as investment and products; tax as a percentage of revenue or end-user price.

To estimate the impact of tax policy, the study has estimated four econometric models for each of the indicators, including investment, access and penetration, revenue and traffic, broadband, pricing, and coverage. The key dependent and independent variables included in the

econometric and simulation models, together with their definitions, are summarised in Table 3. The models comprise both panel data and cross-sectional approaches. These include:

Multiple Regression/Time Series Models: These models have been used to estimate the taxation of various telecommunication services; these include: -investment, affordability, coverage and penetration, e.g.:

$$Y_{it} = X\beta + \varepsilon_{it} \quad (1)$$

Where; it stands for observation i at time t, Y_{it} is a total revenue from telecommunication sector, X is a vector of independent variables while β is a vector of parameters to be determined.

The model specification tests and robust checks were be carried out to ensure the robustness and reliability of the results.

Log-Log Models for Elasticity Estimation: To estimate own-price elasticity of demand for telecom services (These include voice, SMS, data) and handsets (such as smartphones, feature phones):

$$In\ (Quantity\ Demanded)_{it} = \alpha + \beta ln\ (Price)_{it} + \gamma X_{it} + \in_{it} \quad (2)$$

Where β represents the elasticity of demand, X includes control variables such as income, age, time horizon, type of handset owned, sex of the respondent and employment status and γ is the vector of coefficients corresponding to the control variables in X, showing their marginal (or elastic) effects on quantity demanded. The control variables include type of the handset, household income of the consumer, Employment status, Education level and location of respondent.

The study utilized simulation models focusing on reducing taxes, lowering the cost of access or usage, and rolling out infrastructure to explore various potential outcomes. A sensitivity analysis was carried out using the Monte Carlo method and Latin hypercube sampling, followed by multivariate and uncertainty analyses. The analysis emphasized Monte Carlo experiments, as suggested by Kleijnen (2004), and employed complementary values and weights where appropriate. Timeseries data were also incorporated to enhance the robustness of the simulations.

Table 3: Variables included in the model and their definitions

Variable	Description/definition
Quantity Demanded	This refers to the amount or volume of telecom services such as voice and data bundles that customers want to purchase or use at a given price level.
Revenue (UGX)	Refers to the actual revenue in UGX for the telecom operator as a result of customers using the services.
Feature phones	Number of feature phones

Variable	Description/definition
Access and penetration	Access refers to the availability and ability of customers to connect to telecom services while penetration, measured as a percentage show how widespread telecom services are within a given population or market.
Revenue traffic	Refers to the volume of telecom services used by customers that generate actual revenue in UGX for the telecom operator
Digital literacy	Percentage of population aware of digital services
Consumer welfare	This deals with how much value or satisfaction consumers get from telecom services after accounting for the prices they pay, including any taxes.
Consumer awareness	If the consumer is aware of availability of other options of the bundles (voice and data)
GDP (UGX)	Gross Domestic product in Uganda shillings
Exercise duty	Dummy tax where 1=if the tax is imposed and 0 if the tax is not imposed
Location (1=urban, 0=rural)	1 if the respondent is from Urban area and 0 if respondent is from Rural
VAT	Value Added Tax on services or services
Profit tax	Taxes levied on business project in telecommunication
Coverage	Percentage of the population/area covered by $G network
Prices (UGX)	Charges paid by consumers for the telecom service
Age	Age of the respondent in complete years

2.3.2 Qualitative Data Analysis

The study analyzed qualitative data gathered through KIIs and FGDs using thematic, discourse, and content analysis techniques. These methods enabled the team to distil stakeholder perceptions, identify recurring patterns, and interpret the broader implications of taxation policy on the sector. Microsoft Excel was used for coding and organizing the qualitative data.

To strengthen the robustness of the findings, the study triangulated qualitative and quantitative results, ensuring consistency across data sources and providing a deeper, multidimensional understanding of the issues. The final assessment report synthesized these insights into a clear, evidence-based narrative, offering practical recommendations tailored to stakeholders and policymakers.

2.4 Limitations of the Study

The study encountered various challenges and risks that had the potential to affect the successful execution of the study. Accordingly, a number of measures were deployed to prevent or minimize these risks and to ensure the smooth and effective implementation of the study, as outlined in Table 4.

Table 4: Post Study Risk Assessment and Mitigation Measures

S/N	Risk After the Study	Description (What Actually Occurred)	Actions Taken / Post-Study Mitigation Measures
1	Limited Access to Relevant Data	Some telecom operators and government entities provided partial datasets.	• UCC facilitated access. • Secondary datasets used. • Country experts engaged. • Limitations documented.
2	Stakeholder Non-Cooperation	Some stakeholders were initially reluctant to participate.	• Engagement strategy improved participation. • Confidentiality assured. • UCC endorsement increased cooperation.
3	Political Sensitivities	Respondents were cautious about taxation reform discussions.	• Neutral stance emphasized. • Sensitive data anonymized. • Ethical guidelines followed.
4	Tight Timelines	Minor delays in data acquisition and validation.	• Work plan adjusted. • Weekly reviews held. • Roles streamlined.
5	Incomplete Responses	Some respondents provided incomplete information.	• Data triangulated. • QA checks implemented. • Bias documented.

3 PRESENTATION OF STUDY FINDINGS

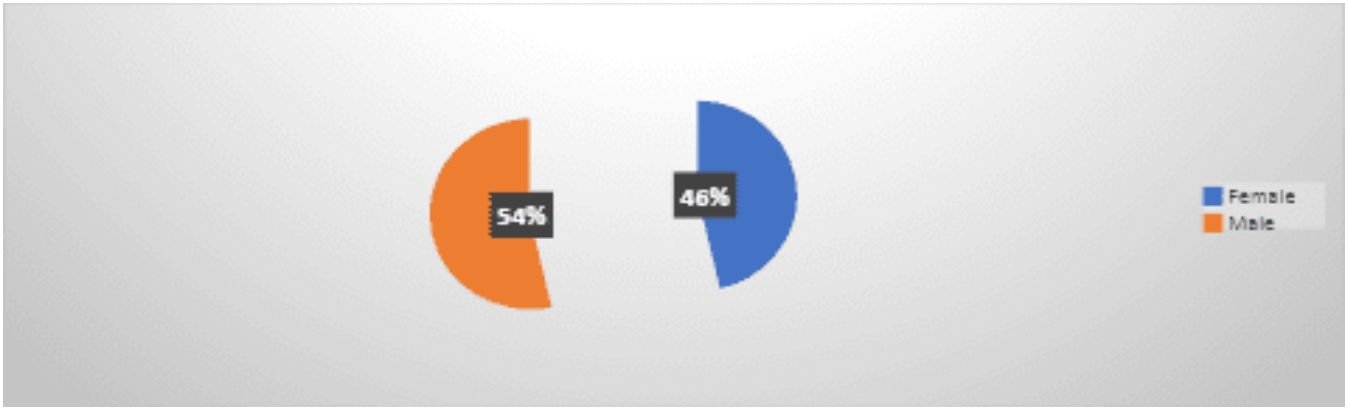
This section presents the key findings of the study, synthesised from desk review, stakeholder interviews, and policy review. Quantitative results are illustrated using tables, charts, and graphs to highlight key trends and patterns, while qualitative insights from KIIs and FGDs are summarized thematically to capture stakeholder perspectives and contextual nuances. The report synthesizes evidence from multiple data sources, clearly linking empirical results to the study objectives and policy questions. This triangulation approach is critical given that several stakeholders consistently emphasised that taxation interacts with user behaviour, market dynamics, and investment decisions in ways that are not fully captured by quantitative indicators alone. The findings are organised thematically to provide a clear, evidence-based understanding of how current telecommunications taxation policies affect affordability, investment, digital inclusion, and revenue performance. This structured presentation is intended to support informed policy dialogue and decision-making among key MDAs, the private sector, CSOs, and development partners.

3.1 SOCIAL DEMOGRAPHIC CHARACTERISTICS OF THE SAMPLED RESPONDENTS

The Business Operators

The survey results indicate that 54% of the business respondents were male, while 46% were female. These results are presented in Figure 2.

Figure 2: Sex of the sampled Business operators



Source: Business owners survey by ECASA, 2025

The results from Figure 3 show that a higher percentage of business operators sell smartphones (58.4%) followed by those selling basic phones (51.2%). The results show a diverse market catering to different consumer income levels. More males (69%) sell smartphones when compared to their female counterparts (47%). This is similar to results across all the types of handsets sold. This could be because more males dominate the telecommunication business compared to females.

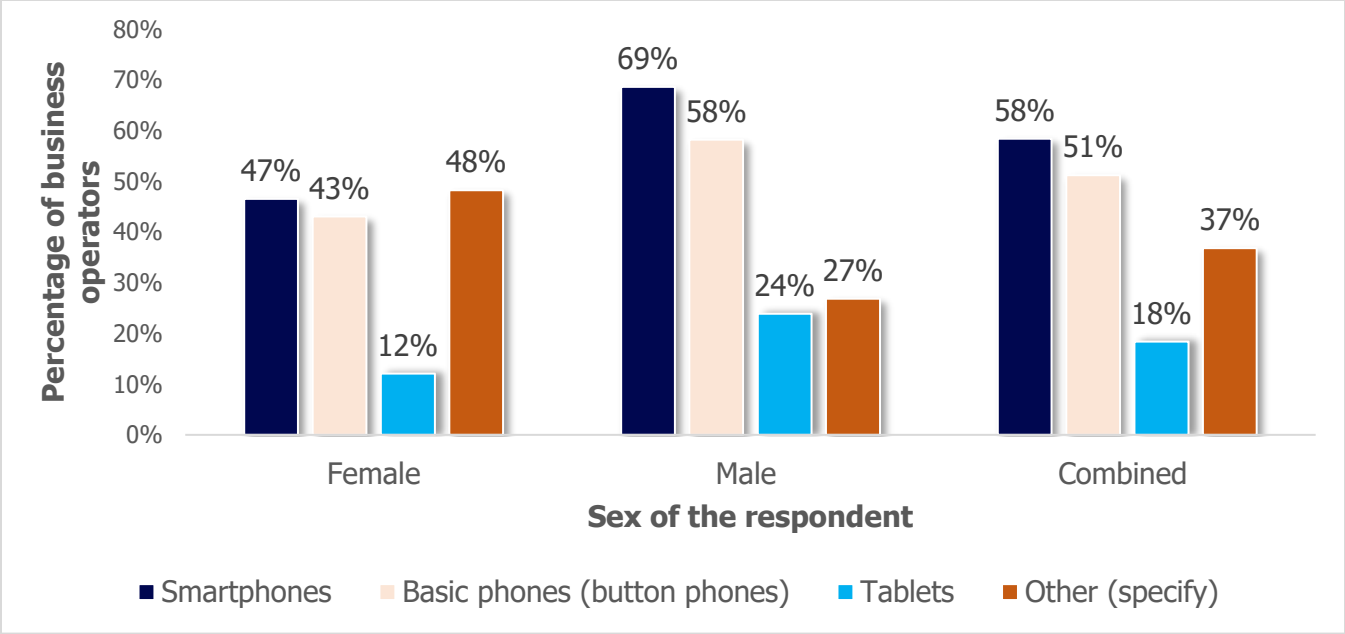


Figure 3: Type of Business operated by sex

Source: Business owners survey by ECASA, 2025

The results in Table 5 revealed that the average number of years the sampled operators have been in business is 5years, with a range from 0.4 to 20 years. On average each business employs 2 people, with a range of 0-10 employees. The average age of the respondents was 31 years with the range between 18-62years. The majority of the respondents were from urban centers. This could be attributed to higher population density and consumer purchasing power in urban areas which make them more commercially viable for such businesses. The results suggest that businesses in the telecommunication sector are concentrated in urban areas, dominated by youth and they are small and medium businesses. The dominance by youth and small businesses could be due to low barriers to entry for selling airtime, mobile money, and handsets have led to a proliferation of small businesses, which form a critical part of the sector's ecosystem.

Table 5: Summary statistics for continuous demographic characteristics of sampled business owners

Variable	Mean(n=125)	Std. Dev.	Min	Max
Continuous variables				
Number of years in business	5.019	4.301	.4	20
Number of people employed in business, full Time	1.78	1.822	0	10
Number of people employed in the business, part time	.356	.843	0	6
Age of the respondents	30.984	7.172	18	62
Location				
Rural		4		3.20
Urban		109		87.20
Peri-urban		12		9.60

Source: *Primary data collected by ECASA, 2025*

3.1.2 University students

Figure 4 shows that a bigger proportion (61%) of the respondent's fellow under usual consumer while 39% of were university students and University staff.

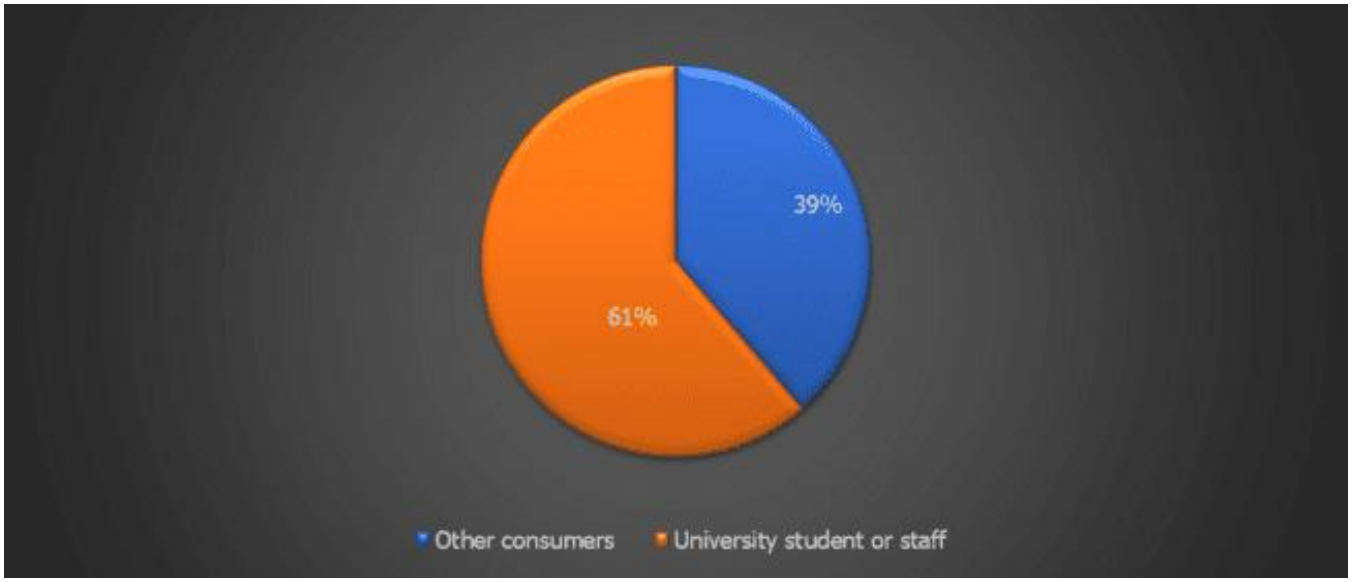


Figure 4: Consumer categories

Source: *Business owners survey by ECASA, 2025*

Among the university respondents the majority were students (88%) since they form the biggest portion of the University while 12% were lecturers. Lecturers provided expert knowledge on Uganda's taxation Structure on the telecommunication sector and its impact on the sector growth (See Figure 5).

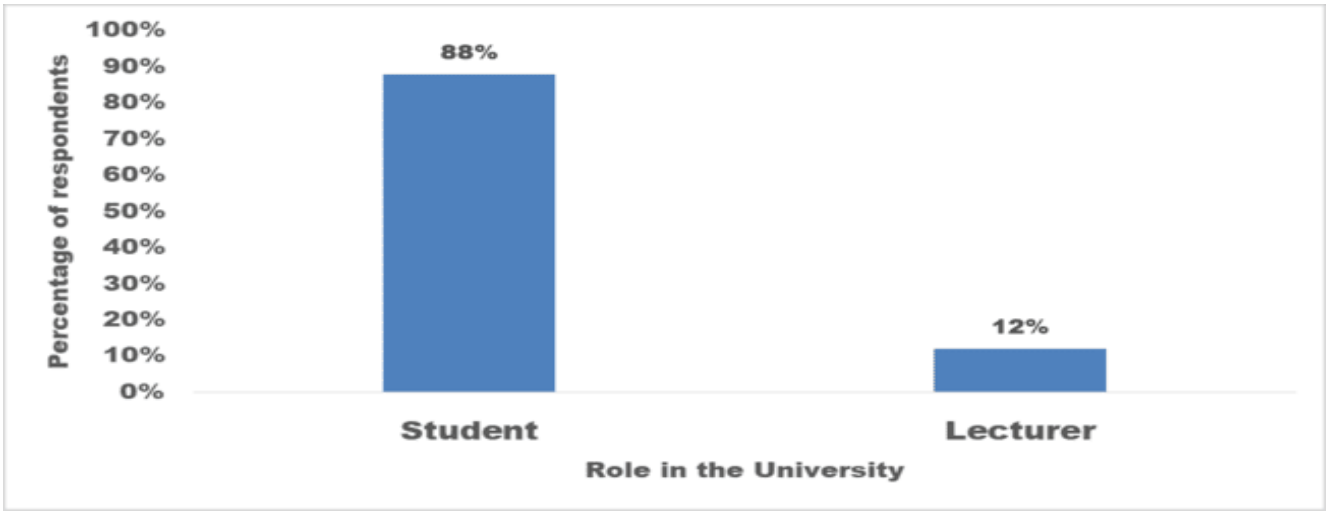


Figure 5: Role played by the University respondents

Source: *Primary data collected by ECASA, 2025*

The majority of the students (63%) were studying for a Bachelor's degree followed by those studying for a Diploma (13%) and Masters (12%). The least proportion of 6% were at a Ph.D. level of education. Those at a PhD level of education were mostly the lecturers (See Figure 6).

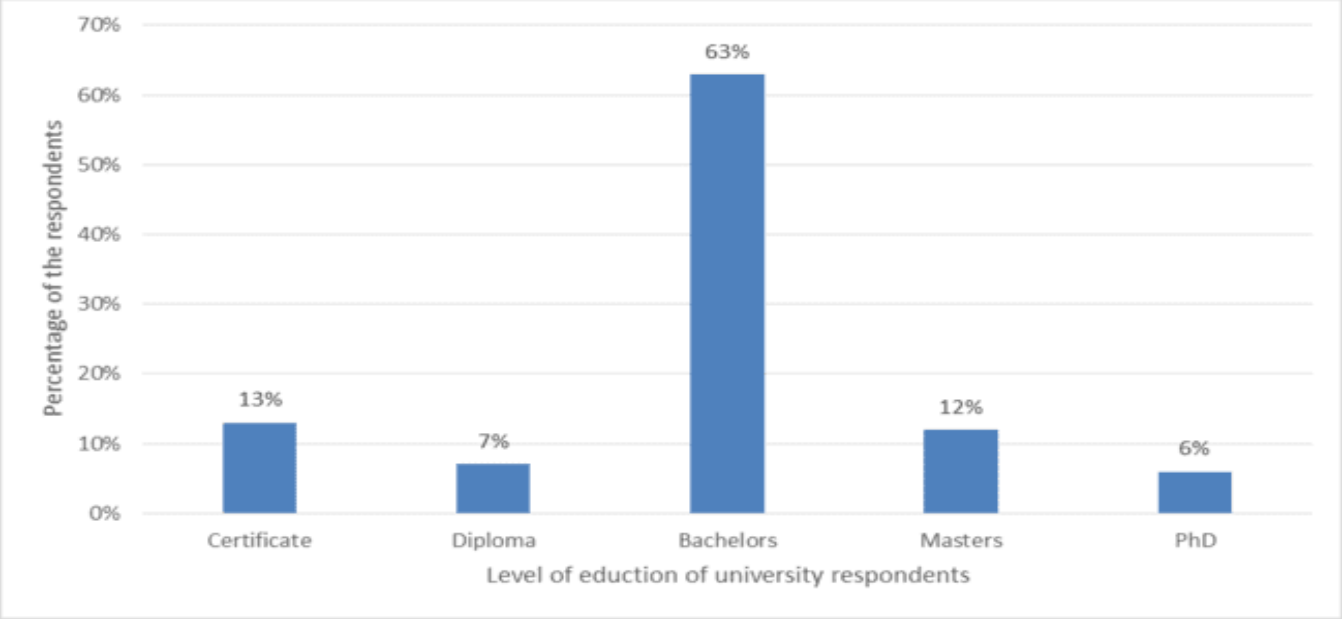


Figure 6: Level of education of the University of Respondents

Source: *Primary data collected by ECASA, 2025*

Demographic Characteristics for the General Consumers

The demographic characteristics of the general consumers are presented in Table 6. The age profile of respondents is strongly skewed towards young consumers aged 18–35 years, who constitute nearly four-fifths (79.7%) of the sample. This dominance highlights the central role of youth in shaping consumption patterns and demand dynamics within the sector. Given that this age cohort is typically more digitally active and more responsive to price and service innovations, the findings primarily reflect the preferences, affordability constraints, and usage behaviour of a youth-driven market. The smaller proportion of respondents aged 36–64 years (19.39%) and the marginal representation of those aged 65 and above (0.91%) indicate that older age groups play a limited role in influencing aggregate demand, underscoring the importance of policies and products that prioritise youth engagement and affordability without compromising inclusion.

Gender distribution shows a near-balanced representation, with males accounting for 54.3% and females 45.7% of respondents. This balance strengthens the robustness of the findings by ensuring that both male and female perspectives are adequately captured. However, the slight male majority may still reflect structural differences in access to income, technology, or decision-making power, suggesting that gender-sensitive policy measures remain important to close residual access and usage gaps.

Educational attainment among respondents reveals a diverse skills and literacy profile. A significant share has vocational qualifications (27.68%) or tertiary education (21.52%), indicating a substantial proportion of respondents with practical and applied skills relevant to income-generating activities. The relatively high representation of postgraduates (11.62%) suggests meaningful participation by more highly skilled individuals, potentially contributing informed and sophisticated perspectives on service quality, pricing, and value. At the same time, respondents with O-Level (19.19%), A-Level (12.32%), and primary or no formal education (8.31% combined) point to persistent variations in educational attainment that may influence digital literacy and service uptake. This distribution implies that services and policies must be designed to accommodate both advanced and basic users, avoiding exclusion of lower-educated groups.

From a spatial perspective, the majority of respondents are urban-based (74.60%), reflecting higher population density, better infrastructure, and greater service availability in urban centres. Nonetheless, the presence of a sizeable rural segment (25.40%) is significant and highlights ongoing urban–rural disparities in access and affordability. These disparities suggest that rural consumers may face higher relative costs and lower service quality, reinforcing the need for targeted interventions to extend coverage and reduce rural access barriers.

Employment status indicates that over three-quarters of respondents (77.78%) are employed, suggesting that a large proportion of the sample has some form of income-generating activity. However, the sizeable share of unemployed respondents (22.22%) signals continued economic vulnerability within the consumer base. This duality implies that while aggregate purchasing power exists, a significant segment remains highly price-sensitive, and demand is likely to respond strongly to changes in affordability, pricing structures, and cost-related policy measures.

Collectively, the demographic profile depicts a young, predominantly urban, economically active, and educationally diverse population. This suggests that demand is driven by youth, shaped by varying levels of skills and income security, and highly sensitive to price and access conditions. Consequently, policies that reduce cost barriers, enhance affordability, and expand access-particularly for rural residents and lower-income or unemployed groups-are likely to generate substantial uptake, inclusion, and welfare gains.

3.1.3 General Consumers

Table 6: Demographic characteristics of consumers of telecommunication services

Age of consumers	**Number of respondents**	**Percent**
18-35 years	789	79.7
36-64 years	192	19.39
65 and above	9	0.91
Gender		
Female	452	45.66
Male	538	54.34
Highest level of Education		
Post graduate e.g. Master, PhD	115	11.62

Age of consumers	Number of respondents	Percent
Tertiary education e.g. Diploma, degree	213	21.52
Vocational e.g. Certificate	274	27.68
A 'level	122	12.32
O 'level	190	19.19
Primary level	68	6.87
No formal education	8	1.44
Location		
Rural	252	25.40
Urban	740	74.60
Status of Employment		
Employed	770	77.78
Unemployed	220	22.22

Source: Primary data collected by ECASA, 2025

4 OVERVIEW OF UGANDA'S TELECOMMUNICATIONS SECTOR

4.1 SECTOR EVOLUTION AND GROWTH TRENDS

Uganda's telecommunications sector has undergone a dramatic transformation since its lib-liberalization in the mid-1990s. Prior to liberalization, fixed-line telephony was virtually non-existent beyond Kampala, with only about 0.4% of households connected by 1995. In 1995, Uganda's first private mobile operator, Celtel Uganda, launched with roughly 3,500 subscribers. The Uganda Communications Commission (UCC) was established in 1997 by the Uganda Communications Act. This marked a turning point in Telephony and communications technology. MTN Uganda began services in October 1998 with 12,000 subscribers, expanding to 40,000 by the year-end. Mobile subscriptions grew explosively from 490,000 in 2002 to 4.6 million by 2007 reaching about 24 million by December 2018. This rapid early growth came as a result of opening the market to multiple operators, the introduction of mobile networks (2G, then 3G/4G), and a population eager for connectivity[10].

Over the past five years, growth has continued, especially driven by mobile internet and affordable smartphones. By Q1 2023, Uganda had 34.3 million mobile subscriptions (roughly 75% of the population) and 27.0 million internet subscriptions (about 59% penetration)[11] [12]. Mobile data use has also surged. UCC reports mobile internet subscribers rose from 14.0 million in 2020 to 16.0 million by 2023. Notably, fixed broadband is expanding as well. The national fibre-optic backbone grew by 71% from roughly 19,700 km in 2019 to 33,650 km by 2023. UCC's 2023 report shows population coverage by at least one mobile technology reaching 88–92%. This is a reflection of expanded rural connectivity in Uganda. In mid-2025, Uganda boasts over 43 million mobile subscriptions (nearly 88% penetration) with more than half of adults online[13].

These trends are attributed to declining costs (through competition and technology innovations), proliferating smart devices, and telecom innovations (e.g. mobile money, digital finance). For example, MTN Uganda reports 31.3% year-on-year growth in data revenue (H1 2025) driven by new data bundle offerings, while fintech (mobile money) revenue grew 18.6% as digital payments expanded[14]. Smartphone penetration has risen sharply too. The number of smartphones in use roughly doubled from 7.6 million in 2020 to 15.0 million in 2023, even as

[10] Uganda Communications Commission. (2019, June) The mobile telephone revolution. Accessed on 25 August 2025. [Online]. Available: https://uccinfoblog.com/2019/06/ 07/the-mobile-telephone-revolution/

[11] Uganda Communications Commission. (2023, Aug.) Ugandans consume more data but spend less, saysreport. Accessed on 25 August 2025. [Online]. Available: https: //www.ucc.co.ug/ugandans-consume-more-data-but-spend-less-says-report/

[12] Uganda Communications Commission, "Annual communications sector report 2023," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 25 Au- gust 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2024/ 11/UCC-Annual-Communications-Sector-Report-2023 Online-Version.pdf

[13] V. Atino. (2025, July) Numbers that matters in uganda's digital landscape. Accessed on 25 August 2025. [Online]. Available: https://nilepost.co.ug/ucc/270435/ numbers-that-matters-in-uganda-s-digital-landscape

[14] Business Times Reporter. (2025, Aug.) MTN Uganda posts strong data, fintech growth in H1 2025 despite profit dip from tax settlement. Accessed on 28 August 2025. [Online]. Available: https://businesstimesug.com/ mtn-uganda-posts-strong-data-fintech-growth-in-h1-2025-despite-profit-dip-from-tax-settlement/

basic phone usage fell. Feature phones still serve about 25 million users in 2023. Affordable mobile internet even on modest devices thus remains critical. These shifts reflect a youthful and growing market. Uganda's population is projected to continue growing 3% annually, making telecoms an even more integral part of future development[15].

Notwithstanding the rapid growth of the telecom industry in Uganda, its usage remains relatively low mainly due to the current high taxes. Qualitative interviews reinforced these trends. For example, a regulator noted that although network expansion has progressed, "usage is still very low… because taxation discourages people from moving to smartphones and using more data" (KII – Government MDA, Female, Kampala). This implies that despite impressive infrastructure expansion, growth in meaningful usage can plateau when taxes limit device affordability and data consumption. Similarly, a telecom operator observed that "data demand is growing, but high taxes slow down how fast new users come online" (KII – Telecom Operator, Male, Kampala), underscoring that taxation interacts directly with Uganda's demographic growth and digital trajectory**.** From the regulators' standpoint, "...*lowering of taxes will reduce service costs, increase affordability, which in turn will drive higher network usage and broader digital inclusion…".* (KII – UCC Male, Management Team)

4.2 KEY PLAYERS AND MARKET STRUCTURE

Uganda's mobile market is highly concentrated and an effective duopoly, giving the leading operators significant influence over prices, competition, and market outcomes. MTN Uganda (a subsidiary of South Africa's MTN Group) and Airtel Uganda (formerly Celtel, now part of India's Airtel) dominate the landscape and together account for over 99% of subscribers. Recent industry analyses estimate MTN holds about 54% of the market while Airtel has about 45%. Due the stranglehold these two companies have on the industry, other mobile entrants have struggled to enter the market. For example, Africell (a pan-African operator) entered in 2014, but exited in 2021 due to competitive pressure. New operators (e.g. Smile Communications, focusing on 4G) and state-linked ventures (UTel/UTL, the reformed Uganda Telecom) remain marginal. In mid-2024, a private investor (Rowad Capital) agreed to take 60% of Utel. This reflects the ongoing, but largely unsuccessful search for viable competition outside MTN/Airtel.

Behind the scenes, infrastructure providers have also reshaped the market. Tower companies now own and lease much of the passive infrastructure. For example, American Tower Corporation (ATC) acquired major tower assets (from Orange, Warid, Airtel and MTN) and remains the largest tower operator[16]. New entrants like TowerCo of Africa (formerly AXIAN Towers) are expanding, supported by EIB financing, indicating growing industry investment. These developments supported by the National Broadband Policy (2018), enable operators to share costs and extend networks. The regulator UCC has mandated operators to reach at least 90% of geographic areas, and is exploring World Bank–funded projects to accelerate rural

[15] Uganda Communications Commission, "Strategic plan 2020/21–2024/25," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 28 August 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2023/ 10/UCC-Strategic-Plan-202021-202425-ONLINE-VERSION-002 Rev2Final.pdf

[16] TowerXchange. (2024) Country profile: Uganda. Accessed on 28 August 2025. [Online]. Available: https://www.towerxchange.com/article/2e2ir07e26c355ps9zy0w/ country-profile-uganda

connectivity especially in refugee-hosting regions[17]. However, despite expanding coverage, population density remains uneven: central (Kampala) and western regions house the bulk of subscribers (42% and 26% respectively) due to higher urbanization and economic activity[18].

Beyond mobile, Uganda has a modest fixed-line and fixed broadband market. Uganda Telecom Limited (UTL), the former state monopoly, has had financial difficulties, and fixed lines remained low (around 131,000 lines by 2023, up 61% since 2019 but still small relative to mobile). Fibre-to-the-home and other fixed broadband remain niche but growing: fixed internet subscriptions increased from 34,700 in 2020 to 48,100 in 2023, reflecting more fibre projects and new ISPs[19]. Nonetheless, mobile data dominates Internet access in Uganda, so the health of the telecom sector depends largely on mobile market conditions.

Qualitative respondents frequently linked market concentration to taxation pressures. One industry expert argued that "high taxes make it even harder for small players to survive; the big companies can absorb the shocks, but the small ones die off" (KII – Industry Expert, Male, Kampala). A digital service provider added, "we need incentives for small ISPs… otherwise MTN and Airtel remain the only players because they can handle the tax burden" (KII – ISP/Digital Service Provider, Male, Kampala). These insights imply that taxation indirectly reinforces the duopoly by raising barriers to entry and limiting competition-based price reductions for consumers. In order to promote a more competitive market in the telecoms industry, there is a need to reduce sector taxes and create targeted incentives that ease entry barriers for smaller operators.

4.3 Regulatory and Policy Framework

Uganda's telecom sector is overseen by the Uganda Communications Commission (UCC), an independent regulator established under the Uganda Communications Act (1997) and related legislation[20] . The UCC's mandate covers telecommunications (mobile and fixed), broadcasting, radio spectrum, postal services, and related ICT infrastructure[21]. Over time the legal framework has broadened to adapt to technological change. For example, the Electronic Media Act of 1996 and subsequent regulations have expanded UCC's oversight to digital communications and content. The Ministry of ICT and National Guidance also plays a central role, setting policy (e.g. national ICT policy, broadband strategy, digital Uganda vision) and coordinating programs such as the National Digital Transformation Programme under NDP III[22].

[17] ibid

[18] Uganda Communications Commission, "Annual communications sector report 2023," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 25 Au- gust 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2024/ 11/UCC-Annual-Communications-Sector-Report-2023 Online-Version.pdf

[19] Ibid

[20] Uganda Communications Commission. (2019, June) The mobile telephone revolution. Accessed on 25 August 2025. [Online]. Available: https://uccinfoblog.com/2019/06/ 07/the-mobile-telephone-revolution/

[21] Uganda Communications Commission. (2025) Home page. Accessed on 28 August 2025. [Online]. Available: https://www.ucc.co.ug/

[22] Uganda Communications Commission, "Strategic plan 2020/21–2024/25," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 28 August 2025. [Online]. Available:

A license issued by the UCC is a necessary prerequisite for any Telecom provider to enter the market. In 2023–2024, the UCC signalled a new licensing regime for mobile operators. The UCC also manages spectrum allocations (especially 4G/5G bands) and enforces quality-of-service standards. Importantly, Uganda maintains a Universal Communications Access Fund (UCUSAF), financed by a levy on communications, to subsidize rural and underserved area connectivity. In practice, UCC reports on rural coverage and often supports tower rollout and fibre through partnerships (e.g. deploying broadband base stations in rural districts, as in 2025)[23].

Taxation policies are critical and contentious components of the regulatory environment. Exercise duty and VAT on telecommunications services are set by parliament via the Finance act but enforced through UCC and the Uganda Revenue Authority (URA). Currently, Uganda imposes multiple taxes on telecom and ICT including a 12% excise duty on prepaid and postpaid airtime and data, a new 12% levy on internet data since July 2021 on top of 18% VAT, a 0.5% tax on mobile money withdrawals, and import duties/VAT on devices (10% duty on devices >USD 500 plus 18% VAT). Other earmarked levies include a 1.5% infrastructure levy on electronics and a 10% withholding on airtime commissions. In total, telecommunication usage is heavily taxed in Uganda (with handsets bearing roughly 35% of their import value in taxes)[2425]. These taxes are part of the policy landscape and figure heavily in discussions of sector growth and affordability, as discussed below.

The government also links telecom policy to socio-economic goals. Digital strategies recognize communications as an engine for growth. UCC's latest strategic plan (2020–25) cites Vision 2040 and the National Development Plan's Digital Transformation Programme, which aim to expand ICT infrastructure and digital skills for development[26] [6]. The regulator itself emphasizes initiatives like the International Girls in ICT Day and improving e-government channels. Nonetheless, competing policy objectives (connectivity vs. revenue) create tension, for instance, while the Ministry of ICT may push for lower gadget taxes to spur broadband adoption, the Treasury often raises levies to meet fiscal targets. The interplay of these forces shapes Uganda's telecom policy framework.

The study noted that there were varied views regarding the tax formulation processes among policy makers. Whereas, regulators are very familiar with the taxation regime and its impact on the consumers, they are not adequately involved in the tax formulation policy. Through

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ttps://www.ucc.co.ug/wp-content/uploads/2023/ 10/UCC-Strategic-Plan-202021-202425-ONLINE-VERSION-002 Rev2Final.pdf

[23] V. Atino. (2025, July) Numbers that matters in Uganda's digital landscape. Accessed on 25 August 2025. [Online]. Available: https://nilepost.co.ug/ucc/270435/ numbers-that-matters-in-uganda-s-digital-landscape

[24] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

[25] CIPESA, "Digital taxation in Uganda: A hinderance to access and use of ICTs," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2022, accessed on 28 Au- gust 2025. [Online]. Available: https://cipesa.org/wp-content/uploads/2022/04/ Digital-Taxation-in-Uganda-A-Hinderance-to-Access-and-Use-of-ICTS.pdf

[26] Uganda Communications Commission, "Strategic plan 2020/21–2024/25," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 28 August 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2023/ 10/UCC-Strategic-Plan-202021-202425-ONLINE-VERSION-002 Rev2Final.pdf

interaction with MoICT&NG stakeholders, it was evident that their role in tax formulation was minimal as stated by one of the respondents … *"Our role in tax formulation is minimal, yet we understand the impact of high taxes on consumers. We can advise government on a taxation regime that fosters growth and increases revenue."* (KII MoICT&NG, Male, Kampala). Similar sentiments were echoed during interactions with UCC stakeholders. Furthermore, a regulator explained that *"we are trying to expand digital inclusion, but every time taxes go up, it becomes harder for people to adopt smartphones and use more data"* (KII – Government MDA, Female, Kampala). Meanwhile, an operator highlighted unpredictability as a major risk: "…*Sometimes as a business you are surprised by new interpretations of tax rules… it pushes us towards short-term planning rather than long-term investment…"* (KII – Telecom Operator, Male, Kampala). These findings imply that the regulatory environment, while robust, is undermined by inconsistent fiscal demands that weaken predictability and investment confidence. Given their role, expertise and good understanding of how taxes impact consumers, regulators are well-positioned to advise the government on designing a taxation regime that promotes growth and boosts revenue.

The regulatory framework experience challenges due to weak monitoring and enforcement. Whereas Telecom operators pay 2% of gross profit annually to UCC, though largely passed on to consumers, there are informal operators-such as unlicensed Wi-Fi vendors-operate outside the tax net, creating unfair competition, reducing ISPs' profitability, and limiting URA's ability to widen the tax base.

4.4 Role of the Sector in Socio-Economic Development

The telecommunications sector is widely acknowledged as a key driver of Uganda's socio-economic development. UCC data and independent analyses consistently show telecom services contribute significantly to GDP and tax revenue. UCC's 2020–25 report notes that communications (encompassing telecoms, broadcasting, etc.) contributed about 9% of GDP and 9.05% of tax revenue during FY2014/15–2018/19[27]. Similarly, CIPESA highlights the sector's GDP contribution (up to 9%), emphasizing how ICT enables agriculture markets, financial inclusion and public services[28]. In concrete terms, mobile operators MTN and Airtel are routinely among Uganda's largest taxpayers, a testament to the sector's fiscal importance. In FY2019/20, MTN and Airtel alone accounted for roughly 40% of the excise duty and 12.7% of VAT collected nationwide.

Beyond revenues, telecoms have transformed daily life. Mobile phones are the primary gateway to information and services for most Ugandans. As of mid-2025, over 26 million Ugandans (52% of the population) are actively online, and mobile money has over 40 million registered accounts[29]. This connectivity underpins innovations in finance (e.g. MTN MoMo, now handling

[27] Ibid

[28] CIPESA, "Digital taxation in Uganda: A hinderance to access and use of ICTs," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2022, accessed on 28 Au- gust 2025. [Online]. Available: https://cipesa.org/wp-content/uploads/2022/04/ Digital-Taxation-in-Uganda-A-Hinderance-to-Access-and-Use-of-ICTS.pdf

[29] V. Atino. (2025, July) Numbers that matters in Uganda's digital landscape. Accessed on 25 August 2025. [Online]. Available: https://nilepost.co.ug/ucc/270435/ numbers-that-matters-in-Uganda-s-digital-landscape

billions of transactions monthly), agriculture (digital payment systems for farmers), education (remote learning tools), and health (telemedicine). For instance, UCC notes that increased broadband and smartphone use are boosting e-commerce and financial inclusion in rural communities[30]. Government agencies leverage telecom networks for service delivery too (e.g. tax payments via mobile money, digital registration platforms). However, the sector also faces challenges that affect development outcomes. Affordability remains a concern: despite price declines over time, Uganda's data costs are still high by regional standards. In 2020, 1 GB of data cost over 8% of monthly income (versus 3% average in Sub-Saharan Africa)[31] . This partly reflects the exorbitant taxation as discussed; multiple levies cumulatively add to consumers' bills. The high-cost burden is especially felt by low-income and rural users, where fixed-line infrastructure is scarce and mobile access dominates[3233] . Efforts like the Universal Service Fund and tower sharing have helped extend networks (5,000+ towers and expanded fiber), but the digital divide (urban/rural, gender) persists. Only about 56% of adult women have mobile access vs. 63% of men[34] .

Uganda's telecom sector has grown from a tiny, state-run monopoly to a dynamic and largely private industry. In recent years, it has been a cornerstone of economic activity, enabling an increasingly digital economy. However, it also faces pressures from taxation and infrastructure gaps. Understanding this balance of growth and constraint sets the stage for understanding how tax policy will evolve in the coming years.

While Uganda's telecom sector continues to drive economic growth and digital transformation in the country, its full development potential is constrained by the burden of high taxes. Qualitative perspectives affirm the sector's developmental role but also highlight affordability as a limiting factor largely driven by high taxes. UCC stakeholder had this to say *"…For Uganda to fully realise the potential of a digital economy, sector taxation should promote affordable access critical for enabling sustainable network expansion…."* (UCC Stakeholder, Male, Kampala). One consumer advocate shared: *"for many low-income households, taxes make data a luxury… you only buy enough for WhatsApp…"* (FGD – Consumer Representative, Female, Lira). Another respondent emphasized the economic role of mobile money: "mobile money helps us run our businesses, but when withdrawal tax increased, many customers reduced transactions" (FGD – Mobile Money Agent, Male, Gulu). An industry expert concluded that "the sector has the potential

[30] Business Times Reporter. (2025, Aug.) MTN Uganda posts strong data, fintech growth in H1 2025 despite profit dip from tax settlement. Accessed on 28 August 2025. [Online]. Available: https://businesstimesug.com/ mtn-uganda-posts-strong-data-fintech-growth-in-h1-2025-despite-profit-dip-from-tax-settlement/

[31] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

[32] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

[33] W. Vota. (2019, July) Digital taxation in Uganda: Has the social media tax really raised revenue? Accessed on 28 August 2025. [Online]. Available: https://www.ictworks.org/uganda-social-media-tax/

[34] Uganda Communications Commission, "Annual communications sector report 2023," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 25 u- gust 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2024/ 11/UCC-Annual-Communications-Sector-Report-2023 Online-Version.pdf

to drive Uganda's growth, but the tax burden slows down that potential" (KII – Industry Expert/Consultant, Male, Kampala).

These grounded insights indicate that heavy taxation weakens not just telecom usage but its broader multiplier effects on overall social economic development including financial inclusion, trade, education, and service delivery. To unlock the sector's full development potential, government should adopt a more growth-friendly taxation framework by rationalising and reducing multiple levies on data, mobile money, and telecom services, ensuring that tax policy promotes affordability, expands digital access, especially for low-income and rural users. In addition, the government should implement incentives that encourage continued investment in infrastructure and innovation.

