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POLICY PAPER ON UGANDA'S DIGITAL ECONOMY:

AN OVERVIEW OF UGANDA'S DIGITAL TRADE, TECHNOLOGY, TELECOMMUNICATIONS, AND MEDIA SECTORS.

AUTHORS

Kenneth Muhangi | Janice Celine Nantumbwe

COLLABORATORS

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E-trade & Startup Association of Uganda

"The Imagined order is inter-subjective. Even if by some super-human effort I succeed in freeing my personal desires from the grip of the imagined order. I am just one person. In order to change the imagined order, I must convince millions of strangers to cooperate with me."- Noah Yuval Harari- Sapiens[1]

Introduction

The Fourth Industrial Revolution (4IR) is in the truest sense a revolution; a very important change in the way that people do things.[2] The term, inter-subjective encapsulates the 4IR. The success of any new technology requires the buy in of the human collective.

In a span of less than a decade, artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy storage, and quantum computing[3] have become engrained in the daily fabric of society. This unprecedented growth of the 4IR reads more like fiction rather than fact; the world has taken the road not taken.[4]

Yuval,[5] postulates that every point in history is a crossroads. A single travelled road leads from the past to the present, but myriad paths fork into the future. Some of these paths are wider. Smoother and better marked, and are this more likely to be taken, but sometimes history or the people who make history- takes unexpected turns.

Technology is important for the growth and diversification of an economy. This is especially true in the era of the fourth industrial revolution (4IR) where the use of technology in the sectors of trade, finance and industry has created the digital economy. The digital economy is the result of economic activities that are facilitated through the habitual use of digital technologies. While the adoption and use of digital technologies vary with each country, governments in both developed and developing economies have taken cognizance of the importance of fostering the digital economy through innovative and proactive strategies.[6] These strategies are often cognizant of the need to nurture habits that inculcate the use of technology in business processes.

A sustainable digital economy is particularly important for developing countries like Uganda which aspires to reach middle-income status by 2040. With Uganda Vision 2040, the Government of Uganda has granted high-level policy recognition to the importance of the digital economy and the need to create a conducive enabling policy and regulatory environment to foster its growth.[7]

1 Harari, Yuval N. author. Sapiens : a Brief History of Humankind. New York :Harper, 2015.
2 https://dictionary.cambridge.org/dictionary/english/revolution
3 https://www.weforum.org/agenda/2016/01/the-fourth-industrial-revolution-what-it-means-and-how-to-respond/
4 Poem by Robert Frost, A Road Not taken, available at https://www.poetryfoundation.org/poems/44272/the-road-not-taken
5 Ibid 1
6 OECD, 'Key Issues for Digital Transformation in the G20', 2017
7 Ibid Page 30

Uganda's Digital Economy

In his book, 'The Digital Economy: Promise and Peril in the Age of Networked Intelligence',[8] Don Tapscott coined the term 'digital economy to show how the internet would change the way we would do business.[9]

Today, over five billion people around the world use the internet. Internet users continue to grow, with the latest data indicating that the world's connected population grew by almost 200 million in the twelve months to April 2022.[10] According to Forbes, the culmination of this explosion of consumer connectivity is the digital economy.[11]

The digital economy is comprised of a number of components through which it is enabled. These include internet networks and telecommunication, financial technology, artificial intelligence, data, and the Internet of Things (IoT).

From the ride-hailing industry to the hospitality industry, the digital economy has facilitated new business models, many of which have transformed the mode of traditional business offerings. According to a report by the World Bank, the digital economy is equivalent to 15.5% of the global GDP and as of 2022, is worth almost three trillion dollars.[12]

The growth of the digital economy is underpinned by digitization. African countries such as Uganda have undertaken initiatives to acclimatize and implement a digital transformation agenda. In 2019, the Government of Kenya developed the Digital Economy Blueprint as a reference for the development of a digital economy strategy. This blueprint recognizes six factors as being the pillars of a digital economy-digital government, digital business, infrastructure, innovation-driven entrepreneurship, and digital skills. Uganda has taken steps towards using a similar strategy as all six of the aforementioned pillars are addressed under the country's digital transformation plan.[13]

In Uganda's National Development Plan III, ICT is mentioned as a crucial driver of social and economic development. Under the fourteenth chapter titled 'Digital Transformation', the Government has committed itself to increasing ICT penetration, reducing the cost of ICT devices and services, creating 30,000 jobs within the ICT sector, increasing local ICT innovation, and providing 80 percent of Government services online. The Government has also committed the country to develop a digital vision that aims to build a digitally enabled society that is secure, sustainable, innovative, transformative, and which could have a positive social and economic impact through technology-based empowerment.[14]

Along with the National Development Plan, the National ICT Strategy, Digital Vision 2040, and the National 4IR strategy, Uganda is intent on leveraging digital technologies to foster the digital economy albeit hampered by a number of factors such as low levels of digital literacy and limited access to digital technologies in the country.

8 Don Tapscott, 'Digital Economy: Promise and Peril in the Age of Networked Intelligence, McGraw-Hill, 1st Edition, ISBN 0070633428
9 Kosha Gada, ' The Digital Economy in 5 Minutes', Forbes, Available at https://www.forbes.com/sites/koshagada/2016/06.16/what-is-the-digital-economy/?sh=73f19e2a7628, Accessed on 22/5/2022
10 Datareportal, ' Digital Around the World, Available at https://datareportal.com/global-digital-overview , Accessed on 10/6/22
11 Kosha Gada, (N 5)
12 Kosha Gada (N 5)
13 The National Development Plan (NDP III) 2020/21- 2024/25
14 World Bank Group, 'Digital Economy for Uganda Diagnostic Report', Washington, DC, World Bank, Page 27

Be that as it may, there are sectors empowered by the digital economy that are already showing great promise within Uganda. In the past few years, the digital trade and financial technology sectors have exponentially grown in the country. With intentional and targeted effort exerted in these sectors, Uganda is one step close to achieving middle-income status by 2040. Despite this apparent growth, the authors note that Uganda lacks consolidated data by her planning authorities and policymakers in the sectors mentioned in this paper.

Digital Trade and E-Commerce

Digital trade and E-commerce are characterized by the use of electronic mediums and technologies to conduct commerce- sell, purchase, or exchange of goods or services.[15] Digital technologies are increasingly being used to enable trade; from using e-signatures to conclude contracts to employing the use of data sets to deliver goods to clients and using financial technologies to facilitate payment.[16]

E-commerce has led to the rapid expansion of markets and cross-border trade. It has also significantly increased competitiveness through the enhancement of consumer choice and the efficient delivery of goods and services. [17] The global e-commerce market is expected to total $6.3 trillion in 2023.[18]

The growth of e-commerce in Africa is attributable to the several technological advantages that can facilitate it on the continent.[19] With the youngest and second largest population in the world, Africa has a large digital audience. The continent accounts for 12.9% of internet users worldwide.[20] In 2018, mobile technologies and services generated 8.6 percent of the Gross Domestic Product (GDP) in sub-Saharan Africa.[21]

As of January 2022, Uganda had 13.92 million internet users, with internet penetration standing at 29.1% of the total population. [22]

15 Amir Manzoor, ' E-Commerce: An Introduction', Lambert Academic Publishing, 2010, p 2
16 European Commission, ' Digital Trade', https://policy.trade.ec.europa.eu/help-exporters-and-importers/accessing-markets/goods-and-services/digital-trade_en Accessed on the 26th of July 2022
17 The Uganda National E-commerce Strategy
18 Anna Balunch, ' 38 E-Commerce Statitics of 2023' , Forbes Advisor, https://www.forbes.com/advisor/business/ecommerce-statistics/
19 Charlemagne logue, Alastair Alinsato, Toussaint Agadjihouédé, ' E-Commerce in Africa: Issues and Challenges', World Trade Organization, p 118
20 Ibid
21 UNCDF, Inclusive Digital Economy Scorecard Report, 2021
22 Simon Kemp, ' Digital 2022: Uganda', Available at https://datareportal.com/reports/digital-2022-uganda#:~:text=Internet%20use%20in%20Uganda%20in,at%20the%20start%20of%202022.

Statistics show that internet users increased by 1.8 million between 2021 and 2022. The country has a majorly young population with over 77% of the population being below the age of twenty-five. All these factors indicate prime opportunities to leverage digitization.

The Government has shown initiative to cultivate these opportunities. In 2021, the Ministry of ICT and National Guidance (MoICT) developed a National E-Commerce strategy to provide a framework that will promote the uptake of e-commerce in Uganda over the next five years.[23] This ties in with the National Development Plan III which identifies ICT as a key driver to economic development and the National Development Agenda which identifies the ICT sector as one which Uganda can exploit to accelerate and transform the economy. The innovations thereunder include building robust ICT infrastructure across the country, enhancing internet connectivity within the country and globally, supporting e-commerce, and promoting innovation to exploit the potential of the digital economy.[24]

However, in comparison with other countries in the region, the uptake of e-commerce is still relatively low in Uganda. This could be attributable to a number of factors. Prime among them is a lack of synergies within the digital trade ecosystem specifically between policymakers and the private sector players.

