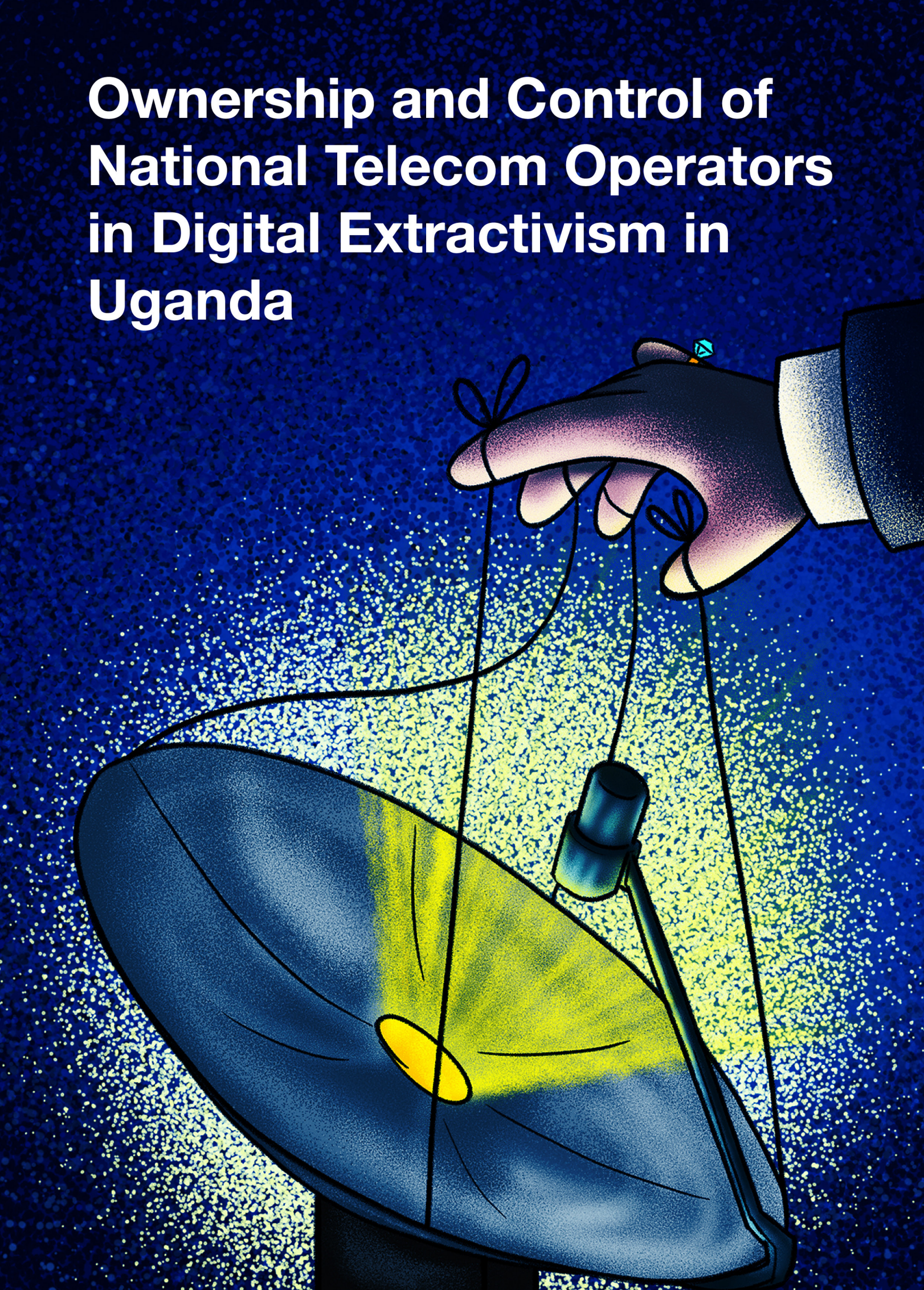
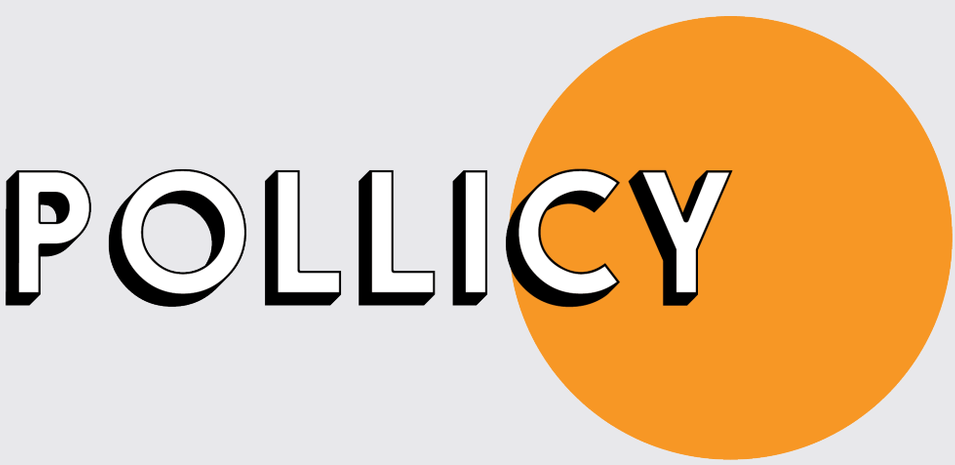
Ownership and Control of National Telecom Operators in Digital Extractivism in Uganda