5 REVIEW OF UGANDA'S TAX POLICY AND FISCAL REGIME

5.1 GENERAL TAX FRAMEWORK APPLICABLE TO ALL SECTORS

Article 152(1) of the Constitution of Uganda states that taxes can only be levied by authority of an Act of Parliament. Consequently, the Uganda Revenue Authority Act (Cap. 196) was established to set out the administrative framework for collecting taxes enacted under those Acts[35].

The Uganda Revenue Authority carries out tax administration on behalf of the Ministry of Finance, Planning and Economic Development under the following laws[36]:

i. The Income Tax Act Cap 340
ii. Value Added Tax Act Cap 349
iii. Customs Tariff Act. Cap 337.
iv. East African Community Customs Management Act, 2004
v. East African Excise Management Act Cap 28
vi. Excise Duty Act 2014
vii. Stamp Duty Act 2014
viii. The Finance Acts 2001-2016
ix. The Lotteries and Gaming Act Cap 334
x. The Tax Procedures Code Act, 2014
xi. Traffic and Road Safety Act Cap 361
xii. All other taxes and non-tax revenue as the Minister responsible for Finance may prescribe

Interviews with different stakeholders reveal that, despite Uganda's tax framework being clearly articulated in law, many stakeholders perceive it as complex, burdensome, and difficult to navigate. Respondents noted that businesses often face unexpected interpretations of existing tax codes and policy provisions, suggesting that the issue extends beyond the sheer number of tax laws to the way they are understood and enforced. This sense of unpredictability in the

[35] URA (2022). Taxation Handbook: A Guide to Taxation In Uganda, 7th Edition, 2024/25
[36] URA (2021). A Reprint of Various Tax Laws and Compendium for Domestic Tax Laws of Uganda

application of the tax regime has significant implications for long-term investment planning and overall risk assessments across sectors.

In order to reduce tax ambiguity and uncertainty, government, in collaboration with URA and UCC, should implement a targeted tax education and awareness drive for telecom operators. This initiative should include regular sector-specific tax clinics adopting systematic, simplified interpretations of tax obligations. By improving understanding and clarifying how tax laws are applied in practice, the initiative would reduce uncertainty, enhance compliance, and support more informed long-term investment decisions by operators.

5.2 Sector-Specific Taxes Affecting Telecommunications

The study reviewed the current tax regime applicable to the telecommunications sector in Uganda, highlighting various tax types, their rates, and specific applications. Uganda's tax regime for the telecommunications and digital services sector combines traditional taxes (corporate income tax, VAT), sector-specific levies (spectrum and licensing fees administered by UCC), and excise/digital taxes that specifically target mobile money, airtime, and (in recent proposals) digital service revenue. Recent legislative changes and continuing reliance on excise on digital transactions have important implications for investment, affordability of services, financial inclusion, and sector growth. Evidence from government and independent analyses suggests that the mobile-money levy in particular has had distortionary effects on usage and financial inclusion, while excise duties and high parafiscal fees increase operator cost burdens that are often passed to consumers (UCC, 2024).

The telecommunications sector in Uganda operates within a complex and evolving policy and regulatory environment shaped by a combination of tax instruments, parafiscal charges, and sector-specific regulatory frameworks. Recent literature and policy analyses highlight that the current taxation and regulatory instruments significantly influence sector performance, investment behaviour, and the affordability of services.

First, corporate income tax and value-added tax (VAT) remain central pillars of Uganda's general tax regime. Telecom operators and digital service providers are subject to the standard corporate income tax rate, while the VAT regime has progressively expanded to include a broader range of electronic and digital services, reflecting global trends in digital taxation. Recent amendment proposals have widened the scope of VAT to cover more electronic service providers, increasing compliance requirements for both resident and non-resident digital firms (KPMG, 2025).

Second, the sector is heavily shaped by excise duty provisions, particularly those targeting mobile money transactions, airtime, and related telecom services. Uganda has consistently used the Excise Duty Act as a major revenue-raising instrument for the telecommunications and digital financial services space. Notably, the mobile money levy introduced in 2018-initially set at 1% before being revised downward-marked a significant shift in the taxation landscape. Subsequent Excise Duty Amendment Acts, including those for 2024/2025 and the tax reforms effective 1 July 2025, have continued to adjust excise schedules and rates, making excise duty one of the most influential policy tools affecting sector pricing, usage patterns, and transaction volumes (UCC, 2025; CIPESA, 2025; GSMA, 2025).

Third, operators face substantial parafiscal fees, licensing obligations, and spectrum charges imposed by the Uganda Communications Commission (UCC). Under the UCC Fees and Fines Regulations (2019 and subsequent amendments), telecom operators must pay licensing fees, annual regulatory levies, spectrum charges, and penalties where applicable. These charges—though not classified as taxes—represent significant operational costs and have important implications for infrastructure investment, market entry, and sector competitiveness (GSMA, 2025).

Lastly, Uganda's policy discourse increasingly features discussions on Digital Service Tax (DST) and taxation of non-resident digital suppliers. Draft bills and policy proposals have explored mechanisms for taxing digital services provided by global platforms to Ugandan consumers, in alignment with broader international developments on cross-border digital taxation. These proposals also aim to strengthen the enforcement of VAT on electronic services, ensuring tax neutrality between local and foreign digital enterprises (Parliament of Uganda, 2024).

It is imperative to state that Uganda's telecommunications sector is shaped by a combination of direct taxes, indirect taxes, excise duties, parafiscal charges, and emerging digital tax proposals. These policy instruments collectively influence sector growth, innovation, service affordability, and investment decisions, underscoring the need for coherent and balanced tax and regulatory reforms.

Overview of Taxes Affecting the Telecom Sector in Uganda

Uganda's telecom sector is governed by a diverse and evolving tax regime that applies to digital services, mobile money transactions, airtime, internet data, and imported ICT devices. These taxes are drawn from multiple legal instruments and administered across different agencies, creating a complex fiscal environment that significantly influences the cost of services, investment decisions, and overall sector growth. Table 7 provides a summary of key taxes applicable to the telecoms sector.

Table 7: Overview of Telecommunications Taxation in Uganda

Tax Type	Rate	Application
Value Added Tax (VAT)	18%	Applied to most ICT products and services, except mobile money transactions.
Excise Duty on Airtime	12%	Levied on prepaid and postpaid airtime and value-added services.
Excise Duty on Internet Data	12%	A direct levy on the net price of internet data, introduced in July 2021 (data for medical and education services is exempt). This replaced the previous Over-the-Top (OTT) tax on social media access.
Excise Duty on Mobile Money	15% (on fees) & 0.5% (on withdrawals)	A 15% excise duty rate is levied on fees for money transfers (excluding banks). A 0.5% duty is also charged on the value of cash withdrawals.
Withholding Tax	10%	Charged on the gross amount of payments for commissions related to airtime distribution and mobile money services. A 15% withholding tax applies to interest payments to non-residents from Ugandan sources.

Tax Type	Rate	Application
Corporate Income Tax	30%	The standard income tax rate for telecommunications companies.
Import Duty	10%	Levied on imported ICT devices.
Digital Services Tax (DST)	5%	A 5% levy on the gross income from digital services by non-resident providers, effective July 1, 2023. This is expected to be replaced by a 15% withholding tax on July 1, 2025.

Source: *CIPESA, 2022*

This taxation framework reflects a mix of direct and indirect taxes targeting both services and devices, and is designed to generate government revenue while influencing sectoral behaviour, including pricing, investment, and access to ICT services.

Stakeholder accounts reveal how the dense and layered tax regime manifests in day-to-day practice. A key informant observed that *the overall tax structure has become "very heavy" and "multilayered," noting that several levies may be applied to a single service or product, ultimately undermining affordability for the populations that most need these services* (KII, 2025, Kampala). Industry representatives echoed this concern, explaining that *the cumulative effect of different taxes-such as excise duty and VAT-can embed significant tax burdens in final prices, with all major services affected* (KII, 2025, Kampala). From the consumer side, participants expressed frustration with what they perceive as *an unrelenting flow of taxes, characterising the system as "endless" and difficult to bear* (FGD, Lira). Collectively, these perspectives demonstrate that the complexity of the tax mix is not merely theoretical but materially influences pricing, service adoption, and equity.

In order to streamline the tax regime, government should undertake a comprehensive review and rationalisation of the telecom tax structure including VAT, excise duties, and device-related levies to eliminate overlapping charges to reduce the cumulative tax burden on services and devices that affect affordability, equitable access, and sector growth aspirations.

5.3 Chronology of Tax Policy Reforms in the Telecom Sector

Uganda's telecommunications taxation framework has evolved significantly over the past decade, shaped by legislative amendments, fiscal pressures, technological changes, and wider debates on digital taxation. The reforms reveal a recurring pattern of balancing revenue mobilisation with digital inclusion, sector growth, and affordability. This section provides a chronological synthesis of key policy developments, drawing on statutory documents, policy analyses, and empirical studies.

Foundational fiscal and regulatory framework (Pre-2018)

Uganda's baseline tax regime for telecommunications-comprising VAT, Corporate Income Tax, and Withholding Tax-is grounded in earlier tax statutes and the Excise Duty Act (2014), which established the foundation for sector-specific excisable items (Government of Uganda, 2014). In parallel, sector regulation through UCC formalised licensing, spectrum fees and regulatory charges, later consolidated under the UCC (Fees and Fines) Regulations, 2019 (UCC, 2019). These frameworks provided the structural environment into which more targeted telecom taxes were introduced from 2018 onward.

2018—A major turning point: Mobile-money levy and OTT social-media tax

In 2018, Uganda enacted two landmark tax reforms that redefined telecom taxation. The 1% levy on mobile-money transactions, later revised to 0.5% on withdrawals only, sparked significant public backlash and was widely analysed for its socioeconomic effects (IGC, 2025; ICTD, 2024). Concurrently, the Over-The-Top (OTT) tax, charging UGX 200 daily for social-media access, introduced a new form of digital taxation that generated substantial behavioural and compliance challenges. A number of researchers and practitioners note that these measures became emblematic of the political economy of digital taxation in Uganda (ICTD, 2024).

Results from interviews with different stakeholders strongly reinforce evidence of this critical shift. A consumer rights representative noted that *mobile money-initially viewed as a key driver of financial inclusion-became less accessible once taxation increased, arguing that the continued application of the 0.5% levy has pushed some users away from the service* (KII – Consumer Advocate, 2025, Kampala). In Lira, participants linked *the introduction of the OTT charge to a noticeable decline in social media use, recalling that many users simply abandoned platforms like Facebook once the tax was imposed* (FGD – Consumer, Lira). These narratives are consistent with quantitative trends showing reduced transaction activity following the 2018 tax changes, underscoring how transaction-based taxes can prompt rapid and significant behavioural adjustments.

2021—Repeal of OTT and introduction of 12% excise duty on internet data

Following widespread avoidance and declining OTT revenues, Parliament repealed the social-media tax, replacing it with a 12% excise duty on the net price of internet data, effective July 2021 (Reuters, 2021). This reform aligned data services with excise obligations already applied to airtime and value-added services. Analysts flagged concerns regarding affordability, noting Uganda's already high cost of data compared to regional peers (Reuters, 2021; CIPESA, 2024).

Stakeholders described this as a shift from a highly visible but narrowly targeted tax to a more embedded, broad-based data tax. A respondent observed that "excise duty continues to be applied to non-luxury services like data that has become very critical for economic development" (KII, 2025 Kampala), while a consumer in Gulu noted that "voice bundles have gone down making them more affordable but that of internet bundles are still high" (FGD – Consumer, Male, Gulu). The chronology therefore, marks a move from OTT to data excise, but without fully resolving the core concern around data affordability.

2019–2020-Growth of para-fiscal and regulatory fees

During this period, UCC strengthened its regulatory financing framework through the 2019 Fees & Fines Regulations and subsequent amendments (UCC, 2019; 2020). These fees-covering licensing, spectrum usage, number ranges and administrative penalties-represent non-tax but financially significant charges that interact with statutory taxes to shape operator cost structures. Literature increasingly recognises para-fiscal charges as integral to understanding the "effective tax burden" on telecom operators.

2023-Introduction of the Digital Services Tax (DST)

Uganda joined global efforts to tax non-resident digital service providers by introducing a 5% Digital Services Tax (DST) in 2023 (PwC Uganda, 2023). Tax advisors note emerging

administrative challenges, particularly enforcement among non-resident platforms, and potential overlaps with VAT on electronic services. The DST is expected to be replaced with a 15% withholding tax on digital payments from July 2025, in line with evolving international tax reforms (PwC Uganda, 2023).

2024-2025-New excise duty and tax amendment cycles

Recent legislative activity demonstrates continued recalibration of telecom taxation. The Excise Duty (Amendment) Act, 2024, together with additional Tax Amendment Acts effective July 2025, adjust excise schedules, revise rates on telecom-related services, and refine VAT and income tax provisions affecting digital and telecommunications markets (Parliament of Uganda, 2024). These reforms reflect government efforts to maintain revenue from the digital economy amid growth in electronic transactions and cross-border digital consumption.

Recent literature documents major shifts in Uganda's telecommunications taxation framework between 2023 and 2025. A series of legislative reforms-including the Excise Duty (Amendment) Act 2024 and multiple tax amendment bills effective 1 July 2025-have introduced new excise schedules and expanded the tax base for digital and telecom services (Parliament of Uganda, 2024). These reforms reflect the government's continued prioritisation of the telecommunications sector as a reliable revenue source.

A recurring theme in contemporary analyses is the debate on mobile-money taxation. Studies and policy briefs by institutions such as the International Growth Centre (IGC) and the International Centre for Tax and Development (ICTD) highlight concerns that mobile-money levies, while fiscally productive, constrain digital payments adoption and undermine financial inclusion (IGC, 2024; ICTD, 2025). These studies emphasise the policy trade-off between short-term revenue mobilisation and long-term digital transformation.

The literature also underscores the fiscal importance of the telecommunications sector. Telecom operators remain significant contributors to VAT, excise duty and other government revenues. Analyses by civil society organisations such as CIPESA point out that the sector's strong revenue performance reinforces continued political support for telecom-focused taxation (CIPESA, 2024).

Overall, the period 2023–2025 is marked by a dynamic and expanding fiscal policy environment, with implications for investment, affordability, competitiveness, and digital innovation in Uganda's communications sector.

The analysis indicates that previous tax amendment cycles in Uganda have been fragmented and reactive, characterized by frequent, uncoordinated adjustments and overlapping levies on services and devices. This unpredictability undermines affordability, distorts market incentives, and hampers investment, ultimately limiting the sector's growth and the country's digital development ambitions. This was clearly evident among respondents that repeatedly framed recent reforms as evidence of what one expert called "uncoordinated fiscal policy movements", noting that *"Ministry of Finance has a target; they don't care about your strategic direction… they should sit together and say let's take the hit on the tax to promote consumption and you'll benefit in three years"* (KII, 2025 Kampala). This was echoed by both UCC and MoICT&NG stakeholders stating that, "…*the Government seems more focused on meeting its short-term revenue targets to fulfil immediate budgetary targets, rather than pursuing long-term sector growth through lower taxes that would improve affordability, drive uptake, expand the market,*

and ultimately generate higher sustainable revenue…" (KII MoICT&NG, Male, Kampala). This narrative points to a perceived gap between short-term revenue goals and longer-term digital-economy strategy, reinforcing the need for better coordination between MoFPED, UCC and the Ministry of ICT when designing future telecom tax reforms.

However, according to The Ministry of Finance and Economic Development, KII, 2025 "*We have no problem with reducing taxes as long as we can widen the tax base and increase revenue to fund the government budget. We are actually also looking at how we can achieve this and thus welcome evidence-based ideas to achieve this target*". In light of this, urgent reform is needed to establish a coherent, predictable, and growth-oriented taxation framework that supports both operators and consumers while advancing sector growth and equitable access to digital services widening the tax base, hence increasing government revenue.

5.4 Tax Incidence Mapping Across the Telecom Value Chain

The telecommunications sector in Uganda is a significant source of government revenue but faces a complex and heavy tax burden. According to GSMA (2023), telecom companies contributed substantial revenue to government coffers, with the Uganda Revenue Authority (URA) reporting UGX 951 billion in taxes from telecoms in FY 2017/18 (Monitor, 2018). Taxes span the entire value chain—from infrastructure and devices to end-user services—making an understanding of **tax incidence** essential to assess both fiscal impact and social/economic effects, particularly on affordability and digital inclusion.

Mapping the Telecom Value Chain & Relevant Taxes

The telecom value chain in Uganda comprises the following segments:

1. **Input / infrastructure level** – network equipment, devices, imports
2. **Telecom operators** – network providers such as MTN and Airtel
3. **Service provision** – voice, data/internet, value-added services (VAS)
4. **Digital services & fintech** – mobile money and over-the-top (OTT) platforms
5. **Consumers** – end users paying for services

Taxes in these segments include corporate income tax, excise duty, VAT, import duties, withholding taxes, digital service taxes, and licensing fees.

Key Taxes in the Telecom Sector & Their Incidence

Corporate Income Tax

Telecom operators pay a **30% corporate income tax (CIT)** (CIPESA, 2021). Incidence falls largely on **producers**, though part of the burden may be passed to consumers via higher prices or lower investment.

Excise Duty

Uganda imposes a **12% excise duty** on prepaid/postpaid airtime, value-added services, and internet data (Research ICT Solutions, 2022). This tax is collected by operators but partially passed to **consumers** through higher prices.

Value-Added Tax (VAT)

VAT at **18%** applies to devices and telecom services, including airtime and data (Observer, 2023). Incidence is mostly on **consumers**, though collected and remitted by operators or importers.

Import Duties and Infrastructure Levy

Devices imported into Uganda attract **10% import duty**, **18% VAT**, and a **1.5% infrastructure levy** (CIPESA, 2021). The **consumer** bears the majority of this tax through higher device costs.

High taxes on imported bandwidth increase the cost of a critical input for telecom operators, reducing their margins and cash flows and limiting their ability to invest in network expansion, capacity upgrades, and service quality; smaller operators are particularly affected, weakening competition. Ultimately, these higher costs are largely passed on to users through more expensive data services, leading to reduced affordability, lower internet usage, slower broadband uptake, and poorer quality of service. Overall, taxing bandwidth heavily constrains sector growth, widens the digital divide, and undermines the development of a competitive and inclusive digital economy.

Withholding Tax on Commissions

A **10% withholding tax** applies to commissions for airtime distributors and mobile money agents (Africa Portal, 2023). The burden falls on **agents/distributors**, potentially reducing incentives or earnings.

Digital Service Tax (DST)

Non-resident digital service providers are subject to a **5% DST** on gross revenue (CIPESA, 2021). Incidence may be partially passed to **local consumers** or businesses. Kajubi (2023) highlights that DST may disproportionately affect platforms with thin margins.

Mobile Money Taxes

Mobile money withdrawals attract a **0.5% tax**, and transaction fees are subject to a **15% excise** (CIPESA, 2021). These taxes are borne by both **users** and **service providers**, depending on cost pass-through.

Licensing / Regulatory Fees

Operators incur license fees, spectrum fees, and other regulatory costs (GSMA, 2023). These costs are borne primarily by **telecom operators**, with possible pass-through to consumers via higher tariffs.

Quantitative Burden

GSMA (2023) estimates that the **average effective tax rate** in Uganda's mobile telecom sector is **68% of pre-tax profit**, among the highest in the region. Excise taxes alone account for approximately **45% of total tax payments** by operators, distorting market incentives and potentially reducing network expansion and service quality.

Implications of Tax Incidence

1. **Affordability Challenge:** Taxes on services (airtime, data, mobile money) significantly impact consumers, particularly low-income users (Africa Portal, 2023; GSMA, 2023).
2. **Distortion of Market Incentives:** Heavy taxation may limit infrastructure investment and quality of service.
3. **Impact on Mobile Money & Financial Inclusion:** Taxes on mobile money withdrawals and transaction fees discourage adoption especially among low-income users.
4. **Revenue vs Equity Trade-Off:** While raising revenue, high taxes may suppress digital adoption and ultimately shrink the tax base.
5. **Compliance & Under-Declaration Risk:** Disputes, such as URA's audit of MTN Uganda, highlight challenges in tracking tax obligations for digital services (Observer, 2023; Extensia Tech, 2023).

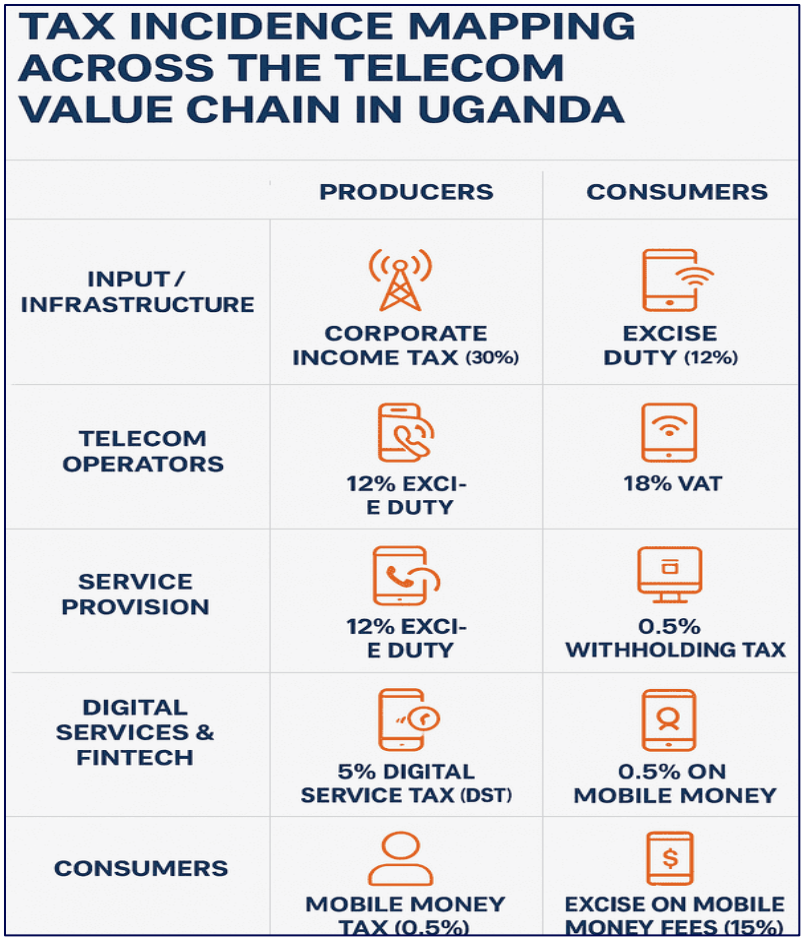

Figure 7: Tax incidence mapping across the Telecom value chain

Table 8: Tax instrument, bearer and ultimate payer

Tax Instrument	Bearer / Payer	Incidence (Ultimate Payer)
Corporate Income Tax	Operators	Mostly producers, partly consumers
Excise Duty (12%)	Operators (remit)	Shared: operators remit, consumers pay
VAT (18%)	Consumers (via operator/importer)	Consumers
Import Duty & Infrastructure Levy	Importers / Consumers	Consumers
Withholding Tax	Agents / distributors	Agents; may reduce service provision
Digital Service Tax (5%)	Non-resident digital providers	Possibly local consumers/businesses
Mobile Money Withdrawal Tax (0.5%)	Users	Consumers
Excise on Mobile Money Fees (15%)	Providers / Users	Shared: providers may absorb or pass on

The qualitative data mirror this mapping of incidence across the value chain and highlight that, in practice, consumers bear the largest visible burden. A telecom operator emphasised that "...i*t is the consumers who bear the highest burden because most of the tax is claimable, i.e., transferable to the consumers..."* (KII – Telecom Operator, Male, Kampala). Another respondent broke down the combined tax load, noting that *"with excise duty of 12% and VAT of 18% on voice and data, it implies that a total of 30% tax is included in the pricing… and the same with mobile money where there is 0.5% on the amount withdrawn and 15% on the fees"* (KII – Telecom Operator, Male, Kampala). From the demand side, a participant in Lira observed that *"on the handset itself, when you're buying, of course there is a tax attached to the price… the handset itself becomes much more expensive"* (FGD – Consumer, Lira). Together, these perspectives confirm the quantitative mapping that taxes bite at every stage ranging from; devices, services and transactions—with the final incidence concentrated on low-income and first-time users.

5.5 Key Gaps and Policy Challenges

The body of literature on telecommunications taxation in Uganda reveals three overarching themes that shape sector performance and policy debates. First, scholars consistently underscore the tension between revenue generation and digital inclusion. While telecom taxes—particularly excise duties on airtime, mobile money, and data—remain an important and reliable source of government revenue, many studies argue that these levies increase the cost of digital services, thereby constraining affordability and slowing progress toward universal connectivity and financial inclusion. This trade-off is especially pronounced for low-income users, who are most sensitive to price changes.

Second, the literature highlights the policy volatility and public contestation surrounding telecom taxation. Rapid shifts—from the OTT tax in 2018 to the subsequent data excise tax and repeated amendments between 2020 and 2025—demonstrate the political sensitivity of digital taxation. Researchers note that abrupt policy changes have frequently triggered public backlash, reduced sector confidence, and introduced uncertainty for both consumers and operators. This volatility has also complicated long-term investment planning in the sector.

Third, authors emphasize the layered tax and parafiscal burden imposed on telecom operators. Beyond statutory taxes such as excise duty, VAT, and corporate income tax, operators face multiple parafiscal charges and regulatory fees administered by agencies like the Uganda Communications Commission (UCC). The cumulative effect of these overlapping obligations creates a complex compliance environment that influences pricing strategies, market competitiveness, and decisions on network expansion. Several studies suggest that this multi-layered fiscal landscape can dampen innovation and investment, ultimately affecting the sector's growth trajectory.

From the above analysis, telecoms taxation in Uganda remains fragile, marked by the tension between revenue generation and digital inclusion, frequent policy shifts, and a complex, multi-layered fiscal burden on operators. This fragility underscores the need for a more balanced and predictable approach that safeguards affordability for low-income users while sustaining government revenue. Enhancing policy stability and structured stakeholder engagement can

reduce public contestation, restore sector confidence, and support long-term investment planning. Additionally, rationalising overlapping taxes, fees, and parafiscal charges through improved inter-agency coordination and clearer regulatory frameworks can lower costs, boost competitiveness, and promote innovation, network expansion, and sustainable sector growth.

Design problems

Transaction-based levies such as mobile-money taxes are widely regarded as regressive and distortionary, disproportionately affecting low-income users. Emerging evidence shows that these tax designs can undermine financial inclusion and digital-adoption objectives (IGC, 2025).

Stakeholders echoed this concern strongly drawing from their own experiences. A consumer-rights expert explained that *"mobile money was always considered an avenue for financial inclusion, but the moment it started gaining popularity, it was taxed… that 0.5% tax continues to lead people out of that sector"* (KII – Consumer Advocate, Female, Kampala). Another respondent noted that *"taxes because of their nature still hit the poor people the hardest… we're still applying the same level of taxation to low-income brackets as we are for the higher income brackets"* (KII – Government MDA, Female, Kampala). These perspectives emphasise that current tax design does not sufficiently differentiate between ability to pay, reinforcing regressivity and exclusion. Tax design should be restructured to be progressive and ability-to-pay sensitive, minimizing the burden on low-income users while supporting financial inclusion and digital adoption.

Cumulative tax burden

The combination of excise duties, VAT, corporate taxes, and parafiscal fees creates a significant cumulative fiscal load on telecom operators. In many cases, this burden is passed on to consumers through higher service prices, reducing affordability and potentially slowing sector growth (UCC, 2024).

Operators consistently described the structure as *"multi-layered… taxes on taxes", with one senior official remarking that "taxes are applied where they are easy to collect and not necessarily where they should be applied… fairness and progressiveness don't seem to be considered"* (KII – Government MDA, Female, Kampala). From the user side, a participant in Lira summarised the cumulative effect by saying *"double taxing… it is not really good; if they could lower the taxes, it would be better"* (FGD – Consumer, Lira). These lived experiences illustrate how overlapping statutory and parafiscal charges translate into a perceived "over-taxation" of the sector and its consumers. Going forward, the government should undertake a comprehensive rationalisation of the telecom tax regime to harmonise and eliminate overlapping charges, thereby reducing the cumulative burden on both operators and consumers. Tax instruments should be applied transparently and progressively, and aligned with sector development priorities and income levels to promote affordability, stimulate investment, and support sustainable sector growth.

Policy coordination challenges

Tax policy, communications regulation, and financial-sector oversight remain insufficiently harmonized, leading to fragmented policy implementation. Improved inter-agency coordination

is needed to ensure that fiscal measures support-rather than conflict with-broader digital-economy and financial-inclusion goals (MoFPED, 2024).

The study noted that regulators are not fully involved in the formulation of the telecom tax structure. This is in spite of their technical expertise and better understanding of market dynamics and consumer impacts critical for them to provide timely and evidence-based input. One stakeholder remarked, *"Since we understand the market dynamics and consumer impact better than anyone, we should be fully involved in the tax formulation process. Too often, we are brought in at a later stage, yet our insights are critical to ensuring that taxes do not inhibit affordability and uptake of services but instead support sector growth."* (KII-MoICT, Male, Kampala). One industry expert captured this misalignment vividly: *"Ministry of Finance will make a policy change in tax and UCC can dance… they don't care about your strategic direction… The Ministry of Trade, ICT and Finance should sit together and say let's take the hit on the tax to promote consumption and you will benefit in three years, but they don't do that"* (KII – Telecom Operator, Male, Kampala). Equally, weak policy implementation and enforcement pose a significant challenge in the sector. While Uganda has formulated commendable policies aimed at promoting ICT growth, there is a significant gap between policy creation and effective implementation as well as enforcement. Policy implementation remains a major challenge in the country. The Inclusive Digital Economy Scorecard (IDES) report of 2021 showed that Uganda is failing to implement the policies due to poor skills, low information and communications technology (ICT) infrastructural development[37].

This analysis suggests that many of the gaps identified in the literature are not purely technical but institutional and political, rooted in the absence of a shared and well-coordinated long-term vision that balances immediate revenue needs with Uganda's digital transformation agenda. To achieve a growth-oriented telecom tax structure, the government should strengthen inter-agency coordination to ensure that tax policy aligns with broader, long-term digital transformation goals. This could involve establishing a multi-stakeholder Task Force or Technical Working Group comprising representatives from MoFPED, MoICT, UCC, URA, and other relevant agencies, as well as industry experts and operators, to review and harmonise policy proposals prior to implementation.

[37] UNCDF, 2021. Inclusive Digital Economy Scorecard (IDES) report. United Nations Capital Development Fund. Available at: https://www.uncdf.org/article/7222/the-inclusive-digital-economy-scorecard

6 IMPACT OF GENERAL AND SECTOR-SPECIFIC TAXES ON THE TELECOM VALUE CHAIN

Different researchers, academics and practitioners alike (e.g. CIPESA, 2025; CIPESA 2022; Thornton Matheson and Patrick Petit, 2017), argue that the multiple and high taxes contribute significantly to the high cost of services and devices, with the financial burden often passed on to the consumer. This impacts the affordability and accessibility of digital technologies, potentially widening the digital divide, particularly for rural dwellers and other disadvantaged groups. The sector, despite these taxes, is a key source of government revenue, contributing over Shs1.1 trillion in taxes as of December 2020.

Policy analysts and bodies like the Collaboration on International ICT Policy for East and Southern Africa (CIPESA) highlight that regressive levies such as taxes on mobile money, internet data, and digital service charges raise costs for consumers, disproportionately impacting low-income, rural, and marginalised groups and potentially inhibiting uptake of digital services and platforms[38]. It advocates for a reduction in these taxes to support innovation, improve access to information, and enhance e-governance and e-commerce across Uganda. It also recommends reviewing and reducing the tax burden on devices and connectivity and designing tax systems that support accessibility, competitiveness, and sustainable digital sector growth.

The qualitative findings from KIIs and FGDs strongly reinforce this narrative. A senior regulator observed that "excise duty continues to be applied to non-luxury services like data that has become very critical for economic development" (KII – Government MDA, Female, Kampala), while an industry expert stressed that "the sector has a lot of potential, but the tax burden slows down how fast it can grow" (KII – Industry Expert/Consultant, Male, Kampala). From the demand side, a rural consumer in Lira summed up the experience by saying "for many low-income households, taxes make data a luxury… you only buy enough for WhatsApp" (FGD – Consumer, Female, Lira). These perspectives indicate that, along the telecom value chain, tax policy is perceived as both a critical revenue tool and a key driver of cost pressures that ultimately shape access and usage.

6.1 IMPACT ON CAPITAL INVESTMENT AND INFRASTRUCTURE DEPLOYMENT

The mobile telecommunications sector in Uganda faces a highly complex and burdensome tax environment. This includes numerous general and sector-specific taxes and fees imposed on both consumers and operators. Such complexity results in a high overall tax burden and significantly increases compliance costs for operators. These fiscal challenges hinder infrastructure investment, limit network expansion, and reduce service quality, thereby slowing digital inclusion and broader socioeconomic development[39]. Frequent tax changes and policy uncertainty further weaken investment planning, discouraging aggressive expansion of

[38] CIPESA. CIPESA Submits Comments on Uganda's Proposed New Digital Tax. May 18, 2023.
[39] GSMA (2025). Mobile Sector Taxation: Comparative Fiscal Burden in Uganda — GSMA Public Policy Brief. https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/gsma_resources/mobile-sector-taxation-in-uganda/

broadband and last-mile infrastructure, particularly in low-income and rural areas where returns are already marginal. As a result, while core network maintenance continues, the pace and scale of new infrastructure rollout and technological upgrading are more cautious than they might be under a more stable and investment-friendly tax regime.

Mobile Subscriber Penetration and Smartphone Ownership

Study findings show a notable proportion of operators (36–41%) reported no change in subscriber penetration and smartphone ownership, indicating that taxation has not drastically reduced consumer uptake in these areas. However, 18–23% observed a slight decrease, and around 9% reported a significant decrease, suggesting that the tax policy has had some limiting effect on expanding access and adoption, especially among low-income and price-sensitive users.

These quantitative patterns resonate with qualitative evidence. Operators repeatedly noted that subscription growth has continued, but more slowly than it could under a flexible tax regime. One telecom executive stated that *"we still add subscribers every year, but high taxes on devices and services mean people come on board more slowly, and some stay on feature phones instead of smartphones"* (KII – Telecom Operator, Male, Kampala). A regulator similarly remarked *that "taxes on handsets are quite high… very high-end devices are paying the same percentage of taxes as an entry-level smartphone, so a person who should be moving to a smartphone ends up staying with a basic phone"* (KII – Government MDA, Female, Kampala). This suggests that while headline penetration grows, tax-induced costs are dampening the transition to more advanced, data-capable devices that would deepen digital usage.

Data Usage / Traffic Volume and Voice Call Volumes

For both data usage and voice calls, a significant share (32–36%) of operators indicated no change, while 32–36% reported a slight decrease. This pattern suggests that taxes may have moderated growth in traffic volumes and voice services, potentially by increasing the cost of services or limiting affordability for certain consumer segments.

FGDs confirmed that many users respond to rising prices by rationing their usage rather than disconnecting completely. A consumer in Gulu explained: *"when bundles become expensive, we just reduce usage… you buy a small bundle only for WhatsApp and stop streaming"* (FGD – Consumer, Male, Gulu). Another participant in Lira added that *"for calls, people 'flash' more and talk less because airtime finishes quickly"* (FGD – Consumer, Female, Lira). These accounts help explain why operators report "slight decreases" rather than sharp collapses in volumes: users remain connected but adjust their behaviour in ways that limit revenue and reduce the developmental benefits of digital communications.

Total Turnover (Revenue)

Nearly 45% of operators reported a slight decrease in total turnover, while 32% indicated no change. This highlights that taxation may have had a noticeable dampening effect on sector revenues, likely reflecting reduced consumer spending, increased operational costs, or a combination of both. While taxes on telecoms and digital transactions deliver significant revenue, they are less stable long-term if they depress transaction volumes or constrain sector growth.

The fiscal gain must be balanced against negative multiplier effects on the rest of the economy (CIPESA, 2022).

Qualitative respondents directly linked high tax incidence to softer revenue performance. An industry expert observed that "high taxes not only affect consumers but also government revenue from telecom services, when usage goes down, the tax base shrinks instead of growing" (KII – Industry Expert/Consultant, Male, Kampala). A mobile money agent in Gulu illustrated this dynamic at micro level: "*ever since that 0.5% tax came in, some customers reduced the number of times they withdraw… they wait and take everything once, so we earn less in commissions*" (FGD – Mobile Money Agent, Male, Gulu). These experiences imply that incremental price increases driven by taxation can cumulatively erode turnover and limit the sector's long-term revenue potential for both operators and government.

Investment in Network/Infrastructure

Responses are more evenly distributed, with approximately 32% reporting a slight decrease, 23% no change, and smaller proportions noting significant decreases or increases. This suggests that taxation may have constrained investment decisions to some extent, particularly affecting expansion and infrastructure development plans. According to UCC (2024), high excise duties and parafiscal fees raise operating costs and can reduce funds available for capex (network rollout, rural coverage). While Uganda remains attractive regionally for investment, the cumulative fiscal burden risks slowing marginal investments.

Across most indicators, the predominant responses are slightly decrease and no change, indicating that while the taxation framework has not drastically reduced sector activity, it has exerted a moderating effect on growth, revenue, and investment. The minimal reports of significant increase suggest that tax policy has not incentivized positive shifts in sector dynamics; rather, its impact has been neutral to slightly negative in key areas.

This is echoed in the KIIs. A senior operator explained that *"we are still investing, but every new tax or fee means we revise our capex plans… maybe we delay some rural sites or choose to upgrade fewer towers this year"* (KII – Telecom Operator, Male, Kampala). Another respondent argued that "if government gave tax holidays on infrastructure or reduced import duties for network equipment, it would go a long way in managing our operational costs and expanding coverage" (KII – Telecom/ISP, Male, Kampala). Figure 8 presents operators' perceptions of the impact of taxation on various telecommunications services, including mobile subscriber penetration, smartphone ownership, data usage, voice call volumes, total turnover (revenue), and investment in network/infrastructure. These insights suggest that current tax policy has a subtle but real chilling effect on marginal investment decisions, especially in high-cost rural and low-income areas where returns are already thin.

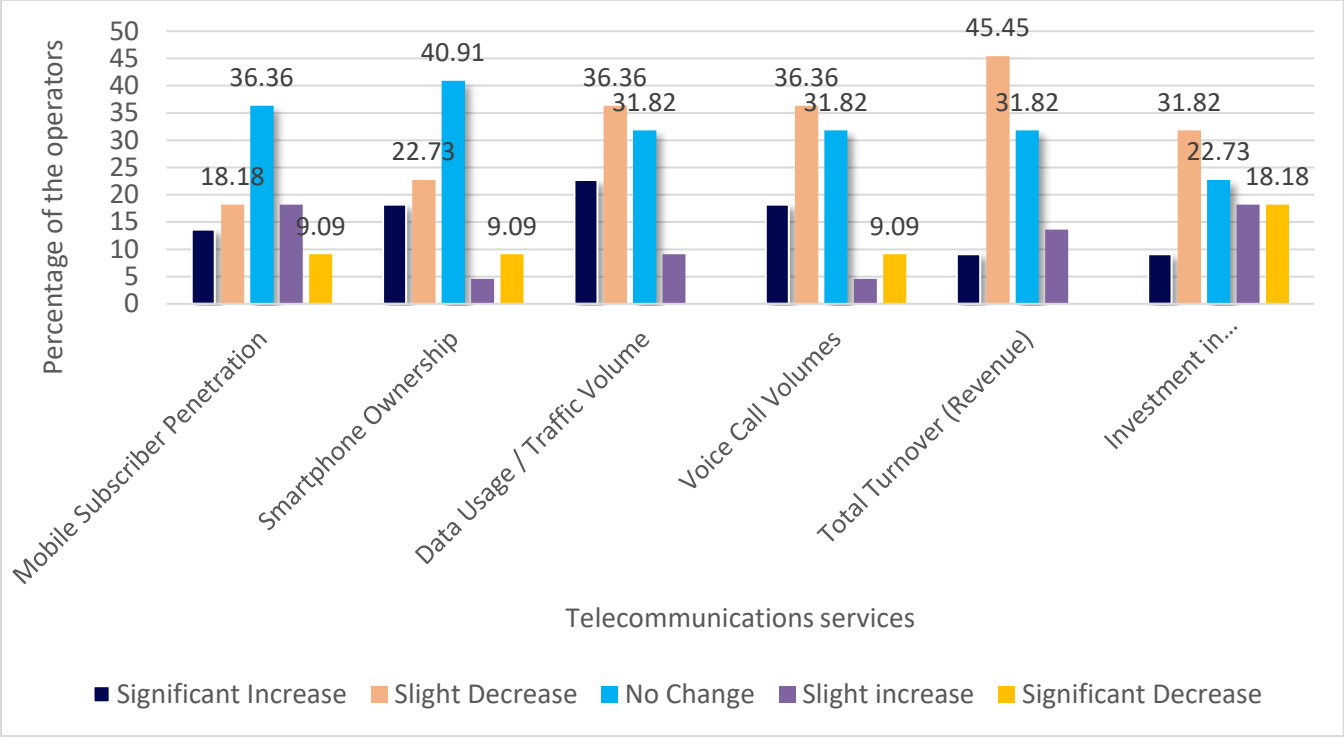

Figure 8: The impact of tax-related price increases on various telecom services

The current telecommunications tax policy in Uganda appears to have moderated growth, slightly constrained investment, and affected sector revenues, while not drastically reducing access or adoption of services. Policymakers may consider reviewing the tax structure to ensure it balances revenue generation with sustaining sector growth, affordability, and investment incentives.

6.2 Impact on Product and Service Pricing

6.2.1 Tax awareness

Operators of telecommunication businesses were asked if they were aware of which taxes levied on their business and the results from Figure 9 show that a significant number of operators (majority at 79%) are aware of the existing tax policies. This could be because majority were located in urban centres where there is more access to information.