Businesses in Uganda's E-Commerce and Digital Trade Sector:

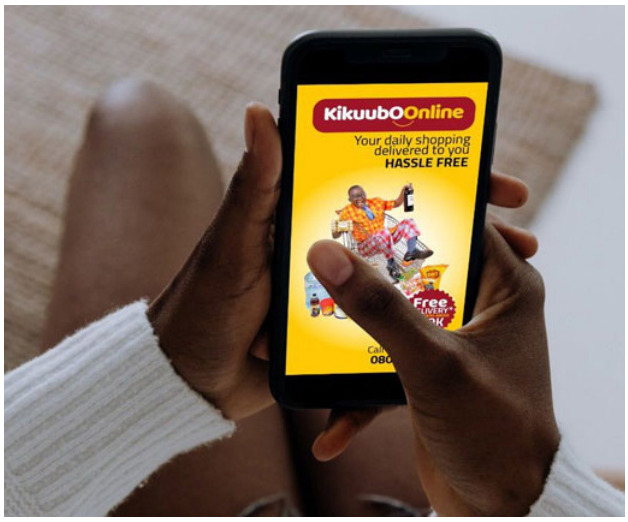
The E-Commerce service offerings in Uganda currently comprise of applications, websites, and online stores on social media such as Facebook, Instagram, and WhatsApp. The growth of the Ugandan e-commerce sector has been facilitated by the widespread use of financial technologies, and the growing use of mobile phones. [25]

Uganda has a diverse e-commerce sector, ranging from ride-hailing, online retail stores to food delivery services and hospitality and accommodation services. In a 2022 survey carried out by the National Information Technology Authority Uganda (NITA –(U)) that collected information on individual e-commerce services and experiences in Uganda, it was found that overall, 9% of all individuals reported using the internet to make an online purchase in the period of 12 months in the years of 2021-2022. It found that individuals that had made online purchases in 2022 mostly bought from sellers in Uganda (96.7%). Individuals that had made online purchases mostly bought clothing, footwear, sporting goods or accessories (41.2%), followed by food, groceries, alcohol, or tobacco (24%), and household goods (22.7%). Other items bought included household items, computer software, electronic books, medicine, and cosmetics.[26]

In regard to retail websites, the sector is serviced by both local and international platforms. Given the nature of online stores, the volume of the websites used in Uganda cannot succinctly be summarized within this paper. However, it is important to note that Uganda's retail e-commerce activity is relatively unsophisticated as a significant amount of it takes place on social media platforms such as WhatsApp and Facebook.

Online retail websites include Tuko app, Kikuu, Maskini, Kikuubo Online Uganda, Jiji Uganda, Ubuy Uganda, and well-known ones such as Jumia, Amazon, eBay, and Alibaba.[27] The business models of these businesses vary. While some sell specific items such as apparel, others are intermediaries or 'digital marketplaces' through which customers can purchase products from other stores or sell their products to fellow customers.

23 Uganda National E-commerce Strategy
24 Ibid
25 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022, Pg 47
26 National Information Security Authority Uganda ' National Information technology Survey Report Final Report, 2022, Pg. 120-121
27 Supra, Pg 47



In the ride-hailing sector, Safeboda and its new flagship product, Safecar dominate this particular industry. Dubbed Africa's super app, the company's unique business model entails the use of motorcycles ('boda-bodas') and cars to provide ride-hailing services. With over twenty-four thousand riders, Safeboda is the biggest ride-hailing service in the country. Other digital ride-hailing services in the country include Uber, Bolt, Lolo ride, Mondo ride, Dial Jack, and Little Ride.[28] The ride-hailing industry has spurred Uganda's gig economy which holds promise in reducing the country's low employment levels.

28 HiUG' The top Ride-Hailing Apps In Uganda Including Safeboda and Uber' Available at https://hereinuganda.com/ride-hailing-apps-uganda

The use of food-delivery applications has also steadily increased in the country. Well-known applications include Jumia Food, Glovo, and Uber Eats.

A number of businesses with physical locations have also adapted to offering their services through digital platforms such as social media, websites, and applications, further widening the scope of e-commerce in Uganda.

Regulation of E-commerce in Uganda

Given the fact that e-commerce comprises a wide array of business offerings, the laws governing the sector are largely fragmented.

With regard to registered companies, all e-commerce businesses which are duly registered with the company's registry are subject to all the laws governing companies in Uganda.
Of specific importance to this sector are the Electronic Transactions Act 2011(ETA) and the Electronic Signatures Act, 2011(ESA). The Electronic Transactions Act essentially provides for the secure facilitation and regulation of electronic communication and online transactions. Additionally, the Electronic Transaction Act 2011 and the Electronic Transaction Regulations, 2023 provide for consumer protection in such transactions. The Electronic Signatures Act 2011 on its part, gives legal effect to digital signatures. Together, both these Acts at their Regulations operate to regulate e-commerce transactions.

During the second quarter of 2022, NITA(U) concluded the establishment of a national Public Key Infrastructure (PKI) licensing and regulatory framework. PKI is intended to facilitate secure electronic information transfer for a wide range of network activities such as e-commerce and Internet banking.[29]

The first Public Key Infrastructure Provider License was issued to PoS Digicert which was contracted by the Government of Uganda to establish and maintain the Digital Authentication and Electronic Signatures solution under the name UGPASS.[30]

29 Uganda Communications Commission, 'Market Performance Report 2Q22' pg. 15
30 https://www.nita.go.ug/nita-u-issues-first-public-key-infrastructure-pki-provider-license

UGPASS has the capability to enable users to utilize their smartphones to register for securely verified digital certificates in order to authenticate themselves online for seamless and secure access to a variety of e-services and use advanced electronic signatures to securely e-sign documents. This solution is compliant with the Electronic Transactions Act and is expected to bolster the security of electronic transactions.

As far as data protection and cyber security are concerned, Uganda has a comprehensive law on data protection and privacy. E-commerce transactions are majorly enabled through the use and transfer of data. The Data Protection and Privacy Act 2019 and its Regulations impose stringent directives on the collection and processing of personal information in Uganda and that relating to Ugandan citizens.

The Act closely mirrors the European Union's General Data Protection Regulation (GDPR). It provides for the rights of persons whose data is collected and the obligations of data collectors, processors, and controllers. It also regulates the use and disclosure of personal information and gives individuals whose data has been collected or processed the power to exercise control over their personal data including the power to consent to the collection and processing of personal data and deletion of personal data.
The Computer Misuse Act 2011 (as amended) as applied to e-commerce transactions provides for offenses relating to the use and misuse of digital technologies including those prevalent in electronic transactions. Some of these offenses include electronic fraud, unauthorized disclosure of information, and unauthorized use or interception of a computer service.

Taxation of digital trade

With respect to taxation, e-commerce businesses are subject to all taxes applicable to the goods and services they provide such as value-added taxes, and income tax. They are also subject to those applicable to their mode of operation such as customs tariff tax.

The aggregate tax burden affecting digital platforms is comprised of a direct 12% levy on the net price of the internet, Value Added Tax on internet services and electronic services (18%), a 12% excise duty on prepaid airtime and on value-added services, and a 10% withholding tax on the gross amount of payment charged on commission for airtime distribution and the provision of mobile money services. Additionally, ICT devices attract a 10% import duty, while income/corporation tax is fixed at 30%. [31] From the foregoing, these are far too many taxes for such a critical sector and point to the misalignment between the industry and policymakers.

Granted, the obtrusive nature of the internet poses a unique challenge to tax authorities. The discussion on how digital services should be taxed is one of nuance, having been hotly debated for over twenty years now.[32] This is especially so with respect to international tax rules. Due to digitization, the international tax rules formulated in the 20th century have proven outdated in as far as they place significant emphasis on an entity's physical presence in a given country.[33]

It is now possible for digital platforms to carry on business in a country without a physical presence in that jurisdiction. This has specifically proven to be a challenge for tax policymakers in the context of income taxes and consumption taxes. When it comes to income taxes, multiple approaches have been taken. Some countries such as Kenya have imposed a digital service tax (DST) on the revenue from certain digital services. Others such as Nigeria have relied on 'virtual permanent establishments' to tax the profit of non-resident digital service providers while other countries such as Malaysia have imposed withholding taxes on digital services.