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List of Acronyms and Abbreviations

AfCFTA: African Continental Free Trade Area

ATC: American Tower Corporation

CEO: Chief Executive Officer

COMESA: Common Market for Eastern and Southern Africa

ICT: Information and Communications Technology

INMS: Intelligence Network Monitoring System

IT: Information Technology

IoT: Internet of Things

LLC: Limited Liability Company

MNCs: MultiNational Corporations

NITA - U: The National Information Technology Authority of Uganda

NTOs: National Telecom Operators

REIT: Real Estate Investment Trust

SDIA: Sustainable Digital Impact Alliance

SMS: Short Message Service

TOA: Tower Company of Africa

UCC: Uganda Communications Commission

URA: Uganda Revenue Authority

UTel: Uganda Telecommunications Corporation Limited

USE: Uganda Securities Exchange

5G: Fifth Generation

Definition of key terms

Control - This refers to the management and decision making of National Telecom Operations

Digital extractivism - A form of exploitation based on the virtualization or digitization of commodities and services through a borderless digital capitalism that perpetuates pre-existing colonial practices of value grabbing and wealth accumulation.

Digital infrastructure - An integrated system of hardware and software components of Information Communication Technologies that serves as the backbone for digitalization of goods and services

Digitalization - Leveraging of digital technologies and digitisation data in processes

Digitisation - The conversion of physical data into a digital format.

Extractivism - A complex of self-reinforcing practices, mentalities, and power differentials underwriting and rationalizing socio-ecologically destructive modes of organizing life through subjugation, depletion, and non-reciprocity

Intelligence Network Monitoring System - A system employed by the Ugandan government to monitor traffic, revenue and quality of service of telecom operators in real time.

MultiNational Corporation - A coordinated system or network of cross-border activities, some of which are carried out within the hierarchy of the firm, and some of which are carried out through informal social ties or contractual relationships.

National Telecom Operators - companies that are licensed to establish and provide both telecommunication infrastructure and services across the entire geographical scope of Uganda.

Ownership - This denotes equity distribution or shareholding of a National Telecom Operator.

Telecommunications - The exchange of information over long distances through digital technologies.

Executive Summary

Extractivism as a concept has extended from its traditional interpretation in the natural resources sector to other economic sectors with contextual definitions ranging from; a mode of capital accumulation, an economic model, and within a socio economic lens, a collection of narratives & ideologies, all marked by destructive and or exploitative tendencies. Digital extractivism therefore refers to extractivism fostered by digitalization of goods and services, and driven by the proliferation of digital technologies as digitalization, and the digital economy ramp up.

To leverage the potential digitalization presents however, digital infrastructure, a foundational pillar necessary for this, has to be self-sustaining i.e affordable, accessible and reliable. This is not the case as the African digital infrastructure ecosystem is dominated by profit driven, foreign Multinational Telecom Companies, and Uganda is no exception. These established themselves in the market favored by; cheaper access to capital & skilled labor, superior tech & knowledge coupled with weak legal & policy frameworks in the region.

Focusing on National Telecom Operators (NTOs) of countrywide telecommunication networks in Uganda, this desk review sought to explore the role of ownership/control of these entities in contributing to digital extractivism. It was guided by two objectives; one on mapping owners and controllers of these NTOs and another on establishing how then this leads to digital extractivism. The methodology adopted both a systematic mapping review and narrative literature review given the limited information available on digital extractivism and ownership of digital infrastructure in Uganda.