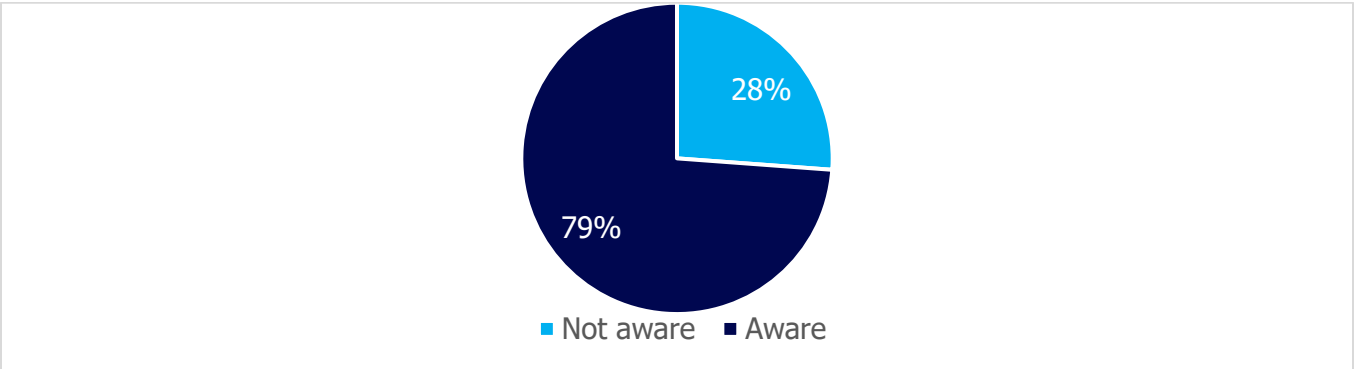

Figure 9: Awareness of tax policy among telecommunication service Business operators

Cooperate income tax was the most known tax (88%) by the business operators. The second most Value Added Tax (VAT) (64%) known tax is income tax (59%) followed by license (56%). The least known is PAYE (pay as you Earn) (17%) as seen in Figure 10. This could be because PAYE is not paid by business unless if the business is employing other people. The reason for high level awareness about income tax, VAT and income tax could be because such taxes are direct and thus it becomes easy for the operators to notice them. Qualitative evidence reinforces this pattern of partial tax awareness. Several participants described an environment in which taxes are widely felt but not always clearly understood. For example, one respondent noted *that "Most Ugandans do not understand even how much tax they actually pay… excise duty, 12% embedded within the airtime; VAT… embedded for data and voice services."* (KII – Government MDA, Female, Kampala). Another consumer group explained more generally that *"the taxes these days are a bit high… and hard to understand" (FGD – Women, Consumer Representatives, Tororo)*. These reflections suggest that while operators may recognize major tax categories, the specific tax components, their structure, and their cumulative financial impact remain opaque to many actors across the value chain.

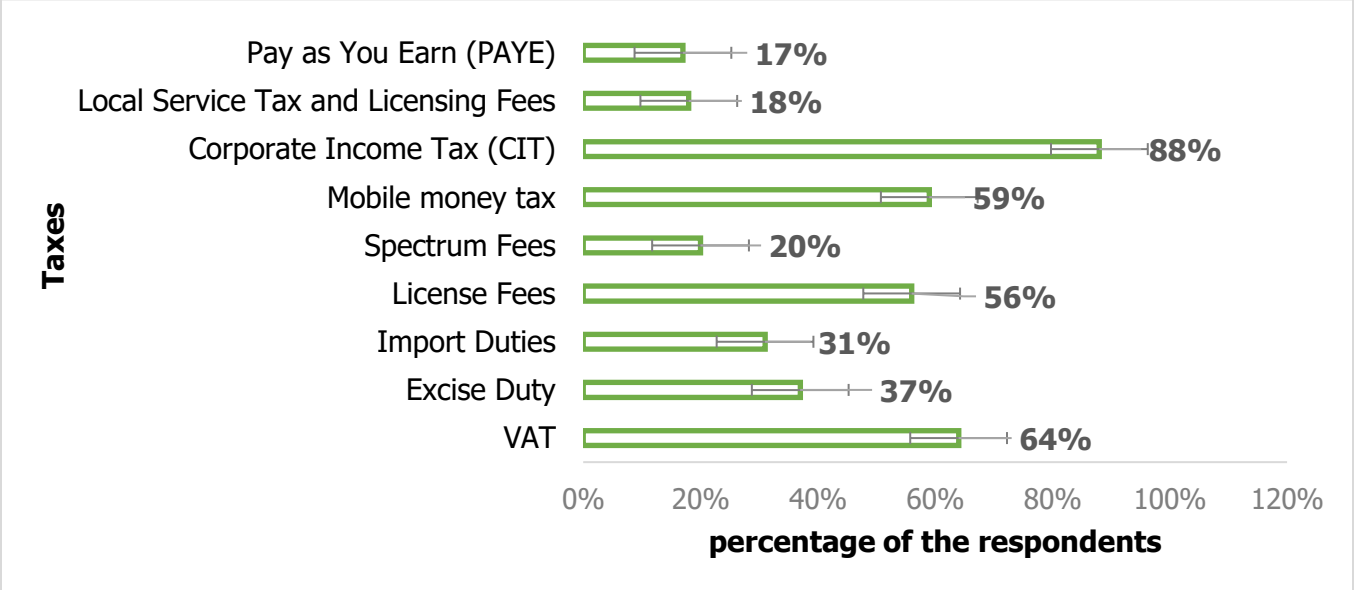

Figure 10: Taxes that are known to business operators in telecommunication sector

Source: *Business owners survey by ECASA*

The results in Figure 11 revealed about 70% of businesses reported that a quarter of their operational expenditure is attributed to taxes. This implies that for the bulk of the telecom sector which is largely comprised of small retailers, airtime vendors, and mobile money agents, taxes are among major constraints. This aligns with qualitative accounts describing taxation as an unavoidable and heavy cost pressure. As one group put it, *"we are charged high taxes on everything used in telecom" (FGD – Consumers).* These experiences indicate that even basic operations, airtime vending, mobile money transactions, and device retail are significantly shaped by the cost burden of taxes, which in turn influences pricing decisions and business viability. In a low-margin business environment, allocating 25% of all operational funds to taxes is a substantial burden that directly affects businesses' profitability. This group likely feels the

weight of consumption taxes which are passed through to them by larger operators and directly affect their cost of goods sold.

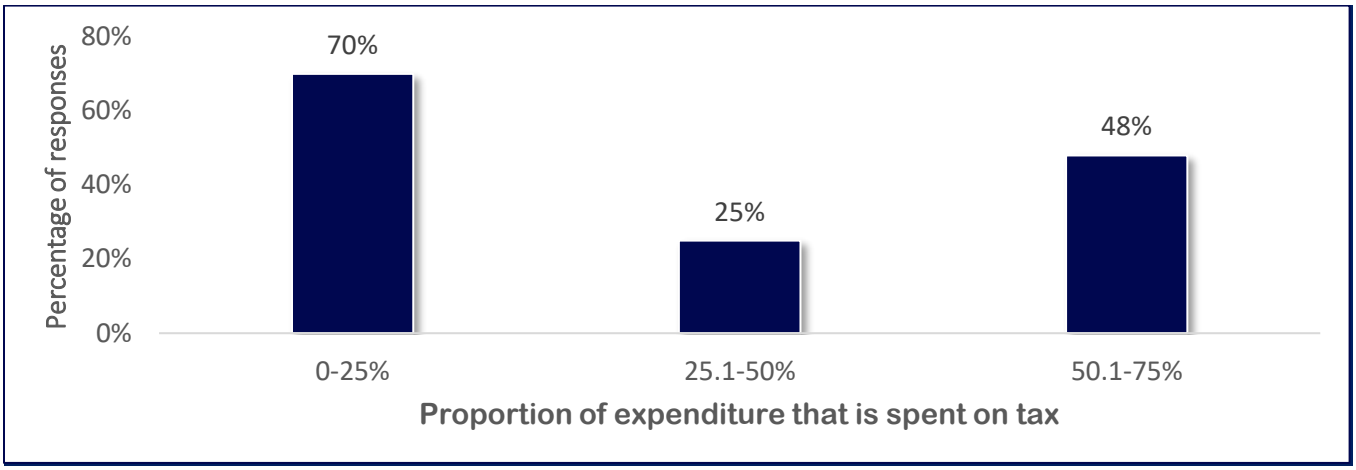

Figure 11: Proportion of business operational expenditure is tax

Source: *Business owners survey by ECASA*

Respondents were asked about the perception on policy and evaluation of tax. The Table 9 presents the perceptions of 125 respondents about policy and evaluation of tax. This was measured using a five-point Likert scale (1= strongly agree, 5 = strongly disagree)

Perceptions regarding Fairness and Equity respondents were asked if the tax policy is fair to all businesses. The results show that the most respondents disagree with the notion of fairness in the existing tax system. This implies that many businesses are disproportionately burdened by tax obligations. This perceived unfairness equity could contribute to low compliance rates and a sense of exclusion among smaller enterprises. Qualitative findings support this, with one telecom operator describing the tax system as *"not only unpredictable, but not exactly equitable*" (KII – Telecom Operator — MTN Uganda & Subsidiaries, Kampala). Such unpredictability increases the perceived risk of long-term investment and complicates operational planning.

With respect to entrepreneurship and reasonableness of tax Rates disagreed (mean = 4) with the statement that "The tax system encourages entrepreneurship." These results imply that current tax policies are perceived as discouraging business start-ups or expansion, possibly due to high tax rates, complex procedures, or lack of supportive incentives for new enterprises. Similarly, the mean of 4 for "Current tax rates are reasonable" shows that most business people consider the tax burden relatively heavy and inhibitive to business growth. These results highlight the need for a more flexible and business-friendly tax policy, especially for SMEs that usually operate with small capital.

Furthermore, business operators were asked about how tax policy is predictable and stable. The results indicate a perceived instability or inconsistency in tax regulations. Businesses value predictability because it allows for effective planning, budgeting, and investment decisions. Unpredictable policy changes, such as frequent adjustments in tax rates or new compliance requirements. This creates uncertainty and discourage long-term investment. Thus, the results imply that the current tax framework is characterized by frequent amendments or inconsistent enforcement, which undermines business confidence.

Regarding the tax system and informal business practices. The business community was neutral about whether the tax system discourages informal business practices taxation. This implies that current tax policies may not be sufficiently effective in bringing informal enterprises into the tax net. This could be due to high compliance costs, lack of awareness, limited perceived benefits of formalization, or ineffective enforcement. This finding emphasizes the need for simplifying tax registration procedures and linking compliance with tangible benefits, such as access to credit.

The results on whether tax administration is efficient and transparent indicate that business men and women hold mixed views about the operations of tax authorities. The results suggest that some business men and women don't understand whether tax administration is efficient and transparent or not. The neutrality implies that although reforms may have been introduced, their impact on user experience and trust remains noticed because of lack of awareness.

Additionally, the results on perception reveal that people are current tax policy regimes don't encourage business growth. This implies that current tax policies drain the benefits of the business. This could be attributed to lack of transparent and efficient tax administration.

As expected, the statement on whether tax incentives (e.g., exemptions, rebates, and tax holidays) can improve business performance received the lowest mean (2), indicating strong agreement among business men and women. This suggests that tax incentives are widely perceived as beneficial instruments for enhancing business productivity and competitiveness. Incentives may reduce operational costs, encourage reinvestment, and improve compliance by providing tangible benefits. This result underscores the importance of maintaining and possibly expanding targeted incentive schemes that promote innovation, investment, and sustainability in key sectors.

Table 9: Perceptions and Policy Evaluation

Perception	Mean (n=125)	Min	Max
The tax policy is fair to all businesses	4	1	5
The tax system encourages entrepreneurship	4	1	5
Current tax rates are reasonable	4	2	5
The tax policy is predictable and stable	4	2	5
The tax system discourages informal business practices	3	1	5
Tax administration is efficient and transparent	3	1	5
Tax incentives (e.g., exemptions, rebates, and tax holidays) can improve my business performance	2	1	5
The current tax policy encourages or discourage business growth	4	1	5

Likert scale: 1. strongly agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

Source: *Business owners survey by ECASA*

6.3 Effect on Market Entry and Competition

Qualitative evidence demonstrates that Uganda's current telecom tax regime together with associated regulatory fees, compliance demands, and device-related taxes creates a difficult environment for new entrants and smaller operators. Participants repeatedly described the sector as dominated by a few large players whose financial capacity allows them to absorb tax-related pressures more easily than prospective competitors. As one industry respondent

observed, *"the telecom industry is capital intensive, which often excludes many potential entrants due to the high initial investment required"* (KII – Telecom/Operator).

This capital intensity is compounded by Uganda's tax structure, which many stakeholders perceive as amplifying operational costs for any operator seeking to compete. A senior sector participant stated that *"the high taxes on internet particularly on smartphones and other related gadgets hinder affordability to many low-income earners"* (KII – Government Representative, Kampala). Because device taxes directly influence smartphone uptake and the demand for data services, high fiscal burdens can shrink the potential customer base for new entrants reducing incentives for investment in alternative networks or innovative service packages.

The qualitative data also reveals that established operators are better positioned to navigate or offset telecom-specific levies, while smaller firms struggle with reduced margins and unpredictable tax obligations. A telecom expert explained that the constant changes in the tax regime complicate business planning: *"these changes create uncertainty for the consumers of our services"* (KII – Telecom Stakeholder, Kampala). This uncertainty extends to investors as well. Investors evaluating the Ugandan market must consider not only conventional operational risks but also the unpredictability of consumer demand in the face of excise taxes, data levies, and mobile money charges.

Consumer voices echo this concern by highlighting how rising taxes limit adoption, thereby reducing the overall viability of new competitors. One participant explained: *"when the OTT tax came in, our usage of mobile internet usage stopped… so basically we were no longer using mobile internet"* (FGD – Women, Kampala). Reduced consumer usage shrinks the effective market. Similarly, youth participants expressed that *"we now buy smaller bundles, only for WhatsApp… we no longer do the things we used to do online"* (FGD – Youth, Jinja). For smaller operators trying to gain a foothold, such suppressed demand makes it exceedingly difficult to reach the scale needed to compete with incumbent firms.

Some respondents also pointed to the cumulative effect of taxes on operational costs for distributors, vendors, and mobile money agents-actors who form part of the broader competitive ecosystem. For example, a small business operator noted: *"the high taxes on data, on smartphones, on everything… it affects us as sellers because people reduce the way they buy"* (KII – Retailer/Vendor). Reduced sales volumes weaken the distribution networks that new entrants rely on, thereby reinforcing the dominance of established operators.

The combined weight of excise taxes on data, levies on mobile money, device tariffs, licensing fees, and compliance costs limits competition by:

1. **Deterring new entrants**, who must factor high regulatory and fiscal burdens into their startup costs.
2. **Compressing consumer demand**, reducing the potential revenue pool and making it difficult for new firms to scale.
3. **Reinforcing incumbent dominance**, as large operators better absorb tax shocks while smaller firms and ISPs face shrinking margins.
4. **Undermining innovation**, as unpredictable tax shifts discourage experimentation with new service models.

Overall, qualitative findings clearly show that Uganda's current tax environment constrains market contestability. Without targeted tax reforms particularly on data, devices, and compliance fees the sector's competitive landscape is likely to remain narrow, with limited incentives for new players to enter or for existing firms to innovate aggressively.

6.4 Influence on Consumer Adoption and Usage

Recent literature consistently shows that Uganda's telecom tax reforms have had notable socioeconomic and sectoral impacts, particularly on affordability and digital inclusion. Taxes on airtime and mobile-money withdrawals increase the cost of usage for low-income consumers and can reduce demand for digital services. Evidence from several policy analyses indicates that the mobile-money levy lowered transaction volumes and shifted some users back to cash-based transactions, undermining progress in financial inclusion and digital payments adoption (IGC, 2025; ICTD, 2024). Similarly, distortionary transaction-based levies have been shown to create bottlenecks for the broader digital economy, including e-commerce and electronic payments, prompting policy briefs to recommend careful redesign of these instruments (IGC, 2025). The introduction of the 12% excise duty on internet data has also been associated with higher consumer prices, with studies warning that the resulting rise in data costs may slow digital uptake and limit affordability, particularly among vulnerable groups (Reuters, 2021). At the same time, sector analyses acknowledge that telecommunications operators contribute significantly to national revenue through VAT, excise duty, and corporate taxes—a factor that continues to drive political commitment to taxing the sector, despite ongoing concerns about the implications for innovation, investment, and service affordability (CIPESA, 2023).

Among the university population, mobile data usage is overwhelmingly dominated by social communication and research and development applications. From Figure 12, the findings show that majority of the use data for streaming and tube (26%), this could be because probably students are trying to understand concepts from tube which they could have not understood in class. This was followed by activities directly related to education and work, such as research and development or teaching, account for about 25%. This signifies the importance of internet in development of the country

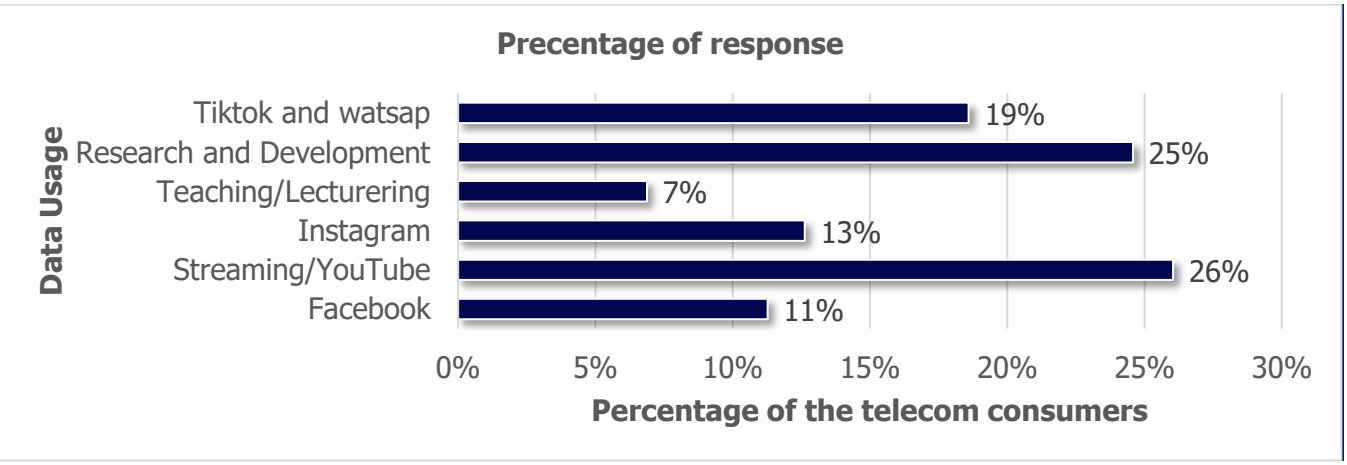

Figure 12: Data use among university staff and students

Source: *Consumers survey by ECASA*

Qualitative findings provide deeper insight into how tax-induced price increases influence adoption and usage behaviour. Several participants reported deliberately reducing their mobile internet consumption due to rising taxes. One female consumer explained *that "when the OTT tax came in, our usage of mobile internet usage stopped… so basically we were no longer using mobile internet"* (FGD – Women, Kampala). Another respondent similarly described cutting back to only essential platforms: *"we now buy smaller bundles, only for WhatsApp… we no longer do the things we used to do online"* (FGD – Youth, Jinja). These statements illustrate how users do not necessarily disconnect entirely but downgrade usage, shifting from richer, data-intensive applications to minimal communication channels.

The effect is even more pronounced among low-income groups, who experience a sharper trade-off between basic needs and digital access. As one participant noted, *"if data is expensive, you first think about food… internet becomes secondary"* (FGD – Low-income Consumers, Gulu). This sentiment reflects the broader implication that telecommunications, though central to modern economic participation, are not yet universally affordable.

Qualitative evidence also points to behavioural adaptations that undermine digital inclusion objectives. For example, some consumers reported substituting mobile internet with public Wi-Fi or shared connections: *"you wait to go to campus or town where there is free WiFi because bundles at home are expensive"* (FGD – University Students, Mbale). Others reported limiting device upgrades due to the combined burden of data and handset taxes: *"even if you want a smartphone, if you can't afford the data, it's useless"* (FGD – Consumers, Mbale). These accounts suggest that high taxes do not only influence service usage but also discourage device adoption slowing the transition from basic phones to smartphones and, by extension, reducing meaningful connectivity.

The implications of these qualitative findings reinforce the quantitative trends, that high telecom taxes depress usage not by disconnection but by behavioural downgrading, undermining digital education, financial inclusion, and broader participation in the digital economy. Reduced usage ultimately limits revenue growth for both operators and government, despite short-term tax gains.

7 COMPLIANCE CHALLENGES IN THE CURRENT TAX POLICY

This chapter synthesises quantitative findings from business operators with qualitative evidence from KIIs and FGDs. The integrated analysis demonstrates that tax compliance challenges are driven by institutional complexities, administrative inefficiencies, unpredictable policy shifts, legal ambiguities, and the heavy burden of compliance costs. These constraints are felt more acutely by SMEs, rural operators, and agents operating on thin margins.

7.1 INSTITUTIONAL AND ADMINISTRATIVE COMPLEXITIES

Results from Figure 13 show that the perceptions of male, female and overall business operators regarding how easy it is for businesses to comply with tax obligations. The responses were categorized into five levels; Very easy, Easy, Neutral, Difficult, and Very difficult.

The results indicate that a significant portion of respondents perceive tax compliance challenging. The "Difficult" category accounted for 31% of females, 28% of males, and 30% overall. This implies that nearly one-third of all respondents face difficulties in meeting tax obligations. The challenges could be due to the complex filing requirements, frequent policy changes, inadequate taxpayer education, or perceived inefficiency and opacity in tax administration systems.

Qualitative insights mirror these quantitative patterns. Operators frequently described the tax environment as administratively burdensome and overly scrutinized. A telecom operator noted that *"Telecom is under most scrutiny… farm produce is taxed but no one pays… but telecom is easy to track"* (KII – Telecom Operator), reflecting a perception that the sector is disproportionately targeted by tax authorities. Another operator highlighted the pressure of real-time oversight, explaining that *"URA now has direct access to our switches… they will squeeze the last juice out of us to meet their KPIs"* (KII – Telecom Operator). These experiences illustrate administrative intensity that reinforces compliance anxiety among operators.

Respondents also pointed to inconsistencies in enforcement and decision-making. One business operator shared that *"businesses may face arbitrary assessments or prolonged disputes with tax authorities"* (FGD Participant). Such discretionary enforcement compounds the perceived difficulty of compliance reflected in the survey results and undermines predictability and trust in the tax system.

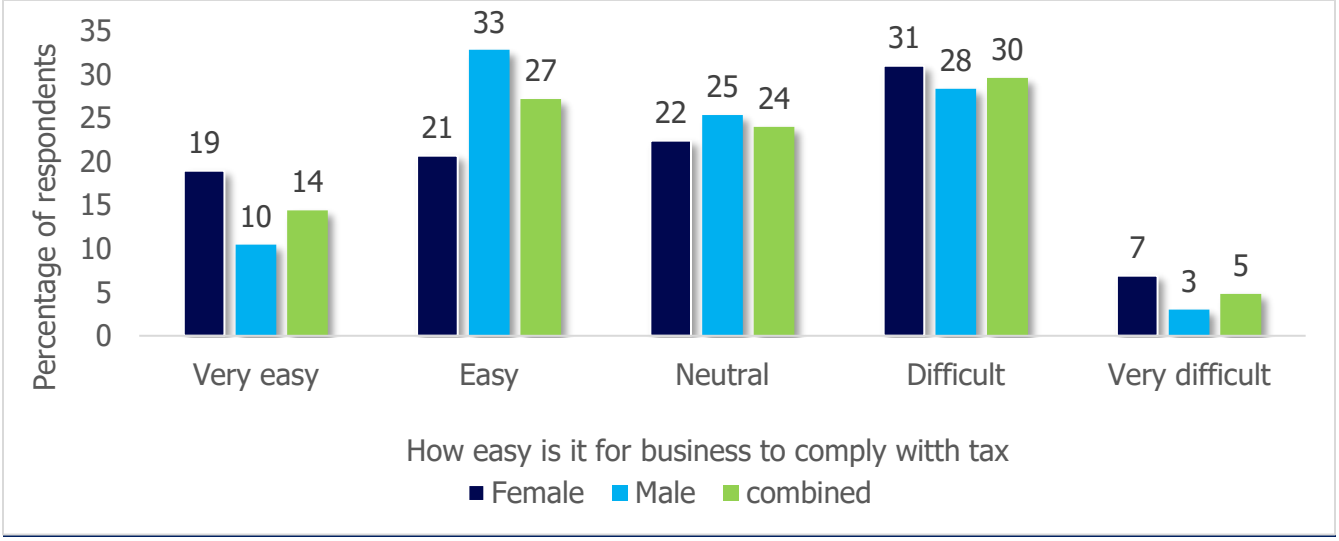

Figure 13: Ease with which business comply with tax

Source: *Business owners' survey by ECASA*

Results in Figure 14, show that tax compliance presents a significant challenge for businesses, with the complexity of tax laws and limited awareness/education on tax being the most severe issues, cited as "somewhat a challenge" by about 61% and 58% of respondents respectively. Corruption or inefficiencies in tax administration, frequent changes and High compliance costs also represent substantial hurdles, considered very serious by 50%, 45% and 30% of respondents respectively. In contrast, limited awareness or education was perceived as a less critical barrier, with the lowest percentage (29.6%) rating it as a very serious challenge, although it still remains a notable concern for a portion of the surveyed population.

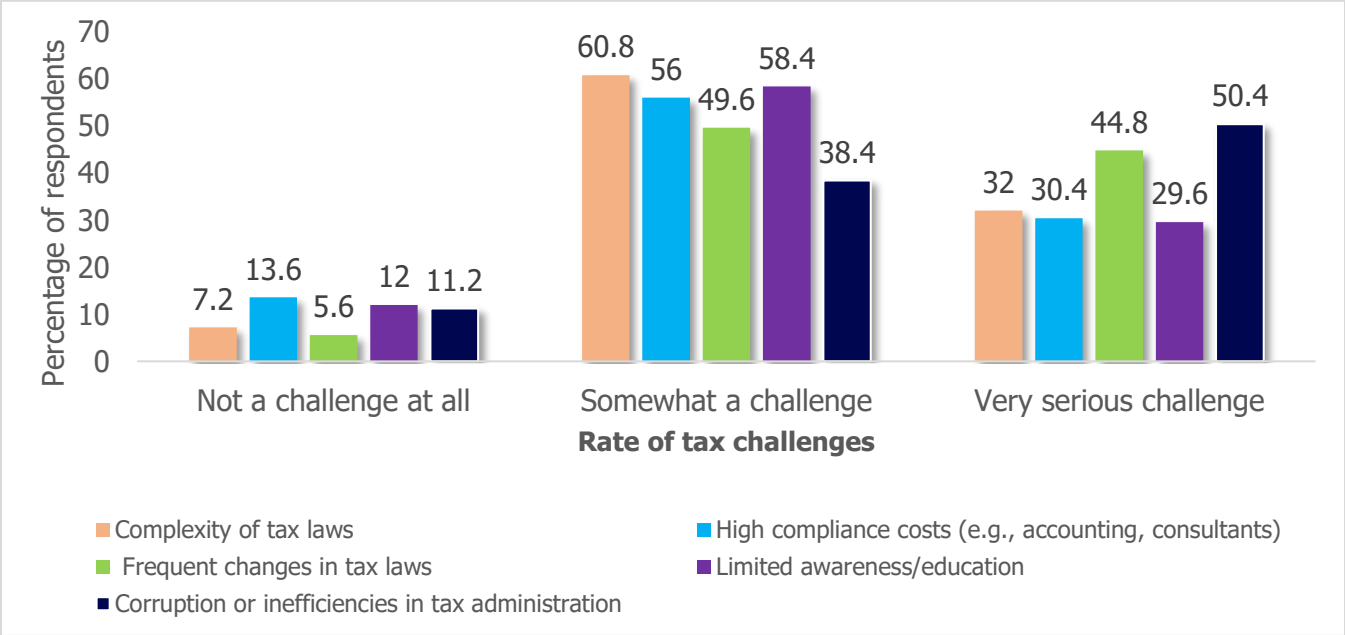

Figure 14: Rate the challenge of the tax compliance

Source: *Business Owners survey by ECASA*

Knowledge of the tax policies

The results presented in Figure 15 indicate that poor understanding of tax policies is a major concern, with 43% of business owners reporting limited tax knowledge. This reflects a significant tax literacy gap that may undermine effective tax compliance, strategic business planning, and informed financial decision-making. This gap was strongly echoed in the qualitative interviews, with one operator noting that *"we hear of many taxes but we don't understand them… sometimes you pay without knowing why"* (KII – Mobile Money Agent, Male, Gulu), illustrating how lack of clarity directly affects day-to-day compliance. Conversely, only a small proportion of respondents rated their tax knowledge as good (3%) or excellent (12%), suggesting that confidence in navigating tax regulations is low across the business community. Participants repeatedly emphasized this challenge, with an SME operator explaining that *"the problem is we don't know these tax policies very well, you only learn when URA comes to penalize you"* (FGD – SME Operator, Female, Mbale). Another respondent added that *"nobody explains to us what these taxes mean; we just comply the way we understand"* (FGD – Mobile Money Agent, Male, Lira). These findings highlight the need for strengthened tax education initiatives, targeted awareness campaigns, and more accessible, user-friendly tax information to support improved taxpayer understanding and compliance.

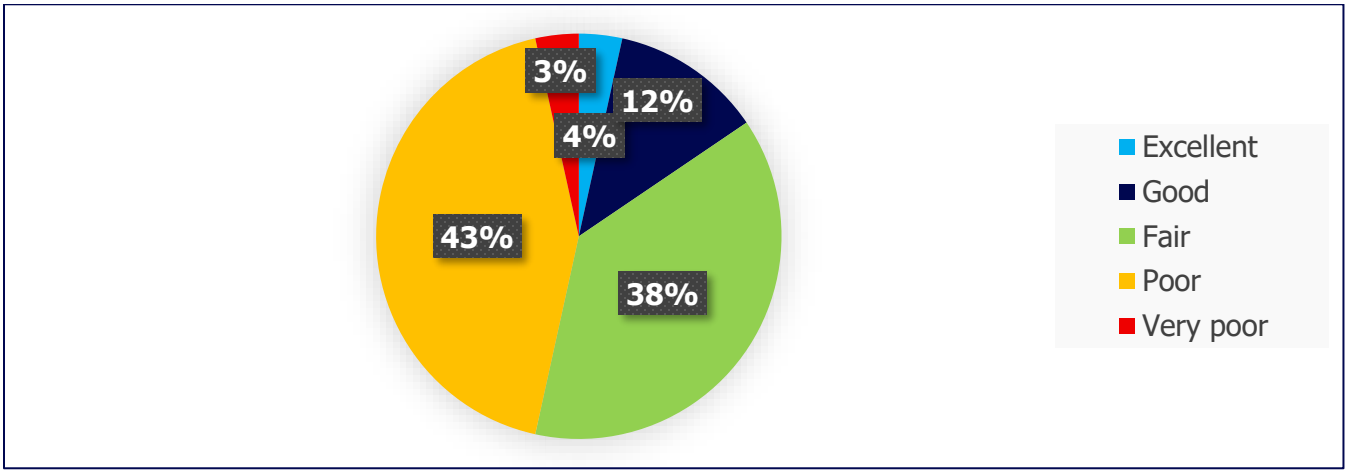

Figure 15: Rate knowledge of the tax policies affecting your business

Source: Business owners survey by ECASA

Challenges faced by business operators

The findings reveal that the most significant challenge reported by business owners is the burden of heavy tax obligations, cited by 78% of respondents. This indicates that many enterprises experience taxation as a major operational cost that erodes profit margins, limits reinvestment, and constrains business growth and innovation. As a result, taxation is widely perceived as a barrier to expansion and long-term sustainability. This sentiment strongly emerged in qualitative interviews, where one operator stated that *"these taxes are too many… by the time you finish paying, there is nothing left to grow the business"* (FGD – Mobile Money Agent, Male, Lira). Another business owner echoed this pressure, explaining that *"tax eats into our profits… you end up working for government, not for your business"* (FGD – SME Operator, Female, Mbale).

These lived experiences confirm that the tax burden translates directly into reduced working capital and diminished entrepreneurial resilience

The second set of major challenges relates to frequent changes in tax laws and a poor understanding of diverse tax obligations, including corporate tax, VAT, withholding tax, and Pay-As-You-Earn (PAYE). These issues were reported by 61% and 59% of respondents respectively. Such unpredictability and limited tax literacy make compliance difficult for many businesses, increasing the risk of errors and contributing to a climate of uncertainty. Respondents repeatedly emphasized this instability: *"every year something new comes up… we are just adjusting and adjusting"* (KII – Airtime/Data Distributor, Male, Arua). Others linked this to confusion over obligations, with a participant noting that *"you only know you did something wrong when URA penalizes you, because the rules keep changing"* (FGD – SME Operator, Female, Mbale). These accounts illustrate how unpredictability not only complicates planning but also undermines trust in the tax system.

In contrast, challenges associated with penalties, fines, or missed tax compliance opportunities were reported by the smallest proportion of business owners. While less prevalent, these issues still highlight the consequences of inadequate support systems and limited taxpayer awareness. Even so, several respondents acknowledged that low awareness exposes them to risk: *"you can easily get fines because you don't understand these things"* (FGD – Mobile Money Agent, Male, Gulu). This implies that while penalties are not the most common challenge, when they occur, they disproportionately affect smaller businesses with limited tax literacy and little access to expert support. These results are summarised in Table 10.

Table 10: Challenges faced by business operators

Challenges	Number of Business operators	Percentage of business operators
Frequent changes in tax laws make compliance difficult	76	60.8
Understanding different tax obligations (corporate tax, VAT, withholding tax, PA)	74	59.2
Heavy tax obligations may reduce profits and discourage reinvestment	97	77.6
Compared Small and medium enterprises (SMEs) often feel disproportionately burdened	65	52
Businesses may deal with local, regional, and national taxes that overlap or dup	34	27.2
Lack of coordination increases compliance costs	28	22.4
Preparing tax returns, audits, and documentation requires resources	29	23.2
Hiring accountants or tax experts increases operating expenses	19	15.2
Sudden changes in tax policy or enforcement practices create planning difficulties	47	37.6
Businesses may struggle with long-term investment decisions due to unpredictable	35	28
E-commerce businesses face challenges with digital	17	13.6

Challenges	Number of Business operators	Percentage of business operators
Double taxation issues arise in international trade	30	24
Businesses may face arbitrary assessments or prolonged disputes with tax authorities	20	16
Corruption and discretionary enforcement increase risks	34	27.2
Small businesses often lack knowledge of tax incentives, exemptions, or complain	51	40.8
This can lead to penalties, fines, or missed opportunities	13	10.4
Others, specify	16	12.8

Source: Business owners survey by ECASA

7.2 Legal Ambiguities and Interpretation Issues

The quantitative findings in Table 10 show that 60.8% of respondents agreed that frequent changes in tax laws make compliance difficult, while 59.2% noted that they struggle to understand different tax obligations such as corporate tax, VAT, withholding tax, and PAYE. These figures indicate that beyond administrative complexity, businesses face significant uncertainty arising from legal ambiguities, inconsistent interpretation, and rapidly changing tax directives. Such unpredictability complicates planning, reduces confidence in the tax environment, and increases the likelihood of errors in compliance.

Qualitative findings reinforce these patterns. One participant described how regulatory shifts disrupt planning, explaining that *"sudden changes in tax policy or enforcement practices create planning difficulties"* (FGD Participant). This sentiment reflects widespread concern that businesses are often forced to adjust compliance processes at short notice, increasing operational stress.

Additionally, operators expressed confusion about how various taxes interact across the telecom value chain. A telecom representative highlighted that *"at every layer there are taxes and heavy taxes… the more the operators are coughing out almost 60% in taxes it affects investment"* (KII – Telecom Operator). This quote illustrates how layered taxes not only increase costs but also create ambiguity about which obligations apply where, intensifying interpretation challenges.

Together, the evidence shows that legal ambiguity arises not just from complex statutes but from inconsistent enforcement, unclear guidelines, and frequent legislative amendments.

Implication: Legal ambiguities increase compliance risk and force operators to rely on costly consultants to interpret changing rules. This uncertainty constrains long-term business planning and may deter new entrants, ultimately weakening sector competitiveness.

The study noted that the requirement demanding taxpayers to deposit 30% of the disputed tax amount before an appeal can be heard has emerged as a significant legal barrier to effective tax dispute resolution. For telecom operators particularly small and medium-sized service providers and ICT firms operating on thin margins, this prepayment obligation places a heavy strain on liquidity and working capital. As a result, some taxpayers are discouraged from pursuing legitimate appeals, even where assessments may be contested on reasonable grounds.

This undermines procedural fairness, weakens taxpayer confidence in the tax system, and contributes to regulatory uncertainty in a sector that is capital-intensive and highly sensitive to policy and administrative risks. Over time, the deterrent effect of the deposit requirement may affect compliance behaviour and potentially constraining investment and innovation.

Addressing this challenge requires a shift toward flexible payment arrangements that allow bona fide appellants to defer or stagger the disputed amount, alongside targeted waivers for cases that meet clear legal and financial criteria. Reforms should include streamlining appeal timelines to reduce prolonged uncertainty, strengthening the institutional independence and operational efficiency of the Tax Appeals Tribunal, and applying proportional safeguards to protect revenue without unduly burdening taxpayers. Together, these measures would enhance access to justice, improve the credibility of tax administration, and support a more predictable and investment-friendly taxation environment for the telecom sector.

7.3 Burden of Tax Compliance on Operators

The findings in Figure 16 show that majority of all business owners, 30% of the whole sample find tax compliance challenging, with a significant gender gap revealing that female business owners report considerably more difficulty (31%), than their male counterparts (28%).

Table 8 reveals the specific areas where this burden is most keenly felt:

- **77.6%** cite heavy tax obligations as a major constraint.
- **60.8%** struggle with frequent changes in tax laws.
- **52%** believe SMEs are disproportionately burdened.
- **40.8%** lack knowledge of incentives or exemptions.
- **27.2%** cite overlapping local, regional, and national taxes.
- **23.2%** view documentation and audits as resource-intensive.

These figures suggest a compliance environment where financial, administrative, and interpretive burdens compound to create significant operational strain.

Qualitative data offers vivid insight into how these burdens affect operators. One respondent described the structural weight of import taxes on operations: *"**Import duties on equipment are high… this has hindered infrastructural development hence limiting innovation and expansion**"*(KII – Telecom Operator). The burden therefore extends beyond tax payment to broader constraints on business growth.

Another participant highlighted how consumers' behavioural adjustments, triggered by taxation, reduce operator revenues, stating: *"**people now get on a boda boda to go to an agency… as opposed to sending through mobile money**"*(FGD Participant). This demonstrates that operators indirectly absorb compliance pressure through reduced customer activity.

Similarly, a business owner emphasised the heavy cost implications of device taxation: *"**handsets become much more expensive because of taxes**"* (FGD Participant), highlighting how compliance burdens extend into retail markets, increasing end-user resistance and reducing sales volumes.

Collectively, these experiences show that compliance costs are not merely administrative but extract **financial, behavioural, and competitive tolls** on operators.

The implication of these findings is that high compliance burdens suppress operational efficiency, discourage reinvestment, and erode profitability, especially for SMEs. This risk entrenching market concentration and widening the gap between large operators and smaller market participants.

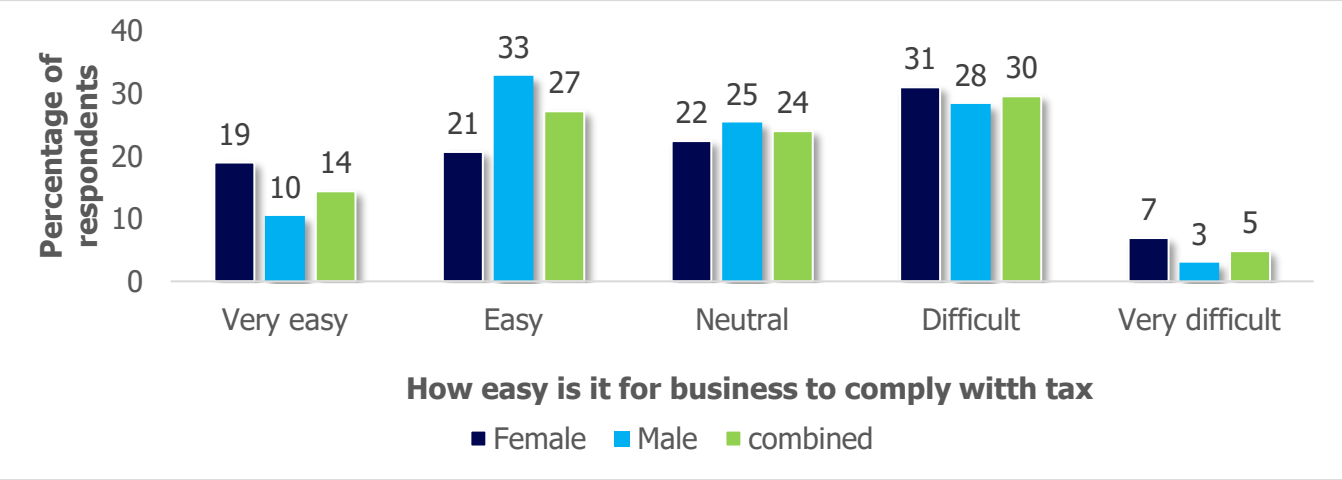

Figure 16: How easy do business comply with tax obligations

Source: Consumer survey by ECASA

7.4 Perspectives from Industry and Regulatory Authorities

Stakeholder perspectives reveal a complex interplay between revenue mobilisation and sector performance. Regulators view telecoms as a reliable and efficient source of tax revenue, while operators emphasise the structural strain created by cumulative taxation and administrative pressure.

One government stakeholder observed that *"telecom companies are opting for business customers, leaving the end users out"* (Government MDA). This reflects how operators may adapt business strategies in response to tax-driven cost structures, prioritising more profitable segments at the expense of broader digital inclusion.

Operators themselves pointed to deeper strategic effects of tax unpredictability. As one noted: *"because it is unpredictable… this uncertainty… may have long-term effects on strategic planning… [investors] may choose to deploy that capital in more predictable environments"* (Telecom Operator). This highlights how tax volatility undermines investor confidence and deters long-term commitments.

Policy experts echoed the need to distribute the tax burden more equitably. One consultant explained*: "government should broaden its tax base… spread the burden… this may contribute to price reduction"* (Industry Expert). This reflects the sentiment that telecoms are disproportionately taxed relative to their peers in other sectors.

These perspectives collectively show that stakeholders recognise tensions between fiscal objectives and digital transformation goals.

Without reforms that balance revenue mobilisation with sector growth, Uganda risks undermining its national ICT ambitions, reducing affordability, deterring investment, and limiting innovation across the telecom value chain.

7.5 Impact of Emerging Technologies on the Taxation of the Telecommunications Sector

Emerging technologies are fundamentally reshaping the structure, revenue models, and tax base of the telecommunications sector, creating both opportunities and challenges for fiscal authorities. Technologies such as fifth-generation (5G) networks, cloud computing, artificial intelligence (AI), Internet of Things (IoT), big data analytics, and over-the-top (OTT) digital platforms are blurring traditional boundaries between telecom operators, digital service providers, and technology firms. As a result, legacy telecom taxation frameworks-largely designed around voice services, physical infrastructure, and clearly identifiable operators—are increasingly misaligned with the evolving digital ecosystem.

One of the most significant impacts is the erosion and transformation of traditional tax bases. Revenues from voice and SMS services, historically subject to excise duties and sector-specific levies, have been displaced by data-driven services enabled by smartphones, OTT platforms, and cloud-based applications. While data consumption has grown exponentially, the value capture has shifted toward global digital platforms that often fall outside conventional telecom licensing and taxation regimes (OECD, 2020). This creates asymmetries where regulated telecom operators bear a heavier tax burden than functionally similar digital service providers, potentially distorting competition and investment incentives.