31 CIPESA, ' Digital Taxation in Uganda: A Hindrance to Inclusive Access and Use of Digital Technologies, 2022
32 Cristian Óliver Lucas-Mas, Raúl Félix Junquera-Varela, 'Introduction to Taxing the Digital Economy'
33 Ibid

In an effort to widen the tax base, Uganda has taken the route of imposing consumption taxes (particularly VAT) on imported electronic services. One of the amendments to the Value Added Tax Act in 2022 imposes VAT on electronic services supplied by non-residents directly to non- (VAT) taxable persons (i.e., natural persons) in Uganda. These services include websites, software, music, film, and games.[34] This is to be done by the non-resident filing a quarterly VAT return. The mode of implementation is potentially difficult as the non-resident shall have the obligation of determining whether the customer is in Uganda, whether they are taxable persons for purposes of VAT, and whether the service offered is not VAT exempt. It has been stated that the Uganda Revenue Authority has already registered several players in this space.[35]

The imposition of these taxes in this case is premised on the justification that non-resident enterprises have carried on significant economic activity through digital mediums in counties where they have no physical presence. At the time of writing this paper, a proposal to introduce a digital services tax of 5% on the income of non-resident digital service providers is being discussed by the legislature.

The tax authorities must tread carefully in their efforts to widen the tax base so as not to inhibit the growth of the digital economy and increase the prices of digital services as this will directly undermine all efforts or interventions to foster the digital economy. Uganda can benefit from impact assessments that are focused on investigating the impact proposed taxes might have on the digital economy.

As is the practice in other jurisdictions, the government may also consider tax incentives designed to attract foreign direct investment (FDI). These may take the form of venture capital tax concessions and tax exemptions that could have the effect of encouraging multinational entities to register as resident companies. In the end, a concession that attracts FDI benefits Ugandans more than a regulation that is unenforceable.

Financial Technologies

Digital Financial Services

The role of Financial Technology (FinTech) in facilitating Uganda's transformation cannot be over-emphasized. Without point-of-sale machines and online/mobile banking expediting entry into our national parks, tourism would most likely contribute less than the 3% it currently contributes to Uganda's GDP.

Without mobile money, global remittance, and payment platforms (which are also key enablers for e-commerce and ride-hailing), Uganda's GDP would be less than its current USD 41.27 billion. Without blockchain (and other distributed ledger technologies) big data, cloud computing, and Artificial intelligence that are at the core of FinTech, developments such as credit scoring and analytics would remain a preserve for the western world. Without virtual private networks and two-factor authentication to secure online payments, Uganda's digital economy would practically be obsolete.

In 2021, the total value of mobile money transactions reached over UGX 140 billion.[36] The total transaction value in the digital payments segment is projected to be $3.30bn in 2023.[37]

34 The Taxman, 'Uganda Set to Collect Taxes from Digital Economy', Uganda Revenue Authority, Available at https://thetaxman.ura.go.ug/uganda-set-to-collect-taxes-from-digital-economy/
35 KTA Advocates, KTA Annual Symposium Report 2022, Page 56
36 Bank of Uganda, 'Mobile Money Statistics', available at https://www.bou.or.ug/bou/bouwebsite/PaymentSystems/dataandstat.html
37 FinTech- Uganda, https://www.statista.com/outlook/dmo/fintech/uganda#:~:text=The%20market's%20largest%20segment%20will,US%2494.98k%20in%202023.

Leveraging digital financial services has the potential to increase the levels of financial inclusion in the country and cater to the financial needs of the unbanked population.

Uganda currently has over 84 fintech firms offering payments, money transfers, e-wallets, remittance, digital lending, digital banking, insurance technology (insurtech), wealth management, capital markets, payment card switches, and blockchain (cryptocurrency currencies and exchange). [38]

Payments and E-Money

The payment ecosystem is made up of various components. In its infancy, the mobile money market primarily focused on person- to person (P2P) transfers. The range of services offered has since expanded to include the purchase of airtime, payment of utility bills, digital lending & saving, cross-border transfer of money, purchase of cryptocurrency and wealth management.

Mobile money was first introduced in Africa by the Kenyan company Safaricom in 2007. It then made its way into Uganda in 2009 through MTN Mobile Money. For many years, mobile money services have largely been a preserve of Mobile Network Operators (MNO) in partnership with commercial banks. However, with the proliferation of financial technologies and with the enactment of the National Payments Systems Act 2020 and Regulations, new players have entered the payment space thus augmenting competition and consumer choice.

According to a report by FITSPA, there are currently fifty entities offering payment services in Uganda. These include MTN Mobile Money Uganda, Airtel Money Uganda, Wave Transfer, Chap Chap, Jumia Pay, Safeboda Pay, Pesapal, and DusuPay. A number of these also operate digital wallets.

As of June 2022, Uganda had a total of 40.7 million digital wallets. Of the 40.7 million wallets, 36.9 million wallets were Mobile Network operators (MNO) – mobile Money wallets linked to MTN, Airtel, and Uganda Telecom Limited. Non-MNO-linked digital wallets accounted for 10% of total wallets with a total count of 3.8 million wallets administered by licensed non-MNO Payment Service Providers.[39]

Payment aggregators or integrators play a pertinent role in the payments sector as they provide the functionality required to run payment platforms such as the cash-in, cash-out, transfer of money, and payments. Yo! Uganda entered the market in 2011 to enable multipurpose mobile payment aggregation.[40] It was closely followed by Beyonic, Payway, Remits, Jpesa, and EzeeMoney.[41]

MTN and Airtel still dominate this industry. This is for a number of reasons key among them being the accessibility of USSD. The affordability of smartphones and low internet penetration rates in the country continue to stifle FinTechs that depend on internet connectivity to service clients. Agility is needed on the part of these FinTechs to adequately respond to the needs of Uganda's low-income demographic. Wave Transfer has shown innovation in this regard by employing the use of cards that customers can use to withdraw cash, without the need for a smartphone.

Payment Cards

There are currently two domestic card switches in Uganda- Interswitch which is used by fifteen commercial banks and six microfinance deposit-taking institutions to route their ATM Verve debit cards and the Agent Banking Company (ABC) Switch which is used by fourteen banks to route ATM Visa debit card transactions.[42]

38 FITSPA, 'Study on the State of Uganda's Fintech Industry', pg. 16
39 Uganda Communications Commission, 'Market Performance Report 2Q22'
40 Supra, page 18
41 Supra , Page 18
42 World Bank Group. 2020. Digital Economy for Uganda Diagnostic Report. Washington, DC, pg. 87

Remittance

Financial technology has revolutionized the tedious process of cross border transfer of money. [43] There are currently eight remittance service providers operating in Uganda. These include Eversend, Sendwave and Flutterwave. Through interoperability, consumers can now send and receive money in real-time on mobile money accounts, bank accounts debit/credit cards and cash outlets.[44]

Digital Lending and Micro-Saving

MTN pioneered Uganda's micro-savings and digital lending industry in 2016 with the introduction of 'MoKash' in partnership with the Commercial Bank of Africa. Uganda currently has sixteen digital lending and microcredit institutions.

The enactment of the Financial Institutions (Amendment) Act 2016 and Financial Institutions (Agency Banking) Regulations 2017 authorized commercial banks to offer agency banking. This has resulted in significant competition for Fintenchs in this sector.[45] However, Fintechs are able to dominate in niche markets of the sector. For instance, Tugende and Asaak both offer asset lending services to motorcycle riders while M-Kopa offers solar.

Unlike the rest of the FinTech sectors, there is currently no legislation that specifically addresses digital lending outside that offered by commercial banks, microfinance institutions, and SACCOs. This may be because a number of entities offering these services have simply digitized existing business models as opposed to creating new ones.

Regulation of Financial Technologies

Joseph Priestly, the eighteenth-century chemist and theologian, once observed that;

"analogy is our best guide in all philosophical investigations; and all discoveries, which were not made by mere accident, have been made by the help of it."[46]

The co-dependence that has caused Uganda's FinTech ecosystem to thrive within the fourth industrial revolution is so, first and foremost because of regulation. Uganda enjoys an evidence-based approach to regulation and this has allowed investment in FinTech to permeate and integrate with all of Uganda's key income sectors. The regulation of innovation sandboxes for example, under the National Payment Systems Act, 2020 (NPS) has allowed investors in FinTech to live-test novel innovations that are interoperable within the traditional banking industry.

The NPS Act regulates payment system operators, payment service providers (who among others include electronic money issuers), and issuers of payment instruments. Section 4 of the Act gives powers to the Bank of Uganda to regulate, supervise and oversee operations of payment systems and this has by advertence, opened up previously over-regulated sectors such as banking.

Section 5 of the Act provides for the categories of payment systems in Uganda. These include those operated by the Central Bank itself such as the Automated Clearing House, and those which are operated by private entities such as switches, and electronic money systems. Integrators and aggregators. The Act also makes it clear that payment systems are not limited to the ones listed under the Act, but extend to any other payment system approved or licensed by the Central Bank under the Act.

43 FITSPA, 'Study on the State of Uganda's Fintech Industry', pg. 22
44 Ibid, pg. 22
45 Ibid
46 https://www.nybooks.com/daily/2020/01/07/why-historical-analogy-matters/

In order to operate a payment system, provide a payment service or issue a payment instrument, an entity must attain a license from the Central Bank.