The mapping showed that Uganda has four licensed National Telecom Operators; MTN UG, Airtel UG, Lycamobile UG and Uganda Telecommunications Corporation Limited (UTel). With the exception of UTEL, the rest are multi billion US dollar Multinational Corporations from South Africa, India and Britain respectively. Regarding management and decision making, each of these subsidiaries has a foreign top executive at the helm of their business operations in Uganda. Together, Airtel and MTN constitute a de facto monopoly with their 90%+ market share in Uganda, which has made competition stiff for new entrants. Several digital extractivist practices were identified as arising from the dominance of these telecom behemoths, the power they hold by virtue of this and the massive scale of their operations. These include; illicit financial flows, value grabbing, capital flight, high pricing and unfair competition.

Operating in a global capitalist model, which itself is extractivist in nature, has further positioned these entities to wield virtually unbridled power in their business operations. The absence of a competitive national telecom, in UTel and its predecessors, has created a vacuum which in filling they have established themselves as indispensable. With telecommunication not only as one of the top taxpayers and employers in Uganda but also a vital need and enabler for economic growth, the government must act on this urgently by; Investing in strengthening and equipping the regulator UCC through capacity development, funding, and tech; Promoting joint ventures between indigenous telecoms and prospective foreign entrants such that new, and preferably, Ugandan companies join the market; Lastly, purpose to establish UTel as a strong competitor to break the duopoly but also ensure that development needs driven by the telecom industry are met.

Contents

Introduction

Digital extractivism is a term that refers to extractivism fostered by digitalization of goods and services,[1] and driven by the proliferation of digital technologies. Digitalization, the leveraging of digital technologies and digitisation in processes, has ramped up in the last decade fueled by the rapid growth of the digital economy and e-services.[2]

To leverage the potential digitalisation presents, digital infrastructure, a foundational pillar necessary for it to be self-sustaining, has to be affordable, accessible and reliable.[3] Its impact on global and national economic development cannot be overlooked[4] as it facilitates the operation of digital technologies.[5] The African digital infrastructure ecosystem is dominated by foreign MultiNational Corporations (MNCs) from the West and Asia, and Uganda is no exception. These foreign entities own and control subsidiaries which have firmly established themselves in the local markets, benefiting from cheaper access to capital and skilled labor, advanced technology and knowledge. Their dominance is further strengthened by the weak legal and policy frameworks on digitalization in the region.[6]

The dominance of these MNCs in the African digital Infrastructure Market is an enabling factor for digital extractivism.[7] In Uganda, this is deepened by the concentration of the market with few big firms[8] leading toa power imbalance that presents a regulatory challenge for the government. Government regulatory oversight is also constrained due to fear of losing these investors.[9] Additional challenges arising from this include; profit maximization at the cost of public development, consumer exploitation through pricing strategies, crowding out and stifling the smaller indigenous firms.[10]

Uganda's telecommunications network sector, a core part of digital infrastructure and focus of this study, is dominated by foreign MultiNational Corporations. Three out of four of the National Telecom Operators are subsidiaries of foreign companies, and the forth, which is the National Telecom, is a Joint venture with a foreign company that holds the controlling stake. Additionally, the same is true in other parts of the digital infrastructure ecosystem such as Tower companies, Backbone operators which gives these foreign companies a competitive advantage.[11]

1 *Iyer, N., Ludger, U., Borokini, F., & Achieng, G. (2021). Automated Imperialism, Expansionist Dreams: Exploring Digital Extractivism in Africa. https://pollicy.org/wp-content/uploads/2021/10/Automated-Imperialism-Expansionist-Dreams-Exploring-Digital-Extractivism-in-Africa_2-1.pdf*

2 *Korea Development Institute (KDI). (2023). Digitalization: aGovernment-Driven, infrastructure-First approach. Global Solutions Journal, (9), 179 - 187. https://www.global-solutions-initiative.org/wp-content/uploads/2023/11/Yoon-Hyun-Kang.pdf*

3 *African Union. (2020). THE DIGITAL TRANSFORMATION STRATEGY FOR AFRICA (2020-2030). African Union.*

4 *Oloyede, A. A., Faruk, N., Noma, N., Tebepah, E., & Nwaulune, A. K. (2023). Measuring the impact of the digital economy in developing countries: A systematic review and meta- analysis. Science Direct, 9(7). https://doi.org/10.1016/j.heliyon.2023.e17654*

5 *Asian Infrastructure Investment Bank (AIIB). (2020). Digital Infrastructure Sector Analysis; Market analysis and technical studies. Asian Infrastructure Investment Bank. https://www.aiib.org/en/policies-strategies/operational-policies/digital-infrastructure-strategy/.content/_download/Full-DISA-Report_final-with-Appendix-2020-01-10.pdf*