Emerging technologies also complicate tax administration and enforcement. AI-driven services, virtual networks, and cross-border cloud infrastructure reduce the reliance on physical presence, making it more difficult to determine taxing rights, revenue attribution, and permanent establishment (PE). IoT services, for example, generate high volumes of low-value transactions across multiple jurisdictions, challenging existing VAT and excise duty collection mechanisms (ITU, 2022). Without adaptive tax rules, governments risk under-collection, increased compliance costs, and regulatory arbitrage.

At the same time, these technologies offer new opportunities for smarter taxation. Advanced data analytics, AI, and real-time monitoring systems can strengthen tax compliance, improve revenue forecasting, and reduce evasion within the telecom sector. Digital billing systems and interoperable payment platforms-often enabled by telecom infrastructure itself-can enhance VAT collection efficiency and transparency when supported by appropriate regulatory frameworks (OECD, 2021).

From a policy perspective, the rise of emerging technologies underscores the need for a shift from distortionary, sector-specific taxes toward broader, technology-neutral taxation frameworks. International experience suggests that excessive excise duties on data services or digital access devices can suppress adoption, slow network effects, and ultimately undermine

long-term revenue growth. In contrast, fiscally sustainable approaches emphasize broad-based consumption taxes, neutral treatment of digital and traditional services, and international coordination on the taxation of the digital economy (GSMA, 2023).

In conclusion, emerging technologies are transforming the telecom sector from a traditional utility into a central platform for the digital economy. Tax systems that fail to adapt risk revenue leakage, reduced investment, and slower digital inclusion. Conversely, forward-looking tax reforms that align with technological change can support innovation, expand the tax base over time, and strengthen the contribution of the telecom sector to inclusive and sustainable economic growth.

8 ELASTICITY OF DEMAND AND INFLUENCE OF TELECOM TAXATION

This chapter presents an integrated analysis of the price responsiveness of telecom services and devices in Uganda and evaluates how taxation influences consumption patterns, pricing decisions, and market outcomes. Quantitative elasticity estimates are triangulated with qualitative insights from KIIs and FGDs to better explain observed behavioural shifts in the market.

8.1 EMPIRICAL ESTIMATION OF OWN-PRICE ELASTICITY FOR TELECOM SERVICES AND DEVICES

From the secondary data, own price elasticity mobile data, while from the primary data collected from consumer of telecom services own elasticity of mobile data and voice bundles. The findings show elasticity of Traffic mobile data is negative. This implies that increases in price by about 1%, the consumption of Traffic mobile data decreases by about 16%.

$$\varepsilon = \frac{(Traffic\ mobile\ data\ in\ 2025\ -\ Traffic\ mobile\ data\ in\ 2019)}{(Price\ of\ Traffic\ mobile\ data(per\ 1gb)in\ 2025 - Price\ of\ Traffic\ mobile\ data(per\ 1gb)in\ 2019)}$$

$$= \left[\frac{(4864.188 - 202.3)}{(1779.88 - 30804.07)}\right] * 100$$

$$\text{Own elasticity of Mobile data} \approx -0.16$$

In contrast, results from multiple regression in Table 11 after controlling for other factors such as household income, age, education level and tax awareness, elasticity of Traffic mobile data was positive (0.743). This could be because the majority of the interviewed were from the urban areas who are assumed to have a high income and thus economically able. Therefore, even when the price of mobile data increases, individuals continue consuming. In addition, mobile data has a higher proportion of samples from university students. With the migration to online classes and the Competence Based Education (CBE) that involves more research, data use has become a necessity in almost every household. All this implies that even when the prices are high, the people still consume. The discrepancy between the two estimates reflects income-

related heterogeneity in demand responsiveness. Price increases dampen demand among low-income segments, but not as strongly among high-income or digitally dependent groups.

Qualitative findings strongly reinforce this duality. Several respondents emphasised that urban, higher-income consumers *"have no choice because we need the internet for work and school"* (FGD – Consumer, Female, Kampala), while poorer users are more sensitive to cost changes. One participant explained: *"when bundles become expensive, we reduce usage… you buy a small bundle only for WhatsApp"* (FGD – Consumer, Male, Gulu). This behavioural adjustment aligns with quantitative evidence that data usage contracts significantly when prices rise particularly among low-income consumers.

This implies that Telecom demand in Uganda is inelastic among middle-income and urban users but elastic among low-income and rural users. This means tax-induced price increases disproportionately hurt lower-income consumers and widen digital inequality.

Table 11: Own-Elasticity of Traffic mobile data and mobile voice bundles

VARIABLES	(1) Ln number of Gbs	(3) Ln voice minutes
Ln price of mobile data	0.743***	
	(0.0262)	
Ln price voice bundles		-0.108***
		(0.0281)
Own basic phone (1=yes, 0=No)	0.00890	0.186
	(0.0455)	(0.130)
Sex (1=Male, 0=female)	0.0542	0.143
	(0.0447)	(0.126)
Age (years)	-0.00490	-0.0120
	(0.00471)	(0.0124)
Awareness of tax (1=Aware, 0=Not ware)	0.0254	0.278*
	(0.0548)	(0.166)
Education level (1=Post Primary, 0=Otherwise)	0.150*	0.182
	(0.0813)	(0.251)
Age squared (years)	0.0542*	0.111
	(0.0297)	(0.0848)
Own a feature phone (1=yes, 0=No)	0.655*	0.705
	(0.353)	(0.981)
Own a tablet ((1=yes, 0=No)	0.285**	0.103
	(0.145)	(0.440)
Formally employed yes (1=Yes 0=No)		-0.336**
		(0.164)
Casually employed(1=yes, 0=No)		-0.328**
		(0.157)
Earn below Ugx. 140000 monthly	-0.236***	
	(0.0634)	
Earn below Ugx. 140001- 500000 monthly	0.0592	
	(0.0548)	

VARIABLES	(1)	(3)
	Ln number of Gbs	Ln voice minutes
Northern region (1=yes, 0=No)	0.171***	
	(0.0614)	
Western Region (1=yes, 0=No)	0.105	
	(0.0708)	
Eastern (1=yes, 0=No)	0.154***	
	(0.0575)	
Constant	-6.007***	8.799***
	(0.296)	(0.504)
Observations	992	992
R-squared	0.551	0.046

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

8.2 Analysis of Whether Telecom Demand is Inelastic or Not

The regression findings in Table 11 suggest that for higher-income, university-based, or urban segments, demand for mobile data appears relatively inelastic because consumption remains high despite higher prices. Meanwhile, secondary data and qualitative insights show that demand among lower-income groups is elastic, with individuals adjusting usage sharply in response to price changes.

Respondents recounted that *"people ration data now; you only load what can take you for the day and switch off when not using then connect only when you want to check messages"* (FGD – Consumer, Female, Lira), while others stated that *"some apps we stop using completely when taxes make data expensive"* (FGD – Consumer, Male, Gulu). These narratives illustrate precisely the kind of behavioural substitution predicted by elastic demand—especially among vulnerable groups.

The implication is that telecom demand in Uganda cannot be assumed inelastic, as government tax policy sometimes presumes. Instead, elasticity varies sharply by income group, creating regressive outcomes when taxes inflate usage costs.

8.3 Impact of Excise Duties on Telecom Services and Handsets

Based on the results, it is evident that the recent tax increase has a direct and significant impact on pricing decisions for the business owners dealing in telecom services and gadgets. The majority of sample business owners (65%) indicated that taxes increased their prices. However, a substantial minority of 35% chose not to pass the cost on to their customers, absorbing the tax increase themselves (See Figure 17). This split highlights a divergence in business strategies, where a significant portion of firms prioritized maintaining competitive pricing and customer loyalty, potentially at the expense of their profit margins, while the majority transferred the financial burden of the tax directly to the consumer.

Qualitative evidence mirrors this split. A business owner noted; *"we try not to increase our prices because customers already complain… but sometimes you simply have to adjust"* (FGD –

Telecom Retailer, Female, Kampala). Another participant emphasised that *"tax makes everything expensive… even smartphones become much more expensive because of taxes"* (FGD – Consumer, Male, Kampala). This indicates that while some firms hold prices temporarily, taxes ultimately push device and service prices upward in most transactions.

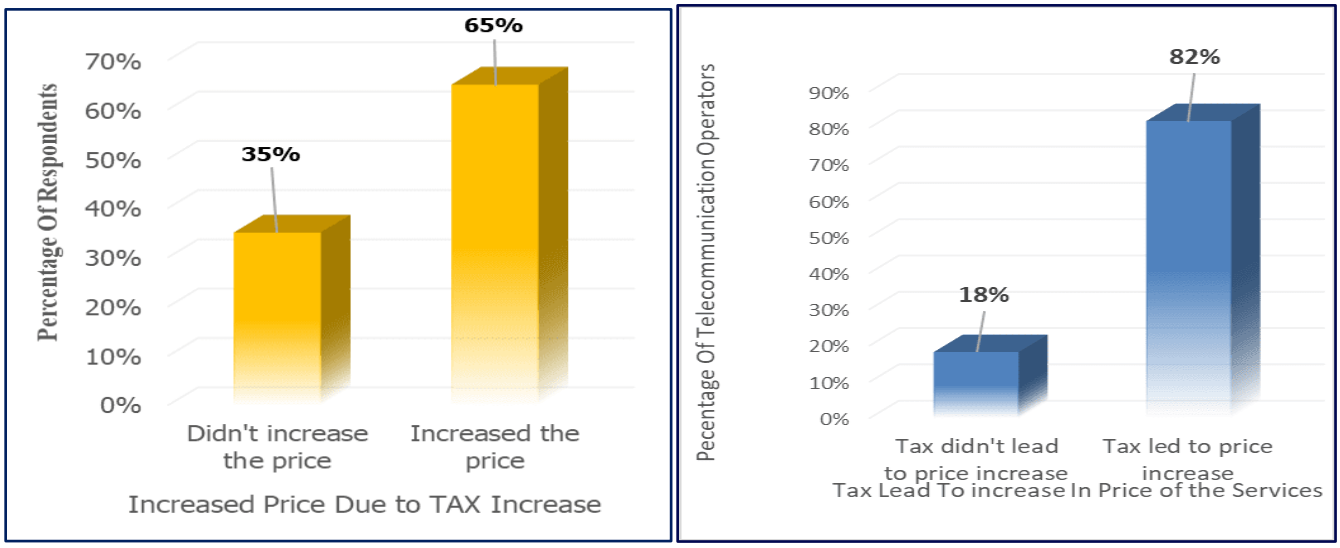

Figure 17: Increase of price due to introduction of tax among business and telecommunication operators

Source: *Business and telecommunication operators survey by ECASA*

Additionally, the results show that imposition of taxes on these services directly increases operational costs for a vast majority of businesses, which could lead to reduced profitability, forced price increases for their own goods and services, or a curtailment of their digital capabilities. The findings from Figure 18 show that most affected telecommunication services were smartphones as reported by the majority (62%) followed by mobile money. The least affected are voice calls. This could be due to the effect of more people owning smartphones/devices which reduces people with button phones/devices. This implies that those who go ahead to buy smartphones are those who can afford and thus their decision to use the voice calls is not highly affected by the tax.

When telecommunication operators were asked about the services affected most, the majority (91%) reported data (Data (mobile internet, fixed internet-FTTH, Value Added Services, Unstructured Supplementary Service Data, USSD) being the most affected by tax. This is in consistency with responses from business owners who mentioned smartphones being the most affected. This is because the deduction in smartphones buying transmits data since smartphones are the ones that use data most.

KIIs also highlighted this chain effect. A telecom operator stated: *"handsets are much more expensive… so people who should move to smartphones stay on feature phones"* (KII – Telecom Operator, Male, Kampala). A regulator similarly observed that *"very high-end devices are paying the same percentage of taxes as entry level, so the person who should upgrade fails to"* (KII – Government MDA, Female, Kampala).

Data is also among the most affected services because taxation directly increases usage costs and indirectly reduces the number of smartphone users. Respondents explained that *"mobile money has also dropped because people avoid the withdrawal tax"* (FGD – Consumer, Male, Gulu), while others noted that *"data bundles disappear faster now, so people cut down on streaming and video calls"* (FGD – Consumer, Female, Lira).Taxation creates a double-sided squeeze on digital participation—fewer people can afford smartphones, and those who do reduce consumption of data and mobile money, constraining the digital economy.

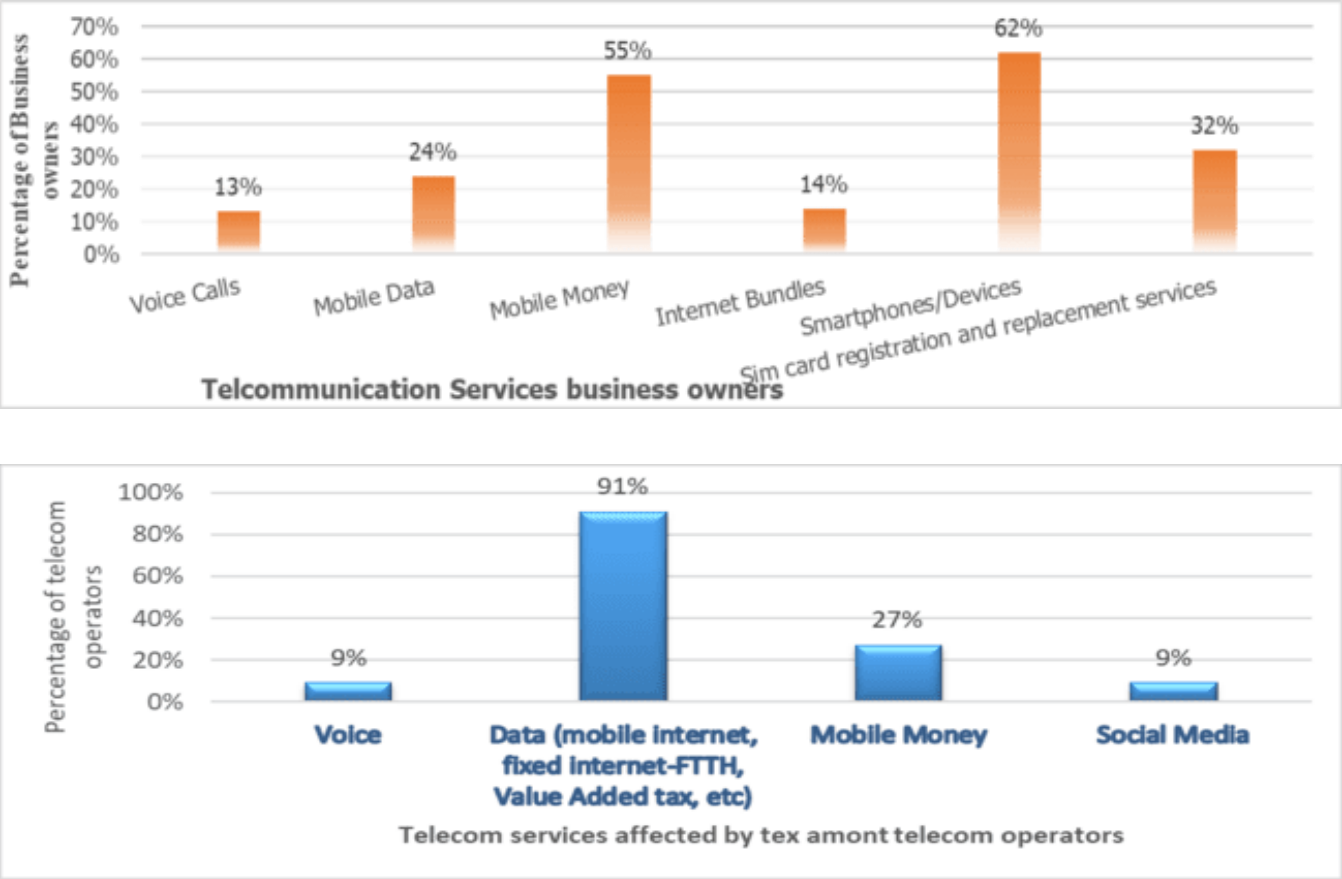

Figure 18: Telecommunication services that were most affected by increase in taxes

8.4 Assessment of Tax Justifications and Their Implications

Government justification for excise duties often rests on the belief that demand for telecom services is inelastic, making the sector attractive and reliable revenue source. However, the quantitative and qualitative findings contradict this assumption:

- Data has price elasticity (–0.16), meaning consumption drops when prices rise
- Operator revenues fall when taxes increase (45% reported decreased turnover)
- Consumers switch behaviour, using less data, avoiding mobile money withdrawals, or shifting to offline alternatives.

One sector expert stated frankly that "*high taxes not only affect consumers but also government revenue from telecom services… when usage goes down, the tax base shrinks instead of growing*" (KII – Industry Expert, Male, Kampala). Another expert added that "t*oo much reliance on telecom taxes is risky because demand is not as inelastic as assume*d" (KII – Telecom

Consultant, Female, Kampala). This implies that the assumption that telecom demand is inelastic leads to over-taxation, reducing sector efficiency, undermining digital inclusion, and ultimately delivering diminishing returns to government revenue.

9 Regional and Global Comparative Analysis with East African Countries and South Korea

9.1 Overview of Telecom Tax Policies in the EAC Region (Kenya, Tanzania, Rwanda, and Burundi)

The Table 12 shows that Uganda imposes higher and more varied telecom-specific taxes relative to other EAC countries. While VAT levels are similar across the region (16–18%), Uganda stands out for its 12% excise duty on data, 12% on airtime, and mobile money excise duty, which substantially increase total cost of digital access.

Rwanda, widely regarded as a regional digital transformation leader imposes no excise duty on data, maintains 0% import duty on smartphones, and uses a simplified licence regime. Kenya has pursued affordability reforms such as VAT exemption on low-cost smartphones, while Tanzania's heavy excise duty structure has produced outcomes similar to Uganda, including reduced affordability and slowed rural digital expansion.

Qualitative respondents consistently acknowledged that Uganda's telecom tax framework is significantly harsher than its EAC neighbours. A senior telecom executive noted: *"…Rwanda and Kenya are doing much better… they don't tax data the way we do, and smartphones are cheaper there…"* (KII – Telecom Operator, Male, Kampala). Another industry expert emphasized: *"…Uganda is among the most taxed telecom markets in East Africa; this affects competitiveness and slows digital uptake…"*(KII – Industry Consultant, Female, Kampala).

These perceptions align with the quantitative evidence showing Uganda's high tax incidence relative to regional benchmarks. A regulator also admitted that *"…our tax regime is heavy compared to neighbours and this affects cross-border competitiveness especially for data and mobile money…"*(KII – Government MDA, Female, Kampala).

Table 12: Comparative Summary Table of Telecommunications Tax Policies in East Africa

Indicator	Uganda	Kenya	Rwanda	Tanzania
VAT on Telecom Services	18%	16%	18%	18%
Excise Duty on Voice/Data/SMS	12% (voice, data, mobile money)	20% (excise on airtime/data)	None	17% on airtime
OTT/OTT-equivalent Tax	5% (on data; previously OTT repealed)	None	None	None
Import Duties on Devices/Infra	10–25%	10–25%	0% on smartphones	10–25%

Indicator	Uganda	Kenya	Rwanda	Tanzania
License/Spectrum Fees	Annual + bidding fees	Tiered model + auction-based	Competitive bidding + annual fees	Annual license fees
Tax Incentives for Sector	None specific	VAT exemption on low-cost smartphones	None specific	Some rural rollout incentives
Recent Tax Reforms	Replaced OTT with direct data tax	VAT exempted smartphones (2023)	Regulatory focus on digital economy	Increased excise on mobile services
Effect on Sector Investment	Moderately negative (high tax burden)	Positive due to policy consistency	Stable investment climate	Mixed—rising taxes affecting margin
Effect on Service Affordability	Low affordability (esp. data)	Improved affordability (price wars)	High affordability	Moderate affordability
Effect on Digital Inclusion	Slowed smartphone & internet uptake	Growing mobile/internet penetration	Rapid digital growth	Slower uptake in rural areas
Elasticity Consideration in Tax Policy?	No formal study	Some studies referenced (GSMA)	Informally considered	No formal modelling
Policy Review Mechanism	Ad hoc	Annual budget reviews	Strong M&E via RURA	Budget-driven

Recent developments in Ghana provide a practical illustration of how progressive tax reforms can translate into immediate consumer benefits within the telecommunications sector. In January 2026, MTN Ghana announced tariff reductions across all its products and services following the implementation of a revised VAT regime. The reductions were introduced in direct response to wide-ranging VAT reforms by the Ghana Revenue Authority (GRA), including the abolition of the COVID-19 Health Recovery Levy, an increase in the VAT registration threshold to reduce compliance burdens on small enterprises, the restoration of input tax credits through the re-coupling of NHIL and GETFund levies, and a reduction of the standard VAT rate to 20 percent[40]. These measures lowered the effective tax burden on operators and improved cash flow, enabling MTN to pass tax relief through to consumers almost immediately. This experience demonstrates that predictable, well-coordinated tax reforms can enhance affordability, support compliance, and stimulate demand without undermining revenue objectives. In contrast, Uganda's higher cumulative telecom tax burden and limited input credit mechanisms constrain operators' ability to reflect tax adjustments in pricing, reinforcing the case for progressive, consumption-led tax reforms that align fiscal policy with digital transformation and affordability objectives.

[40] https://citinewsroom.com/2026/01/mtn-cuts-tariffs-on-products-and-services-in-line-with-revised-vat-regime/

9.2 BEST PRACTICES AND LESSONS LEARNED

A review of regional policies indicates several lessons Uganda can draw from its neighbours:

(1) Reducing Taxes on Devices to Spur Smartphone Adoption

Across East Africa, one emerging good practice is to limit the total fiscal burden on entry-level devices (through lower import duties, targeted incentives, or avoiding extra surcharges), in order to accelerate smartphone penetration. Countries such as Rwanda have, at different times, applied more favourable treatment to smartphones within the EAC tariff framework, helping to reduce end-user prices and support uptake. The core lesson is not that VAT has been universally removed, but that policy can be deliberately used to avoid making basic smart devices prohibitively expensive. Ugandan respondents articulated a similar need for relief at the device level*: "…smartphones are expensive because of taxes… if we reduce tax on devices, more Ugandans will join the digital economy..."* (FGD – Consumer, Male, Kampala). The implication is that even modest reductions in the tax wedge on basic smartphones could unlock significant demand and broaden digital participation.

(2) Being Cautious with Heavy Consumption-Based Taxes That Suppress Usage

Regional experience also shows that aggressive, transaction-based or usage-based taxes on data and mobile money can reduce demand, especially in low-income markets. While all EAC countries use some form of VAT and excise, Uganda stands out for its combination of 12% excise on data, 12% on airtime, and additional levies on mobile money usage. Stakeholders in Uganda repeatedly described how this model suppresses consumption rather than simply raising revenue: *"…data bundles finish too fast because they are expensive, so we use the bare minimum…"* (FGD – Consumer, Female, Lira). The lesson from neighbours is not that they have no consumption taxes, but that telecom-specific excise on data is used more sparingly, with greater attention to affordability and inclusion. For Uganda, this suggests that re-balancing away from heavy excise on usage toward broader, less distortionary bases would better support growth in traffic volumes and digital services.

(3) Stable, Predictable Tax Regimes Encourage Investment

Another clear lesson is the value of stability and predictability. Kenya's telecom sector benefits from policy consistency, supporting capital investment, rural rollout, and infrastructure modernization. Rwanda similarly maintains a stable, growth-oriented regulatory and fiscal framework. In contrast, Uganda has frequent tax changes that undermine investor confidence. A telecom executive stressed*: "The unpredictability of the tax policies may make the investors choose to deploy that capital in more predictable environments…this can also lead to reduction in investment decisions…"* (KII – Telecom Operator, Male, Kampala).

(4) Linking Tax Policy to Broader Digital Transformation Goals

A further lesson is the importance of explicitly tying tax decisions to national digital-transformation objectives. Rwanda's approach, for example, more deliberately connects its digital strategy with measures on affordability, skills, and infrastructure rollout, so that fiscal tools and digital-inclusion programmes reinforce each other rather than pulling in opposite

directions. Ugandan respondents noted that this kind of alignment is largely missing locally: *"Uganda has ICT policies on one side and tax measures on another; they don't talk to each other, which makes it hard to achieve digital inclusion"* (KII – Industry Expert/Consultant, Male, Kampala). The implication is that Uganda's telecom tax policy would be more effective if it were systematically assessed against Digital Uganda Vision, NDP III/NDP IV, and broadband targets so that decisions on excise or device taxation are judged not only by short-term revenue yield, but also by their impact on connectivity, skills, and socio-economic transformation.

9.3 Impact of Progressive Tax Models on Growth and Affordability

Multiple respondents emphasized that the current excise-heavy structure dampens growth and limits affordability. One industry consultant noted that *"the high taxes on smart gadgets make them inaccessible to most Ugandans"* (KII – Industry Expert/Consultant, Kampala). Another participant remarked that *"high taxes discourage innovation and reduce the ability of local businesses to embrace new technologies"* (FGD – SME Representative, Kampala). These testimonies reveal strong stakeholder concern that the taxation model is suppressing demand among the groups who most urgently need affordable digital access such as youth, SMEs, and informal sector operators.

The implications of shifting to a progressive model are profound. First, removing or reducing excise duties on smartphones and data would expand smartphone ownership and data consumption key determinants of sector revenue. Second, lower taxes would reduce affordability barriers for rural users, women, youth, and people with disabilities. Third, because internet access is increasingly essential for education, agriculture, and commerce, a more progressive tax structure would indirectly stimulate economic productivity. International research supports this logic: the World Bank (2021) found that reducing internet taxes in Uganda could increase broadband adoption by 7% and data usage by 30%[41]. Overall, empirical evidence show that progressive tax models not only improve affordability but also generate more sustainable long-term revenue by expanding the number of taxable users rather than increasing the tax burden on existing ones.

[41] https://documents1.worldbank.org/curated/en/638411630481877180/pdf/Country-Diagnostic.pdf

9.4 BENCHMARKING UGANDA'S POLICY AGAINST REGIONAL TRENDS

Benchmarking Uganda's telecom taxation regime against regional trends reveals that Uganda maintains one of the heaviest and most distortionary tax structures in East Africa. While all regional peers impose VAT on telecom services, Uganda stands out for stacking multiple taxes including 12% excise duty on data, 12% on airtime, 15% excise on mobile-money fees, 0.5% tax on withdrawals, 10% import duty, 18% VAT, and a 1.5% infrastructure levy on devices. According to GSMA's regional analysis, Uganda has one of the highest mobile sector tax burdens in Sub-Saharan Africa, with excise duties representing up to 45% of sector tax payments (GSMA, 2023)

Qualitative insights from the Ugandan telecom ecosystem reinforce these findings. A telecom industry expert explained that *"Uganda's taxes hit every layer devices, data, airtime, mobile money making our ecosystem more expensive than neighbours"* (KII – Industry Expert/Consultant, Kampala). Another stakeholder noted that *"these high taxes push the digital divide wider, especially for rural people who already struggle with connectivity costs"* (KII – Academic/Telecom Researcher, Kampala). Such perceptions underscore concerns that Uganda's tax-heavy approach could undermine national aspirations for digital transformation and competitiveness

9.5 COMPARATIVE SUMMARY OF TELECOMMUNICATIONS TAX POLICY: UGANDA AND SOUTH KOREA

Uganda's telecommunications tax policy is characterised by a high and layered tax burden on both telecom services and devices. Mobile and internet services are subject to 18% Value Added Tax (VAT) and 12% excise duty, in addition to corporate income tax at 30%, regulatory fees, spectrum charges, and import duties on ICT equipment (CIPESA, 2022; GSMA, 2020). These cumulative taxes significantly increase the effective price of voice and data services, contributing to affordability constraints, slower growth in broadband penetration, and reduced digital inclusion, particularly among low-income and rural populations (GSMA, 2020; World Bank, 2021).

In contrast, South Korea applies a neutral and growth-oriented taxation framework to the telecommunications sector. Telecom services are taxed under the general VAT regime at 10%, with no sector-specific excise duties, and corporate income tax is applied progressively, with lower marginal rates for smaller firms (OECD, 2022; Santander Trade, 2024). Digital and telecommunications services are treated uniformly within the broader tax system, reducing distortions, administrative complexity, and consumer price inflation. This approach has supported high broadband penetration, strong private sector investment, and rapid adoption of advanced digital technologies (OECD, 2022).

The comparison highlights several best practices from South Korea that are relevant for Uganda. First, eliminating or substantially reducing telecom-specific excise duties and relying on a single, moderate VAT rate can lower consumer prices and stimulate demand. Second, tax neutrality between digital, telecom, and other services reduces market distortions and improves

compliance. Third, progressive and investment-friendly corporate taxation, combined with limited sector-specific levies, encourages sustained infrastructure investment. Overall, evidence suggests that shifting from revenue-maximising sector taxes toward a broad-based, low-rate tax model, as demonstrated by South Korea, can enhance affordability, expand usage, and generate higher long-term fiscal and economic returns for Uganda (GSMA, 2020; OECD, 2022).

Policy Implications for Uganda (NDP IV and Digital Uganda Vision)

To support the achievement of NDP IV and the Digital Uganda Vision, Uganda could adopt selected best practices from South Korea by rationalising telecom-specific taxation. In particular, reducing or phasing out excise duty on telecom services and relying on a single, moderate VAT rate would lower consumer prices and stimulate demand for digital services. Adopting tax neutrality across digital, telecom, and other services would improve market efficiency and compliance, while a more investment-friendly corporate tax approach could accelerate broadband and last-mile infrastructure rollout. Over the medium term, these reforms are likely to expand the tax base, increase data usage and digital adoption, and generate higher and more sustainable fiscal revenues, consistent with Uganda's tenfold growth ambition under NDP IV (GSMA, 2020; OECD, 2022).

10 STAKEHOLDER PERSPECTIVES ON TELECOM TAX POLICY

Uganda's telecommunications taxation policy on excise levies on voice, data, and mobile money has drawn strong reactions from different stakeholders. This section summarizes the perspectives and concerns of key groups: government and revenue authorities, telecom operators, consumer advocates, and external experts / development partners.

10.1 GOVERNMENT AND REVENUE AUTHORITIES' VIEWPOINTS

From the government's perspective, telecom taxes represent a critical revenue source in an era of fiscal strain. Uganda's public debt and revenue targets have prompted policymakers to broaden the tax base. For example, Reuters reported that the July 2021 increase (introducing a 12% excise on data) was part of a "raft of new taxes to help boost revenues and pay a ballooning public debt"[42] . Indeed, the telecom sector has a large subscriber base and yields substantial receipts. UCC noted that by mid-2023, telecoms were generating about UGX 1.36 trillion in excise revenues in just a single quarter[43] (roughly equivalent to nearly 360 million USD). In national budget planning, officials often cite the need to tap sectors like telecoms to meet ambitious revenue goals (e.g. the government aimed for Ush 29.7 trillion tax revenue in FY2024/25)[44] . Qualitative evidence reinforces this fiscal perspective. A senior government official emphasized that *"the telecom sector is one of the most reliable sources of revenue… it has predictable cash flows so the government cannot ignore it when planning taxes"* (KII – Government MDA, Female, Kampala).

Economically, policymakers argue telecom taxes are justified because the sector "operates with a degree of monopoly power and high cash flows"[45], and they view levies as fair shares from a prosperous industry. President Museveni explicitly framed the 2018 social media tax as both a revenue measure and a way "to punish social media users for. . . spreading gossip and insults"[46]. Similarly, Finance Ministry spokespeople have defended mobile money taxes as part of normalizing digital finance. They saw it as an older "sin tax" on mobile money fees (10%) was tolerated, and the 2018 attempt to tax transaction values was presented as a novel revenue idea. However, when public outcry forced a rollback of the 1% mobile money tax, officials

[42] E. Biryabarema and P. Mark. (2021, Apr.) Uganda introduces 12% in- ternet data levy; critics say move will stifle online. Accessed on 28 August 2025. [Online]. Available: https://www.reuters.com/world/africa/ uganda-introduces-12-internet-data-levy-critics-say-move-will-stifle-online-2021-04-30/

[43] G. Mbaseege, "Exploring the role of ownership and control of national telecom operators in digital extractivism in uganda," Pollicy, Kampala, Uganda, Tech. Rep., 2024, accessed on 28 August 2025. [Online]. Available: https://pollicy.org/wp-content/ uploads/2024/10/Geetu-report.pdf

[44] KPMG, "Uganda 2024-2025 budget brief," KPMG, Tech. Rep., 2024, accessed on 28 August 2025. [Online]. Available: https://assets.kpmg.com/content/dam/kpmg/ke/ pdf/tax/2024/Uganda%202024-2025%20Budget%20Brief.pdf

[45] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

[46] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

characterized it as a "miscommunication" and simply amended it to 0.5% on withdrawals. However, MDAs also quietly acknowledge unintended consequences. A regulator stated: *"we know taxes can slow digital uptake… but the government still needs revenue, so it is a balancing act"* (KII – Regulator, Female, Kampala). This highlights the internal tension between fiscal needs and ICT-sector development.

The Uganda Revenue Authority (URA) often highlights that telecom companies account for a large share of excise and VAT collections. As noted, MTN and Airtel contributed 40% of all excise duty and 12.7% of VAT in FY2019/20[47]. In 2023 the URA reported that telecoms remained among the highest taxpayers. From the government's view, then, the telecom sector is a reliable tax base, and reducing its tax burden could leave a significant gap. Ministry of ICT officials have at times lobbied for tax cuts on ICT devices to spur adoption but this tension persists. Ultimately, the official line tends to stress that revenues raised from telecom taxes fund public services and infrastructure. This is a common justification, for instance, when facing criticism for policies seen as "raining taxes down on communications" (Museveni's phrase in 2018)[48].

10.2 Telecom Operators' Experiences and Recommendations

Mobile operators and ISPs generally oppose additional taxes on services. They argue that these taxes undermine growth and affordability. The industry contends that Uganda's excise and VAT regime, combined with regulatory fees, makes communication costs among the highest in the region. Operator reports frequently note low Average Revenue Per User (ARPU). MTN Uganda's ARPU is around USD 2.8–3.1/month[4950]. They point out that added taxes can consume a large fraction of this revenue. For example, UCC found that for a subscriber spending UGX 10,500 per month on all mobile services (voice, data, SMS), the 2018 social media tax alone represented an extra 54% of that spend[51] . Even after the OTT tax was replaced by a data excise, operators warned that data prices would rise. Roke Telkom, an ISP, publicized that a standard 60 GB data bundle would cost roughly USD 1.50 more per month under the new tax reflecting the 12% levy. Such price increases directly impact operators' marketing and uptake; in practice, many operators passed these costs to consumers, which risks slowing subscriber growth. A telecom

[47] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

[48] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

[49] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

[50] CIPESA, "Digital taxation in Uganda: A hinderance to access and use of ICTs," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2022, accessed on 28 Au- gust 2025. [Online]. Available: https://cipesa.org/wp-content/uploads/2022/04/ Digital-Taxation-in-Uganda-A-Hinderance-to-Access-and-Use-of-ICTS.pdf

[51] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

operator confirmed this strain, stating: *"These taxes affect the prices of everything… devices increase in price… even conversations reduce… the government thinks it's the rich who use these services but even the poor depend on them"* (KII – Telecom Operator, Male, Kampala). This illustrates how taxation diminishes demand across socioeconomic levels.

Beyond direct costs, operators raise concerns about tax complexity. They must comply with multiple regimes (excise, VAT, withholding, import duties, etc.). This increases administrative burdens on their part. Industry experts point out that double taxation is pervasive. For instance, an internet user pays 12% excise plus 18% VAT on the same data bundle[52] . They argue that this dampens demand. When mobile internet prices doubled with taxes in 2021, UCC data showed a sharp drop in data usage despite falling underlying rates[53] . Operators also note that equipment imports (towers, handsets) face 18% VAT plus up to 10% import duty, inflating capex costs. Another operator highlighted: *"We are taxed everywhere… devices, towers, data, even the agents… it makes doing business very expensive"* (KII – Telecom Operator, Male, Kampala). This directly supports survey findings indicating high operational cost burdens.

In response, telecom companies and their associations have recommended more moderate taxation or targeted relief. MTN Uganda's CEO has publicly urged that connectivity be made "more affordable" as key to digital inclusion. In the run-up to fiscal debates, industry advocates and think tanks have proposed scaling back excise rates. For example, GSMA and local ICT organizations have recommended lowering the data excise from 12% to something like 6% or 10%, arguing this would stimulate usage without huge revenue loss [11]. Some operators also stress they already contribute through corporate taxes and license fees, and that higher user penetration via lower taxes could eventually increase overall collections. In sum, operators view the current tax regime as a brake on market growth and urge tax policy that balances revenue with the need to keep users connected. Operators' testimonies show a cumulative tax burden that suppresses innovation, slows subscriber growth, and reduces reinvestment capacity—confirming quantitative evidence of "slight decreases" in revenue and investment.

10.3 Consumer Associations and Public Perception

Consumers and civil society groups have been highly critical of telecom taxation, viewing it as burdensome and regressive. The introduction of the OTT "social media" tax in 2018 provoked widespread protests with the hashtag #ThisTaxMustGo trending and even street demonstrations[54] . Surveys conducted after the 2018 taxes found overwhelming

[52] CIPESA, "Digital taxation in Uganda: A hinderance to access and use of ICTs," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2022, accessed on 28 Au- gust 2025. [Online]. Available: https://cipesa.org/wp-content/uploads/2022/04/ Digital-Taxation-in-Uganda-A-Hinderance-to-Access-and-Use-of-ICTS.pdf

[53] Uganda Communications Commission, "Annual communications sector report 2023," Uganda Communications Commission, Kampala, Uganda, Tech. Rep., 2023, accessed on 25 Au- gust 2025. [Online]. Available: https://www.ucc.co.ug/wp-content/uploads/2024/ 11/UCC-Annual-Communications-Sector-Report-2023 Online-Version.pdf

[54] W. Vota. (2019, July) Digital taxation in Uganda: Has the social media tax really raised revenue? Accessed on 28 August 2025. [Online]. Available: https://www.ictworks.org/uganda-social-media-tax/

public opposition. Nearly 89–98% of Ugandans polled disapproved of the new mobile money and social media taxes. The taxes were seen as targeting ordinary people, many of whom were getting online for the first time, rather than wealthy elites. Civic organizations like Unwanted Witness and CIPESA highlighted the disproportionate effect on young people and rural citizens, who rely almost entirely on mobile internet (97% of respondents had no other internet access)[55] . Indeed, consumer surveys and ISP data both confirm dramatic impacts. Uganda lost an estimated 3–5 million internet subscriptions within a year of the social media tax, reflecting many users quitting or using VPNs to evade the fee. Mobile money usage also fell; a national survey found 70% of users transacted less after the July 2018 mobile money tax, with 4% abandoning it altogether[56] . In private, many Ugandans have expressed that connectivity feels like a "tax on daily life." A consumer in Gulu emphasized this burden clearly*: "When bundles become expensive, we reduce… we only buy WhatsApp bundles"* (FGD – Consumers, Male, Gulu). Another from Lira noted: *"For calls we flash more and talk less because airtime finishes quickly"* (FGD – Consumers, Female, Lira). These behavioural changes align with quantitative finding that ~36% reported slight reductions in data and voice usage

Consumer associations warn that heavy telecom taxes threaten digital inclusion and the achievement of development goals. They stress that communication is a basic need in the 21st century, much like water or electricity, and that pricing it too high risks excluding the poorest. After the 2021 data levy was enacted, one watchdog executive noted that internet costs in Uganda were already "some of the world's highest" and that further hikes would make Uganda look unreliable to investors seeking good connectivity[57] . Broadly, public sentiment is that telecom taxes widen the digital divide. Those with disposable income can absorb them, but marginalized groups may be priced out of news, education, and e-services. Consumer groups have therefore joined policy debates, often pushing for tax reforms or targeted subsidies. Consumer testimonies highlight clear regressive impacts low-income users reduce consumption disproportionately, amplifying the digital divide.

10.4 Insights from Industry Experts and Development Partners

International experts and development agencies have consistently argued that Uganda's approach to telecom taxation is counterproductive to its development objectives. Research by CIPESA and others highlights how high taxes on connectivity undermine universal access. For instance, a 2022 CIPESA policy brief notes that Uganda, despite ambitious ICT goals, still lags neighbours in connectivity, ranking low on GSMA's Mobile Connectivity Index. This is partly because "digital taxation regime has become a key impediment to inclusive access"[58] . Empirical studies support this. World Bank simulations in Uganda's own Digital Economy Assessment found that cutting the effective internet tax from 30% to 10% could boost internet users by 7% and

[55] Ibid
[56] Ibid
[57] E. Biryabarema and P. Mark. (2021, Apr.) Uganda introduces 12% in- ternet data levy; critics say move will stifle online. Accessed on 28 August 2025. [Online]. Available: https://www.reuters.com/world/africa/ uganda-introduces-12-internet-data-levy-critics-say-move-will-stifle-online-2021-04-30/
[58] CIPESA, "Digital taxation in Uganda: A hinderance to access and use of ICTs," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2022, accessed on 28 Au- gust 2025. [Online]. Available: https://cipesa.org/wp-content/uploads/2022/04/ Digital-Taxation-in-Uganda-A-Hinderance-to-Access-and-Use-of-ICTS.pdf

data consumption by 30%[59] . Analogous analyses by international NGOs estimated that, after the OTT tax, 1 GB of data cost nearly 40% of the monthly income of the poorest quintile[60] .

Global organizations have also benchmarked Uganda's tax burden. GSMA's recent study of African markets reports that Uganda's mobile sector faces the highest excise-tax share in Sub-Saharan Africa. Roughly 45% of mobile service revenue is captured by excise duties (versus nearly 2% for Kenya)[61] . In context, this means Ugandan operators and consumers must pay a far greater share to the state than their peers. Likewise, the Alliance for Affordable Internet (A4AI) and Broadband Commission have singled out Uganda for attention. A4AI's 2018 report projected that the social media tax would push basic internet "out of reach for many", forcing the poorest to spend over a third of their income on minimal data[62] . Development partners like UNCDF have observed real-world costs. After the 2018 mobile money tax, a survey found nearly half of mobile money users reduced usage, with key sectors such as agriculture payments, school fees noticeably disrupted[63]. A senior industry consultant interviewed argued: *"Uganda is now one of the most taxed telecom markets… this affects competitiveness and slows digital uptake"* (KII – Industry Consultant, Male, Kampala). This validates regional comparison findings showing Uganda has the highest excise tax burden in East Africa.

In response to these findings, international advocacy tends to recommend tax rationalization. CIPESA's formal submissions[64] urge a comprehensive review of telecom taxes, device tariffs, and licensing fees. GSMA's policy reports encourage balancing revenue needs with growth goals. They warn that excessive taxation can shrink the base as fewer users generate less tax. The OECD/World Bank framework for digital taxation, while focused on global digital companies, also emphasizes that developing countries should be cautious about stifling domestic connectivity through fiscal measures.