An application to operate as a payment system or offer a payment service must be accompanied by a number of documents including a detailed description of the applicant's product or services, policies for transacting with customers, and a certified copy of the entity's certificate of incorporation, among others.[47]

An applicant can apply for more than one license within one application.[48] Indeed, it is usually the case that an entity that applies for a Payment Service Operator (PSO) license also applies for a Payment Service Provider (PSP) license. As of 2022, the Bank of Uganda has issued seventeen licenses. Guinness Tech (U) Limited (T/a Safeboda) and Wave Transfer Limited are among those that have both PSP and PSO licenses. Interswitch East Africa (U)Limited has a PSO license, a PSP license, and a license as an issuer of payment instruments.[49]

Payment Service Operators License

A payment service operator refers to an entity, alone or with other entities, which is in charge of the operation of a payment system.[50] Examples include MTN Mobile Money Uganda Limited, Airtel Mobile Commerce Uganda limited, and Wave Transfer Limited.

A PSO license for entities with systems that carry out funds transfer is categorized into three separate classes-

a) Large funds transfer: Systems whose transaction value exceeds one hundred billion Uganda shillings per month;
b) Medium funds transfer: Systems whose transaction value exceeds one billion Uganda shillings per month but does not exceed one hundred billion Uganda shillings per month.
c) Small funds transfer: Systems whose transaction value does not exceed one billion Uganda shillings per month

Other license classes for PSO licenses are clearing systems or switches, settlement systems, and third-party systems.[51]

One of the requirements for applying for a PSO license is evidence that the applicant has a particular minimum paid-up capital. The required minimum paid-up capital depends on the class of license applied for.

The required minimum paid-up capital must be maintained by the entity subsequent to the grant of the license. Where a licensee is granted two or more licenses (e.g., a PSO and PSP license) the licensee must maintain the minimum capital that is the highest among the categories or classes of the licenses attained.[52] It is important to note that as is the trend in the finance sector, the minimum share capital is usually adjusted to meet the industry's requirements.

47 Regulation 3 (1), National Payments Systems Regulations, Laws of the Republic of Uganda
48 Regulation 3 (6), National Payment Systems Regulations, Laws of the Republic of Uganda
49 https://www.bou.or.ug/bou/bouwebsite/bouwebsitecontent/Supervision/Supervised_Institutions/Supervision/financial_institutions/2022/List-of-licensed-PSPs-and-PSOs-as-at-August-1-2022.pdf
50 Section 1, National Payments Systems Act, 2020, Laws of the Republic of Uganda
51 Schedule 4, The National Payment Systems (Amendment) Regulations, 2022 Laws of the Republic of Uganda
52 Regulation 8, National Payment Systems Regulations, 2021, Laws of the Republic of Uganda

Payment Service Provider License

Payments service as defined under the Act means services enabling cash deposits or withdrawals, execution of payment transactions, issuance and acquisition of payment instruments, or any other service incidental to the transfer of funds.[53]

Just as is the case for PSO licenses, PSP licenses have different classes. These are;

i. Electronic money issuer;
ii. Payment services including tokens; and
iii. Any other class of payment service provider as the central bank may determine.[54]

Electronic money refers to the monetary value represented by a claim to an issuer which is stored on an electronic device and is issued upon receipt of funds in an amount not less than the monetary value received.[55] An entity that operates a digital wallet falls under the category of an electronic money issuer. This includes MTN Mobile Money Uganda Limited, Airtel Money Commerce Uganda Limited, Wave Transfer Uganda Limited, and Guinness Tech (U) Limited (T/a Safeboda).

An electronic money issuer is required to maintain a trust account in financial institutions or microfinance deposit-taking institutions in order to facilitate the issuance of electronic money. [56] This is an account that holds the equivalent amount of cash as the electronic money issued. The classes of licenses to be granted under PSP for electronic money issuers differ according to the amount of money to be held in the trust account.

i. Large electronic money issuer: Total trust account value exceeds one hundred billion;
ii. Medium electronic money issuer: Total trust account value exceeds five hundred million; and
iii. Small electronic money issuer: Total trust account value does not exceed two hundred fifty million.[57]

Each of the classes under the PSP licenses requires a particular minimum paid-up share capital.

Trust accounts

The electronic money issuer must apply to the Central Bank in order to open the trust account. Within that application, the applicant must also propose trustees whose duty shall include managing the trust account. It is up to the Central Bank to approve the trustees and permit the electronic money issuer to open the trust account.[58]

The law requires that the trust account opened should be one that earns interest. This interest must be distributed for the benefit of the customer. The interest must accrue on a daily basis and be paid to the customer at the end of every calendar year quarter. [59]

53 Section 1, National Payment Systems Act, 2020, Laws of the Republic of Uganda
54 Regulation 11(3), National Payment Systems Regulations, Laws of the Republic of Uganda
55 Section 1, National Payment Systems Act, 2020, Laws of the Republic of Uganda
56 Section 49, National Payment Systems Act, 2020, Laws of the Republic of Uganda
57 Schedule 4 , National Payments Systems (Amendment) Regulations, 2022
58 Section 49, National Payments Systems Act, 2020
59 Regulation 14, National Payments Systems Regulations, 2021

Issuer of payment instrument license

An issuer of a payment license is issued in the following classes:

i. payment cards;
ii. electronic devices;
iii. paper-based instruments; and
iv. any other class of payment instrument as the Central Bank may determine.[60]

An application is made to the Central bank and is accompanied by a number of documents including a copy of a description of the payment instrument, terms and conditions of the issuance of the payment instrument, and a copy of a license of a PSO or PSP for an applicant who is a licensee. Interswitch East Africa (U) Limited has an Issuer of payment instrument license.[61]

There are other regulations that apply to National Payment Systems. These include The National Payment Systems (Agents) Regulations, 2021 which regulate how agents are appointed by licensees and the terms pertaining to those agreements, The National Payment Systems (Sandbox) Regulations, 2021, which regulate the operation of sandboxes, and the National Payments Systems (Consumer Protection) Regulations, 2022, which regulate how licensees should handle customers.

Other laws like the Electronic Transactions Act, 2011 (ETA) have directly enabled the shift from traditional banking by authorizing the use, security, facilitation and regulation of P2P transfers, electronic communications, and other online transactions. The ETA (together with the Electronic Signatures Act, 2011) also significantly provides for the legal recognition of electronic transactions, records & signatures; which guarantees effective enforcement of the rights of consumers, if infringed.

The Data Protection and Privacy Act, 2019 (DPPA) has also increased consumer confidence and participation in FinTech by regulating the use and transfer of personal data. Data protection and Fintech inter-are. Personal data is defined as any information relating to an identified or identifiable person (a data subject), and is at the core of FinTech. Without personal data, FinTech algorithms would not be able to perform or conclude payment instructions as I it would be impossible to distinguish one data subject from another without the use of personal identifiers.

Data protection revolves around several principles encapsulated by notions that a data controller/processor should be accountable to the data subject for data collected, processed, held, or used; data should be collected in a lawful and fair manner; it should be adequate, minimal and not excessive, accurate, not misleading & up-to-date, collected transparently, should not be kept longer than necessary, should be secure and overall should only be used for the purpose for which It is collected.

The Data Protection regime also allows FinTech domiciled outside Uganda to utilize standard contractual clauses (SCCs) that allow the lawful cross-border transfer of data into and out of Uganda. SCCs are standard form clauses pre-approved by an oversight data protection agency that governs the relationship between a data subject and collector/processor in relation to the use and transfer of personal data.

SCCs may enable a payment platform to exploit advanced cloud computing infrastructure outside of its jurisdiction without fear of reprisal from oversight of Data Protection Agencies. Without SCCs it would be difficult for many of the world's leading FinTech-payment platforms that leverage personal data as a tool of trade, to operate in multiple markets whilst following best practices in regard to privacy and data protection.

60 Regulation 11 (4), National Payments Systems Regulations, 2021
61 https://www.bou.or.ug/bou/bouwebsite/bouwebsitecontent/Supervision/Supervised_Institutions/Supervision/financial_institutions/2022/List-of-licensed-PSPs-and-PSOs-as-at-August-1-2022.pdf

The DPPA does not specifically provide for SCCs but under Section 7 (2)(C), personal data may be collected and/or processed in furtherance of a contract to which the data subject is party and under 17 (2)(e) of the DPPA 2019, a person who processes personal data shall take into account the contractual rights and obligations between the data subject and processor.

Uganda imposes a 0.5 percent tax on mobile money withdrawals.[62] A study done by the UNCDF found that this tax disproportionally affects low-income earners, resulting in a 40 percent drop in the average non-over-the-top transaction value since the tax was introduced.[63] This indicates the discord between the Government's desire to empower the digital economy and to widen the tax pool.