6 *Iyer, N., Ludger, U., Borokini, F., & Achieng, G. (2021). Automated Imperialism, Expansionist Dreams: Exploring Digital Extractivism in Africa.*

7 *Amusan, L. (2018). Multinational Corporations' (MNCs) Engagement in Africa: Messiahs or Hypocrites? Journal of African Foreign Affairs, 5(1), 41–62. https://www.jstor.org/stable/26664051*

8 *https://www.kaa.co.ug/kaa-chapter-for-the-chambers-tmt-2020-guide-trends-and-developments/*

9 *Amusan, L. (2018). Multinational Corporations' (MNCs) Engagement in Africa: Messiahs or Hypocrites? Journal of African Foreign Affairs, 5(1), 41–62. https://www.jstor.org/stable/26664051*

10 *UN Economic Commission for Africa. (2023). Digital Infrastructure in Africa. UN Economic Commission for Africa. https://hdl.handle.net/10855/50027*

11 *César Calderón, & Catalina Cantú. (2021). The Impact of Digital Infrastructure on African Development. Office of the Chief Economist, Africa Region.*

Objectives, scope and methodology of the desk review

This study conducted an exploratory review of literature on digital extractivism and digital infrastructure to draw insights on how ownership and control of the telecommunication network infrastructure influences digital extractivism in Uganda. According to the Uganda National Broadband Baseline Survey & Infrastructure Blueprint, the nation is still predominantly a voice & Short Message Service (SMS) market[12] with a low internet penetration rate at 27% as of early 2024.[13] As such, the focus of this study was limited to telecommunications networks which are a major component of digital infrastructure in Uganda and a major source of internet access. These were limited to companies licensed to operate these telecommunication networks across Uganda, i.e. the four National Telecom Operators (NTOs).

It should be noted that this study does not extensively examine the various forms of digital extractivism in detail but rather looks at the concept in a broad sense. The review incorporates knowledge from various sources of literature both academic and non academic. This has been helpful in understanding the nuanced differences between ownership and control of digital infrastructure as well as their effect on digital extractivism in Uganda. Additionally, they have guided a first of its kind mapping of Uganda's National Telecom Operators.

The methodology applied two approaches: narrative literature and systematic mapping reviews, both of which enriched each other's findings. As an exploratory study, this approach was found appropriate given the limited information available on, and the sensitivity of the subject of digital extractivism and ownership of digital infrastructure in Uganda. The study adapted the categorization of digital infrastructure used by the Asian Infrastructure Development Bank in the 2020 Digital Infrastructure sector analysis report.[14]

Systematic mapping reviews helped identify linkages between variables through a subjective synthesis of published literature on the topic from all sources.[15] The narrative literature review permitted flexibility in the research by giving a wide body of studies to review and make a critique or interpretation.[16] These included telecom industry reports, company reports, blogs, websites, Ugandan legal & regulatory documents, regional and global frameworks & policies of the sector, news articles, research papers, journal articles, ebooks.

The goal of the study was to explore the role of ownership & control of National Telecom Operators in Digital extractivism in Uganda. This was driven by two objectives;

- To map owners and controllers of the National Telecom Operators in Uganda.
- To establish how ownership and control of National Telecom Operators facilitates digital extractivism in Uganda.

12 Ministry of ICT and National Guidance. (2022). National Broadband Baseline Survey & Infrastructure Blueprint. In National Information Technology Authority. National Information Technology Authority (NITA-U). https://ict.go.ug/wp-content/uploads/2022/01/Uganda-Broadband-Baseline-and-Infrastructure-Blueprint-Draft-2.pdf

13 Kemp, S. (2024, February 23). Digital 2024: Uganda — DataReportal – Global Digital Insights. DataReportal – Global Digital Insights. https://datareportal.com/reports/digital-2024-uganda

14 Asian Infrastructure Investment Bank (AIIB). (2020). Digital Infrastructure Sector Analysis; Market analysis and technical studies. Asian Infrastructure Investment Bank. https://www.aiib.org/en/policies-strategies/operational-policies/digital-infrastructure-strategy/.content/_download/Full-DISA-Report_final-with-Appendix-2020-01-10.pdf

15 Cooper ID. What is a "mapping study?". J Med Libr Assoc. 2016 Jan;104(1):76-8. doi: 10.3163/1536-5050.104.1.013. PMID: 26807058; PMCID: PMC4722648.