On the positive side, industry experts acknowledge that some level of telecom taxation is normal and agree that the sector has been a reliable revenue contributor. The consensus advice is for Uganda to streamline and lower telecom-specific taxes over time, tying any increases to measurable improvements. Some partner-funded projects are already active. For example, a

[59] H. M. L. Niesten and T. P. Begazo Gomez, "Taxes and parafiscal fees on digital infrastructure services in Africa," World Bank Group, Washington, D.C., Tech. Rep., 2024, accessed on 28 August 2025. [Online]. Available: http://documents.worldbank.org/curated/en/099051924165515718

[60] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

[61] GSMA, "Mobile tax policy and digital development: A study of markets in sub-Saharan Africa," GSMA, Tech. Rep., 2023, accessed on 28 Au- gust 2025. [Online]. Available: https://www.gsma.com/solutions-and-impact/connectivity-for-good/public-policy/wp-content/uploads/2023/10/Mobile-Tax-Policy-and-Digital-Development-A-study-of-markets-in-Sub-Saharan-Africa.pdf

[62] D. Mwesigwa. (2021, July) Uganda abandons social media tax but slaps new levy on internet data. Accessed on 28 August 2025. [Online]. Available: https://cipesa.org/ 2021/07/uganda-abandons-social-media-tax-but-slaps-new-levy-on-internet-data/

[63] W. Vota. (2019, July) Digital taxation in Uganda: Has the social media tax really raised revenue? Accessed on 28 August 2025. [Online]. Available: https://www.ictworks.org/uganda-social-media-tax/

[64] CIPESA, "CIPESA submission to white paper on ICT tax reduction - Uganda," Collaboration on International ICT Policy for East and Southern Africa (CIPESA), Kampala, Uganda, Tech. Rep., 2018, accessed on 28 August 2025. [Online]. Available: https://cipesa.org/wp-content/files/briefs/report/CIPESA Submission to White Paper on ICT Tax Reduction - Uganda.pdf

global program is assisting Uganda to strengthen evidence-based policy (e.g., using ICT usage data to assess tax impacts) and to communicate the value of affordable internet. Indeed, the expert view is that Uganda's current telecom tax regime is overburdened and that recalibration could drive higher inclusion and, paradoxically, more revenue in the medium term by expanding the taxed base. Expert views also confirm that Uganda's taxation trajectory is misaligned with digital transformation goals. A more rationalised tax framework could enhance usage, expand the revenue base, and accelerate socio-economic development.

11 EFFECTS OF TAX-INDUCED PRICE CHANGES ON SECTOR PERFORMANCE

11.1 AFFORDABILITY AND DIGITAL INCLUSION IMPACTS

11.1.1 Services consumed, handset type by gender and locations among consumers of telecommunication services

Results in Table 13, indicate high ownership of smartphones in both rural and urban Uganda followed by Basic phones. A few respondents indicated ownership of feature phones. This could be attributed to lack of knowledge by the users to differentiate between a feature phone and a smart phone. They consider all smart phones as long as they have a touch screen. This implies that people appreciate the importance of these phones compared to the basic phones. The distribution of smart phone ownership is equally high by gender (>83%). These results present an opportunity for the Government to achieve the Digitisation agenda and inclusivity. Thus, supporting the population to own the feature and smart phones would be a great stride towards digitisation of the economy. The results found no significant relationship between the type of handset and the gender of the consumer(P-value>0.05 for all the handset types).

Results also show that the majority of the respondents use phones for voice class (over 86%) and data (over 79%) in both rural and urban areas and by both genders. Most owners of smartphones use mobile data with over 80% for both males and females. The other commonly used service is mobile money with over 85% smart phone users and over 35% basic phone users. It was also noted that there is a quiet number of people who own both smartphones and button phones. This was sighted mainly among the rural consumers. This could be because they assume that basic phones are easier to use. Although ownership of smartphones is high, from the results, it can be noted that the most consumed telecommunication services are voice bundles among both male and female consumers (91% for males, and 86% for males). The results also show that across all the services, there are more males consuming them compared to their female counterparts. This could be attributed to resource constraints among female consumers. The higher consumption of voice bundles compared to data even when the smartphone ownership is high signals data usage gap. The findings are in-line with a study by Datareportal (Datareportal,2025) which showed that Uganda has about 28% users yet the population with cellular mobile connection is about 76%.

Table 13: Handset type owned, services consumed by location and gender

Handset type	Urban	Rural	Combined	chi2/p*
Smartphone	85.71	85.71	85.71	0.000 (1.000)
Basic phone(button phone)	36.19	34.13	35.66	0.348 (1.000)
Feature phone	0.27	0.4	0.3	0.000 (1.000)
Tablet	2.59	1.59	2.33	0.821 (1.000)

Handset type	Urban	Rural	Combined	chi2/p*
Gender	**Male**	**Female**	**Combined**	**chi2/p***
Smartphone	87.48	83.63	85.71	2.963 (0.341)
Basic phone (button phone)	35.14	36.28	35.66	0.140 (1.000)
Feature phone	0.56	0	0.3	2.542 (0.443)
Tablet	2.99	1.55	2.33	2.238 (0.539)
Services consumed	**Male**	**Female**	**combined**	**chi2/p***
Voice	91.99	86.28	89.29	8.430 (0.018)
Data (mobile internet, Value Added Services, Unstructured Supplementary Service)	82.12	79.65	80.91	0.978 (1.000)
Fixed internet-FTTH	3.35	1.55	2.53	3.239 (0.360)
Short Message Short (SMS)	22.16	18.58	20.53	1.924 (0.827)
Mobile Money	82.87	80.53	81.8	0.900 (1.000)

Source: Consumer survey by ECASA, 2025

Results in Table 14 indicate that the most consumed telecom services are voice bundles (80%) and mobile money (>81%) among all age groups followed by SMS (>20%) and data (2.53%). Comparing youth and other age categories, a high percentage of consumers that consume telecommunication services are between 36-64 years. These could be due to affordability factors. Data and fixed internet are the least used each at 2.53%. This implies that whereas the majority of the users own phones, very few use them for mobile data services. This has a negative impact on the achievement of Government targets on digitisation and inclusivity

Table 14: Services consumed by age category

Services consumed	18-35 Years(n=789)	36-64 years(n =192)	65 and above (n=9)	combined (n=992)	chi2/p*
Voice	86.8	99.48	100	80.99	27.224 (0.000)
Data (mobile internet, Value Added Services, Unstructured Supplementary Service)	2.54	2.6	0	2.53	12.005 (0.012)
Fixed internet-FTTH	2.54	2.60	0.00	2.53	0.238 (1.000)
Short Message Short (SMS)	17.89	31.77	11.11	20.53	18.720 (0.000)

Services consumed	18-35 Years(n=789)	36-64 years(n =192)	65 and above (n=9)	combined (n=992)	chi2/p*
Mobile Money	81.09	84.38	88.89	81.8	1.425 (1.000)

Source: *Consumer survey by ECASA*

The results in Table 15 indicate that employment status has a significant relationship with consumption of telecommunications services in Uganda, particularly voice services and mobile money. Majority of the employed individuals use voice calls (81.5%) and mobile money (80.6%), with both categories showing strong statistical significance (P-value >0.01)**.** This suggests that communication and financial services are associated with economic activity, and income stability. In practical terms, people with employment use mobile services to support work communication, business coordination, or regular financial interactions, making these services essential tools for economic participation.

Conversely, services such as mobile data, SMS, and fixed internet (FTTH) show no statistically significant relationship with employment status. Although, majority of employed telecommunication service consumers consume data, the lack of significance implies that internet access is becoming a universal need, increasingly used by both employed and unemployed consumers for social media, online learning, employment searches, and daily communication. For the meantime, SMS and FTTH remain underutilized. This can be attributed to available alternatives such as WhatsApp as well as economic constraints. Generally, the findings highlight a digital divide driven more by affordability and infrastructure than employment alone, reflecting broader challenges in Uganda's telecommunications sector.

Table 15: Services consumed VS employment status

Services consumed	Unemployed	Employed	combined	chi2/p*
Voice	18.55	81.45	89.38	62.299(0.000)
Data (mobile internet, Value Added Services, Unstructured Supplementary Service)	23.47	76.53	80.99	4.305(0.190)
Fixed internet-FTTH	8	92	2.53	2.976(0.423)
Short Message Short (SMS)	18.72	81.28	20.53	1.737(0.937)
Mobile Money	19.41	80.59	81.8	19.313(0.000)

Source: *Consumer Survey by ECASA*

11.1.2 Affordability Impacts

Figure 19 represents consumers of telecommunications regarding the impact of tax on the affordability. Across all categories, internet/data affordability, Innovation and digital access and

smartphone/device consistently receive the highest negative responses (23% - 31%) and slightly negative (25% to 32%). This shows that taxation appears to have significantly increased the cost burden on users. Additionally, this suggests that taxes may be reducing consumers' ability to purchase or upgrade essential digital devices. These quantitative patterns correspond closely with qualitative perspectives, with several consumers describing affordability pressures as immediate and constraining. As one FGD participant explained, *"When bundles become expensive, we reduce… we only buy WhatsApp bundles"* (FGD – Consumers, Male, Gulu). A female respondent in Lira echoed the same burden: *"For calls we flash more and talk less because airtime finishes quickly"* (FGD – Consumers, Female, Lira). These testimonies show that even modest price increases driven by taxation lead consumers to ration their usage instead of fully disconnecting, highlighting behavioural elasticity consistent with survey findings. The implication is that as consumers shift toward minimal-use bundles and reduce calling time, affordability constraints risk limiting meaningful digital participation, thereby slowing digital adoption and reducing sector revenue growth.

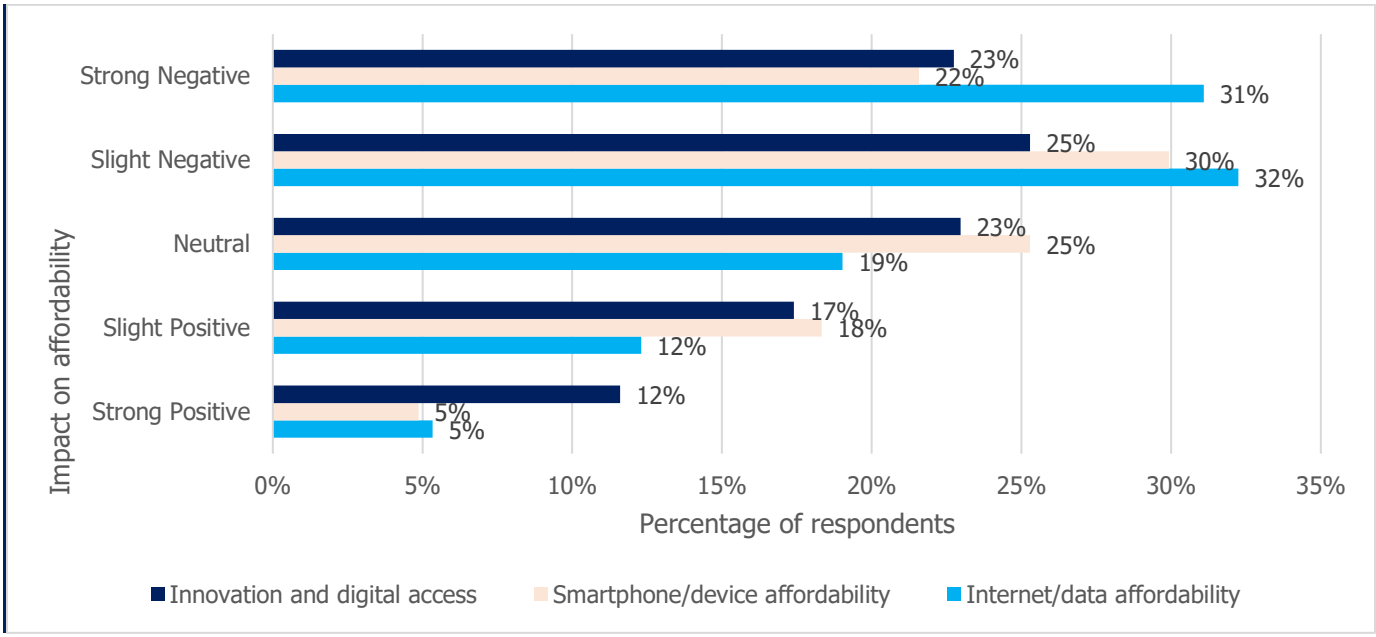

Figure 19: Impact of the tax induced tax on affordability; responses from consumers

Source: Consumer survey by ECASA

Figure 20 represents business owners' feelings and perceptions about telecommunications services; data affordability, device affordability and internet usage levels. Across nearly all categories, the majority of respondents fall within strong and slight negative responses (between 22-30%), suggesting that while the telecommunications environment is functional, it is also strained by factors such as costs and tax burdens. For example, internet/data affordability has particularly high negative sentiment, with slight negative responses dominating. This suggests that many users feel the current cost structures are limiting or burdensome. This mirrors business-owner sentiments from the qualitative data. A business operator complained that *"these taxes affect the prices of everything… even conversations reduce"* (KII – Telecom Operator, Male, Kampala). Another noted that customers *"complain that bundles finish fast*

because they can't afford the bigger ones" (FGD – Consumers, Male, Mbale). These narratives reinforce that affordability pressures affect not only households but also micro-enterprises that depend on constant connectivity. The implication is that the affordability strain experienced by business operators limits digital-enabled business growth and reduces competitiveness, particularly in data-intensive sectors like e-commerce and digital services.

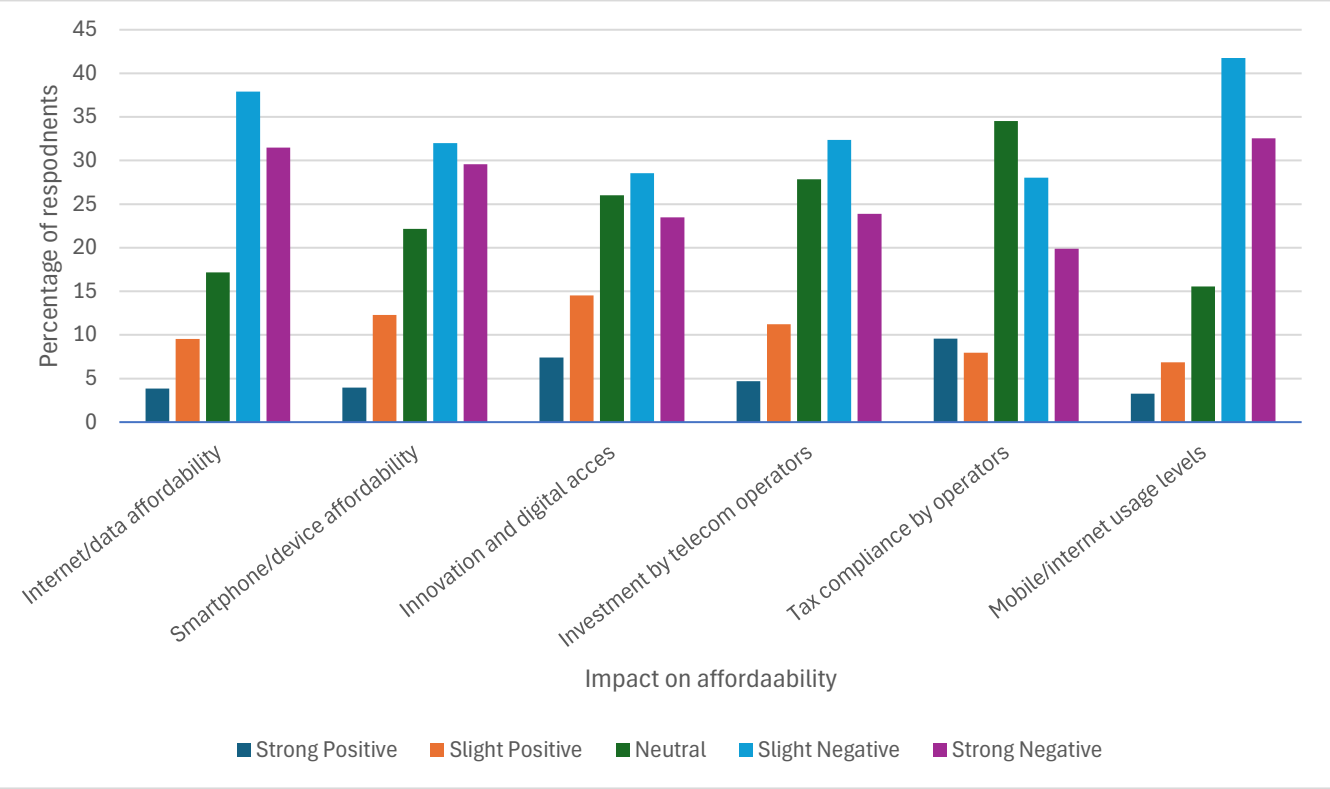

Figure 20: Impact of the tax induced tax on affordability; responses from business owners

Source: Business owners survey by ECASA

11.1.3 Inclusion impact

With respect to the category of people that are affected, the majority of telecommunication operators reported that the majority the most affected are the youth (88%). This could be because youth are the highest consumers of mobile data, social media, and messaging apps. A tax on these services directly increases their cost of living and social connectivity. In contrast, the tax appears to affect Women and People with Disabilities to a much lesser and equal degree, with only 6% of respondents in each of these groups reporting an impact (See Figure 21).

Qualitative results also show youth as disproportionately affected. In Mbale, a youth respondent stated: *"As youth, we depend on data every day… but now you buy only small bundles because of tax"* (FGD – Youth Consumers, Male, Mbale). Similarly, another added: *"Smartphones are useless without data… so people stop buying smartphones"* (FGD – Youth Consumers, Female,

Mbale). These findings show that affordability constraints particularly widen the digital gap for young people, who rely heavily on data for education, work, communication, and innovation. This implies that tax-induced price increases disproportionately exclude youth, the largest digital adopters ultimately slowing national digital transformation and limiting labour-market competitiveness in a digital economy.

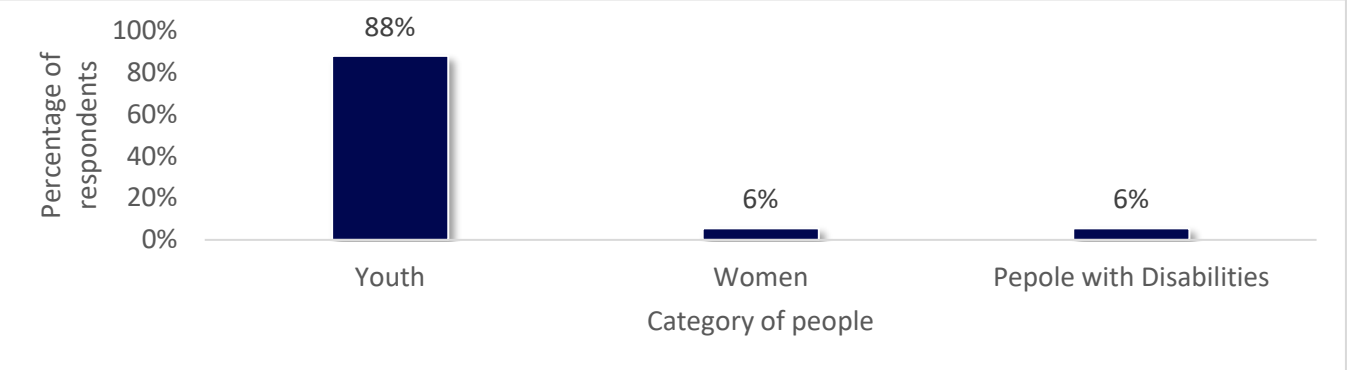

Figure 21: showing category of people most affected

Source: *Consumer survey by ECASA, 2025*

However, while youth are often cited as the most affected group, evidence from Uganda shows that taxation has a disproportionate impact on persons with disabilities (PWDs), as it raises the cost of essential goods and services that are vital to their inclusion, independence, and full participation in society. PWDs generally experience lower incomes and higher living costs related to healthcare, assistive devices, and support services, making them especially sensitive to indirect taxes. Taxes and excise duties on digital services, internet data, and ICT devices raise the cost of connectivity, which is a key enabler for communication, education, employment, and access to public and private services for PWDs. As a result, many PWDs are unable to afford consistent internet access or digital tools, limiting their ability to benefit from online opportunities and deepening existing social and economic inequalities.

Evidence shows that digital taxation policies have widened the digital divide by making ICT access less affordable for low-income and marginalised groups, including persons with disabilities. Increased costs of data and digital services reduce usage or exclude PWDs entirely from digital spaces, even though these platforms are essential for overcoming physical, communication, and mobility barriers. CIPESA study highlights that without a disability-responsive approach to taxation, digital taxes risk undermining national inclusion goals by reinforcing exclusion and limiting the potential of ICTs to support independence and participation for PWDs in Uganda[65].

Addressing this challenge requires a deliberate policy shift toward disability-responsive taxation that recognises ICT access and assistive technologies as essential services rather than luxury goods. The Government should review and reduce excise duties and indirect taxes on assistive ICT tools, while introducing targeted tax exemptions or zero-rating for services and equipment

[65] CIPESA (2022). Digital Taxation in Uganda: A Hindrance to Inclusive Access and Use of ICTs. Collaboration on International ICT Policy for East and Southern Africa.

used by persons with disabilities. In addition, disability considerations should be systematically integrated into tax policy design through inclusive impact assessments, stronger coordination between tax authorities, telecom regulators, and disability institutions, and regular consultation with organisations of persons with disabilities such as the National Union of Disabled Persons of Uganda (NUDIPU). Such reforms would help lower the cost of connectivity, narrow the digital divide, and ensure that taxation supports rather than undermines national goals on inclusion, digital transformation, and equal participation for PWDs in Uganda.

11.1.4 Telecommunication services consumed by different categories of consumers

11.1.4.1 Data and Voice bundle consumption by employment status

The study findings in Table 16, indicate differences in voice bundle consumption and expenditure between employed and unemployed consumers. This reflects how employment levels shape telecommunication behaviour in Uganda. Employed consumers spend slightly more on voice services (UGX 32,294 vs. 31,813 per month) and consume marginally higher minutes compared to the unemployed. The results imply that voice communication is still central in the communication sector. Although the difference in voice usage is so big, it highlights that employment provides greater ability to maintain consistent airtime expenditure. This aligns with broader sector trends where voice revenues remain stable, particularly among working populations, even as data services expand.

Additionally, the findings in Table 16 show a clear pattern on data expenditure. The findings show that data takes a larger share of consumer expenditure than voice, more so for employed consumers. Among employed individuals, the average monthly expenditure on data (UGX 51,197.4) is significantly higher than that on voice bundles (UGX 32,294.6). This could be due to both affordability issues and work-related activities such as work communication, internet-based calling (WhatsApp, Zoom, social media), and access to online services. In contrast, unemployed users spend less overall, but the pattern changes slightly, they spend slightly less amount (UGX. 29,123) on data than on voice bundles (UGX 31,813). This implies that even with limited income, data remains important since it supports wider digital access, including job searching and information access.

Table 16: Voice and Mobile data consumption in Uganda

Employed Status	Monthly voice bundles(minutes)	Months amount spent on voice bundles	Monthly data bundles (GBs)	Months amount spent on data
Unemployed	1187.6(1355.4)	31813.2(27804.1)	3.2(2.7)	29123.0(22408.3)
Employed	1219.3(1402.1)	32294.6(26202.0)	5.1(8.5)	51197.4(68955.7)
Total	1211.2(1389.6)	32187.6(26552.8)	4.7(7.6)	46292.0(62391.3)

Source: Consumption survey by ECASA

11.1.4.2 Average voice and data consumption by age and gender

Additionally, findings in Table 17 show that males slightly consumer more mobile data (5.1 GB monthly) compared to their female counterparts. Similarly, males spend more (Ugx.49,929 monthly) compared to their female counterparts. In regards to voice bundles and gender, males consumer (1,289 minutes monthly) slightly higher voice bundles compared to females who consume about 1123 minutes months. Surprising, although males consume more minutes than females, the findings show that females (Ugx.32,601) spends slightly more than males on average (Ugx.31,839). This could be due to the way male and female buy their bundle. Male could be buying many minutes at once which are subsidized and females could be buying in small bites which are more expensive.

On the other hand, consumers aged 65 years and above consume more (1,532 minutes per month) when compared to those aged between 18-35years and those aged between 36-64 years), however, when it comes to consumption of mobile data, the study show that these category of people consumer the least number of GBs (4.6Bs) compared to 18-35years (4.9GBs) and those aged between 36-64 years (4.7GBs). Consumers aged between 36 and 64 years spend on and consume data while 65 and above spend less on data but more on voice bundles. This reflects digital shifts across different age categories. There as digital services expand, telecommunication's strategies should target youth affordability and accessibility to improve overall sector participation and balance usage across age groups.

Table 17: Price and data consumption by gender and age category

Gender	Monthly voice bundles(minutes)	Months amount spent on voice bundles	Monthly data bundles(minutes)	Months amount spent on data
Male	1289.6(1462.9)	31839.5(25033.9)	5.1(8.9)	49929.6(77825.8)
Female	1123.2(1298.7)	32601.9(28277.1)	4.3(5.6)	41962.4(35915.1)
Total	1211.2(1389.6)	32187.6(26552.8)	4.7(7.6)	46292.0(62391.3)
Age category				
18-35 years	1194.6(1372.6)	32170.3(26558.3)	4.7(7.9)	45828.2(63701.4)
36-64 years	1270.1(1458.9)	32054.9(26660.6)	4.9(6.4)	48512.2(58240.2)
65 and above	1532.0(1622.4)	36535.4(26341.7)	4.6(2.9)	39589.0 (19000.6)
Total	1211.2(1389.6)	32187.6(26552.8)	4.7(7.6)	46292.0 (62391.3)

Source: *Consumer survey by ECASA*

11.2 Mobile and Internet Penetration Trends

Figure 22, show three graphs that present important trends in Uganda's telecommunications sector and their relationship with government revenue from 2019–2025. Generally, they illustrate how changes in telecommunications pricing, digital adoption, and infrastructure developments shape the government's tax revenue performance. The analysis focuses on how these revenues; prices of telecommunication services interact.

With respect to Revenue and Interconnection Rates, the findings show a clear divergence between revenue and interconnection rates. Interconnection rates steadily decline from nearly

50 UGX in 2019 to around 30 UGX by 2025. In contrast, government revenue rises consistently over the same period. This could be because reduction in interconnection rate increases the number of consumers who end up paying more venues, unlike when interconnection rate increases and few people consume the telecommunication services. This is because low interconnection rate improved affordability thus high consumption of telecommunication services. Qualitative interviews affirm that reductions in costs typically stimulate usage. A telecom engineer noted: *"When calling costs fall, people talk more… usage increases automatically"* (KII – Telecom Operator, Male, Kampala). This confirms the affordability consumption relationship seen in the quantitative trend.

Additionally, regarding the number of Smartphones and Price of mobile data which is presented in the middle graph highlight the dynamics of digital access. Smartphone penetration increases dramatically from 2019 to 2025, rising from roughly 5million to about 18million devices respectively. Conversely, the price of 1GB of mobile data declines sharply between 2019 and 2021 and then stabilizes. The findings that when the price of 1GB stabilizes, the penetration of smartphones is also stabilised. This could be because when data prices increase, consumers may find no reason to buy smartphone when they cannot buy data. For instance, consumer from focus group discussion in Mbale indicated, because they cannot afford data, the smartphones are as good as basic phones and that discourages people from buying smart phones. Qualitative evidence echoes this consumer logic: *"Smartphones are useless without data… so people stop buying smartphones when data is expensive"* (FGD – Youth Consumer, Female, Mbale). This behavioural link is a critical insight reinforcing the data-price–device-uptake relationship, device penetration is strongly moderated by data affordability.

Furthermore, the findings indicate that there was a sharp fall in price data from 2019 to 2020 but with a slight increase in revenue collected. This probably due to covid-19 outbreaks where people were buying less data given the economic situation that was prevailing by then. Similarly, when the price fall further in 2024 and 2025, the revenue increases though slightly. This indicates a negative relationship. This is because fall in data prices drives device penetration which in turn increases revenues. The implication is that lower data prices expand the base of connected users (smartphones + active data consumers), which gradually increases revenue even if unit prices fall supporting arguments for reducing tax-induced price burdens.

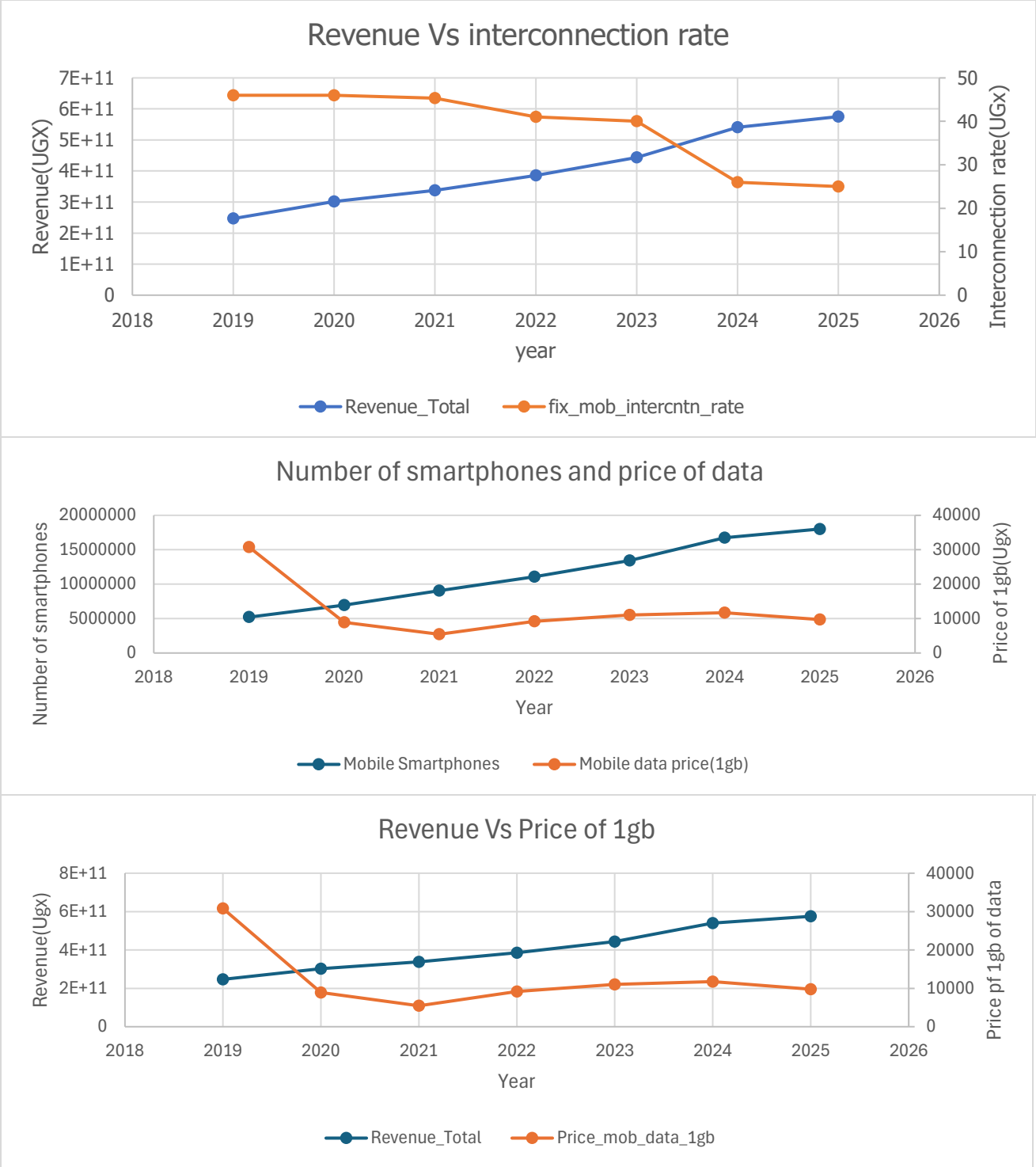

Figure 22: Trends of revenue against prices of mobile data and interconnection rate

11.3 Implications on Revenue, Traffic Volume, and Market Dynamics

The Figure 23 illustrates the relationship between the prices of mobile data and the volume of mobile internet traffic in Uganda over the period 2019–2040, where actual historical data is up to 2024 and forecasted data is from 2025 to 2040. In the actual period, the graph shows a sharp decline in the price of mobile data between 2019 and 2021, from UGX. 30,000 per GB to UGX.10,000. This dramatic reduction indicates the effects of increased competition among telecom operators, infrastructure expansions such as fibre-optic backbones. During the same early period, mobile data traffic remained relatively low and stable, indicating that affordability could be still a significant constraint despite the initial price drop.

Between 2021 and 2024, the price of mobile data fluctuates between UGX.6,000 and UGX.12,000 per GB, showing periods of slight increases and reductions. These fluctuations may reflect market adjustments, taxation changes, and shifts in operating costs for telecom firms. Significantly, during this same period, mobile internet traffic begins to rise sharply, particularly from 2023 onwards. This increase suggests that as digital services expand such as mobile banking, social media use, e-learning, and online commerce consumer demand for mobile internet grows even when prices are not consistently falling. It also demonstrates price elasticity of demand, where moderate price changes do not significantly alter consumption because internet access has become an essential service.

From 2025 onwards, both the price and traffic curves represent forecasted values obtained using forecast methods in excel. The projected data shows that mobile data prices are expected to decline steadily from around UGX.8,000 in 2025 to slightly above UGX.2,000 by 2040. In contrast to the declining price trend, the projected trajectory of mobile internet traffic rises sharply and steadily from 2025 to 2040. Traffic is expected to grow from slightly above 1,000 million gigabytes in 2025 to nearly 5,000 million gigabytes by 2040. This significant growth implies that reduction in prices makes data affordable thus increasing data consumption. The divergent directions of the two prices and rising mobile data consumption show that the low data costs stimulate demand, for policymakers, the trends imply that efforts to reduce the price of data are likely to yield social and economic benefits by supporting digital inclusion, innovation, and productivity.

Qualitative findings strongly align with this observed negative relationship between prices and traffic volumes. As one consumer stated: *"When bundles become expensive, we reduce… we only buy WhatsApp bundles"* (FGD – Consumers, Male, Gulu). Another explained: *"People stop streaming and use only basic apps when taxes make data high"* (FGD – Consumers, Female, Mbale). These testimonies confirm that consumption declines when prices rise—consistent with the elasticities observed in the model. Implying that sustained high consumer prices particularly tax-driven lead to structural reductions in traffic growth, which over time suppress revenue and undermine wider digital economic activity.

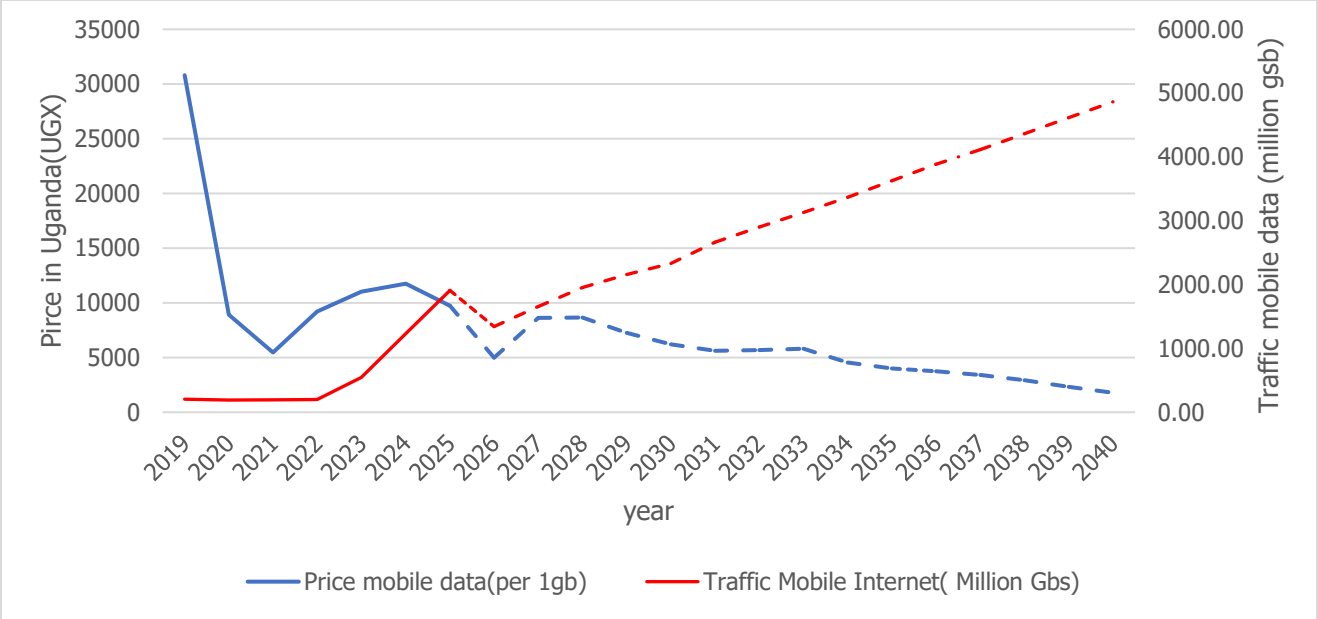

Figure 23: Trend of Traffic mobile data and price of the data

Figure 24 demonstrate the historical and predicted trends for the fixed and mobile interconnection rate and on-net voice traffic minutes between 2019 and 2030. From 2019 to 2024, the interconnection rate remains relatively high before beginning a sharp decline, especially after 2023. The dotted section from 2025 onwards shows a forecast of an even steeper decline, eventually approaching very low levels by 2030, consistent with long-term policy direction towards cost-based interconnection. However, historical data for on-net voice traffic minutes highlights gradual growth from 2019 to 2024. This could be due to increased mobile data penetration, expanding network coverage, and continued consumer reliance on voice services. The dotted part of the traffic line represents predicted values from 2025 onward, showing continued and accelerating growth. By 2030, voice traffic is projected to reach nearly 9,000 million minutes, indicating sustained demand even amid shifting communication patterns and increased adoption of internet-based communication platforms.

Comparing the two telecommunication services, a clear inverse pattern arises: historically, as interconnection rates decline, voice traffic increases. This is attributed to affordability of services which induces consumption. The predicted values strengthen this relationship, suggesting that further reductions in interconnection rates are expected to support continued growth in voice traffic. Lower interconnection costs imply more affordable calling rates, reduced barriers to off-net calling, and overall increased usage of voice services. Overall, the combined historical and predicted data shows how policy changes in interconnection pricing may shape future market behaviour of telecommunication market. The projections suggests that, reduction interconnection in charges stimulates traffic growth. Qualitative evidence further reinforces that reducing interconnection and data prices encourages usage. Telecom respondents emphasized that *"when the rates reduce, usage automatically increases"* (KII – Telecom Operator, Male, Kampala), confirming that affordability reforms directly stimulate demand. This implies that price reductions whether through market forces or policy decisions have strong multiplier effects such

as increased voice and data traffic, improved network value, and higher aggregate revenue potential.

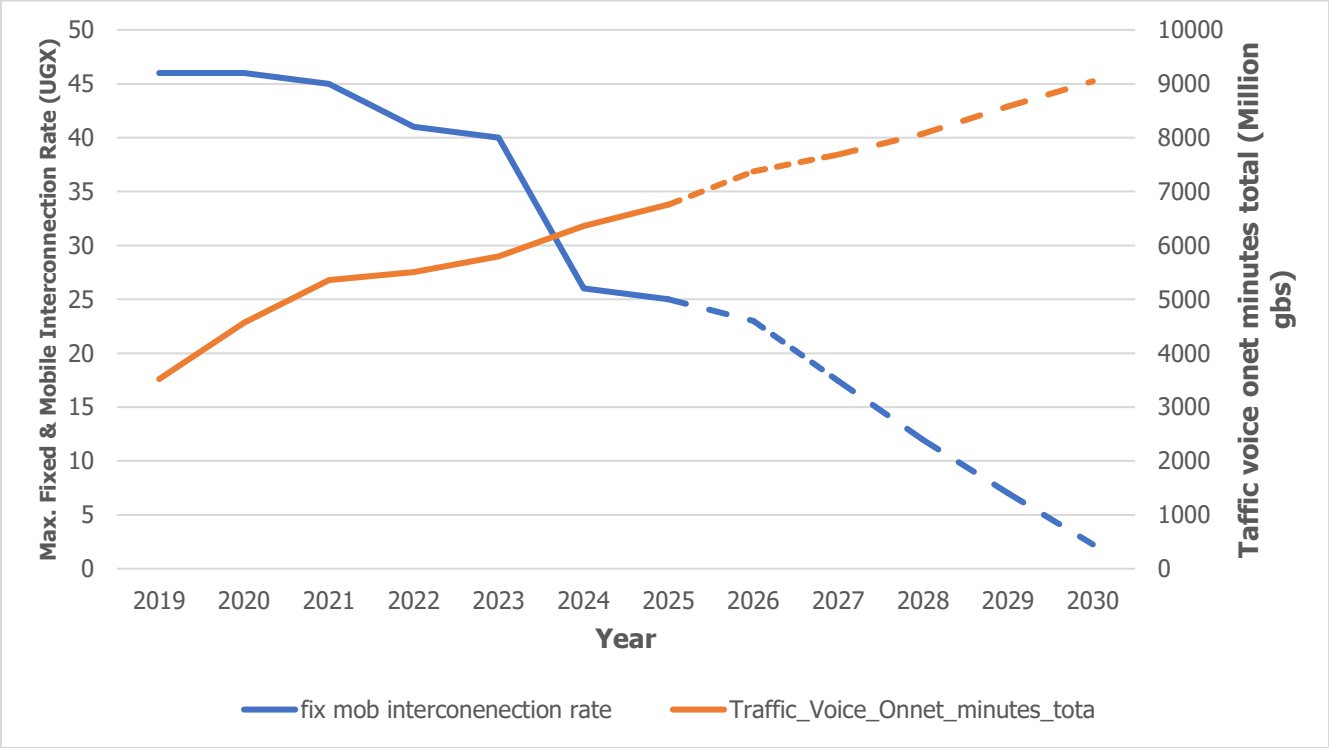

Figure 24: Traffic voice on net minute

Impact of Price on traffic mobile data Revenue and Investment

Multiple Regression: Effect of tax induced prices on telecom turnover

Table 18: Effect of tax induced prices on telecom turnover

Log Revenue	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Lagged log revenue	0.644	0.079	8.20	0.000	.487	.8	***
Log voice bundles	0.253	0.046	5.53	0.000	.162	.345	***
Lagged voice bundles	-0.267	0.045	-5.96	0.000	-.356	-.178	***
Log price of 1GB	0.025	0.01	2.47	0.016	.005	.045	**
Log feature phones	-0.239	0.071	-3.35	0.001	-.381	-.096	***
Log basic phones	0.047	0.012	3.79	0.000	.022	.072	***
Log smartphones	0.342	0.077	4.45	0.000	.189	.496	***
Constant	5.796	1.224	4.74	0.000	3.355	8.237	***
Mean dependent var		22.395	SD dependent var			0.196	
R-squared		0.986	Number of obs			80	
F-test		690.681	Prob > F			0.000	
Akaike crit. (AIC)		-303.730	Bayesian crit. (BIC)			-284.774	

**** p<.01, ** p<.05, * p<.1*

Model Overview and Goodness of Fit

The estimated Autoregressive Distributed Lag (ARDL) model examines the short-run dynamics of telecommunications turnover (log of revenue) in response to tax-induced price changes and demand-side factors over the period February 2019 to September 2025, using 80 data points generated from data reported by UCC monthly. After running the model, the model was subjected to Durbin's h-test (for models with lagged dependent variables) to test for serial autocorrelation. The results showed that there is serial autocorrelation and this was corrected by running Prais–Winsten / Cochrane–Orcutt

The model demonstrates excellent explanatory power, with an R-squared of 0.986, indicating that approximately 98.6% of the variation in telecom revenue is explained by the variables in the model. The F-statistic (690.681, $p < 0.001$) confirms that the model is jointly statistically significant. Overall, these diagnostics indicate a well-specified and robust dynamic revenue model.