Overview of Drone Technology in Uganda

Unmanned Ariel Systems (UASs) /Drones

In Uganda, as is the case with most of Africa, drone technology is being used to address socioeconomic and environmental problems. Drones or Unmanned Aerial Systems (UAS) have proven useful in a number of sectors including security, agriculture, healthcare, road infrastructure, and media.[64]

The use of drones in Uganda has majorly been for aerial imagery and for recreational purposes. However, within the last few years, drones have also been used to deliver essential medicines to remote areas, for electoral inspection in the recently concluded by-elections, to optimize agricultural yield, and for other commercial uses. [65]

Drones in Healthcare

In 2021, Uganda's Infectious Disease Institute launched its medical drone project which would facilitate the delivery of antiretroviral drugs (ARVs) to Kalangala District located about sixty miles from Kampala. Kalangala has an HIV prevalence rate of 18%. The drones are able to carry loads of up to 1kg and fly for 150 kilometers.[66]

62 UNCDF, ' Impact of Mobile Money Taxation in Uganda', available at https://www.uncdf.org/article/7313/the-impact-of-mobile-money-taxation-in-uganda
63 Ibid
64 DO4 'The Drone Industry in Africa' available at https://www.do4africa.org/en/the-drone-industry-in-africa/
65 Godfrey Lutaaya, ' The Drone Industry in Uganda: A multifaceted Pandora's Box', Digital Human Rights Lab, available at https://digitalhumanrightslab.org/blog/the-drone-industry-in-uganda-a-multifaceted-pandoras-box/
66 Infectious Diseases Institute, ' Medical Drones Research Project Launch', https://idi.mak.ac.ug/medical-drones-research-project-

Drones in agriculture

Jaguza Tech (U) Limited is a company that uses technology to provide farmers with information and tools to improve farm productivity. This includes an application that uses artificial intelligence to collect datasets for disease identification, geospatial epidemiological modeling, and rapid point- of care diagnostics. Additionally, the company empowers livestock farmers to use drones in order to monitor their livestock through aerial imagery.[67]

Regulation of Drones

At an international level, the International Civil Aviation Organization (ICAO) which recommends regulations for aviation for all states which are signatories to the Convention on International Civil Aviation (the Chicago Convention, 1944) has issued the ICAO Model Unmanned Aircraft Systems (UAS) Regulations titled Parts 101, 102, and 149. The ICAO Model UAS Regulations are intended to provide member states with a template that they can use to implement or supplement their own UAS regulations. These regulations are supported by companion Advisory Circulars and the ICAO Standard and Recommended Practices (SARPs), all of which are informed by best practices in the industry.[68]

At a regional level, the East Africa Community (EAC) Aviation Safety Security Oversight Agency (CASSOA) which is responsible for ensuring that partner states of the East African Community coordinate, develop, and implement civil aviation frameworks that fulfill international safety and security oversight obligations, has a vital role to play in establishing effective regulation of UAVs within East Africa.

A number of countries including Uganda have taken steps to enact regulations pertaining to UAS. The process undertaken to import, own and operate a UAS is now well laid out in the law.

Import and manufacture of UAS in Uganda

According to the Civil Aviation (Unmanned Aircraft Systems) Regulations, 2022, a person or entity seeking to import a UAS or its components must first notify and seek written authorization from the Civil Aviation Authority (CAA). Upon arrival at a port of entry, the person or entity must declare the UAS to the customs office. Thereafter, the person or entity must submit the UAS to the joint Security Office for inspection and clearance.[69] Where the person or entity wants to manufacture, assemble, test, or sell a UAS, they must do so with the approval of the CAA.[70]

Registration of UAS in Uganda

Regulation 9 of the Civil Aviation (Unmanned Aircraft Systems) Regulations, 2022 stipulates that in order for a UAS to operate within Uganda, the UAS must be registered with the CAA.

launch/

67 https://jaguzafarm.com/about-us/

68 ICAO, ' Introduction to ICAO Model UAS Regulations and Advisory Circulars', available at https://www.icao.int/safety/UA/Pages/ICAO-Model-UAS-Regulations.aspx

69 Regulation 16, Civil Aviation (Unmanned Aircraft Systems) Regulations, 2022

70 Regulation 17 , Ibid

This responsibility falls on the owner of the UAS who must furnish the CAA with evidence of ownership and proof of payment of the prescribed fees. Upon registration, the owner of the UAS is granted a certificate of registration from the CAA and is entered into the UAS register maintained by the CAA.

Operation of UAS in Uganda

The operation of UAS is categorized based on the risk levels associated with the intended operation. There are three categories- Category A for basic operations, Category B for standard operations, and Category C for complex operations.

A. Basic operations

Category A (basic operations) refers to those operations that pose a low risk to the public, property, and manned aviation. UAS Operations in this category should be carried out within visual line of sight, at a maximum height of 30 feet, at a speed not exceeding 20 kilometers per hour, and within the territorial borders of Uganda, among other requirements.[71]

In order for a person to carry out a basic operation, they must have valid authorization with respect to the UAS issued by the CAA. They must also apply for approval from the CAA to carry out that particular operation. They must also attain authorization from the local authorities prior to conducting the operation. Where that operation is conducted on private property, they must attain authorization from the owner of that property, where the property does not belong to the operator.[72]

B. Standard Operations

Category B (standard operations) refer to those operations that pose a medium risk to the public, property, and manned aviation. Similar to basic operations, these operations must be performed within a visual line of sight. Furthermore, standard operations may be performed at a maximum height of 400 feet above the ground, with a mass not exceeding more than 5 kilograms.

However, given the risk, they pose, the requirements for standard operations are more than those for basic operations. The law requires that these operations should be performed by a person in possession of a valid remote pilot authorization issued by the CAA, with a training program approved by the CAA, a safety risk assessment of the intended operation, and maintained with a manufacturer's maintenance manual or maintenance manual accepted by the CAA, among other requirements.[73]

A person intending to carry on a standard operation must attain approval from the CAA. The requirements for application for approval include a letter of no objection from the line ministry regarding the intended operations, a copy of the insurance policy in respect of third-party risks, and a remote pilot training certificate or license.[74]

C. Complex Operations

Category C (Complex operations) are those which pose a high risk to the public, property, and manned aviation. Unlike basic and medium operations, complex operations may be performed beyond visual line of sight (BVLOS)[75].

In order to perform a complex operation, an entity must attain approval from the CAA and the operator must have a valid pilot license issued by the CAA. [76] In addition to the requirements needed for standard operations approval as stated above, approval for complex operations includes a security program and an operator who has been issued an Unmanned Aircraft Systems Operator Certificate (UOC) by the CAA. One of the requirements to attain a UOC is having qualified remote pilots. A UOC license lasts for twelve months and may be renewed.[77]

Before any operation falling under the categories above is carried out, the CAA must be notified. Furthermore, the pilot or owner of the UAS must seek the permission of the appropriate authorities and inform the community within the area of operation. A person cannot, without the approval of the authority, operate a UAS at night. Where the UAS has cameras and imaging devices, UAS should not capture images, videos, or information beyond the prescribed area of approval.

71 Schedule 2, Ibid
72 Regulation 5 and Schedule 2, Ibid
73 Schedule 2, Ibid
74 Regulation 6 and Schedule 2, Ibid
75 Regulation 2 and Schedule 2, Ibid
76 Regulation 7, Ibid
77 Regulation 22, Ibid

International Commercial Operations

Operation of a UAS beyond borders brings with it the obligation to seek authorization not only from the CAA but also from the foreign authority. Such operation can only be carried out by a holder of a UOC. This operation may also only be carried out by an individual who has a remote pilot license Before authorization from CAA is granted, a number of things must be considered. This includes a copy of the certificate of registration for the UAS, a copy of a certificate of the remote pilot license, and take-off and landing requirements.[78]

The Regulations took effect on 15th February 2023. The implementation and effect of these regulations are yet to be seen. However, this is a budding sector with the potential to address the socio-economic issues that plague the country.

78 Regulation 30, Ibid

Overview of the Telecommunications Sector

The Ugandan telecommunications sector offers a number of services pertinent to the digital economy. These include telecom services, payment services, and internet services. This sector alone contributes UGX 1.1 trillion in taxes.[79]

According to a report by the Quarter 1 Market report by the Uganda Communications Commission, the sector raked in revenue of UGX 1.15 trillion in the first quarter of 2022 alone. Most of this revenue was generated from voice and data services (40% and 23 % respectively). A sizeable amount of revenue was also generated from tower leasing (14%).[80]

This sector continues to grow each year. Between the months of April to June 2022, fixed and mobile subscriptions grew by more than 690,000 new subscriptions, bringing the total number of telephone connections in the country to 31.3 million. Given the estimated population of 45.2 million Ugandans in 2022, the telephone penetration stands at 73 lines per 100 Ugandans. Furthermore, the number of devices accessing telephone networks grew from 35 million in March 2022 to 36.1 million in June 2022.

Internet Services

According to the integrated framework of the 2016 World Bank World Development Report on Digital Dividends, the provision of internet services is achieved through a number of steps that can be broken down into the first mile - which connects the country to international internet traffic, the middle mile through which the internet is distributed throughout the country by the national backbone and intercity network (including the fiber backbone and Internet Exchange Points), and the last mile through which it reaches the

79 Norbert Atukunda, ' Telecom Sector Contributes Shs 1.1 Trillion in Taxes- Govt' Monitor, available at https://www.monitor.co.ug/uganda/news/national/telecom-sector-contributes-shs1-1-trillion-in-taxes-govt-3399058
80 Uganda Communications Commission, ' Market Performance Report 1Q22, available at https://www.ucc.co.ug/wp-content/uploads/2022/07/UCC-1Q22-Market-Performanace-Report-1-compressed.pdf

end user through the local access network such as wireless masts. [81]

As a landlocked country, Uganda is connected to the global internet via overland links to undersea fiber-optic cables in Kenya and Tanzania. Uganda is connected to The East African Marine System (TEAMS), SEA Cable System (SEACOM), and Eastern Africa Submarine Cable System (EASSy) via Mombasa and Dar es Salaam.[82]

This internet is then distributed throughout the country through optical fiber cables laid by the Government of Uganda (such as the National Backbone Infrastructure (NBI/EBI), by government parastatals such as Uganda Electricity Transmission Company Limited (UETCL), and by companies in the private sector including Liquid Telecom, MTN, and C- Squared.[83] Presently, there is a concentration of fiber connection within the central (Kampala and surrounding areas). It has been noted that there is a duplication of fiber routes by both the public and private sectors. This has resulted in limited effective national coverage and inadequate penetration of broadband services. Some regions in the country have little to no fiber connectivity.[84]

The provision of internet services in the market is majorly dominated by mobile telecommunications operators using 3G and 4G technologies as fixed technologies. According to a report by the World Bank, Uganda Telecom Uganda Limited (UTL) was one of the main providers of Uganda's wired internet services but has been undergoing financial troubles, hence hindering the growth of affordable broadband services to the public.[85] Several other internet service providers serve the sector. A majority are members of the Internet Service Providers Association Uganda (ISPAU). Among its other functions, the association lobbies for policy and laws within the telecommunications sector.

A report by the UCC revealed that the sector recorded a total of 232,000 new broadband subscriptions, bringing the total number of broadband connections in the country to 23.7 million. This translates into a broadband penetration of 55 internet connections for every 100 Ugandans.[86] There has also been an increase in the number of people using home fiber connections provided by mobile network operators and new Metro Fibre providers.[87]

Mobile and Internet Enabled devices

The devices used by users to access the internet include smartphones, feature phones, laptops, and tablets.[88]

As of June 2022, the total number of internet-enabled gadgets connected to the networks stood at 10.9 million gadgets while the count of feature phones and basic phones connected to the network had grown to 25 million gadgets.[89] The Uganda National Household Survey 2019/20 indicated that 74% of all households reported owning at least one mobile phone. The survey also found that 86% of internet users reported that they used the internet via mobile phone therefore, indicating that mobile phones are the primary channel through which users access the internet in Uganda.[90]

The high cost of smartphones continues to create a barrier to internet access in Uganda.

81 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022, Page 53
82 World Bank Group. 2020. Digital Economy for Uganda Diagnostic Report. Washington, DC, pg. 41
83 Ibid
84 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022, Page 53
85 Supra, page 40
86 https://www.ucc.co.ug/wp-content/uploads/2022/11/UCC-2Q22_Final-Report_With-Response-to-ED-Comments-2-compressed.pdf
87 Ibid
88 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022, Page 14
89 https://www.ucc.co.ug/wp-content/uploads/2022/11/UCC-2Q22_Final-Report_With-Response-to-ED-Comments-2-compressed.pdf
90 Supra

Regulation of the Telecommunications Sector in Uganda

In order for an entity to provide telecommunications and internet services in Uganda, it must attain the requisite license from the Uganda Communications Commission (UCC). According to the Uganda Communications (Licensing) Regulations 2019, there are three types of licenses granted by UCC.

National Telecommunications Operators (NTOs)

The NTO license allows the license holder to establish and provide both infrastructure and services across the entire country. Services hereunder include all telecommunications services and Value-Added Services. The application fee for the license is $2500 while annual license fees are USD 21,300,000 or 1.84% of the prior year's Gross annual revenue multiplied by the license term payable in advance for every 10 years of the license. The license fees also include a 2% levy on Gross Annual Earnings each year. The license lasts for a period of twenty years[91].

A licensee must cover 90% of the geographic area of Uganda and must deploy internet access of at least 8Mps.

Currently, there are five national telecom operators licensed by the Uganda Communications Commission. MTN Uganda, Airtel Uganda, Tangerine T/A Lyca Mobile, National Information and Technology Authority (NITA -U), and Uganda Telecom Limited (UTL).[92] MTN and Airtel dominate the market as they hold the majority market share at 44.1 percent and 38.2 respectively.[93]

Public Service Providers

A public service provider license (PSP) authorizes the license holder to provide telecommunications services across a designated area. There are two types of PSP licenses- a Regional Public Service Provider (RPSP) which limits the license holder to provide the services within a particular region (not more than two regions), and a National Public Service Provider (NPSP) which authorizes the license holder to provide the services nationwide.[94]

A PSP license allows the license holder to provide public voice and data services including cellular, fixed telephony, and internet access. It also grants the license holder the authorization to resell the telecommunication services of a National Telecom Operator (NTO), a PSP, or the capacity of a Public Infrastructure Provider.[95]

The application fee is $2500 while the license annual fees are to be paid depending on the region with respect to which the license application is made. The annual license fee for the Central Region is $ 12,000 or 0.89% of the licensee's audited Gross Annual Revenue, whichever is higher, and a 2% levy on Gross Annual earnings payable each year. The annual license fee for other regions is USD 3,300 or 0.89% of the audited Gross Annual Revenue whichever is higher and a 2% levy on Gross Annual earnings payable each year. The fee for a national PSP license(for those not eligible for the infrastructure license) is USD 20,000 or 0.89% of the licensee's audited Gross Annual Revenue, whichever is higher, and a 2% levy on Gross Annual earnings payable each year.[96]

91 https://www.ucc.co.ug/wp-content/uploads/2020/10/REVISED-APPLICATION-GUIDELINES-FOR-TELECOM-SECTORS-30-07-2020.pdf
92 https://www.ucc.co.ug/list-of-telecom-providers/
93 World Bank Group. 2020. Digital Economy for Uganda Diagnostic Report. Washington, DC, pg. 41
94 https://www.ucc.co.ug/wp-content/uploads/2020/10/REVISED-APPLICATION-GUIDELINES-FOR-TELECOM-SECTORS-30-07-2020.pdf
95 Ibid
96 Ibid

A license lasts for a period of five years and is renewable upon application. For a National PSP with eligibility to hold up to two regional infrastructure licenses, the annual license fee with respect to the National PSP license is $ 60,000 or 0.89% of the licensee's audited Gross Annual Revenue, whichever is higher, and a 2% levy on Gross Annual earnings payable each year.[97]

There are currently twenty licensed public service providers, seven of which are regional public service providers, and thirteen of which are national public service providers. The majority of regional public service providers have licenses for the Kampala and western regions, while a few have licenses for the eastern region.[98]

Public infrastructure Providers

Just as with the public service provider license, a public infrastructure license can be either regional (limited to only two regions) or national. This license gives the license holder authorization to establish, install and provide infrastructure services across the designated area of the country. Infrastructure in this case includes last-mile network facilities and radio access network facilities and equipment, backhaul or transmission facilities and equipment, and core network or switching equipment.[99]

Licensed Public Infrastructure Providers are entitled to provide infrastructure services to licensed National Telecom Operators, Public Service Providers, and Public Infrastructure Providers. Holders of this license are not authorized to provide communication services to final consumers unless the licensee also holds a Public Service Providers license. Liquid Telecom and Smile Communications Uganda Limited are some of the entities that have been able to acquire both licenses.[100]

Application fees for a Public Infrastructure License are $2500. An applicant for a national Public Infrastructure Provider license must also pay an initial entry fee of USD $ 100,000. Annual license fees for national Public Infrastructure Provider licenses are $ 60,000 or 0.89% of the audited Gross Annual Revenue, whichever is higher, and a 2% levy on Gross Annual earnings payable each year. An applicant for a regional Public Infrastructure Provider license must pay an initial entry fee of $25,000. Annual license fees for a regional Public Infrastructure Provider license for the central region is $ 36,000 or 0.89% of the audited Gross Annual Revenue, whichever is higher, and a 2% levy on Gross Annual earnings payable each year while for other regions, the annual licence fee stands at $9,900or 0.89% of the audited Gross Annual Revenue whichever is higher. This license lasts for a period of fifteen years.[101]