Revenue Persistence and Market Dynamics

The positive and statistically significant coefficient on lagged revenue (Coefficient = 0.640, $p < 0.001$) indicates strong persistence in telecom turnover. A 1% increase in revenue in the previous period leads to a 64% increase in current revenue, holding other factors constant. This reflects structural inertia in telecom markets, the importance of recurring subscriptions and habitual usage, and the stabilizing role of existing customer bases. From a policy perspective, this implies that shocks-whether positive or negative-tend to carry forward, amplifying the long-term impact of tax and pricing decisions.

Voice Services and Usage Adjustment Effects

Current voice usage has a positive and economically meaningful effect on telecom turnover [Log of Voice Calls (Coefficient = 0.253, $p < 0.001$)]. A 1% increase in voice call volumes is associated with a 25% increase in revenue, indicating that voice services remain a relevant revenue stream, despite the growing importance of data.

Interestingly, the negative coefficient on lagged voice calls [Lagged Voice Calls (Coefficient = -0.267, $p < 0.001$)] suggests a short-run adjustment effect. High voice usage in the previous period leads to a contraction in current revenue, potentially due to consumption smoothing by users, migration from voice to data-based communication, and promotional pricing or bundles that temporarily inflate usage without sustaining revenue. This pattern is consistent with a structural transition away from traditional voice services, particularly in price-sensitive markets like Uganda.

Tax-Induced Data Pricing Effects

The coefficient on data prices is positive and statistically significant [Log Price of 1GB Data (Coefficient = 0.025, $p = 0.016$)], though modest in magnitude. A 1% increase in the price of 1GB of data is associated with a 2.5% increase in telecom revenue. This result suggests that, in the short run, demand for mobile data is relatively price inelastic, and telecom operators are able to pass tax-induced price increases on to consumers without an immediate reduction in turnover.

However, the small elasticity also signals that revenue gains from higher data prices are limited, and sustained price increases may eventually suppress usage, particularly among low-income users. This has important implications for digital inclusion and affordability policies.

Device Composition and Revenue Structure

The negative and significant coefficient [Feature Phones (Coefficient = -0.24, p = 0.001)] indicates that a higher stock of feature phones reduces telecom turnover. A 1% increase in feature phone penetration is associated with a 2.6% decline in revenue. This reflects lower data consumption, limited access to value-added services, and reduced monetization potential per user. Feature phone dominance therefore, constrains revenue growth and limits the effectiveness of data-driven taxation strategies.

Basic Phones

Basic phones exhibit a small but positive impact on revenue [Basic Phones (Coefficient =0.047, $p < 0.000$)]. This likely reflects stable voice and SMS usage, broad market penetration, and contribution to baseline turnover despite limited data capability.

Smartphones

Smartphone penetration has the largest positive effect among device variables [(Coefficient = 0.342, $p < 0.000$)]. A 1% increase in smartphone numbers leads to about 34% increase in telecom revenue on average. This underscores the central role of smartphones in driving data consumption, supporting digital services, mobile money, and OTT platforms, and enhancing the revenue-raising capacity of the telecom sector.

Constant Term

The constant term is positive and statistically significant, capturing baseline revenue effects not directly explained by the variables included, such as institutional market structure, regulatory environment, and long-term sectoral growth trends.

Policy Recommendations

1. Shift Telecom Tax Policy from Price-Based Revenue Extraction to Demand Expansion

Recommendation
Reorient telecom taxation away from high excise duties on usage toward policies that expand demand, adoption, and long-term participation in the digital economy.

Justification
The persistence of telecom revenue implies that today's tax and pricing decisions lock in future outcomes. Short-run price increases generate limited and unsustainable revenue gains, while suppressing demand. Demand-expanding policies generate long-lasting revenue and welfare gains, aligning fiscal objectives with sector growth.

2. Reduce or Eliminate Taxes on Smartphones and Digital Devices

Recommendation
Reduce VAT, excise duties, and import levies on smartphones and related digital devices, with particular emphasis on entry-level smartphones.

Justification
The model identifies smartphone penetration as the strongest driver of telecom revenue, far exceeding the impact of price adjustments. High device taxes slow the transition from feature phones, suppressing data usage, innovation, and tax yield. Lower device taxes would accelerate smartphone adoption, expand the data-driven revenue base and improve long-term fiscal returns.

3. Introduce Targeted Incentives to Accelerate Feature Phone–to–Smartphone Migration

Recommendation
Implement targeted fiscal and regulatory incentives (e.g., tax rebates, zero-rated entry-level devices, operator-led handset financing) to support rapid migration from feature phones to smartphones.

Justification
A high share of feature phones structurally constrains both sector growth and tax revenues. Encouraging device upgrading directly addresses this bottleneck and unlocks data consumption, digital services uptake, and broader tax base expansion.

4. Prioritise Affordable Data Access Over Voice-Centric Taxation

Recommendation
Gradually reduce taxes on mobile data services while reviewing and rationalising taxes on legacy voice services.

Justification
The sector is undergoing a structural shift away from voice toward data. Continued reliance on voice-related taxes is increasingly misaligned with market realities and may distort investment incentives. Affordable data pricing supports usage growth, digital inclusion, and **future-proof revenue streams**.

5. Integrate Device Affordability and Data Pricing into Telecom Tax Design

Recommendation
Mandate affordability impact assessments for any proposed telecom tax changes, explicitly analysing effects on smartphone uptake, data usage, and long-term revenue.

Justification
Because telecom revenue is highly persistent, poorly designed tax measures can have **lasting negative effects**. Embedding affordability considerations ensures that fiscal policy supports sustainable growth rather than short-term extraction.

6. Use Telecom Tax Policy as a Tool for Digital Transformation and Human Capital Development

Recommendation
Align telecom taxation explicitly with digital transformation, education, and productivity objectives by prioritising low-cost access to smartphones and data.

Justification
Affordable devices and data enable e-learning, digital skills acquisition, fintech, and e-government services. These spillovers enhance **economy-wide productivity**, reinforcing the long-term tax base beyond the telecom sector.

7. Move Away from Regressive Excise Duties on Usage

Recommendation
Gradually phase down regressive excise duties on data and usage-based services, particularly those that disproportionately affect low-income users.

Justification
Usage-based excise taxes raise prices without materially improving sustainable revenue and disproportionately exclude low-income users. Reducing them supports inclusion while expanding total market participation and tax yield.

8. Anchor Telecom Tax Reforms in a Medium-Term, Evidence-Based Framework

Recommendation
Institutionalise telecom tax reforms within the Medium-Term Revenue Strategy and NDP IV implementation framework, supported by continuous data monitoring.

Justification
The persistence of revenue effects and structural market shifts require predictable, evidence-driven policymaking. Medium-term planning allows government to manage transition costs while capturing long-run gains from device-led and data-driven growth.

Policy-Oriented Synthesis

Overall, the evidence strongly supports a strategic pivot in Uganda's telecom taxation policy: from taxing usage and prices toward enabling device adoption, affordable data access, and digital participation. Policies that accelerate smartphone penetration and data affordability are not only welfare-enhancing but also more effective at generating sustainable telecom revenues and tax receipts. This approach aligns squarely with Uganda's digital transformation agenda, NDP IV priorities, and long-term growth objectives.

Box 1: Practical Illustration: Total Cost of Ownership (TCO) of Smartphone-Based Internet Access in Uganda

To illustrate why affordability analysis must go beyond the upfront cost of acquiring a device, the study applied a Total Cost of Ownership (TCO) approach for a typical Ugandan internet user over the expected lifespan of a basic smartphone (3 years), as recommended by UCC. The values presented are indicative proxies intended to demonstrate cost structure rather than exact household expenditure.

Step 1: Device Acquisition Cost - A basic but functional smartphone commonly available in the Ugandan market costs approximately UGX 250,000. This represents the initial barrier to entry but does not reflect the full cost of remaining connected.

Step 2: Charging Costs - Most users in rural and peri-urban Uganda rely on paid charging services due to unreliable electricity access. We assumed the following values:

- Average charging cost: **UGX 1,000 per charge**
- Charging frequency: **15 charges per month**
- Annual charging cost: **UGX 180,000**
- 3-year charging cost: **UGX 540,000**

This cost alone is more than double the initial device price, highlighting a hidden but significant affordability constraint.

Step 3: Data Usage Costs - Using conservative assumptions aligned with entry-level digital participation:

- Average data usage: **3 GB per month**
- Average cost per GB: **UGX 3,500**
- Monthly data cost: **UGX 10,500**
- Annual data cost: **UGX 126,000**
- 3-year data cost: **UGX 378,000**

These recurring costs determine whether users can meaningfully access online services such as e-learning, mobile money, and e-government platforms.

Step 4: Proxy Costs for Loss, Theft, or Damage - Given high device theft rates and limited insurance penetration, the study applied a conservative proxy:

- Probability of replacement once in 3 years
- Replacement cost (50% of device value): **UGX 125,000**

Total Cost of Ownership Summary (3 Years)

Cost Component	Estimated Cost (UGX)
Device acquisition	250,000
Charging (3 years)	540,000
Data usage (3 years)	378,000
Loss/damage proxy	125,000
Total TCO (3 years)	**1,293,000**

Affordability Implications

- Uganda's GDP per capita (nominal) is approximately UGX 4.3 million per year.
- The annualized TCO of smartphone internet access is therefore about UGX 431,000, equivalent to 10% of annual per capita income.
- For low-income households, particularly those in the bottom 40% of the income distribution, this share rises substantially, often exceeding 20–25% of disposable income.
- When assessed using PPP-adjusted income, the burden remains significant, confirming that affordability challenges persist even after accounting for local purchasing power.

Policy Implication: This case study demonstrates that reducing taxes on devices alone is insufficient. Sustainable digital inclusion requires coordinated policy action across data pricing, energy access, device security, and targeted support for low-income and rural users.

11.4 Long-term Impact on Investment Decisions and Sectoral Contribution to GDP

The long-term effects of tax-induced price changes on Uganda's telecommunications sector reveal a complex interplay between fiscal policy, investment behaviour, and the sector's overall contribution to GDP. As the preceding analysis demonstrates, higher data and service prices driven largely by excise duties, VAT, and parafiscal charges have a statistically significant negative effect on usage (elasticity of –0.8%) and reduce the depth of consumer participation in the digital economy. Over extended periods, suppressed usage translates into weaker service revenues, slower market expansion, and reduced economies of scale. Although the econometric model shows that short-term price increases may momentarily enhance cash flow and slightly boost investment (coefficient 0.152), the long-term trajectory of sector performance is more strongly shaped by subscriber growth and usage intensity than by higher retail tariffs. This indicates that Uganda's current tax model, which leans heavily on usage-based excise duties, risks undermining the very revenue base it seeks to reinforce.

Qualitative insights from operators and regulatory experts reinforce these concerns, highlighting that cumulative taxation has begun to alter capital allocation decisions within the industry. A senior industry consultant explained that "*at every layer there are taxes and heavy taxes… the more the operators are coughing out almost 60% in taxes, it affects investment… pushing services to the remotest part of the country becomes a gamble"* (KII – Industry Expert/Consultant, Kampala). This implies that high fiscal pressure reduces the financial room operators need to upgrade infrastructure, deploy new technologies, or extend coverage to low-income and rural areas. Similarly, a regulator emphasised that when taxes inflate operational costs in areas with already thin margins, "*investment decisions obviously change… it becomes a question of whether you invest and not get a return, or focus only where returns are guaranteed"* (KII – Government MDA, Kampala). The implication is that Uganda's current tax structure inadvertently incentivises geographically uneven investment, reinforcing digital divides that already disadvantage northern and eastern districts and rural communities.

A key long-term risk is that sustained affordability constraints could slow the diffusion of smartphones, data adoption, and digital services factors that directly influence productivity, financial inclusion, innovation, and the broader digital economy. The qualitative findings show that consumers ration their usage, downgrade bundles, or avoid smartphone purchases because *"bundles are expensive"* and devices *"cost almost double due to taxes"* (FGD – Youth, Mbale District). When consumers reduce usage, the ripple effects cut across multiple sectors: SMEs limit online marketing, youth cut back on learning platforms, and households reduce participation in mobile money and e-commerce ecosystems. These behavioural adjustments weaken the catalytic spillovers through which telecoms contribute to GDP growth, including job creation in digital businesses, expansion of platform-based markets, and efficiency gains in agriculture, finance, and public service delivery.

From a macroeconomic perspective, the sector's long-term contribution to GDP depends on a stable cycle of investment, innovation, and expanding user participation. Yet, the combination of high tax burdens and declining affordability risks slowing this cycle. While government revenue from telecom taxes has grown steadily between 2019 and 2025 despite declining usage

prices the sustainability of this growth is uncertain. As econometric results showed, revenue grows more through subscriber expansion (coefficient 0.918) than through higher prices. This means that policies which suppress demand eventually weaken revenue growth, reduce network effects, and limit reinvestment. Stakeholders in Northern Uganda therefore warned that to sustain national development, *"government should exempt taxes on infrastructure to promote network rollout to rural areas… this will promote inclusion and boost the economy"* (FGD – Consumer Representative, Northern Uganda).

In the long run, if tax-driven affordability barriers persist, the sector could experience slower penetration growth, fewer marginal investments in rural coverage, and reduced progression toward mass digitalization all of which weaken ICT's multiplier effect on national GDP. Conversely, a more balanced tax regime that prioritises usage volumes and device affordability over high excise rates would support sustained traffic growth, wider digital inclusion, and stronger private sector investment-ultimately enhancing the sector's contribution to national economic transformation.

12 FISCAL SCENARIO SIMULATIONS

12.1 SCENARIO 1: BASELINE (STATUS QUO)

Under the baseline scenario, the telecommunications sector operates within the current policy and tax environment, with no changes to pricing structures, tax rates, or coverage obligations. Rural network coverage remains at 75%, reflecting existing infrastructure limitations and slow expansion in underserved areas. The sector serves 44 million subscribers, growing modestly at 1.36% per year, consistent with a mature market characterized by affordability constraints. Data prices remain high at UGX 5,000 per GB (inclusive of VAT, excise duty, and other levies), resulting in relatively low annual usage of 41 GB per subscriber. As several consumers noted, *"data is too expensive… you only buy what you need"* (FGD – Consumers, Female, Gulu), underscoring the regressive impact of the current tax-inflated pricing structure.

Under this scenario, annual sector revenues are estimated at UGX 575.2 billion, supported primarily by voice, data, and mobile-money services. Capital expenditure remains high at USD 2.6 billion, representing past investment in the national network backbone, while OPEX continues at baseline levels to maintain operations. However, limited affordability and stagnant data demand mean consumer surplus shows sub-optimal utilisation and no meaningful improvement. Device taxes (10%), VAT (18%), excise duty on data (12%), withholding tax (6%), and the infrastructure levy (1.5%) continue to apply fully, contributing to high retail prices and low uptake. Telecom GDP contribution remains stable at 3.7%, with penetration and coverage expansion projected to increase by only 10% in the medium term due to high investment costs and constrained demand. Overall, the baseline scenario reflects a steady but efficiency-limited sector shaped by high taxation, slow subscriber growth, and affordability barriers.

Table 19: Baseline Fiscal and Sector Performance Parameters for Scenario 1 (Status Quo)

Indicator	Value / Assumption	Notes
Rural Coverage (%)	75	Existing coverage before policy interventions
Subscribers	44,030,253	Current subscriber base
Subscriber Growth Rate	1.36% per year	Moderate growth scenario
Data Price per GB (incl. taxes)	UGX 5,000	Baseline price including VAT and excise
Data Usage per Subscriber	41 GB/year	Average annual consumption per person
Annual Revenue	UGX 575.2B	Revenue from data and other services
CAPEX	USD 2.6B	Existing network deployment cost
OPEX	Baseline operational cost	Routine network operations and maintenance
Consumer Surplus	-	Baseline reference; no additional benefit yet
Cost per GB	5000	Given in the dataset by YCC
Penetration / Coverage Trajectory	10%	No additional coverage expansion yet
GDP Contribution (%)	3.7	Telecom sector share of national GDP

Indicator	Value / Assumption	Notes
Licensing Fees	30% reduction	No reductions applied
Device Taxes	10%	Baseline tariffs apply
VAT	18%	Baseline tariffs apply
Infrastructure levy	1.5%	Baseline tariffs apply
Exercise tax on data	12%	Baseline tariffs apply
Withholding tax	6%	Baseline tariffs apply
Infrastructure Levy	1.50%	Current levy applied
Elasticity of demand	-0.2	As calculated in this study

12.2 Scenario 2: Reducing Cost of Access and Usage of Mobile Data

1. Base Case (Business as Usual – BAU)

Under the current tax structure (12% excise duty and 18% VAT), the effective price of mobile data remains relatively high at USD 1.39 per GB (UCC, 2025). Usage growth and subscriber expansion are flat, indicating that the existing tax regime has largely reached its revenue and **market saturation limits. Annual sector revenue stabilises at about USD 162 million, with no** meaningful gains in affordability or inclusion. From a policy perspective, this scenario confirms that maintaining the status quo prioritises short-term fiscal certainty but constrains market expansion, digital inclusion, and long-term revenue growth.

2. Policy Conservative Scenario (Moderate Excise and VAT Reduction)

Reducing excise duty to 5% and VAT to 14% lowers the effective data price by about 19%, which translates into a 12.5% increase in data usage and a 14% increase in annual sector revenue. Importantly, this scenario demonstrates that modest tax reductions can generate positive fiscal returns, with revenue rising to nearly USD 182 million annually and projected five-year revenues increasing to USD. 899 Billion. For example, consumers repeatedly emphasized that even small reductions in data prices would significantly increase their usage. As one participant remarked, *"…if data becomes even slightly cheaper, we shall be online more often because right now we buy just enough to check messages…"*(FGD – Consumers, Female, Gulu). Another stressed that high prices force rationing, noting, *"…you can't do research or learn properly when data is expensive… you only go online when it is really necessary…"* (FGD – University Students, Male, Mbale). These perspectives confirm the elasticity assumption and underscore that affordability remains a primary barrier to digital participation. Consumer costs decline, and new subscriber growth increases by approximately 13%. From a policy standpoint, this scenario represents a low-risk, high-credibility reform option, aligning affordability objectives with revenue protection.

3. Policy Aggressive Scenario (VAT Removal)

Eliminating VAT on data while maintaining the 12% excise duty produces the largest affordability and market response. The effective price per GB falls by nearly 29%, resulting in the highest increase in usage (19%), strong subscriber growth (21%), and the largest revenue gains, with annual revenue increasing by over 20%. Over five years, sector revenue reaches approximately

UGX. 1.084 Trillion. This scenario clearly illustrates the elastic nature of data demand and confirms that lower prices significantly expand the tax base, offsetting foregone VAT through higher consumption and broader market participation. Operators also expressed that tax reductions could stimulate demand without undermining fiscal stability. One telecom retailer explained, *"…when prices drop a bit, customers buy more bundles and the business moves… high taxes spoil the volumes…"* (KII Business Operator, Male, Fort Portal). Another operator added that reduced taxes *"…would widen the customer base because more people can afford regular data…"* (KII – Mobile Money & SIM Card Agent, Female, and Lira). These insights align with the simulation's indication that reduced tax rates may catalyse growth in traffic and subscriber activity. From a policy perspective, this option is growth-maximising but requires strong fiscal coordination and short-term revenue management.

4. Policy More Aggressive Scenario (Excise Duty Removal)

Removing excise duty while retaining VAT produces mixed outcomes. Although prices fall and usage increases, the gains are less pronounced than in the VAT removal scenario, and revenue growth is more modest (12%). While consumer costs decline, the effective price remains higher than under the VAT-free option, limiting uptake. This suggests that VAT has a more binding effect on affordability than excise duty, and that excise-only reforms may deliver sub-optimal growth outcomes when applied in isolation.

Cross-Cutting Policy Insights

1. Data demand in Uganda is price-elastic, meaning that lower taxes expand usage, subscriptions, and ultimately revenues.
2. VAT reduction or removal has a stronger impact on affordability and growth than excise duty adjustments alone, indicating where fiscal reform yields the highest returns.
3. Moderate reforms can "pay for themselves" through base expansion, making them fiscally defensible within the Medium-Term Revenue Strategy.
4. Aggressive reforms maximise long-term sector growth, digital inclusion, and five-year revenues, but require careful transition planning to manage short-term fiscal impacts.
5. Maintaining the current tax regime risks foregoing future revenue, innovation, and inclusion, contrary to NDP IV and the Tenfold Growth Strategy.

Policy-Relevant Conclusion

The simulation provides strong empirical support for shifting telecom taxation from a high-rate, narrow-base model to a lower-rate, wider-base framework. From a policy perspective, a phased approach beginning with conservative tax reductions, followed by targeted VAT reforms, offers a practical pathway to improve affordability, expand digital access, and enhance long-term fiscal returns. This approach directly supports Uganda's digital transformation agenda while preserving macro-fiscal credibility. Table 20 presents these simulation results.

Table 20: Simulations on data usage

Scenario	Excise duty (%)	VAT (%)	effective price per GB(USD)	% price change	Expected increased in Usage	Annual revenue (million USD)	%change in revenue	Consumer cost trend	New subscribers (millions)	% change in new subscribers	New Revenue after 5 years (USD)
Base case (BAU)	12	18	1.39	0.00	0.00	159.78	0.000	Baseline	44.03		799.15
Policy Conservative	5	14	1.13	-0.19	0.1254	182.259	0.141	Lowered	49.55	0.13	899.36
Policy Aggressive	12	0	0.99	-0.29	0.189552	192.649	0.206	Lowered further	59.75	0.21	963.5
Policy more Aggressive	0	18	1.53	-0.18	0.1188	181.191	0.134	Lower further	51.84	0.12	940.97

Figure 25 illustrates how different fiscal policy choices directly affect the retail price of mobile data per GB, highlighting the strong linkage between taxation and affordability.

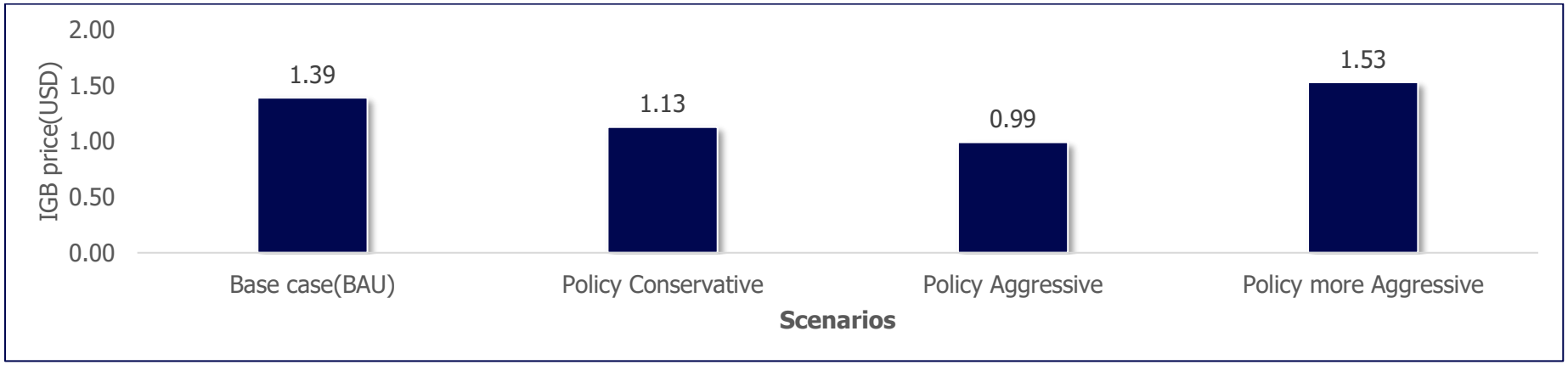

Figure 25: Effective price of mobile data per GB by fiscal scenario

Overall, the graph clearly shows that VAT reform has a stronger effect on data affordability than excise duty adjustments alone. Policies that significantly reduce or eliminate VAT on mobile data achieve the greatest price reductions and are therefore more likely to drive usage, subscriber growth, and long-term revenue expansion. Conversely, poorly sequenced or partial reforms can unintentionally worsen affordability, even when headline tax rates appear more aggressive. This evidence reinforces the case for carefully targeted, VAT-focused telecom tax reforms aligned with Uganda's digital transformation and growth objectives.

Figure 26 illustrates how different fiscal policy choices affect annual telecom sector revenue, providing clear insights into the revenue–growth trade-offs associated with telecom taxation.

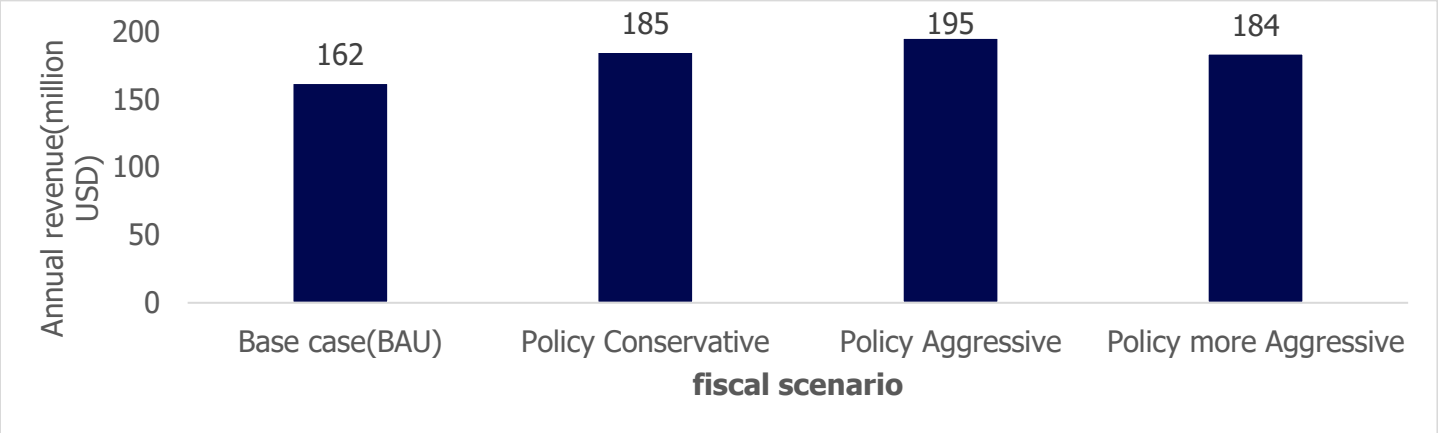

Figure 26: Annual Telecom revenues by fiscal scenario

Overall, the figure reinforces the argument that strategic, well-targeted telecom tax reforms can simultaneously advance fiscal performance and digital transformation objectives, rather than forcing a trade-off between the two.

Figure 27 illustrates the relationship between changes in the effective price of mobile data per GB and the percentage change in annual telecom revenue across different fiscal scenarios. It provides clear evidence on how pricing responses interact with sector revenues.

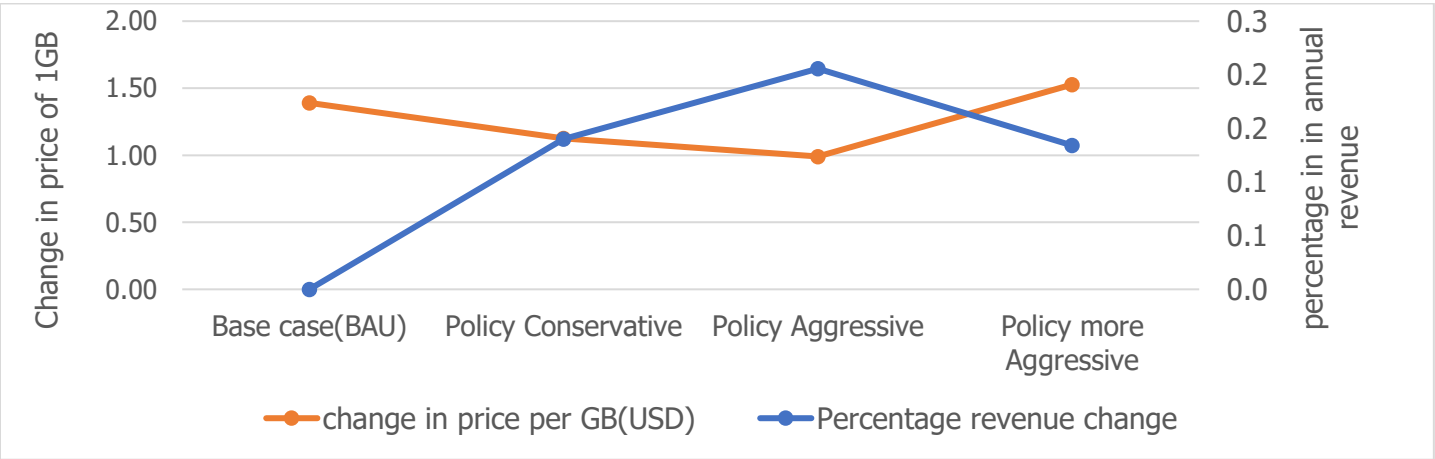

Figure 27: Percentage change in revenue vs price reduction

Figure 28 shows the projected revenues from difference scenario. The findings show that tax reduction continue to produce higher revenues in short, medium and long run. The findings show that a more

aggressive policy projects (remove excise tax and maintain VAT) fetches more income in long run as compared to other scenarios

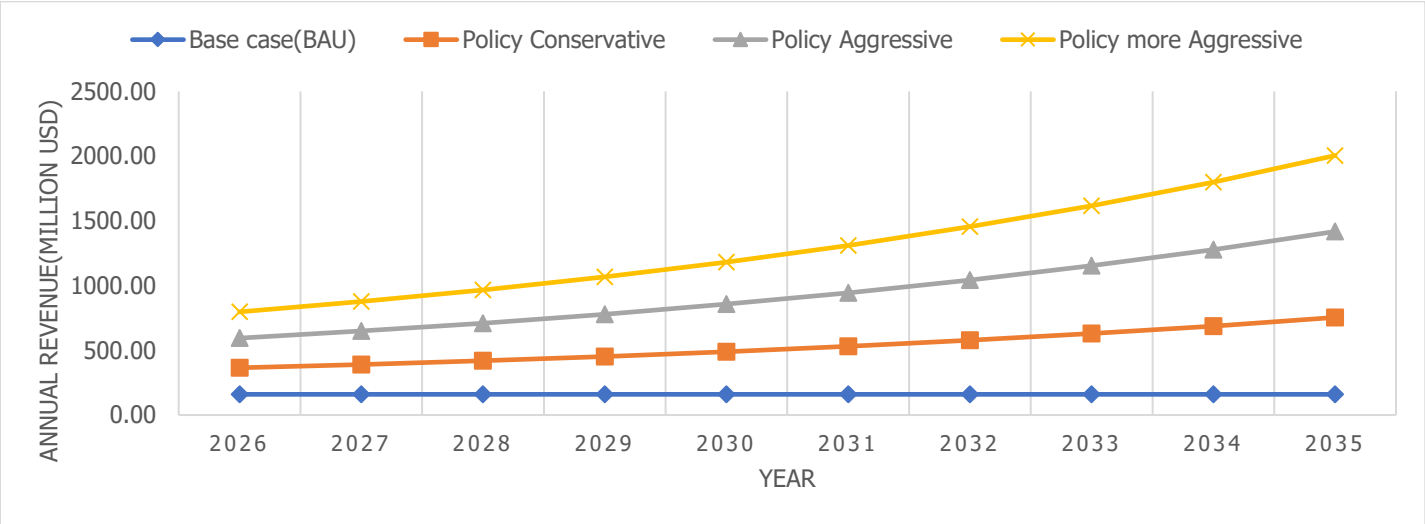

Figure 28: Projected revenue for different fiscal scenarios for 10 years as result of tax reduction on data

Key Policy Insights

- Revenue growth is non-linear with respect to price reductions; beyond a certain point, the composition of taxes matters more than the magnitude of the price cut.
- Deeper, well-targeted price reductions (particularly those driven by VAT reform) generate the strongest revenue gains.
- Partial or poorly sequenced tax reforms can reduce prices without maximising revenue growth.
- Maintaining current prices yields neither affordability nor revenue benefits.

Overall, the figure reinforces the conclusion that strategic, VAT-focused price reductions are most effective in expanding both affordability and sector revenues, supporting a shift toward lower-rate, wider-base telecom taxation.

Figure 29 illustrates the relationship between Long-term revenue impact. Fiscal scenarios vs revenue after 5 years demonstrating clearly that telecom tax reform can enhance affordability, expand digital inclusion, and strengthen Uganda's long-term revenue base.

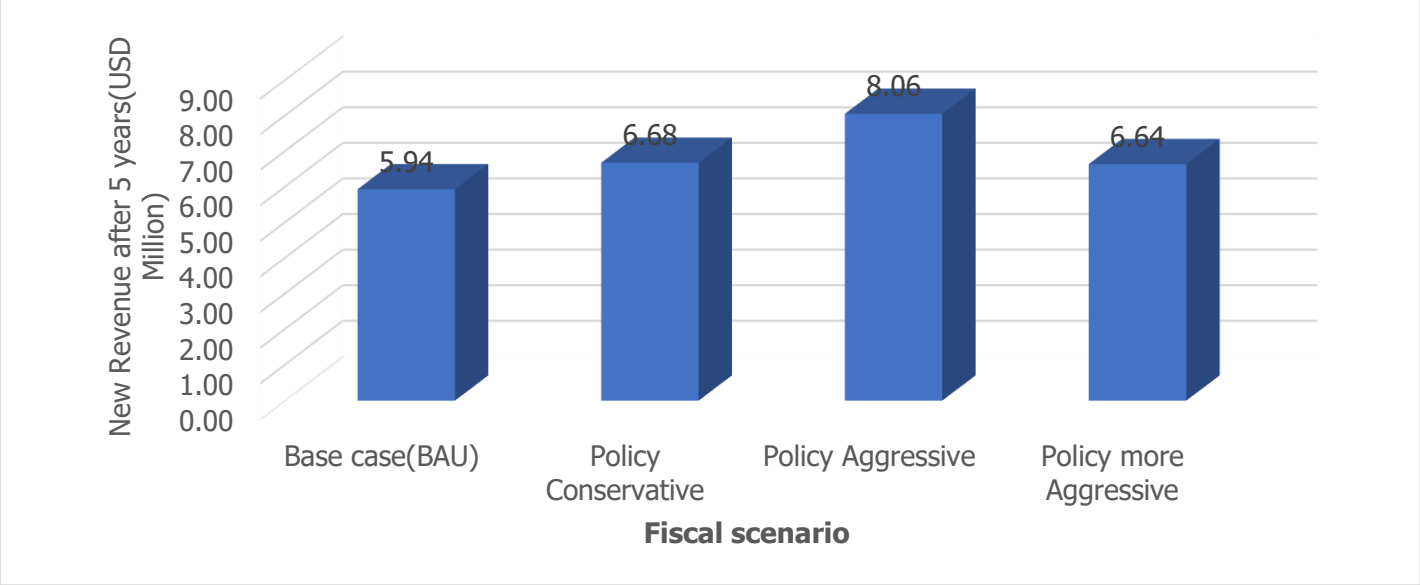

Figure 29: Long-term revenue impact. Fiscal scenarios vs revenue after 5 years

Policy Recommendations and Justifications

1. Maintain the Status Quo Only as a Short-Term Fiscal Baseline, Not a Long-Term Policy Option

Recommendation
Retain the current telecom tax structure (12% excise duty and 18% VAT) only as a short-term fiscal reference point while preparing reforms, rather than as a preferred long-term policy stance.

Justification

The BAU scenario demonstrates that the existing tax regime has reached market and revenue saturation, with flat usage, stagnant subscriber growth, and limited digital inclusion. While it offers short-term fiscal predictability, it constrains long-term revenue growth, innovation, and affordability. Maintaining this regime indefinitely would conflict with NDP IV's digital transformation objectives and the Tenfold Growth Strategy's emphasis on market expansion and productivity.

2. Implement a Conservative Telecom Tax Reduction as an Immediate, Low-Risk Reform

Recommendation
Reduce excise duty to around 5% and VAT to approximately 14% in the short term as an initial reform package.

Justification
The conservative scenario shows that modest tax reductions lead to higher sector revenues, increased usage, and improved affordability without undermining fiscal stability. A 19% price reduction generates a 12.5% increase in usage and a 14% rise in annual revenue, confirming that moderate reforms can pay for themselves through base expansion. Consumer and student testimonies further validate that even small price reductions significantly improve digital participation, making this option politically, socially, and fiscally credible.

3. Prioritise VAT Reform over Excise Duty Reform for Maximum Impact

Recommendation
Target VAT on mobile data as the primary instrument for deeper reform, including partial or full VAT removal, rather than focusing solely on excise duty adjustments.

Justification
Simulation results clearly indicate that VAT reduction or removal produces the largest gains in affordability, usage, subscriber growth, and long-term revenue. The VAT-free scenario delivers the highest increase in data usage (19%) and the strongest revenue performance over five years. This confirms that VAT is the most binding tax component affecting affordability, and that reforming it yields higher economic and social returns than excise-only measures.

4. Adopt VAT Removal on Mobile Data as a Medium-Term, Growth-Enhancing Reform

Recommendation
Phase in the removal of VAT on mobile data as a medium-term reform, subject to fiscal transition planning and monitoring.

Justification
Although VAT removal implies short-term revenue foregone, the simulation demonstrates that expanded usage and subscriber growth compensate through a wider tax base, resulting in higher long-term revenues. Stakeholder feedback from operators and retailers confirms that lower prices stimulate demand and volumes. This option aligns strongly with digital inclusion, human capital development, and private sector growth, core pillars of both NDP IV and the Tenfold Growth Strategy.

5. Avoid Isolated Excise Duty Removal without Complementary VAT Reform

Recommendation
Do not pursue excise-duty-only reforms in isolation; instead, combine any excise adjustments with VAT reforms for maximum effectiveness.

Justification
The excise-only removal scenario yields weaker affordability and revenue outcomes compared to VAT-focused reforms. While consumer costs fall modestly, prices remain relatively high, limiting usage and subscriber growth. This indicates that excise-only interventions deliver sub-optimal policy outcomes and should not be prioritised unless paired with broader tax restructuring.

6. Institutionalise Telecom Tax Reforms within the Medium-Term Revenue Strategy (MTRS)

Recommendation
Embed telecom tax reforms into the Medium-Term Revenue Strategy and Budget Framework Paper to ensure predictability and credibility.

Justification

Both conservative and aggressive reform scenarios show that revenue gains materialise over time. Integrating reforms into the MTRS allows government to manage short-term revenue adjustments while capturing medium- to long-term gains, enhancing investor confidence and supporting sustainable fiscal planning.

7. Use Telecom Tax Reform as a Digital Inclusion and Productivity Policy Tool

Recommendation

Explicitly recognise telecom tax policy as a lever for digital inclusion, education, innovation, and productivity growth not solely as a revenue instrument.

Justification
Consumer and student testimonies demonstrate that high data prices restrict learning, research, and online engagement. Lowering data costs directly supports human capital development, e-learning, e-commerce, Fintech, and digital public services, amplifying the economy-wide returns of telecom tax reform beyond direct sector revenues.

8. Adopt a Phased Reform Approach with Continuous Monitoring

Recommendation
Sequence reforms by starting with conservative reductions, followed by targeted VAT reform, while continuously monitoring usage, revenues, and inclusion indicators.

Justification
The simulation confirms that tax elasticity is real but gradual, and aggressive reforms require careful fiscal coordination. A phased approach balances growth maximisation with fiscal prudence, allowing government to adjust policy based on observed outcomes rather than assumptions.

Overall, the evidence strongly supports transitioning from a high-rate, narrow-base telecom tax regime to a lower-rate, wider-base framework. Conservative reforms offer a safe entry point, while VAT-focused reforms unlock the greatest long-term benefits. Implemented progressively and anchored in medium-term fiscal planning, telecom tax reform can enhance affordability, expand digital inclusion, and strengthen Uganda's long-term revenue base-fully aligning with NDP IV and the Tenfold Growth Strategy.

Table 21: Policy Matrix

S.N.	Policy Recommendation	Policy Objective	NDP IV Alignment	Tenfold Growth Strategy Alignment	Lead MDA	Supporting MDAs / Institutions
1.	**Treat the current telecom tax regime (BAU) as a short-term fiscal baseline, not a long-term policy option**	Preserve short-term fiscal stability while preparing for growth-oriented reforms	*Governance & Accountability Programme*- Fiscal sustainability and evidence-based policymaking	Emphasis on *Structural Reforms* rather than maintaining growth-constraining status quo	MoFPED	URA, NPA
2.	**Implement conservative reductions in excise duty and VAT as an immediate reform**	Improve affordability while protecting revenues through base expansion	*Digital Transformation Programme* – Affordable access to digital services; *Private Sector Development*	*Lowering Cost of Doing Business* and *Market Expansion*	MoFPED	URA, UCC, MoICT&NG

S.N.	Policy Recommendation	Policy Objective	NDP IV Alignment	Tenfold Growth Strategy Alignment	Lead MDA	Supporting MDAs / Institutions
3.	**Prioritise VAT reform over excise duty reform in telecom taxation**	Maximise affordability and usage response per unit of tax foregone	*Digital Transformation*; *Human Capital Development* – access to digital learning and services	*Productivity and Demand Expansion* through digital connectivity	MoFPED	URA, UCC
4.	**Phase in VAT removal on mobile data as a medium-term growth-enhancing reform**	Expand the digital tax base, usage, and long-term revenues	*Digital Transformation* – Universal and affordable connectivity; *Private Sector Development*	*Tenfold Growth Enabler*: Digital economy as a growth multiplier	MoFPED	URA, UCC, MoICT&NG, NPA
5.	**Avoid isolated excise-duty-only reforms without complementary VAT measures**	Ensure efficiency and effectiveness of fiscal reforms	*Governance & Accountability* – Policy coherence and regulatory efficiency	*Efficient Policy Design* to maximise returns on reform	MoFPED	URA, UCC
6.	**Embed telecom tax reforms in the Medium-Term Revenue Strategy (MTRS) and BFP**	Improve predictability and credibility of fiscal policy	*Governance & Accountability* – Medium-term planning and fiscal discipline	*Stable Policy Environment* to crowd in private investment	MoFPED	URA, NPA, Parliament
7.	**Recognise telecom tax policy as a digital inclusion and productivity tool, not only a revenue instrument**	Support education, innovation, fintech, and e-services	*Human Capital Development*; *Digital Transformation*	*Broad-Based Growth* driven by digital adoption	MoICT&NG	MoFPED, UCC, Ministry of Education & Sports
8.	**Adopt a phased reform approach with continuous monitoring and evaluation**	Balance growth objectives with fiscal prudence	*Governance & Accountability* – Results-based monitoring and adaptive policy	*Iterative Reform and Learning* under Tenfold Growth implementation	MoFPED	NPA, UBOS, URA, UCC

This matrix demonstrates that telecom tax reform is not a sectoral issue but a cross-cutting growth intervention. The recommendations strongly advance NDP IV's Digital Transformation and Human Capital Development programmes, while operationalising the Tenfold Growth Strategy's focus on cost reduction, market expansion, productivity, and private sector–led growth. Clear assignment of lead and supporting MDAs enhances accountability and facilitates integration into Uganda's medium-term fiscal and development planning frameworks.