There are currently fourteen entities licensed as public infrastructure providers. Five of these are licensed as national public infrastructure providers. These include Ubuntu Towers and American Tower Company. Nine are licensed as regional public infrastructure providers. These include C Squared and Roke Telkom.[102]

Type Approval

All communication equipment imported and used in Uganda must attain type approval from the UCC. Type approval is the process by which communication equipment that meets the minimum technical requirements specified by the Commission, is authorized by the Commission to be sold, distributed, and imported into Uganda. Communication Equipment that requires Type Approval includes mobile phones, laptops, tablets, drones, radio sets, signal boosters, and broadcast transmitters to name but a few.[103]

97 Ibid
98 https://www.ucc.co.ug/list-of-telecom-providers/
99 https://www.ucc.co.ug/wp-content/uploads/2020/10/REVISED-APPLICATION-GUIDELINES-FOR-TELECOM-SECTORS-30-07-2020.pdf
100 Ibid
101 Ibid
102 https://www.ucc.co.ug/list-of-telecom-providers/
103 Uganda Communications (Equipment Type Approval) Regulations, 2019

The grant of a type approval certificate to radio and telecommunications equipment means that the equipment conforms to the respective legal, technical, and safety requirements prior to the same being imported, used, or sold in Uganda. This process is set out in the Uganda Communications (Equipment Type Approval) Regulations, 2019, and the UCC Framework on Type Approval of Communications Equipment in Uganda 2022.

The standards which the equipment must meet are specified by the Commission. However, the Commission recognizes standards of various international, regional, and national standard-making bodies including the International Telecommunications Union (ITU, the International Organization for Standardization (ISO), and the Global System for Mobile Communications Association (GSMA).[104]

A standard type approval is granted to a specific model of device/apparatus/equipment which has been cleared by the Commission as compliant with the specified standards or technical requirements. A standard type approval certificate does not expire and the respective equipment can be used again in the future without the need for another application for type approval.

In order to attain type approval, the equipment must have undergone a conformity assessment. This is a demonstration that the specified requirements relating to the product or system are fulfilled. All type of approval applicants must submit a Declaration of Conformity issued by the manufacturer. The Commission recognized a number of accredited test laboratories which can carry out the conformity assessment. A list of the test laboratories recognized by the Commission is published on the Commission's website.[105]

An application for type approval is made through a formal letter addressed to the executive director of UCC requesting for type approval. The applicant must also fill out an application form. The application is accompanied by a number of documents including test reports verifying conformity with the respective standards and a signed declaration of conformity. Type approval fees depend on the equipment for which the application is sought.

The applicant must also submit a sample of the equipment with the commission where the application is for an end-user device.[106] For non-end-user communications devices, the Commission shall on a case by case decide on the need for the submission of samples.[107]

Where the equipment conforms with the requisite standards and the appropriate fees have been paid, the commission shall issue a Type Approval Certificate.

Regulation of Competition in the Telecommunications Sector

There are legislation and regulations that are particularly important in establishing competition and affordability of services within this sector.

The Uganda Communications (Consumer Protection) Regulations 2019 regulate consumer protection in matters relating to communications services in Uganda. These Regulations are intended to promote and safeguard the interests of consumers and operators. Key provisions, among others, include those granting certain rights to consumers such as the right to consume licensed communications services that meet an established quality.

104 UCC Framework on Type Approval of Communications Equipment in Uganda 2022
105 Ibid
106 https://www.ucc.co.ug/wp-content/uploads/2022/07/Type-Approval-Framework-for-Communications-Equipment_March-2022.pdf
107 Supra

The Uganda Communications (Interconnection and Access) Regulations, 2019 impose an obligation on telecommunication operators to interconnect on an unbundled basis. Additionally, they require licensees who own or control infrastructure such as masts, to share facilities with other operators. Furthermore, the Regulations provide for compulsory interconnection with mobile virtual network operators.[108]

In 2019, the UCC published the Uganda Communications Commission Guidelines on National Roaming. These guidelines require mobile operators to offer national roaming services to other licensees engaged in the provision of mobile communication services.[109]

The UCC is in the late stages of consultation for the proposed Guidelines on Communications Infrastructure Deployment and Sharing. The proposed Guidelines are aimed at establishing a framework that will guide and foster the deployment and sharing of communications infrastructure in Uganda.[110]

Policy and Incentives in the Telecommunications Sector

According to the National Development Plan III, the government intends to increase ICT penetration in the next five years. The desired results include an increase in internet penetration from twenty-five percent to fifty percent and an increase the national broadband coverage to ninety percent. As such, the Government plans to extend broadband infrastructure coverage countrywide in partnership with the private sector and government entities and to implement last-mile connectivity.

The government of Uganda has established a plan for broadband infrastructure to achieve broadband for all by 2030. The 10-year National Broadband Blueprint (2022/23-2032/33) puts in place a strategy to invest USD 70 million in fiber rollout and expansion of Radio Area Networks (RAN) over the next ten years.

The first part of the strategy is to invest USD 29 million in fiber in order to connect all district capitals to fiber. The second part of the strategy is to subsidize the expansion of RAN site rollout after the connection of all districts to fiber. Uganda's universal access and service (UAS) fund, administered by the Rural Communications Development Fund (RCDF), will be responsible for this intervention. In total, 503 new RAN sites would be subsidized, bringing 4G coverage to 9 million more Ugandans.[111]

We have seen a few incentives being put in place already. The Uganda Communications Commission under the Uganda Communications Universal Service Access Fund has launched a subsidy program dubbed 'the Cell Tower Build Stimulus' aimed at supporting passive infrastructure deployment in areas with low coverage. The program includes a cash subsidy component to licensed cell site tower builders that would translate into tower rental discounts to stimulate network extensions by mobile network operators and Internet service providers into these zones).[112]

The National Broadband Infrastructure Blueprint has made the recommendation that UCC reviews its licensing regulations to encourage innovation and allow more flexibility in the sector. It suggests that the introduction of regulatory sandboxes which will facilitate innovation and allow UCC to monitor and respond to innovations in real-time. Regulatory sandboxes have so far proven successful in the financial technologies sector in Uganda.

108 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022, pg. 90
109 Ibid
110 Ibid
111 Ibid, page 19
112 https://www.ucc.co.ug/wp-content/uploads/2022/07/UCC-1Q22-Market-Performanace-Report-1-compressed.pdf

Overview of the Media Sector

Uganda has a diverse media sector with a steady increase in broadcast media. According to UCC, as of October 2022, there were 71 licensed television broadcasters and 218 radio broadcasters.[113] According to a report by the Media Innovation Centre, there is growing competition from social media in the sector.

The biggest multimedia conglomerates in Uganda maintain a diversified portfolio of products ranging from television, radio, and print media. The Multimedia powerhouse - Vision Group publishes six newspapers, operates six radio stations, and operates six television stations all of which are targeted at diverse audiences, are provided in different local languages, and are available in different regions.

Nation Media Group is one of the largest independent media houses in East and Central Africa, Within the Ugandan market, the Company publishes three newspapers and operates two television stations and two radio stations. Next Media, another one of the biggest multimedia companies in Uganda has four television stations, an audio-visual radio channel, an FM radio station, an e-news platform, a news application, and a multimedia production house.

In terms of generation of revenue through advertising, advertising in Uganda is mainly by the private sector with corporate companies, beverage, and telecommunication firms listed as the biggest spenders contributing UShs 65.7b, UShs52.1b, and UShs43.9 in the first half of the 2018 period respectively.[114] The last few years have seen a decline in advertising revenue particularly for print media. Data indicates that even though the advertising market has grown, global trends show that most of this revenue has been redirected toward social media platforms.[115]

The migration of users to social media for news and entertainment has led to a number of media houses developing products specifically targeted at an online audience. Vision Group, Nation Media Group, and Next Media all have digital products ranging from e-newspapers to online radio stations. The National IT Survey Report 2022 found that 18.9% of individuals in Uganda use the Internet to read or download online newspapers, magazines, or electronic books.[116]

Radio

The Uganda Media Landscape report of 2019 revealed that the majority of the Ugandan adult population had access to the radio (87%). The report indicated that figures show that radio is the most popular medium in the country.[117] The Uganda National Household Survey 2019/20 revealed 31.95 households owned a radio device.[118] Over half of the radio stations in Uganda can be classified as small FM stations.[119] A GeoPoll survey conducted in 2018 revealed that the top radio stations in the country were Capital FM (10%), Bukedde FM(4%), Radio West (4%), NBS (3%), and Radio Simba (3%). Overall, these stations share a market share of 24%. It's key to note that most licensed stations enjoy varying degrees of popularity and audience in different regions.