12.3 SCENARIO 2: REDUCING COST OF SMARTPHONES

Detailed reform scenarios on entry-level 4G and 5G enabled smartphones and the resulting growth in mobile data usage are presented below.

Key Assumptions of the Simulation Scenarios

1. The modelling considers only entry-level smartphones with minimum 4G and 5G capabilities.
2. The modelling excludes high end smartphones that is, those above 150 USD FOB and this is based on GSMA global best practice definitions for entry level smartphones.
3. The modelling considers only type-approved entry-level 4G and 5G enabled smartphone models that meet the global standards.
4. The Average Annual Natural Growth rate for adoption of entry-level 4G and 5G enabled smartphone is 10%
5. There is an expected shift from feature phones to entry-level 4G and 5G enabled smartphones by 16%
6. Data usage for the base year 2025 was adjusted by 38% for 2G and 3G feature phones and other devices.
7. Total data revenue was also adjusted by 38% to cater for the data revenues for 2G and 3G feature phones and other devices.
8. Price elasticity of demand for mobile data is 0.743 (computed) and this was only applied to policy reforms that widen the subscriber base and hence expected reduction in cost of data.
9. The Average Annual Natural Data Growth rate is 44%.

The simulation results in Table 22 demonstrate that telecommunications tax reforms particularly exemption of import duty and / or VAT on the entry-level 4G and 5G enabled smartphones, has a strong positive effect on smartphone affordability, adoption, and overall growth. This leads to an increase in adoption of entry-level 4G and 5G enabled smartphones.

However, this is associated with foregone expected short-term tax revenues to the Government on the entry-level 4G and 5G enabled smartphones, as shown in Table 22.

Table 22: Simulation on Growth-oriented Tax Reform on entry-level 4G and 5G enabled smartphones

Indicator	Base case (BAU)	Do nothing	Option 1 – 0% import duty	Option 2 – 0% VAT	Option 3 – 0% VAT and 0% import duty
Import duty (%)	10%	10%	0%	10%	0%
VAT (%)	18%	18%	18%	0%	0%
Infrastructure levy	1.50%	1.50%	1.50%	1.50%	1.50%
Import declaration fee	1%	1%	1%	1%	1%
Withholding tax		6%	6%	6%	6%
Mark-up	20%	20%	20%	20%	20%
Effective price per smartphone (USD)	70	109.62	102.62	97.02	89.95
% price change	0	–	-6%	-12%	-18%
Expected increase in adoption	0		5%	9%	14%

Indicator	Base case (BAU)	Do nothing	Option 1 – 0% import duty	Option 2 – 0% VAT	Option 3 – 0% VAT and 0% import duty
Natural growth rate		10%	10%	10%	10%
Projected shift from feature phone			16%	16%	16%
Total number of 4G & 5G smartphones	11,745,930	12,920,523	15,369,916	15,825,953	16,401,698
Percentage change in smartphones			31.00%	35.00%	39.60%
Annual Movement in 4G &5G Smartphones		1,174,593	3,624,351	4,080,679	4,651,088
Expected tax revenue on new smartphones (natural growth = 10%)		111,040,149,255			
Tax revenue foregone on smartphones			30,421,958,700	54,759,525,660	85,181,484,360

Under the Base Case (Business as Usual), entry-level 4G and 5G enabled smartphones, prices remain high, adoption stagnates and penetration is driven largely by natural population growth rather than policy-induced expansion. The "do nothing" scenario yields limited gains in connectivity while maintaining a high effective tax burden, resulting in constrained digital inclusion and modest fiscal returns.

Option 1 (Removal of Import Duty) shows that exemption of the 10% import duty on entry-level 4G and 5G enabled smartphones, reduces the effective smartphone price by 6%, triggering a 5% increase in adoption and a 31% increase in the total subscriber base. This indicates that import duty is a significant price distortion that suppresses demand, particularly among price-sensitive users who are majorly low-income earners.

Option 2 (Removal of VAT) generates even stronger results. A full VAT exemption lowers entry-level 4G and 5G enabled smartphone prices by 11%, leading to a 9% increase in adoption and a 35% expansion in total subscriber base. This suggests that VAT on entry-level 4G and 5G enabled smartphones is a major barrier to entry for first-time users and disproportionately affects low-income earners, and Micro, Small and Medium Enterprises (MSMEs), a critical lever to the economy.

Option 3 (Removal of both VAT and Import Duty) delivers the most transformative outcome. Entry-level 4G and 5G enabled smartphones prices fall by 18%, driving a 14% increase in adoption and a 40% rise in total subscriber base. This scenario produces the largest shift signalling accelerated digital readiness and deeper participation in the digital economy.

Across all reform Options, the expansion in the subscriber base significantly outpaces natural growth, indicating that tax reform actively unlocks suppressed demand rather than merely redistributing existing users. While each reform scenario entails foregone short-term tax revenue, the scale of new adoption, formalisation,

and digital participation points to strong medium- to long-term revenue recovery potential through expanded usage, data consumption, mobile financial services, and broader digital economic activity.

Overall, the simulations confirm that telecommunications taxation reform is a growth-enhancing policy lever, aligning fiscal policy with Vision 2040, NDP IV, Digital Uganda Vision, Digital Transformation Roadmap, Tenfold Growth Strategy, Domestic Revenue Mobilization Strategy (DRMS) and Medium-Term Revenue Strategy (MTRS). Reducing taxes on entry-level 4G and 5G enabled smartphones and access is not a revenue loss, but a strategic investment in digital infrastructure, inclusion, and future domestic revenue mobilization as demonstrated by Simulation results on data usage in Table 23. Figure 30 presents a 15years forecast in adoption of entry-level 4G and 5G enabled smartphones under different fiscal scenarios.

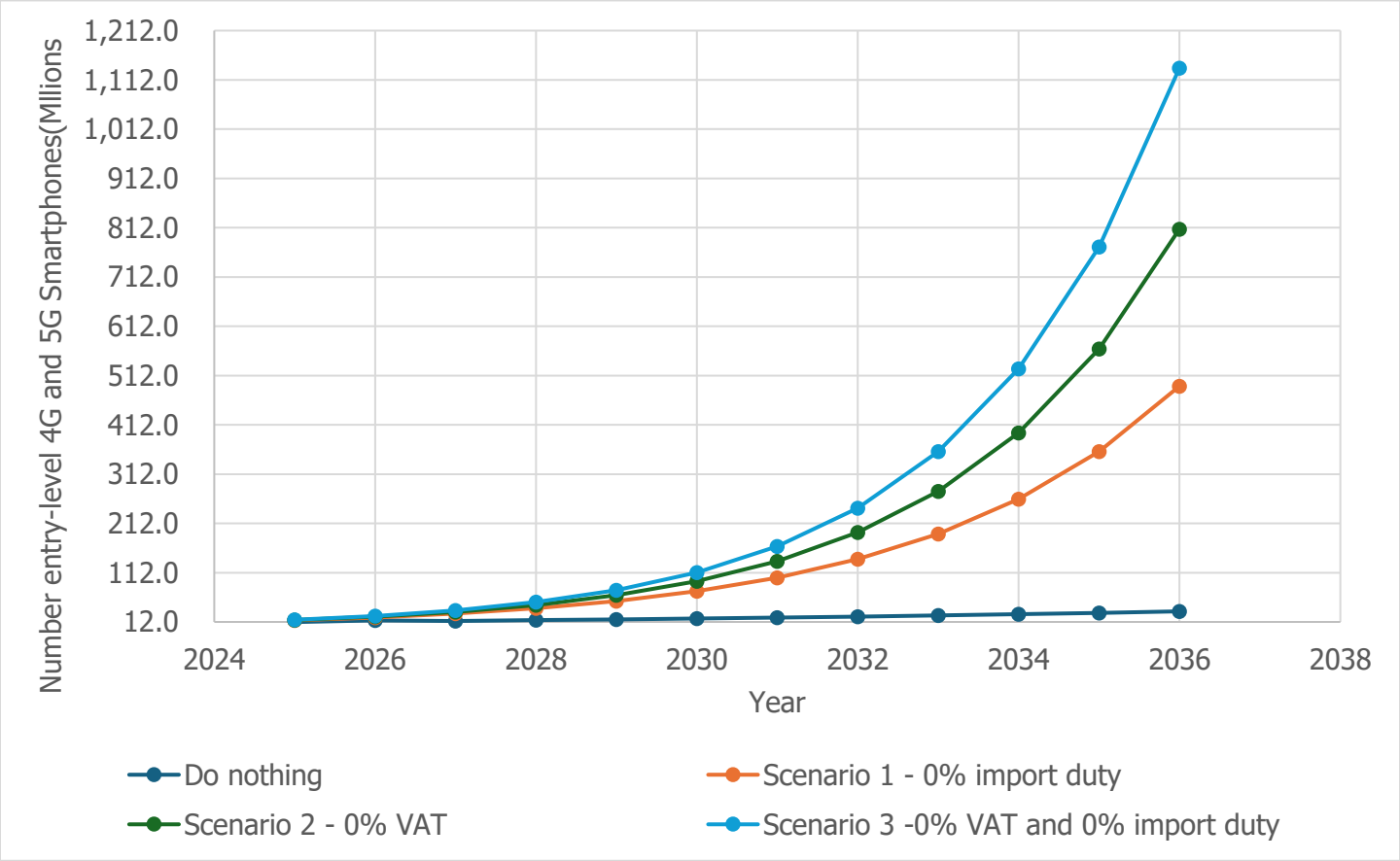

Figure 30: Forecasted Number of Entry-level 4G and 5G enabled Smartphones Adoption

The results in Table 23 show the increase in mobile data usage and the corresponding revenue generations as a result of increase in adoption of entry-level 4G and 5G enabled smartphones under different fiscal policy scenarios.

Table 23: Mobile Data Usage and the Corresponding Revenue Generations

Scenario	Base case (BAU)	Do nothing	Option 1 - 0% Import duty	Option 2 - 0% VAT	Option 3 - 0% VAT and

					0% Import duty
Total Number of Subscribers	11,745,930	12,920,523	15,369,917	15,825,953	16,401,699
Percentage change in new subscribers			31%	35%	40%
Expected Tax Revenue on new Smartphones at Natural Growth Rate=10%		111,040,149,255		386,761,704,185	441,338,931,211
Tax Revenue Foregone on new Smartphones			30,421,958,700	54,759,525,660	85,181,484,360
Average annual GBs per user	57.56	57.56	57.56	57.56	57.56
Average annual Data growth rate (%)		44%	44%	44%	44%
Total Annual Data Usage (GBs)	676,142,774	1,041,259,872	2,060,710,143	2,106,495,335	2,163,726,824
Annual ARPU Growth rate (%)	16%	16%	16%	16%	16%
Annual ARPU(UGX)	126,574	146,826	146,826	146,826	146,826
Annual Movement in Smartphones		1,174,593	3,624,351	4,080,679	4,651,088
Annual Revenues Generated from Data Usage (UGX)	1,347,540,900,720	2,075,212,987,109	4,106,959,815,471	4,198,208,913,509	4,312,270,286,056
Annual Tax Revenue (UGX)- 18%VAT +12% Excise Duty	404,262,270,216	622,563,896,133	1,232,087,944,641	1,259,462,674,053	1,293,681,085,817
Extra Tax Revenue at Natural GR=44% (UGX)- 18% VAT +12% Excise Duty		218,301,625,917			
Extra Tax Revenue Gained from Policy Review (UGX)- 18%VAT +12% Excise Duty			609,524,048,509	636,898,777,920	671,117,189,684
Total Expected Tax Revenue with Policy Reform)- 18%VAT +12% Excise Duty			827,825,674,425	855,200,403,837	889,418,815,601

Note: 1. Expected Annual Tax Revenue is at an average data usage natural growth rate of 44% and price elasticity of data of 0.743

After accounting for natural market growth and applying an own-price elasticity of 0.743, entry-level 4G and 5G enabled smartphones reforms generate between approx. 2.06 Terabytes and 2.16 Terabytes of data traffic within one year, yielding UGX 671.12 billion in incremental tax revenues from Excise Duty and VAT alone.

The fiscal simulations demonstrate that telecommunications taxation reform generates positive net tax revenue outcomes driven by rapid expansion in total subscriber base, data usage, despite initial foregone tax revenues on entry-level 4G and 5G enabled smartphones.

Under the Base Case (Business as Usual), the telecommunications market remains constrained, with limited subscriber growth and modest data consumption. Revenue growth is incremental and largely driven by price increases and natural demand trends rather than scale effects.

The "Do Nothing" scenario increases total subscriber base by 1.17million and delivers only fiscal gains (UGX 218.30 billion), reflecting the structural ceiling imposed by high costs of entry-level 4G and 5G enabled smartphones. This scenario confirms that maintaining the current tax structure does not optimize the sector's revenue-generating potential from mobile data usage.

Option 1 (Exemption of Import Duty) produces a substantial expansion in the subscriber base (31% increase), resulting in a sharp rise in data consumption and tax revenues. Although UGX 30.42 billion in tax revenue is foregone upfront, the increased market scale generates UGX 609.52 billion in additional tax revenues to the Government.

Option 2 (Exemption of VAT) delivers stronger fiscal performance. Total Subscriber base expands by 35%, annual data usage increases significantly to 2.11 Terabytes, and total tax revenues increase to UGX 4.2 trillion. Despite UGX 54.76 billion foregone in taxes, Government realizes UGX 637 billion in additional revenues.

Option 3 (Exemption of both VAT and Import Duty) presents the most fiscally and economically transformative outcome. The total subscriber base expands by 40%, with over 4.65 million new entry-level 4G and 5G enabled smartphones annually, driving the highest data usage of 2.16 Terabytes and tax revenue generation of UGX 4.31 trillion. While this scenario involves the largest upfront tax foregone of UGX 85.18 billion, it yields UGX 671.12 billion in additional tax revenues to the Government.

This confirms that telecommunications taxation reform is revenue-enhancing rather than revenue-eroding when assessed from a dynamic, short-term fiscal perspective. For MoFPED, the simulations provide strong evidence that shifting from high upfront taxation on entry-level 4G and 5G enabled smartphones to a broader data usage-based revenue model aligns with domestic revenue mobilisation objectives, supports digital economy growth, and strengthens the tax base sustainably. Telecommunications tax reform therefore constitutes a fiscally prudent growth strategy, fully aligned with Vision 2040, NDP IV, Digital Uganda Vision, Digital Transformation Roadmap, Tenfold Growth Strategy, Domestic Revenue Mobilization Strategy (DRMS) and Medium-Term Revenue Strategy (MTRS).

Figure 31: *Annual Telecom revenues by fiscal scenario*

Figure 32 illustrates annual revenue projection for different fiscal policy choices on mobile data usage providing clear insights into the revenue-growth trade-offs associated with taxation of entry-level 4G and 5G enabled smartphones.

Policy Position: Simulation results in Table 22 and Table 23 demonstrate that tax revenue gains on data usage as a result of increment in the subscriber base due to increased adoption of entry-level 4G and 5G enabled smartphones significantly outweighs the short-term revenues foregone, hence the need for fiscal reforms. This presents an opportunity for sustainable revenue growth in the long-term as demonstrated in Figure 32.

Note: The model does not account for tax revenues that the government will earn from:

- VAT on airtime.
- Excise duty on airtime.
- PAYE and withholding taxes.
- Corporate Income Tax (CIT); and
- Productivity and digital economy spill overs as espoused under the Digital Transformation Roadmap.

PRIORITY RECOMMENDATIONS ON ENTRY LEVEL 4G & 5G ENABLED SMARTPHONES

PILLAR I: STRENGTHENING REGULATORY, POLICY, LEGAL, AND INSTITUTIONAL FRAMEWORKS

Recommendation: MoFPED should adopt a phased, rules-based telecommunications tax reform framework that reorients taxation of type-approved entry-level 4G and 5G enabled smartphones from upfront access taxes to downstream, usage-based revenue mobilisation.

Policy Actions:

- UCC and URA should fast track the integration of the Central Equipment Identity Register (CEIR) with the URA ASYCUDA system, to close the observed gap in revenue leakage. This will enable real-time IMEI verification at entry points, ensuring only declared, compliant devices activate on networks. It will also improve blocking, tracking, and recovering lost, stolen, or counterfeit devices, strengthening consumer protection.
- MoFPED and UCC in consultation with URA and other relevant industry stakeholders to prepare a draft policy framework outlining the operational, legal, and technical modalities for implementing the CEIR–ASYCUDA integration. This framework should form part of the compliance enhancement measures proposed for FY 2026/27.
- Following the fixing of compliance gaps, immediately exempt import duty on type-approved entry-level 4G and 5G enabled smartphones, followed by conditional VAT zero-rating based on clearly defined performance thresholds.
- Anchor exemptions in legally binding eligibility criteria (FOB price caps, type approval, minimum 4G/5G capability) to prevent revenue leakage.
- Establish a joint MoFPED–URA–UCC monitoring mechanism to review adoption, data usage, and revenue outcomes on a quarterly basis.

Fiscal Rationale: This approach minimizes short-term fiscal risk while ensuring that tax policy dynamically adjusts to market responses, consistent with the Vision 2040, Tenfold Growth, Medium-Term Revenue Strategy (MTRS), and Domestic Revenue Mobilization Strategy (DRMS).

PILLAR II: INCREASING INTERNET CONNECTIVITY AND UPTAKE OF DIGITAL PRODUCTS AND SERVICES

Recommendation: MoFPED should deploy targeted fiscal incentives to reduce the effective price of entry-level 4G and 5G enabled smartphones in order to unlock suppressed demand and accelerate nationwide digital adoption.

Policy Actions:

- Implement duty and VAT exemptions on entry-level smartphones to reduce prices by up to 18%, driving a 40% increase in the entry-level 4G and 5G enabled smartphone subscriber base.
- Prioritise first-time users and feature-phone migrants to maximise elasticity-driven adoption and data consumption.
- Align fiscal incentives with national broadband and digital transformation Roadmap to ensure coherence across sector policies.

Fiscal Rationale:

PILLAR III: IMPROVING EFFICIENCY IN BUSINESS PROCESSES AND PUBLIC SERVICE DELIVERY

Recommendation: MoFPED should leverage telecommunications tax reform as a structural enabler for digitalization of business operations and public service delivery.

Policy Actions:

- Shift the telecom tax mix towards data usage and digital services, reinforcing incentives for online transactions, e-government, e-education platforms, and digital service delivery.
- Integrate telecommunications tax reform outcomes into broader public sector digitalization and efficiency programs.
- Use increased data traffic and subscriber growth as proxies for improved service reach and efficiency.

Fiscal Rationale: By expanding the digital user base, reforms strengthen indirect tax yields, improve compliance, and support productivity gains that enhance broader tax bases, including PAYE, withholding tax, and corporate income tax.

PILLAR IV: REDUCING VULNERABILITY, GENDER INEQUALITY, AND INEQUITY IN TELECOMMUNICATIONS ACCESS

Recommendation: MoFPED should explicitly use fiscal policy to lower digital entry barriers for vulnerable and underserved populations through targeted exemptions on entry-level smartphones.

Policy Actions:

- Apply tax exemptions strictly to low-cost, entry-level 4G and 5G enabled Smartphones disproportionately used by low-income households, women, youth, and MSMEs.
- Coordinate with UCC and MDAs to ensure that affordability gains translate into effective access and use.
- Monitor adoption patterns to ensure reforms deliver equitable outcomes across income groups and regions.

Equity Rationale: High upfront taxation on entry- level 4G and 5G enabled Smartphones disproportionately excludes vulnerable groups from the digital economy. Reducing these taxes directly supports inclusive growth while expanding the long-term tax base.

12.4 Scenario 3: Reducing Cost of Infrastructure Rollout

The simulation looked at how reducing telecom infrastructure costs (CAPEX) can help expand rural network coverage. Three scenarios were considered: a small 5% reduction (conservative), a medium 10% reduction, and a larger 15% reduction (aggressive). The rule used was that 1% reduction in CAPEX leads to a 1.2% increase in the network expansion rate. With current rural coverage already at 75%, even small reductions slightly increase network expansion, allowing more rural areas to gain access to mobile services. The simulation also accounted for subscriber take-up, average data use, and monthly revenue per user.

Results in Table 24 show that even a small CAPEX reduction leads to additional coverage and more subscribers. For example, a 5% reduction could connect nearly 795,000 new rural users over five years. Larger reductions connect more people, but because coverage is already high, gains are gradual. This indicates that reducing CAPEX costs is effective, but the improvements in coverage take time and are modest in percentage terms. Qualitative evidence strongly supports these modelled outcomes, especially regarding the role of infrastructure costs in limiting rural coverage / Islands. National-level stakeholders consistently emphasized that high tower construction costs, power requirements, and right-of-way fees restrict rollout in remote areas. One UCC official noted, *"the cost of putting up a tower in the deep rural areas is very high… operators avoid those places because they cannot recover the money quickly" (KII – UCC, Regulation Directorate, Kampala)*. Similarly, a telecom infrastructure provider highlighted that "if the government reduced some of the infrastructure-related taxes, we would roll out faster in hard-to-reach areas" (KII – Infrastructure Provider, Male, Kampala). These insights affirm that CAPEX-related fiscal adjustments can meaningfully shift operator incentives and accelerate rural deployment.

Financially, the simulation highlights that CAPEX savings are large, but the extra revenue from new subscribers grows more slowly. This means the time to recover the investment is longer in aggressive scenarios, even though more people are connected. Cost per MB of data also decreases slightly as more traffic is served efficiently. Stakeholder perspectives reinforce this

revenue dynamic. Operators explained that rural returns are slower because *"people in those areas use very little data and airtime, so you don't get back the investment quickly"* (KII – Business Operator, Female, Fort Portal). They stressed that reducing CAPEX is essential because *"the demand is there, but the business case is weak unless rollout becomes cheaper"* (KII – Telecom Distributor, Male, Mbale). These perspectives suggest that CAPEX-focused tax incentives could unlock expansion that is currently commercially unattractive. Overall, lowering CAPEX costs can encourage rural network growth and improve affordability, but policymakers should recognize that effects on coverage and revenue take time and are proportional to the size of the cost reduction.

Table 24: Simulation on Investment

Scenario	CAPEX saved / year (USD)	New expansion (%/yr)	Coverage after 5 yrs (%)	Newly covered people	New subscribers (50% take-up)	CAPEX reinvested (USD/yr)	Cost/ MB new (USD)	Cost/ MB reduction (USD)	Time to ROI shortened (yrs)
Conservative — 5% cut	130,000,000	1.06	75.00 %	1,589,999	794,999	130,000,000	**0.019934**	0.000066	**15.14 yrs**
Medium — 10% cut	260,000,000	1.12	80.60 %	1,679,999	839,999	260,000,000	**0.019869**	0.000131	**28.66 yrs**
Aggressive — 15% cut	390,000,000	1.18	80.90 %	1,770,000	885,000	390,000,000	**0.019803**	0.000197	**40.80 yrs**

Policy Recommendations from the CAPEX Reduction Simulation

1. Introduce Targeted CAPEX-Focused Fiscal Incentives for Rural and Hard-to-Reach Areas

Recommendation

Government should introduce targeted tax and fee reductions on telecom infrastructure investments in rural, island, and hard-to-reach areas.

Justification from simulation

Even a modest 5% CAPEX reduction could connect nearly 795,000 additional rural users over five years, demonstrating strong responsiveness of network expansion to cost reductions. The rule-based simulation confirms that each 1% CAPEX reduction increases expansion by 1.2%, making fiscal levers effective even at low levels.

Policy implication

Rather than blanket national tax cuts, geographically targeted CAPEX incentives (e.g., VAT exemptions on towers, power equipment, and backhaul in underserved areas) deliver measurable inclusion gains while limiting fiscal exposure.

2. Prioritise CAPEX Reduction Over OPEX Subsidies in Rural Connectivity Policy

Recommendation

Policy emphasis should shift from recurrent operational subsidies to one-off or time-bound CAPEX cost reductions.

Justification from simulation and KIIs

The simulation shows that CAPEX savings are large and immediate, while revenue recovery is slower due to low rural usage. Stakeholders consistently indicated that high upfront costs—not operating expenses—are the main barrier to rural rollout.

Policy implication

Reducing tower construction costs, right-of-way fees, and power infrastructure expenses directly improves the rural business case, even where demand and ARPU remain low.

3. Adopt a Graduated Incentive Framework Linked to Coverage Saturation Levels

Recommendation

Design a graduated CAPEX incentive framework, where higher incentives are applied in areas with lower initial coverage or higher deployment costs.

Justification from simulation

With rural coverage already at 75%, incremental gains are necessarily gradual in percentage terms, even under aggressive CAPEX reductions. Larger reductions connect more people, but at diminishing marginal returns.

Policy implication

Aggressive CAPEX incentives should be selectively deployed in islands, mountainous regions, and sparsely populated districts, where the marginal impact per shilling of incentive is highest.

4. Complement CAPEX Incentives with Infrastructure Sharing and Open-Access Policies

Recommendation

CAPEX reduction policies should be paired with mandatory or incentivised infrastructure sharing, including towers, power systems, and backhaul.

Justification from findings

While CAPEX reductions encourage rollout, the simulation indicates that revenue growth lags behind investment, particularly under aggressive expansion scenarios. Sharing infrastructure lowers duplication and shortens payback periods.

Policy implication

UCC should strengthen regulatory frameworks for active and passive infrastructure sharing, especially in rural deployments benefiting from fiscal incentives.

5. Align CAPEX Incentives with Long-Term Universal Access Objectives Rather Than Short-Term Revenue Targets

Recommendation

Policymakers should treat CAPEX-related tax incentives as strategic public investments in inclusion, not short-term revenue-neutral measures.

Justification from simulation

Aggressive CAPEX reductions yield greater coverage and lower cost per MB, but investment recovery is slower due to low rural usage levels. Stakeholders confirmed that rural returns are inherently long-term.

Policy implication

Evaluation of these incentives should prioritise coverage expansion, affordability, and social returns, rather than immediate fiscal recovery.

6. Institutionalise CAPEX Incentives Through Predictable, Multi-Year Policy Instruments

Recommendation

CAPEX-focused incentives should be embedded in multi-year policy instruments (e.g., investment allowances, accelerated depreciation, or rural infrastructure tax credits).

Justification from stakeholder evidence

Operators and infrastructure providers stressed that rollout decisions depend on predictability, not one-off concessions. Temporary or discretionary incentives weaken investor response.

Policy implication

Embedding CAPEX incentives in medium-term fiscal frameworks enhances investor confidence and accelerates rollout planning.

Policy Conclusion

The simulation and qualitative evidence jointly demonstrate that reducing telecom CAPEX costs is a powerful but gradual lever for expanding rural connectivity in Uganda. While coverage gains are incremental due to already high rural penetration, even modest CAPEX reductions unlock significant numbers of new users and improve affordability. To maximise impact, CAPEX-focused fiscal incentives should be targeted, predictable, geographically differentiated, and complemented by infrastructure sharing policies, with success measured in long-term inclusion outcomes rather than short-term revenue performance.

Table 25: Policy Matrix: CAPEX Reduction for Rural Telecom Expansion

	Policy Recommendation	Policy Action	NDP IV Alignment	Tenfold Growth Strategy Alignment	Lead MDA	Supporting MDAs / Institutions
1.	**Introduce targeted CAPEX-focused fiscal incentives for rural and hard-to-reach areas**	Introduce VAT, excise, and import duty exemptions on telecom infrastructure (towers, power systems, backhaul equipment) deployed in rural, island, and hard-to-reach areas	*Digital Transformation*; Objective on expanding inclusive digital infrastructure and reducing spatial inequalities	Pillar on *Lowering the Cost of Doing Business* and *Expanding Productive Infrastructure* to unlock private investment	MoFPED	URA, UCC, MoICT&N, Local Governments
2.	**Prioritise CAPEX reduction over OPEX subsidies in rural connectivity policy**	Reorient fiscal incentives away from recurrent subsidies toward upfront investment incentives such as accelerated depreciation and investment allowances for rural telecom infrastructure	NDP IV Strategic Intervention on improving efficiency of public support and leveraging private sector-led growth	Focus on *High-Impact, Cost-Effective Interventions* that crowd-in private capital	MoFPED	URA, UCC, MoICT&NG
3.	**Adopt a graduated incentive framework linked to coverage saturation levels**	Design differentiated incentive rates based on remoteness, population density, and current coverage levels, with higher incentives for islands and sparsely populated districts	NDP IV Objective on *Equitable Regional Development* and targeting lagging regions	Strategy principle of *Targeted Growth Acceleration* rather than uniform policy application	MoFPED	UCC, UBOS, Ministry of Local Government
4.	**Complement CAPEX incentives with infrastructure sharing and**	Strengthen regulatory requirements and incentives for active and passive infrastructure	NDP IV Programme on *Institutional Strengthening and*	Growth enabler on *Reducing Duplication and Improving*	Uganda Communications Commission (UCC)	MoICT&NG, MoFPED, Telecom Operators, Infrastructure Providers

	Policy Recommendation	Policy Action	NDP IV Alignment	Tenfold Growth Strategy Alignment	Lead MDA	Supporting MDAs / Institutions
	open-access policies	sharing in rural areas benefiting from fiscal incentives	*Regulation* to improve service delivery efficiency	*Capital Productivity*		
5.	**Align CAPEX incentives with long-term universal access objectives rather than short-term revenue targets**	Integrate CAPEX incentives into Universal Service and Access Fund (USAF) objectives and performance monitoring frameworks	NDP IV Objective on *Universal Access to Quality Services* and digital inclusion	Long-term growth vision focusing on *Human Capital, Market Expansion, and Inclusion*	UCC	MoFPED, MoICT&NG, NPA
6.	**Institutionalise CAPEX incentives through predictable, multi-year fiscal policy instruments**	Embed CAPEX-related incentives in the Medium-Term Revenue Strategy (MTRS) and Medium-Term Expenditure Framework (MTEF)	NDP IV Emphasis on *Policy Predictability, Planning Certainty, and Investor Confidence*	Tenfold Strategy principle on *Stable and Credible Policy Environment* to attract long-term investment	MoFPED	URA, NPA, UCC

This matrix in Table 25 demonstrates that CAPEX-focused fiscal incentives are fully consistent with Uganda's national development and growth ambitions. Under NDP IV, the proposed actions directly advance digital inclusion, regional equity, and private sector-led infrastructure expansion. Under the Tenfold Growth Strategy, they operationalise core principles of lowering investment costs, improving capital efficiency, and unlocking growth in underserved markets. The clear assignment of lead and supporting MDAs strengthens accountability and facilitates integration into the national policy and budget framework.

12.5 Scenario 4: Combined Incentive Package

Table 26 show the integrated simulation that combines Capital investment (CAPEX) reductions, data tax cuts, and licensing fee reductions can significantly accelerate Uganda's telecom sector growth. Rural coverage improves from 75% to over 80% in five years, connecting hundreds of thousands of new subscribers. Lower data prices stimulate higher usage, increasing consumer surplus while ensuring that operators maintain strong revenue growth. CAPEX savings and reduced licensing fees attract new investments and allow operators to reinvest in underserved regions, driving further network expansion.

This was strongly echoed by operators, with one noting that *"when taxes and fees reduce, we are able to push deeper into rural areas because the cost becomes manageable"* (KII – Telecom Infrastructure Provider, Kampala).

Table 26: Combined Incentive Package

1. Scenario	Coverage (%)	New Rural Subscribers (M)	Annual Revenue (USD Bn)	Consumer Surplus Increase (USD Million)	CAPEX Reinvestment (Million USD/yr)	Cost per GB (UGX)	Penetration /Coverage Trajectory (%)	New Investments Attracted (USD M)	GDP Contribution (%)
Baseline	75	6.00	159.78	0.00	0	1.39	10	0	0.5
Combined: Conservative	83	6.50	170.39	3.00	10	1.13	15	10	0.7
Combined: Medium	90	9.00	173.58	4.5	15	1.06	20	15	0.85
Combined: Aggressive	95	12.50	180.00	6.00	20	0.99	25	20	1

The combined base scenario (BUA) shows that coverage is limited, rural adoption is moderate, and the telecom sector contributes only modestly to GDP. No additional reinvestments or new investments are realized, and consumer benefits remain stagnant.

A conservative policy or investment strategy moderately increases coverage, slightly boosts rural subscribers, and reduces the cost of data per GB. Consumer benefits improve, CAPEX reinvestment supports network expansion, and additional private investment is attracted. GDP contribution rises modestly, indicating positive but incremental economic impact.

A medium-level intervention significantly expands rural coverage and subscriber numbers. The reduction in data costs increases consumer surplus, enhancing affordability. Reinvested CAPEX accelerates network growth, and the scenario attracts more private investments. GDP contribution shows meaningful economic stimulation from digital inclusion.

Aggressive interventions dramatically expand rural coverage and subscriber base, making telecom services more accessible and affordable. Reduced data costs significantly improve consumer welfare. CAPEX reinvestment fuels further network development, while new investments flow into the sector, demonstrating strong confidence. This aligns with consumer voices from across regions, such as a respondent in Tororo who stated that *"if data reduces, more people will be online every day—for school, business, everything"* (FGD – Consumers,

Female, Tororo). GDP impact rises to 1%, indicating that telecom expansion can meaningfully contribute to overall economic growth (See Figure 32).

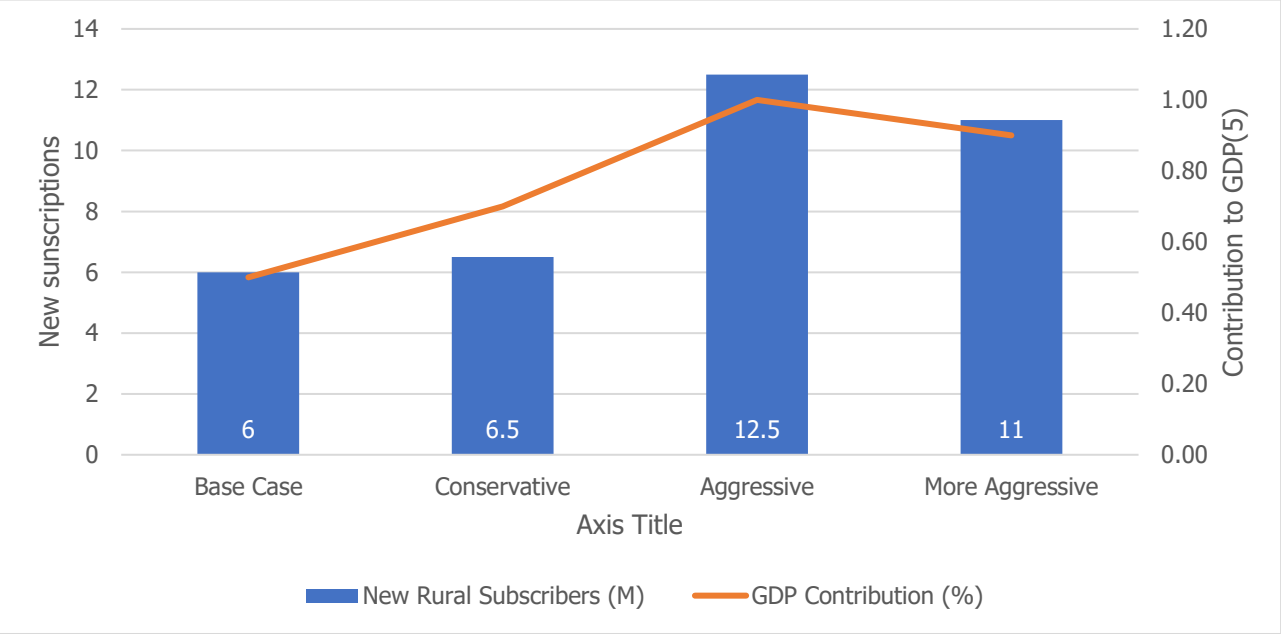

Figure 32: New rural subscribers Vs GDP contribution

13 CONCLUSION AND POLICY RECOMMENDATIONS

13.1 CONCLUSIONS

Uganda's telecommunications sector remains a critical driver of economic transformation, contributing 3.7% to GDP and supporting digital services across education, commerce, health, governance, and financial inclusion. However, the study reveals that the sector carries one of the heaviest cumulative tax burdens in East Africa, with levies applied at multiple points along the value chain on devices, data, voice, mobile money, infrastructure, and licensing. While these taxes help address fiscal pressures and generate substantial government revenue, they also produce unintended effects that constrain affordability, suppress usage, and slow the pace of digital inclusion.

The combined econometric and simulation evidence demonstrates that Uganda's telecommunications tax policy is a decisive driver of long-term sector performance, fiscal sustainability, and digital inclusion. Tax-induced price changes have persistent and compounding effects on revenue, investment, and usage, confirming that telecom taxation is a strategic development policy lever, not merely a short-term revenue instrument. The current high-tax, business-as-usual regime has reached its economic limits-maintaining short-run fiscal stability but constraining affordability, market expansion, and alignment with NDP IV and the Tenfold Growth Strategy.

Across all reform scenarios, the results consistently show that lower and better-designed telecom taxes expand usage, subscriptions, and ultimately government revenues. While operators may initially absorb or pass on higher taxes without immediate revenue losses, such gains are limited and risk suppressing digital participation over time, particularly among low-income and rural users. In contrast, moderate and well-calibrated reductions in VAT and excise duty emerge as low-risk, fiscally credible reforms that widen the tax base and effectively pay for themselves. More ambitious reforms especially targeted VAT removal on mobile data deliver the strongest gains in digital inclusion, private investment, and medium-term revenue, albeit requiring careful short-term fiscal coordination.

The evidence further confirms that Uganda's telecom market has irreversibly transitioned from voice to data, with smartphone penetration now the most important driver of revenue growth. Tax policies that increase the cost of smartphones or data are therefore fiscally counterproductive, whereas affordability-enhancing measures unlock higher data usage, digital services uptake, and monetizable economic activity across the wider economy.

Scenario analysis reinforces that the scale of intervention matters. Business-as-usual outcomes are characterised by limited coverage expansion, modest rural adoption, weak investment response, and marginal GDP contribution. By contrast, progressively stronger reforms generate non-linear gains: moderate interventions yield incremental improvements, while medium to aggressive reforms trigger substantial rural connectivity expansion, higher consumer surplus, accelerated network rollout through CAPEX reinvestment, and rising investor confidence. At the upper end, telecom expansion raises GDP contribution to about 1%, demonstrating the sector's potential to become a meaningful engine of national economic growth when affordability enables widespread digital participation in education, business, and service delivery.

For government, the policy conclusion is clear: sustainable fiscal and development outcomes in the telecommunications sector will not be achieved through higher sector-specific taxes, but through simpler, lower, and growth-oriented taxation that prioritises affordability, scale, and usage expansion. A phased reform pathway beginning with moderate tax reductions and progressing toward targeted VAT reforms offers an evidence-based approach to strengthening digital inclusion, crowding in private investment, and delivering higher, more durable revenues in support of Uganda's digital transformation and long-term development objectives.

The evidence from this study underscores a central fiscal reality: Uganda will not achieve sustainable domestic revenue mobilisation, universal connectivity, or full digital transformation under a high and fragmented telecommunications tax regime. Current tax structures-particularly on entry-level 4G and 5G enabled smartphones-constrain device affordability, suppress broadband uptake, and ultimately limit the expansion of the digital tax base.

Experiences from Kenya and South Africa demonstrate that targeted tax exemptions or reductions on entry-level 4G and 5G smartphones are best understood as strategic fiscal investments rather than permanent revenue sacrifices. While governments in these cases experienced short-term reductions in VAT, import duty, or excise collections at the point of importation or sale, these temporary foregone revenues were offset over time through expanded mobile data consumption, accelerated growth in mobile financial services, improved business digitisation, and broader formalisation of economic activity. The result was a wider, more dynamic, and more sustainable tax base.

In line with MoFPED's reform agenda, rationalising taxes on 4G and 5G entry-level smartphones should therefore, be framed as a revenue-enhancing structural reform, one that shifts taxation from narrow, distortionary upfront device taxes towards broader, efficiency-driven digital economic activity. By lowering entry barriers to broadband access, Uganda can stimulate demand, increase taxable digital transactions, expand corporate and consumption tax bases, and strengthen long-term fiscal resilience.

Accordingly, telecommunications tax reform directly advances the objectives of the Digital Transformation Roadmap by anchoring ICT investments, digital skills development, e-government services, and private sector innovation on an affordable and inclusive connectivity foundation. A coherent, growth-oriented telecom tax policy is not a concession, it is a prerequisite for sustained revenue expansion, competitiveness, and inclusive economic transformation.

To support the achievement of NDP IV and the Digital Uganda Vision, Uganda could adopt selected best practices from South Korea by rationalising telecom-specific taxation. In particular, reducing or phasing out excise duty on telecom services and relying on a single, moderate VAT rate would lower consumer prices and stimulate demand for digital services. Adopting tax neutrality across digital, telecom, and other services would improve market efficiency and compliance, while a more investment-friendly corporate tax approach could accelerate broadband and last-mile infrastructure rollout. Over the medium term, these reforms are likely to expand the tax base, increase data usage and digital adoption, and generate higher and more sustainable fiscal revenues, consistent with Uganda's tenfold growth ambition under NDP IV (GSMA, 2020; OECD, 2022).

13.2 POLICY RECOMMENDATIONS

The proposed recommendations are informed by the study's empirical findings on affordability constraints, investment barriers, and structural inefficiencies in the telecommunications sector. They are aligned with Uganda Vision 2024 and NDP IV programmes, particularly the Digital Transformation, and Human Capital Development programmes and Private Sector Development, to ensure that proposed tax reforms effectively advance Uganda's long-term vision and the national development agenda. Furthermore, the recommendations are aligned with the 10-Fold Growth Strategy priority interventions for knowledge economy aimed at last-mile connectivity to homes and public service facilities to spur demand for digital goods and services.