113 https://www.ucc.co.ug/licensed-television-broadcasters/ https://www.ucc.co.ug/list-of-approved-radio-broadcasters/
114 Ibid
115 https://www.marketingdive.com/news/social-media-marketing-spend-economy/639407/#:~:text=A%20significant%20number%20of%20advertisers,channel%2C%20according%20to%20Advertiser%20Perceptions.
116 nita.go.ug/sites/default/files/2022-12/National%20IT%20Survey%20Report%202022%20-%20Final.pdf pg. 183
117 https://www.communityengagementhub.org/wp-content/uploads/sites/2/2019/09/Uganda-Media-Landscape-report_BBC-Media-Action_February-2019.pdf
118 https://www.ubos.org/wp-content/uploads/publications/09_2021Uganda-National-Survey-Report-2019-2020.pdf
119 https://mediainnovationnetwork.org/wp-content/uploads/2021/08/Media-Vibility-in-Uganda-8.pdf

Television

According to research carried out by the Media Innovation Centre, audience data reveals that the majority of Ugandan audiences in urban and rural areas rely on radio to access information while television viewing is more prevalent in the urban areas. According to the Uganda National Household Survey 2019/2020, there has been an increase in the proportion of households that own televisions with 19 percent of the households owning at least one television set.[120]

The second quarter of 2022 saw an increase in the total active television subscribers from a total of 1.45 million as of March 2022 to 2.2 million in June 2022. According to the National IT Survey Report 2022, 15.4% of individuals in Uganda watch web television.

Online and Social Media

According to the National Broadband Baseline Survey and Infrastructure Blueprint, social media is the predominant use of the internet in Uganda with 83% of internet users engaged with social media. As of January 2022, there were 2.8 million social media users in Uganda. This is equivalent to 5.9 % of the total population.[121] The most popular social media platforms in Uganda as of September 2021 were Twitter (51%), Pinterest (24%), YouTube (10%), Facebook (8.2%), Instagram (2.8%), and Tumblr (1.8%). There was a rise in local content creation as a result of the COVID-19 pandemic.

There are currently 86 online data communication providers that are authorized to operate by the UCC. This includes the two major daily newspapers, New Vision and Monitor, which provide online content using a variety of channels.[122]

Currently, there is no exhaustive study that has been conducted on the size of the Ugandan content creation market.

Regulation of Radio & Television

In order to establish and operate a radio station or provide radio communication services, an entity may acquire a license from the Uganda Communications Commission.[123] The Commission is also given the exclusive power to issue licenses for radio broadcasting and spectrum use, managing, monitoring, and allocating the use of radio spectrum. The UCC Act also gives power to the commission to issue a broadcasting license. A broadcaster must also abide by minimum standards set by the Commission as well as the professional code of ethics specified in the Press and Journalist Act. [124]

In regard to competition, the UCC Act prohibits operators from engaging in any activities, which have, or are intended or are likely to have, the effect of unfairly preventing, restricting, or distorting competition in relation to any business activity relating to communications services.[125]

Regulation of online/ digital media

120 https://mediainnovationnetwork.org/wp-content/uploads/2021/08/Media-Vibility-in-Uganda-8.pdf
121 https://datareportal.com/reports/digital-2022-uganda#:~:text=There%20were%202.80%20million%20social%20media%20users%20in%20Uganda%20in%20January%202022.
122 Ministry of ICT and National Guidance, 'National Broadband Baseline Survey and Infrastructure Blue Print', 2022
123 Section 21, Uganda Communication Act, Laws of the Republic of Uganda
124 Section 32, Ibid
125 Section 53 (1) Ibid

The UCC requires that online data communication providers attain authorization from the Commission before providing services to the public.[126] Online data communication providers are creators of blogs, online television, online radio programs, online newspapers, audio of IP, internet protocol IP, digital radio and television internet/web radio, and internet/web television who derive commercial gain from the aforementioned activities. [127]

With respect to the regulation of content posted online, Section 31 of the Electronic Transactions Act creates an avenue through which an internet service provider can be directed to remove certain content on their websites. The section suggests a notice and takedown requirement on the part of a service provider who is notified of an unlawful data message. Notice and Takedown is usually used in the context of content that infringes on intellectual property rights and defamatory content.

With regard to digital media specifically, trends all over the world indicate that this is a space that may experience more regulation in the near future. While Uganda's law provides for a notice and takedown mechanism, it is not clear if this mechanism can effectively be used to remove content such as misinformation, content encouraging violence, or that containing hate speech. Social media sites have mostly taken it upon themselves to self-regulate through content moderation policies.[128]

The Ugandan Government has taken steps to assert greater control over social media use. This is evidenced through the occasional internet shutdowns the country has experienced and the enactment of provisions criminalizing hate speech, cyberbullying, and misuse of social media under the Computer Misuse (Amendment) Act, 2022[129] Striking a balance between regulation and the right to free speech in this area is one that is necessary and must be done carefully.

Recommendations:

- Harmonize tax policy with vision 2040: The technology sector is one of the highest-taxed sectors in the country. The government should harmonize tax policy and the ambitions of Vision 2040 as they currently seem to be at an impasse. With respect to taxing the digital economy, the government should consider adopting a multilateral approach as suggested under the OECD/G20 Inclusive Framework on BEPs or executing agreements with other states relating to the taxation of their resident digital companies. This should be done with the objective to tax the digital economy in a fair and equitable manner, and in a way that does not inflate the prices of digital services in the country;

- The government should collaborate and compare notes with other developing countries that have successfully leveraged and grown their digital economies. This includes Kenya and Nigeria;

- The Government should also foster partnerships with development partners in the space of technology development policy. This includes the Organization for Economic Co-operation and Development (OECD), World Economic Forum, World Trade Organization, Enabel, and GIZ;

- Implementation of policy and legislation is undermined by varying aspects such as digital literacy, cost, poor infrastructure, and tax burdens. Priority should be on creating policies that foster inclusivity and intentional growth in the digital trade sectors;

- There is a need for players in the ecosystem of policy and law creation to understand how the

126 UCC, Public Notice, ' Registration of Online Data Communication and Broadcast Service Providers', Available at https://www.ucc.co.ug/wp-content/uploads/2018/03/UCC_ONLINE-DATA-COMMUNICATIONS-SERVICES.pdf
127 Geoffrey Mutegki, Government Orders Registration of Online News Sites, Blogs, New Vision, Available at https://www.newvision.co.ug/news/1526760/government-registration-online-news-sites-blogs
128 https://www.cfr.org/in-brief/social-media-and-online-speech-how-should-countries-regulate-tech-giants
129 The Computer Misuse (Amendment) Act, 2021, Laws of the Republic of Uganda

digital economy operates. For instance, heavy taxation on the sector is a prevalent barrier to its growth. The government should undertake sector impact assessment surveys and capacity-building engagements that train legislators on the nuances of the digital economy. This would enable policymakers and legislators to create laws that foster rather than hinder the growth of the digital economy;

- As seen above, Uganda has created a number of policies aimed at bolstering the growth of sectors of the digital economy. These policies usually fall short at the stage of implementation. Therefore, implementation strategy should be considered a priority;

- Uganda should be intentional about harmonizing data in the digital economy specifically in the sectors of technology and digital trade. This will make planning and policy formulation more precise.

Conclusion

Technology will continue to remain a staple for Uganda's digital economy. The Government has shown great ambition to leverage digital technologies to grow and foster a sustainable digital economy. Indeed, many of these laws have facilitated the growth of the digital trade financial sector and for this, credit must be given where it is due.

Uganda has demonstrated the capacity to develop policies and an enabling regulatory environment for the growth of the ICT sector. However, gaps still remain to be addressed in the areas of infrastructure, human capital, digital literacy, and innovation. There is also a need for further collaboration with all the stakeholders involved in this ecosystem.

We often hear John Heywood's famous idiom 'Rome wasn't built in one day'. Writer James Clear reworks this phrase to read 'Rome wasn't built in one day, but they laid they laid a brick every hour'. The same rings true for Uganda's road to digital transformation.

Authors

Kenneth Muhangi
Partner

LLB (HONS) (UCU) LLM (WALES) DIP. LP (LDC)
Advocate & Partner KTA Advocates, Lecturer, Intellectual Property-Uganda Christian University, Uganda's Fourth Industrial Revolution (4IR) Representative-Centre For The Fourth Industrial Revolution At The World Economic Forum, Chair Technology, Media, Telecoms Committee East Africa Law Society, Chair ICT Cluster Uganda Law Society

Janice Celine Nantumbwe
Associate | Executive Assistant to Kenneth Muhangi

LLB HONS, DIP. LP (LDC) (HONS)
Associate in the technology, media, telecommunication, and intellectual property law practice group at KTA Advocates. Key areas of expertise include data protection and privacy, telecommunications, payment services, financial technology, software contracts, copyright advisory, trademark advisory, and patent advisory. Has a keen interest and experience in policy lobbying and creation.

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DISCOVER.

Contact Us

Floor 3, Plot 4 Hannington Road
Kampala, Uganda,P.O. Box 37366,

+256 414 530 114 / +256 414 531 078

partners@ktaadvocates.com

ktaadvocates.com