Ultimately, these recommendations aim to achieve a balanced taxation framework that meets short-term revenue needs, while supporting long-term sector growth and investment, as well as efficient business operations. They also embed social inclusion, prioritising affordability and access through equitable, gender-responsive fiscal policies that drive inclusive growth and a broader sustainable tax base, consistent with NDP IV objectives.

The recommendations are organized under key thematic areas aligned with NDP IV objectives and categorized into short, medium, and long-term actions, with designated lead entities responsible for implementation.

I. Strengthen regulatory, policy, legal and institutional frameworks.

No.	Recommendations	NDP IV Alignment (Programmes)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	**Deploy targeted fiscal incentives** to reduce the effective price of entry-level 4G and 5G enabled smartphones in order to unlock suppressed demand and accelerate nationwide digital adoption.	Digital Transformation; Governance & Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
2	**Develop and operationalise Telecoms Tax Harmonisation Guidelines** to standardise the interpretation and administration of all telecom-related taxes and fees, and to rationalise the telecom tax mix by eliminating overlaps between VAT, excise duty, parafiscal charges, and device-related taxes, thereby reducing the cumulative tax burden on end-users and improving affordability.	Digital Transformation; Governance & Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
3	**Adopt a phased, rules-based telecommunications tax reform framework** that reorients taxation of type-approved entry-level 4G and 5G enabled smartphones from upfront access taxes to downstream, usage-based revenue mobilisation.	Digital Transformation; Governance & Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
4	**Introduce graduated and targeted UCC parafiscal fees and spectrum charges**, applying differentiated rates, discounts, or phased payment schedules to incentivise network rollout in rural and low-income areas and support new market entrants, thereby expanding coverage, and enhancing digital inclusion.	Digital Transformation; Private Sector Development	UCC	MoFPED, MoICT&NG, Operators
5	**Establish Joint Telecoms Fiscal Coordination Committee** comprised of MoFPED, UCC, URA, NPA and Industry Expert representative to review and approve proposed telecom tax or fee changes before implementation.	Digital Transformation; Governance & Accountability	UCC	MoFPED, URA, MoICT&NG, NPA, Industry Experts
6	**Adopt mandatory use of fiscal scenario simulations** (baseline, conservative, aggressive, and combined incentive packages) as part of the approval process for all proposed telecom tax reforms to ensure evidence-based decision-making.	Digital Transformation; Governance & Accountability	MoFPED	UCC, URA, MoICT&NG, NPA
Timeframe: Medium Term (1-3 years)				

No.	Recommendations	NDP IV Alignment (Programmes)	Lead Entity	Supporting Institutions
7	**Establish a predictable, multi-year telecommunications taxation framework aligned to MTEF and NDP IV**, that limit ad-hoc tax changes and stabilises telecom-related taxes over a defined planning horizon, reducing policy uncertainty and enabling long-term network investment and infrastructure planning.	Digital Transformation; Human Capital Development	MoFPED	Parliament, URA, UCC, MoICT&NG
8	**Establish a supportive fiscal and licensing framework** that lowers entry and operational barriers for ISPs, through phased and affordable licensing fees, targeted tax incentives and streamlined tax administration to enable wider service provision and inclusive digital access.	Digital Transformation; Human Capital Development; Private Sector Development	UCC	MoICT&NG, MoFPED
Timeframe: Long Term (3-5 years)				
9	**Integrate digital transformation objectives into all telecom tax related decisions**, ensuring affordability, device access, and connectivity expansion are explicitly assessed before tax changes and fee measures are approved. *Investment impact assessments for telecom taxation should to ensure that long-term fiscal decisions support affordability, universal access, and growth of the digital ecosystem.*	Digital Transformation; Human Capital Development;	MoFPED	UCC, URA, MoICT&NG, Parliament. NPA
10	**Design and implement fiscal reforms that support the growth of digital ecosystem**, ensuring that taxation of telecom support innovation, service expansion, affordability and adoption across services such as fintech, e-commerce, digital payments, online education, and health technology rather than constraining growth through excessive or fragmented levies.	Digital Transformation; Human Capital Development;	MoFPED	MoICT&NG, UCC, URA

II. Increase internet connectivity and uptake of digital products and services across the country.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
1	**Reduce excise duty on data and airtime** (e.g., from 12% to 5%) to improve affordability and stimulate usage. Lowering data costs will encourage the adoption and usage of new technologies such as; Artificial Intelligence (AI) to enhance operational efficiency as well as widening the tax base. Do not pursue excise-duty-only reforms in isolation; instead, combine any excise adjustments with VAT reforms for maximum effectiveness.	Digital Transformation; Private Sector Development;	MoFPED	URA, Parliament, UCC
2	**Reduce VAT on mobile data (e.g., from 18% to 14%)** in the short term as an initial reform package / option shown by simulations to increase data usage and total revenue through consumption-led growth.	Digital Transformation; Private Sector Development	MoFPED	URA, Parliament
3	**Introduce targeted tax incentives on digital devices and services** (e.g., reduced VAT on devices, lower excise on data bundles under 1 GB) to lower device costs and accelerate smartphone adoption and data use.	Digital Transformation; Private Sector Development;	MoFPED	URA, UCC
4	**Remove or reduce excise and VAT on entry-level smartphones** as simulations show strong gains in adoption, usage, and long-term revenue expansion.	Digital Transformation; Private Sector Development	MoFPED	URA, UCC
5	**Prioritise VAT Reform over Excise Duty Reform for Maximum Impact,** by targeting VAT on mobile data as the primary instrument for deeper reform, including partial or full VAT removal, rather than focusing solely on excise duty adjustments.	Digital Transformation Programme – Affordable access to digital services; Private Sector Development	MoFPED	URA, UCC
6	**Classify internet data as an essential service rather than a luxury good**, in line with global best practices, recognising its critical role in enabling innovation, education, digital inclusion, and economic enhancement.	Digital Transformation; Governance and Accountability	MoFPED	UCC, MoICT&NG
Timeframe: Medium Term (1-3 years)				
7	**Implement tax policies that prioritise the affordability of data and digital devices as essential public goods,** supporting e-education, e-healthcare, e-commerce, e-agriculture, and e-civic participation, while	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	ensuring equitable access for all population groups.			
8	**Phase in VAT removal on mobile data as a medium-term growth-enhancing reform,** subject to fiscal transition planning and monitoring. Sequence reforms by starting with conservative reductions, followed by targeted VAT reform, while continuously monitoring usage, revenues, and inclusion indicators.	Digital Transformation – Universal and affordable connectivity; Private Sector Development	MoFPED	URA, UCC, MoICT&NG, NPA
9	**Promote consumption-led revenue growth by keeping data prices affordable**, enabling expansion of the subscriber base and increased usage, and boosting tax revenues over the medium term.	Digital Transformation; Private Sector Development	MoFPED	URA, UCC
Timeframe: Long Term (3-5 years)				
10	**Offer long-term and sustained tax incentives**, including accelerated depreciation, and performance-linked rebates to operators expanding coverage for rural and underserved areas	Digital Transformation; Private Sector Development	MoFPED	UCC, MoICT&NG, Operators
11	**Promote digital inclusion through targeted tax reliefs and subsidies for devices and network expansion.** Targeted tax relief on devices would gradually increase smartphone penetration, enabling higher data usage and broader participation in digital services.	Digital Transformation; Private Sector Development	MoFPED	UCC, URA, MoICT&NG, NITA-U

III. Improve efficiency in business processes and public service delivery.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	Leverage telecommunications tax reform as a structural enabler for digitalization of business operations and public service delivery.	Digital Transformation; Human Capital Development	MoFPED	MoFPED, UCC, MoICT&NG
2	**Streamline tax procedures and reporting for SMEs, mobile money agents, and small handset retailers** to reduce compliance burdens, improve formalisation and reliability, and enhance efficiency.	Digital Transformation; Human Capital Development	URA	MoFPED, MoICT&NG, UCC, Bank of Uganda, Parliament
3	**Reform the mobile-money tax design** and introduce simplified revenue or profit-based charge on mobile money providers, while introducing exemptions or minimum	Digital Transformation; Human Capital Development	MoFPED	MoFPED, MoICT&NG, UCC, Bank of

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	thresholds for low-value transactions to reduce compliance burdens, protect inclusion, and improve the efficiency of mobile money business and public service delivery, hence enhancing the formal sector.			Uganda, Parliament
4	**Enhance taxpayer education** through regular publication and wider dissemination of clear and user-friendly guidance notes, digital tax calculators, and targeted awareness campaigns on PAYE, VAT, Excise and WHT obligations to enhance compliance and improve efficiency in service delivery	Digital Transformation; Human Capital Development	URA	MoFPED, UCC
Timeframe: Medium Term (1-3 years)				
5	**Strengthen inter-agency coordination on telecom taxation**, through operationalisation of the established inter-agency coordination committee (MoFPED, MoICT&NG, URA and UCC) to ensure consistent tax application, expedited approvals and strong monitoring to meet service-delivery timelines.	Digital Transformation; Human Capital Development; Public Sector Transformation		
6	**Enhance digitalization and integrate URA and UCC systems** for filing, assessments, audits, and licensing to eliminate duplicate reporting, reduce compliance costs and disputes, and accelerate approvals, thereby improving efficiency in telecom business processes.	Digital Transformation; Human Capital Development; Public Sector Transformation	URA	UCC, NITA-U, MoFPED
7	**Use evidence-based modelling tools** (elasticity analysis, demand forecasting, fiscal scenario modelling) to guide annual telecom tax and regulatory decisions, enabling more efficient policy design, predictable investment planning, and improved delivery of digital public services.	Digital Transformation; Human Capital Development;	MoFPED	URA, UCC, MoICT&NG
8	**Institutionalise Telecom Tax Reforms within the Medium-Term Revenue Strategy (MTRS),** embed telecom tax reforms and fiscal scenario simulations (baseline, conservative, aggressive, combined) into the MTRS and Budget Framework Paper to ensure predictability and credibility.	Digital Transformation; Human Capital Development	MoFPED	URA, UCC

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Long Term (3-5 years)				
9	**Adopt a balanced taxation framework** that meets short-term revenue needs, while supporting long-term sector growth and investment, as well as efficient business operations.	Digital Transformation; Human Capital Development; Private Sector Development	MoFPED	URA, UCC
10	**Integrate telecom taxation with e-government,** by aligning telecom tax policy with national digital platforms to streamline processes, reduce service delivery costs, and enhance the efficiency and reliability of public services.	Digital Transformation; Public Sector Transformation		
11	**Implement sector-wide performance monitoring** to measure the impact of tax reforms on service quality, coverage, affordability, and economic output, enabling data-driven policy decisions that improve business efficiency and public service delivery.	Digital Transformation; Human Capital Development;	UCC	MoFPED, URA, MoICT&NG

IV. Reduce vulnerability, gender inequality and inequity in the telecommunications services.

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
Timeframe: Short Term (0-12 months)				
1	Explicitly use fiscal policy to lower digital entry barriers for vulnerable and underserved populations through targeted exemptions on entry-level smartphones.	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
2	**Design and implement targeted tax relief schemes for the marginalised underserved groups** (youth, students, women, older persons, PWDs) such as zero-rating educational platforms and assistive devices or providing subsidised low-cost data packages.	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament
Timeframe: Medium Term (1-3 years)				
3	**Reduce CAPEX-related costs** through lower import duties on network equipment, providing tax credits and rebates for rural infrastructure investments to expand	Digital Transformation; Governance and Accountability	MoFPED	URA, UCC, MoICT&NG, Parliament

No.	Recommendations	NDP IV Alignment (Programme)	Lead Entity	Supporting Institutions
	affordable connectivity and reduce vulnerability and geographical inequities in telecommunications services.			
4	**Enhance digital literacy and awareness support,** through targeted digital and financial literacy programs for women, youth, PWDs, orders persons, and rural communities. Explicitly recognise telecom tax policy as a lever for digital inclusion, education, innovation, and productivity growth—not solely as a revenue instrument.	Digital Transformation; Human Capital Development	UCC	MoICT&NG, MoGLSD, MoLG
5	**Expand tax incentives for innovations that promote social inclusion,** such as R&D tax credits, for telecom operators, digital service providers, and fintech innovators that develop inclusive solutions to reduce vulnerability, gender inequality, and inequitable access to telecommunications services	Digital Transformation; Human Capital Development; Private Sector Development	MoFPED	URA, MoICT&NG, UCC
Timeframe: Long Term (3-5 years)				
6	**Ring-fence telecom revenues for digital inclusion** by allocating a portion of sector revenues to support inclusion programs, such as rural connectivity, digital and financial literacy, affordable devices, and gender equality initiatives to ensure equitable access to digital services.	Digital Transformation; Governance and Accountability	MoFPED	UCC, URA, MoICT&NG, Parliament
7	**Undertake annual sector-wide performance monitoring** to assess cumulative tax burden and ensure it does not compromise affordability or increase vulnerability, thereby safeguarding Uganda's universal access to ICT services.	Digital Transformation; Human Capital Development	MoFPED	URA, UCC, MoICT&NG
8	**Implement a universal access strategy,** adopting risk mitigation, targeted subsidies and incentives, and demand creation to enhance telecom investments in rural and hard-to-reach areas to promote equitable access.	Digital Transformation; Human Capital Development	UCC	MoICT&NG, MoFPED, Operators

Recommendations to promote the use of mobile money services as part of Uganda's transition to a cashless economy

Introduce a Targeted Tax Incentive & Digital Ecosystem Support Framework to Expand Mobile Money Usage

4. **Implement Tiered Transaction Tax Incentives:** Reform mobile money taxation to reduce the cost burden on low- and medium-value transactions. This can involve applying **Zero tax/no withdrawal charges** on transactions below a defined threshold (e.g., UGX 5,000–1000,000). This threshold has been informed by the current amount that the government is providing to individuals under the PDM. Under this arrangement, MoFPED can send the money directly to verified beneficiaries on their mobile phones without involving the parish committee staff who have been accused of corruption practices. The Ministry can then introduce **gradual tax increase** on higher transaction bands to balance revenue needs just as is the case with PAYE.

The justification is that lower costs encourage uptake among low-income users who transact small amounts daily, removing a key barrier to adoption and also promoting financial inclusion. The expected outcome is that more users transacting digitally, particularly lower-income and rural populations thereby expanding the tax base.

5. **Subsidize Merchant Mobile Money Fees:** Introduce **merchant fee rebates or tax credits** for businesses that adopt mobile money payments. This requires the Government offsetting a portion of the mobile money merchant fee (e.g., 25–50% rebate) prioritizing adoption in key sectors of the economy such as retail, agriculture, transport, and utilities. This reduces the cost of accepting digital payments, incentivizing businesses to shift from cash and accelerating ecosystem growth.
6. **Support Agent Network Expansion & Liquidity:** Ensure strong agent presence and float availability across underserved areas by providing **tax breaks or micro-grants** to agents in low-density districts and encouraging local banks/telecoms to adopt shared agent models. This is because Agents are critical touchpoints for cash-in/out and trust building; strong networks reduce barriers to mobile money use.

Alignment with Telecommunications Tax Policy Reform

This recommendation **balances revenue objectives with financial inclusion** by:

- Reducing tax barriers that inhibit usage (especially for small/value transactions).
- Leveraging targeted incentives rather than blanket taxation.
- Aligning sector incentives (telecoms, financial services, government payments) toward a unified digital payments agenda.

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ANNEXES

ANNEX I: DATA COLLECTION TOOLS

Tool 1: Key Informant Interview Guide-Macro and Meso Level

Introduction: We are here today as part of a team from ECASA Group of Consultants Ltd (ECASA) on behalf of the Uganda Communications Commission which seeks to *"Undertake a Study on the Impact of the Current Telecommunications Sector Taxation Policy on the Communications Sector in Uganda".* The purpose of our visit is to collect data to help inform policy recommendations to optimize the telecommunications sector's contribution to Uganda's economic development by considering adjustments to taxation policies that promote growth, spur uptake and penetration of telecom services, promote investment, and equitable access while ensuring fair revenue collection. We hope that you will give us a few minutes of your time since your views are very important. This information will help to inform an in-depth analysis of the fiscal regime, including the impact of general and sector-specific taxes across the telecom value chain, compliance challenges, and the influence of taxation on consumer behaviour, investment, and market dynamics. The study will also incorporate comparative insights from other East African countries and simulate fiscal scenarios to guide evidence-based policy recommendations for sector growth and affordability. We assure you that whatever information you provide will be kept strictly confidential and will not be used for any other purpose other than for this study.

May we proceed with the discussion / interview? ☐ Yes ☐ No

Expected Duration: 30 – 45 Minutes

Target Respondents:

1. Government MDAs (MoFPED, URA, UCC,)
2. Telecom Operators & Internet Service Providers (ISPs) (Senior Managers, CFOs, Regulatory Affairs Managers, Tax Analysts)
3. ICT Sector Investors/Consultants
4. Consumers Representative Associations
5. Civil Society and Digital Inclusion Advocates

Section A: Background Information

S.N.	Item	Response
1.	Name of Institution/Company	
2.	Respondent's Name & Title (optional)	
3.	Date of Interview	
4.	Category of Stakeholder	1) Government MDA 2) Telecom Operator 3) Consumer Advocate 4) Investor/Consultant-Demand 5) Investor/Consultant-Supply 6) Consumer Representative

Uganda's Telecom Tax Structure

5. Can you describe the current tax structure applicable to the telecom sector in Uganda?
6. How do you assess the clarity, efficiency, and equity of these taxes?

Sector Performance & Economic Impact

7. How has the current taxation policy influenced the overall growth and competitiveness of the telecommunications sector? *Probe for economic contributions (e.g., employment, GDP, digital and financial inclusion) that is directly linked to the performance of the telecom sector under the current tax regime?*
8. In terms of the current contribution of the telecommunications sector to Uganda's GDP, employment, and digital economy growth, how is it fairing?
9. How has the sector's growth trajectory evolved in response to recent taxation changes?
10. Which segments of the telecom value chain (infrastructure, services, devices) would show the highest growth potential if tax policies are optimized?

Impact of Current Taxation Structure

11. How do current telecom-specific taxes impact affordability and access for consumers? *Probe impact on low-income and rural populations.*
12. How are telecommunications companies adapting their pricing, services, or operations in response to the existing tax regime?
13. How would you rate telecoms fiscal contribution to total government revenue, and are these taxes disproportionately higher compared to other sectors with similar economic contributions?

Investment & Infrastructure Expansion

14. What impact has the current tax policy had on investment, innovation, and expansion within the telecommunications sector?
15. How do fiscal obligations and tax-related barriers affect telecom companies' investment decisions in network rollout-particularly in underserved areas?
16. Could targeted tax reductions stimulate greater capital expenditure in rural connectivity?

Demand-Side Considerations

17. How have changes in telecommunications taxes influenced your usage or consumption of telecom services?
18. What factors most affect your decision to subscribe to or continue using specific telecom services?
19. In what ways has the affordability of telecom services changed for you or your household in recent years?
20. What is the estimated price elasticity of demand for telecom services in Uganda, and how do tax-related price changes influence consumer behaviour, service uptake, and traffic volume-both locally and in peer countries where tax reductions have driven increased service penetration and usage?

Comparative Regional Lessons

21. How does Uganda's telecom tax policy compare with those of other East African countries and others-such as Kenya, Rwanda, Tanzania, Burundi, South Sudan, Ethiopia and South Korea in terms of promoting equitable digital access, and what taxation strategies or policy tools in these countries have yielded positive results? *Probe for key similarities and differences*
22. What lessons can be drawn from regional experiences where tax reforms led to expansion, improved access, affordability, and sector performance?

Policy Reform and Revenue Optimization

23. What taxation reforms can Uganda implement to balance telecom sector growth with government revenue enhancement, including the feasibility of a tiered or progressive tax model to support low-income user adoption.
24. What trade-offs between short-term revenue losses and long-term economic gains should be considered?
25. What policies/strategies have proven effective in other sectors or countries for optimizing tax revenue without stifling demand or investment?
26. Thank You

Tool 2: Consumer Survey Questionnaire-Micro

Introduction: We are here today as part of a team from ECASA Group of Consultants Ltd (ECASA) on behalf of the Uganda Communications Commission which seeks to *"Undertake a Study on the Impact of the Current Telecommunications Sector Taxation Policy on the Communications Sector in Uganda".* The purpose of our visit is to collect data to help inform policy recommendations to optimize the telecommunications sector's contribution to Uganda's economic development by considering adjustments to taxation policies that promote growth, spur uptake and penetration of telecom services, promote investment, and equitable access while ensuring fair revenue collection. We hope that you will give us a few minutes of your time since your views are very important. This information will help to inform an in-depth analysis of the fiscal regime, including the impact of general and sector-specific taxes across the telecom value chain, compliance challenges, and the influence of taxation on consumer behaviour, investment, and market dynamics. The study will also incorporate comparative insights from other East African countries and simulate fiscal scenarios to guide evidence-based policy recommendations for sector growth and affordability. We assure you that whatever information you provide will be kept strictly confidential and will not be used for any other purpose other than for this study.

May we proceed with the discussion / interview? ☐ Yes ☐ No

Target Group: Consumers (Urban/Rural, Youth, Businesses)

Section A: Background Information

Select all options that apply.

Qn.	Variable	Response
1.	Age (in complete years)	
2.	Gender	1. Male 2. Female
3.	Level of Education	1. Primary level 2. Secondary level 3. Higher institutions of learning 4. Adult education (FAL) 5. Never been to school 6. Other (specify)
4.	Location	1. Urban 2. Rural
5.	Monthly Income Bracket	1. Less than 50,000shs 2. Between 60,000shs-100,000shs

		3. Between 110-150,000shs 4. Between 160,000-200,000shs5=between 210,000shs-500,000shs 5. Between 510,000-1,000,000shs 6. Other (specify)
6.	Status of Employment	1. Employed 2. Unemployed
7.	Primary Telecom Provider	1. MTN Uganda 2. Airtel Uganda 3. Uganda Telecom Limited 4. Lycamobile (Tangerine) 5. Other (specify)
8.	Nature of Handset	1. Smartphone 2. Basic phone (button phone) 3. Feature phone 4. Tablet 5. Other (specify)
9.	Period spent with the telecom provider (time in full years)	

Section B: Consumption Patterns

Select all options that apply.

10. What telecom services do you use regularly?
    a. Voice
    b. Data (mobile internet, fixed internet-FTTH, Value Added Services, Unstructured Supplementary Service Data, USSD)
    c. SMS
    d. Mobile Money
    e. Social Media
11. On average, how much do you spend on telecom services monthly (approx.)?
    a. <5,000 UGX
    b. 5,000–15,000 UGX
    c. 15,000–50,000 UGX
    d. >50,000 UGX
12. If prices for telecom services increased, how would you react?
    a. Continue using same amount
    b. Reduce usage slightly
    c. Reduce usage significantly
    d. Stop using some services
13. Have you ever reduced or stopped using a telecom service due to price/tax increase?
    a. Yes – Which service(s)? _____
    b. No
14. Did you recently delay or cancel plans to purchase a mobile handset due to price?
    a. Yes, if yes, provide reasons for your answer?
    b. No

c. Not Applicable

15. In your view, how affordable are telecom services today compared to one year ago?
    a. More affordable
    b. About the same
    c. Less affordable
    d. Don't know

Section C: Awareness and Understanding of Telecom Tax Policy

16. Are you aware of the current tax policies applied to telecommunications in Uganda?
    a. Yes
    b. No
    c. Somewhat
17. Which specific taxes do you believe have the most impact on the telecom sector?
    a. Excise Duty on Services
    b. VAT on Services or Devices
    c. Import Duties
    d. OTT/Data Tax
    e. Others (specify): _____

Section C: Perceptions of Impact

18. How has the current telecommunications taxation policy affected your operations or service delivery in the sector?
19. What changes have you observed in consumer behavior or demand as a result of the existing tax structure?
20. In your view, what are the broader implications of the current tax policy on innovation and investment in the telecommunications industry?
21. In your opinion, how have these taxes affected the following areas?

No.	Area	1. Strong Positive	2. Slight Positive	3. Neutral	4. Slight Negative	5. Strong Negative
22.	Investment by telecom operators					
23.	Internet/data affordability					
24.	Smartphone/device affordability					
25.	Mobile/internet usage levels					
26.	Tax compliance by operators					
27.	Innovation and digital access					

28. In your own experience, what challenges do you face when procuring or selling telecom services and products through your business? Please describe as many as you can. *Probe for challenges related to pricing, availability of stock, quality of products, delays in delivery, customer demand, marketing support, etc.*

29. Based on your experience, what suggestions do you have to help improve the delivery of telecom services and products, so they are easier to access and sell? *Probe for suggestions related to supplier support, training, marketing, pricing, product range, technology, customer service, etc.*

Tool 3: Structured Questionnaire and Interview Guide

Introduction: We are here today as part of a team from ECASA Group of Consultants Ltd (ECASA) on behalf of the Uganda Communications Commission which seeks to *"Undertake a Study on the Impact of the Current Telecommunications Sector Taxation Policy on the Communications Sector in Uganda".* The purpose of our visit is to collect data to help inform policy recommendations to optimize the telecommunications sector's contribution to Uganda's economic development by considering adjustments to taxation policies that promote growth, spur uptake and penetration of telecom services, promote investment, and equitable access while ensuring fair revenue collection. We hope that you will give us a few minutes of your time since your views are very important. This information will help to inform an in-depth analysis of the fiscal regime, including the impact of general and sector-specific taxes across the telecom value chain, compliance challenges, and the influence of taxation on consumer behaviour, investment, and market dynamics. The study will also incorporate comparative insights from other East African countries and simulate fiscal scenarios to guide evidence-based policy recommendations for sector growth and affordability. We assure you that whatever information you provide will be kept strictly confidential and will not be used for any other purpose other than for this study.

May we proceed with the discussion / interview? ☐ Yes ☐ No

Target Stakeholders:

- Telecom Operators and ISPs
- Investors in the ICT/Telecom Sector

Section A: Background Information

Select all options that apply.

No.	Question	Response
1.	Name of Institution/Individual	
2.	Type of Stakeholder (Tick)	1. Operator 2. Investor 3. Civil Society
3.	Position/Role	
4.	Interview Date	

Section B: Taxes On the Telecom Value Chain

Select all options that apply.

5. What are the main taxes and levies affecting your operations?
    a. VAT
    b. Excise Duty
    c. Withholding Tax
    d. OTT (if applicable)
    e. Import Duties (Customs Duties)
    f. License Fees
    g. Spectrum Fees
    h. Others (Specify): _____
6. Which part(s) of the telecom value chain are most affected by these taxes?
    a. Infrastructure Development
    b. Service Provision
    c. Device Importation/Sales
    d. Data/Voice/SMS Pricing
    e. Consumer Affordability
7. In your view, to what extent have higher telecommunications costs affected the broader economy (e.g., productivity, business growth, digital inclusion)?
    a. Not at all
    b. Slightly
    c. Moderately
    d. Significantly
    e. Very significantly

Section C: Taxes and Investment Decisions

8. What are the key taxes currently applied to telecom operators and ICT products/services?
9. How have these taxes influenced your organization's investment decisions in the last 5 years? *(Probe for CAPEX, network expansion, product innovation)*
10. Have you shelved, reduced, or redirected any planned investments due to taxation? *If yes, please explain.*
11. In what ways could changes in the tax regime encourage more investment in telecommunications sector?
12. How predictable and stable is the telecommunications tax regime in Uganda?
13. What impact does tax policy uncertainty have on long-term strategic planning?

Section D: Operational Costs and Product Pricing

14. What proportion of your operational expenditure would you estimate is attributable to taxes?
    a. Less than 10%
    b. 10%–20%
    c. 20%–30%
    d. 30%–40%
    e. More than 40%
15. Have sector-specific taxes led to price increases for telecom services/products?
    a. Yes
    b. No
16. If yes, by approximately what percentage? _____%
    a. Less than 5%
    b. 5%–10%
    c. 10%–15%

d. 15%–20%
e. More than 20%

17. Which products or services have been most affected?

Section E: Consumer Access and Adoption

18. From your perspective or data, how have taxation policies affected affordability of telecom services for consumers? *Probe for affordability of services such as voice, data, and mobile money.*
19. Have you observed any changes in subscription rates, data usage, or service uptake due to tax-related pricing changes?
20. Are there specific groups (e.g., youth, rural populations, low-income earners) most affected by tax-driven price increases?
21. Do you offer tax-related subsidies or cost-sharing mechanisms for consumers?
    a. No
    b. Yes
22. If yes, please describe the approach used

Section F: Price Increases and Tax Linkages

23. Have telecom service prices increased in the past 3–5 years in your view/records?
    a. Yes
    b. No
    c. Not Sure
24. What were the main causes of price increases? (Select all that apply):
    a. Excise Duty Increases
    b. VAT
    c. OTT/Data Taxes
    d. Foreign exchange/inflation
    e. Regulatory compliance costs
    f. Other (specify): _____
25. Which services/products were most affected by price increases?
    a. Voice Calls
    b. Mobile Data
    c. Mobile Money
    d. Internet Bundles
    e. Smartphones/Devices
    f. SIM card registration and replacement services
    g. Enterprise Services
    h. Wholesale services
    i. Value Added Services
    j. Termination Rates

Section G: Impact on Key Sector Indicators

26. What impact have tax-related price increases had on the following? Tick the most appropriate response

Indicator	Significant Increase	Slight Increase	No Change	Slight Decrease	Significant Decrease

Mobile Subscriber Penetration					
Smartphone Ownership					
Data Usage / Traffic Volume					
Voice Call Volumes					
Total Turnover (Revenue)					
Investment in Network/Infra					

Section H: Consumer behaviour and market dynamics tick the most appropriate option

27. Have consumers changed their usage behaviour due to price increases?
    a. Yes – Using less data
    b. Yes – Switching to Wi-Fi alternatives
    c. Yes – Making fewer calls
    d. Switching between service providers for better rates
    e. No significant change
    f. Not sure
28. Are consumers switching between providers due to cost differences?
    a. Frequently
    b. Sometimes
    c. Rarely
    d. Not at all
29. Have telecom operators introduced any product or pricing innovations to respond to affordability pressures (e.g., micro bundles, off-peak discounts)?
    a. Yes – Please specify: _____
    b. No
30. Has the competitive landscape changed (e.g., smaller players exiting, increased dominance by major players)?
    a. Yes – Describe: _____
    b. No
    c. Not Sure

Section I: Recommendations

31. On a scale of 1–5 (here 1 is very ineffective and 5 is very effective), how effective do you believe the current telecom tax policy is in supporting sector growth?
    a. Very effective
    b. Effective
    c. Moderately effective
    d. Slightly effective
    e. Not effective at all

32. In your opinion, what tax reforms could best balance government revenue needs and sector growth?
33. What incentives (tax or non-tax) would encourage greater investment in underserved areas?
34. Are there international best practices Uganda could consider in telecom taxation?

Thank You

Tool 4: Focus Group Discussion Guide-Meso Level

Introduction: We are here today as part of a team from ECASA Group of Consultants Ltd (ECASA) on behalf of the Uganda Communications Commission which seeks to *"Undertake a Study on the Impact of the Current Telecommunications Sector Taxation Policy on the Communications Sector in Uganda".* The purpose of our visit is to collect data to help inform policy recommendations to optimize the telecommunications sector's contribution to Uganda's economic development by considering adjustments to taxation policies that promote growth, spur uptake and penetration of telecom services, promote investment, and equitable access while ensuring fair revenue collection. We hope that you will give us a few minutes of your time since your views are very important. This information will help to inform an in-depth analysis of the fiscal regime, including the impact of general and sector-specific taxes across the telecom value chain, compliance challenges, and the influence of taxation on consumer behaviour, investment, and market dynamics. The study will also incorporate comparative insights from other East African countries and simulate fiscal scenarios to guide evidence-based policy recommendations for sector growth and affordability. We assure you that whatever information you provide will be kept strictly confidential and will not be used for any other purpose other than for this study.

May we proceed with the discussion / interview? ☐ Yes ☐ No

Target Groups:

- Consumers (Urban, Rural, Low-income, Youth and vulnerable groups)
- Mobile Network Operates including Fintech Associations operating mobile money
- Civil Society/Consumer Advocacy Groups
- ICT Policy Advocates

Section A: Understanding the Current Telecom Tax Regime

1. What are your views on the current taxation structure for telecom services and products in Uganda?
2. Are you aware of any specific sector taxes? If aware, *Probe the major taxes or fees of concern*
3. How do you perceive the fairness or complexity of these taxes?
4. Do you believe the tax regime supports or inhibits sector growth and innovation?

Section B: Impact on the Telecom Value Chain

5. In what ways have taxes affected telecom service pricing or product affordability?
6. How do taxes influence telecom operators' investment in network expansion, especially in rural or underserved areas?
7. Have you seen any link between tax increases and changes in service uptake or usage patterns?
8. In your opinion, who is most affected by the current telecom tax structure, and why?
9. What has been the impact of telecom-specific taxes on penetration rates and consumer demand?

Section C: Tax Compliance and Implementation Challenges

10. From your perspective, what are the key challenges faced by telecom companies in complying with tax policies?
11. Are there ambiguities or inconsistencies in the tax regulations that complicate compliance? *Probe for these inconsistences and ambiguities*.
12. How do these challenges affect service delivery and pricing?

Section D: Regional Comparisons and Best Practices

13. Are you familiar with telecom taxation approaches in countries like Kenya, Rwanda, Tanzania, or Ethiopia?
14. Are there successful models you think Uganda can learn from?
15. What aspects of these policies have improved affordability, investment, or digital access?

Section E: Elasticity and Consumer Behaviour

16. How do you think consumers respond to price increases due to taxes (data, airtime, mobile money fees, handsets)?
17. If telecom services become more expensive due tax increase, what do you do differently?
18. Do you think telecom service demand is affected by price increases? Why?
19. Have tax reductions ever resulted in increased service usage or revenue in your experience or observation?

Section F: Exploring Fiscal Scenarios and Policy Solutions

20. What tax reforms could strike a balance between government revenue needs and sector growth without making services too expensive?
21. In your view, what tax reforms could offer support to both users and service providers?
22. Would a tiered or progressive tax system (e.g., lower taxes for low-income users) be viable?
23. How might reducing taxes on infrastructure deployment impact rural connectivity?
24. What trade-offs should policymakers consider—short-term revenue vs. long-term economic growth?
25. What incentives could encourage private investment in the telecom sector?

Section G: Recommendations and Closing Reflections

26. Based on our discussion, what are your top recommendations for improving Uganda's telecom tax policy?
27. What role should various stakeholders (government, industry, consumers) play in reform? Any final remarks or key messages to policymakers?

Thank You

Tool 5: Fiscal Scenario Simulation Template for Uganda's Telecommunications Sector

Objective: To model and simulate the effects of **reduced fiscal burdens** (e.g., excise duties, VAT, import taxes) on investment, affordability, and service uptake in Uganda's telecom sector.

Simulation Structure

Component	Description
Scenarios	Policy options involving fiscal changes
Key Variables	Taxes, investment, ARPU, traffic, coverage, penetration, cost to consumer
Assumptions	Elasticities, regulatory environment, market growth rate
Data Sources	UCC, URA, operator data, World Bank, ITU, GSMA
Model Type	Spreadsheet-based with demand-elasticity and CAPEX-OPEX modelling

Scenario Models

Scenario 1: Base Case (Status Quo-BAU)

a) **Purpose**: Provide benchmark for comparison
b) **Assumptions**:
   - Excise duty on data: 12%
   - VAT: 18%
   - WHT: 10%
   - Import Duties
   - Device import duty: 10–25%
   - Growth: Moderate, current penetration
c) **Key Outputs**:
   i) Annual revenue growth
   ii) Consumer cost trends
   iii) CAPEX/OPEX levels
   iv) Penetration/coverage trajectory (baseline)

Scenario 2: Reducing Cost of Access & Usage

a) **Policy Action**: Reduce excise duty from 12% → 5%; VAT from 18% → 14%
b) **Purpose**: Encourage affordability and digital inclusion
c) **Key Assumptions**:
   - Own-price elasticity of demand for data: -0.9
   - Lower prices increase data traffic volume
d) **Outputs**:
   i) Increase in data usage per user
   ii) Broadband/3G/4G penetration growth
   iii) Net effect on tax revenue (Laffer curve)
   iv) Adoption rate among low-income users

Scenario 3: Reducing Cost of Rolling Out Infrastructure

a) **Policy Action**: Waive import duty on telecom infrastructure (e.g., towers, fiber equipment)

b) **Purpose**: Stimulate rural/last-mile investment
c) **Key Assumptions**:
   - 1% CAPEX cost reduction = 1.2% network expansion rate increase
   - Operators shift saved capital into underserved regions
d) **Outputs**:
   i) Coverage gains (% of rural areas)
   ii) CAPEX reinvestment levels
   iii) Cost per MB reduced
   iv) Time to ROI shortened

Scenario 4: Combined Incentive Package

a) **Policy Action**: Combine Scenario 2 + Scenario 3 + reduced licensing fees
b) **Purpose**: Maximize coverage and service usage growth
c) **Assumptions**:
   i) Stimulated demand + reduced deployment cost = accelerated market expansion
d) **Outputs**:
   i) GDP contribution of telecom sector (as %)
   ii) Consumer surplus increase
   iii) New investments attracted
   iv) Overall revenue gained from economic growth

Model Variables & Simulation Dashboard Template

1. **Key Input Variables**

Variable	Unit	Source
Excise Duty on Data (%)	%	URA
VAT (%)	%	URA
Import Duty on Telecom Equipment	%	URA
Device Import Tax (%)	%	URA
Withholding Tax	%	URA
Mobile Broadband Penetration	% of population	UCC/UBOS
CAPEX per Site	UGX million/site	Operators
Price Elasticity of Demand	Coefficient	GSMA, ITU
Average Revenue Per User (ARPU)	UGX/month	Operators

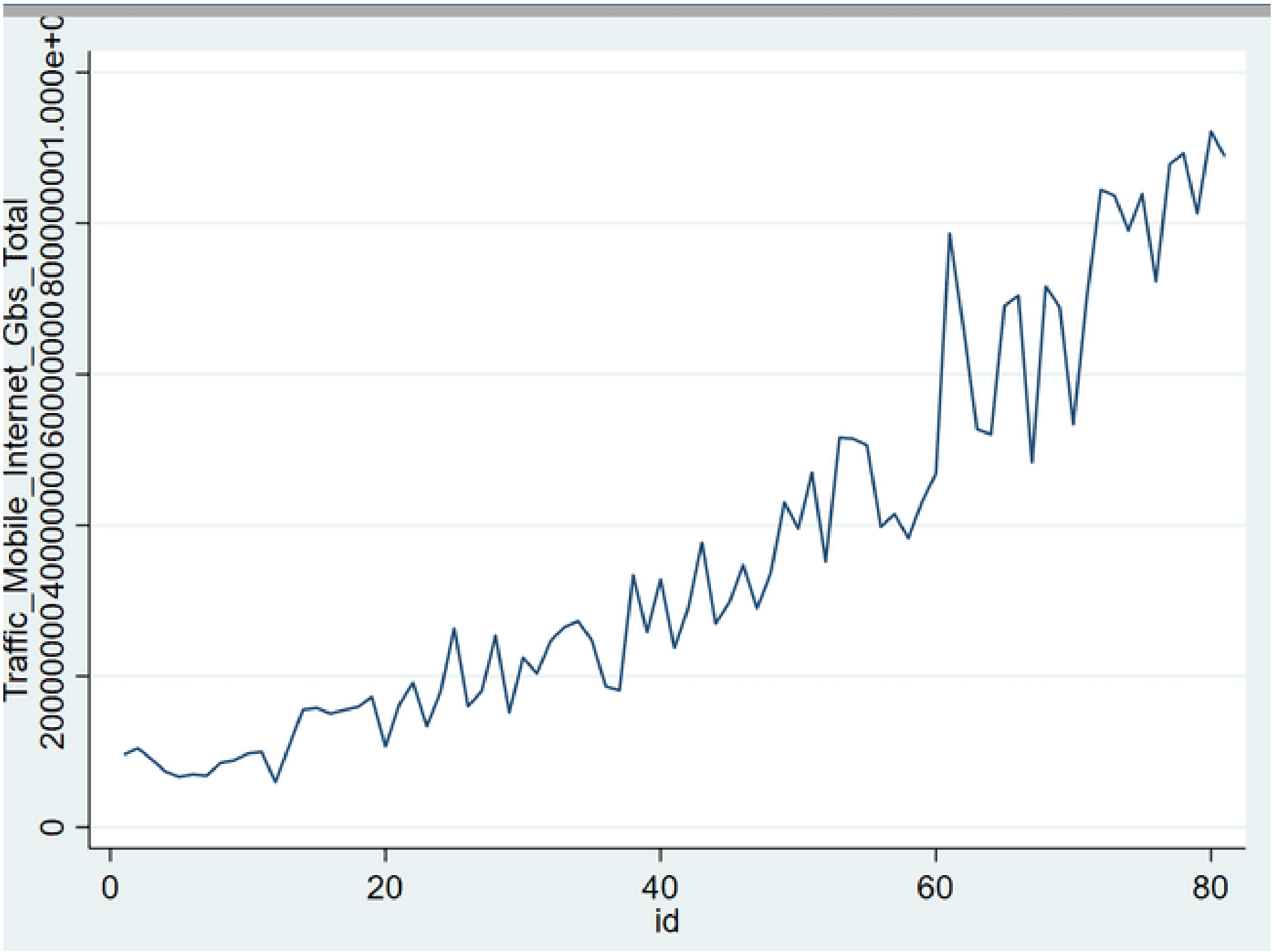
2. **Output Metrics**

Indicator	Unit	Explanation
Change in Total Tax Revenue	UGX or %	Net impact across tax categories
Change in Data Usage per User	MB/month	Affordability impact
Change in Network Coverage	% of population	Access & universalization impact
Change in Telecom Sector Turnover	UGX billion	Sector revenue growth
Change in CAPEX/OPEX Investment	UGX billion	Stimulated investment
GDP Contribution from Telecom	% of GDP	Macro-level economic impact

ANNEX II: STAKEHOLDER MAPPING AND CONSULTATION ROADMAP

(The roadmap was presented in a separate document)

ANNEX III: CHECK FOR SEASONALITY



ANNEX IV: AUGMENTED DICKEY–FULLER (ADF) TEST FOR DETERMINISTIC TREND

```
. dfuller ln_revenue , lags(3) trend

Augmented Dickey-Fuller test for unit root

Variable: ln_revenue                         Number of obs  = 77
                                             Number of lags =  3

H0: Random walk with or without drift

                                       Dickey-Fuller
                   Test          ──────── critical value ────────
              statistic             1%           5%          10%
─────────────────────────────────────────────────────────────────
 Z(t)            -4.052         -4.091       -3.473       -3.164
─────────────────────────────────────────────────────────────────
MacKinnon approximate p-value for Z(t) = 0.0074.

.
```

ANNEX V: DURBIN'S H-TEST (FOR MODELS WITH LAGGED DEPENDENT VARIABLES)

```
. estat durbinalt

Durbin's alternative test for autocorrelation
```

lags(*p*)	chi2	df	Prob > chi2
1	**7.626**	**1**	**0.0058**

H0: no serial correlation

ANNEX VI: OBSERVED REVENUE VS ITS PREDICTED VALUES