16 Sukhera J. Narrative Reviews: Flexible, Rigorous, and Practical. J Grad Med Educ. 2022 Aug;14(4):414-417. doi: 10.4300/JGME-D-22-00480.1. PMID: 35991099; PMCID: PMC9380636.

Understanding Digital Extractivism

Over time, Extractivism as a concept has evolved from its traditional application in the natural resources sector, originally in oil and mining, to other sectors where similar characteristics of extractivist tendencies have been reported.[17] As scholarship of the subject has grown, so has its interpretation. For some, it is a mode of capital accumulation while others it is an economic model both of which are marked by extensive and intensive exploitative practices.[18] From a socio economic view, extractivism is also recognized as a collection of narratives, ideologies, policies and mindsets that promote and/or rationalize destructive modes of economic organizing.[19]

Chagnon et al agreed that broadly as a concept, *"Extractivism refers to a complex of self-reinforcing practices, mentalities, and power differentials underwriting and rationalizing socio-ecologically destructive modes of organizing life through subjugation, depletion, and non-reciprocity."*[20] Digital extractivism then refers to the type of extractivism based on digitalization of goods and services, and fostered by the proliferation of digital technologies. Digitalization, the leveraging of digital technologies and digitisation in processes, has ramped up in the last decade fueled by the rapid growth of the digital economy and e-services. Iyer et[21] al defined digital extractivism as *"a form of exploitation based on the virtualization or digitization of commodities and services through a borderless digital capitalism that perpetuates pre-existing colonial practices of value grabbing and wealth accumulation."*

It is a part of a broader group of extractivism in which various forms have been identified including financial extractivism, data extractivism, urban extractivism and lately in light of climate change, "green" extractivism.[22] As with other forms of extractivism, digital extractivism entails the following defining characteristics which cut across all forms of extractivism.[23]

- Intensive & extensive exploitation of a resource; both renewable & non renewable. Several resources can be exploited in digital extractivism concurrently or one at a go.
- Self-reinforcing practices that perpetuate the other, entrenching extractivism as a way of life or business.
- Social ecologically destructive extraction manifesting both virtually and physically.
- Massive siphoning of resource wealth from the global south to global west. These include but are not limited to; labor, data, capital, culture, minerals etc. and may differ depending on the context.
- Domination of and monopolization of a resource.
- Value grabbing which comprises the ways in which value is extracted directly and indirectly through linkages, at no cost or significantly underpaid for.

17 *Riofrancos, Thea. November 11, 2020. "Extractivism and Extractivismo." Global South Studies: A Collective Publication with The Global South. https://globalsouthstudies.as.virginia.edu/key-concepts/extractivism-and-extractivismo*
18 *Research: The state of the debate on development, extractivism and capital accumulation in Ecuador. https://cdes.org.ec/web/investigacion-el-estado-del-debate-sobre-desarrollo-extractivismo-y-acumulacion-de-capital-en-el-ecuador/#_Toc373742413*
19 *Chagnon, C. W. et al. (2022) 'From extractivism to global extractivism: the evolution of an organizing concept', The Journal of Peasant Studies, 49(4), pp. 760–792. doi: 10.1080/03066150.2022.2069015.*
20 *Ibid*
21 *Iyer, N., Ludger, U., Borokini, F., & Achieng, G. (2021). Automated Imperialism, Expansionist Dreams: Exploring Digital Extractivism in Africa.*
22 *Chagnon, C. W. et al. (2022) 'From extractivism to global extractivism: the evolution of an organizing concept', The Journal of Peasant Studies, 49(4), pp. 760–792. doi: 10.1080/03066150.2022.2069015.*
23 *Ibid*

The relevance of ownership & control of digital infrastructure

Digital infrastructure defined

Digital infrastructure is defined as an integrated system of hardware and software components of Information Communication Technologies (ICT) that serves as the backbone for digitalization of goods and services.[24] The Sustainable Digital Infrastructure Alliance (SDIA) further defines Digital Infrastructure as *"The total physical and software-based infrastructure necessary to deliver digital goods, products & services. This includes data centers, fiber infrastructure, server hardware, personnel, IT virtualization & infrastructure software, operating systems, etc.".*[25] It is digital Infrastructure that facilitates the operation of digital technologies[26] such as 5G, the Internet of things, virtualization and artificial Intelligence that are rapidly advancing across the globe.[27] This is primarily hinged on the technologies' ability to boost human productivity and efficiency which further deepened post pandemic[28] when they became the primary means of connectivity among people.[29]

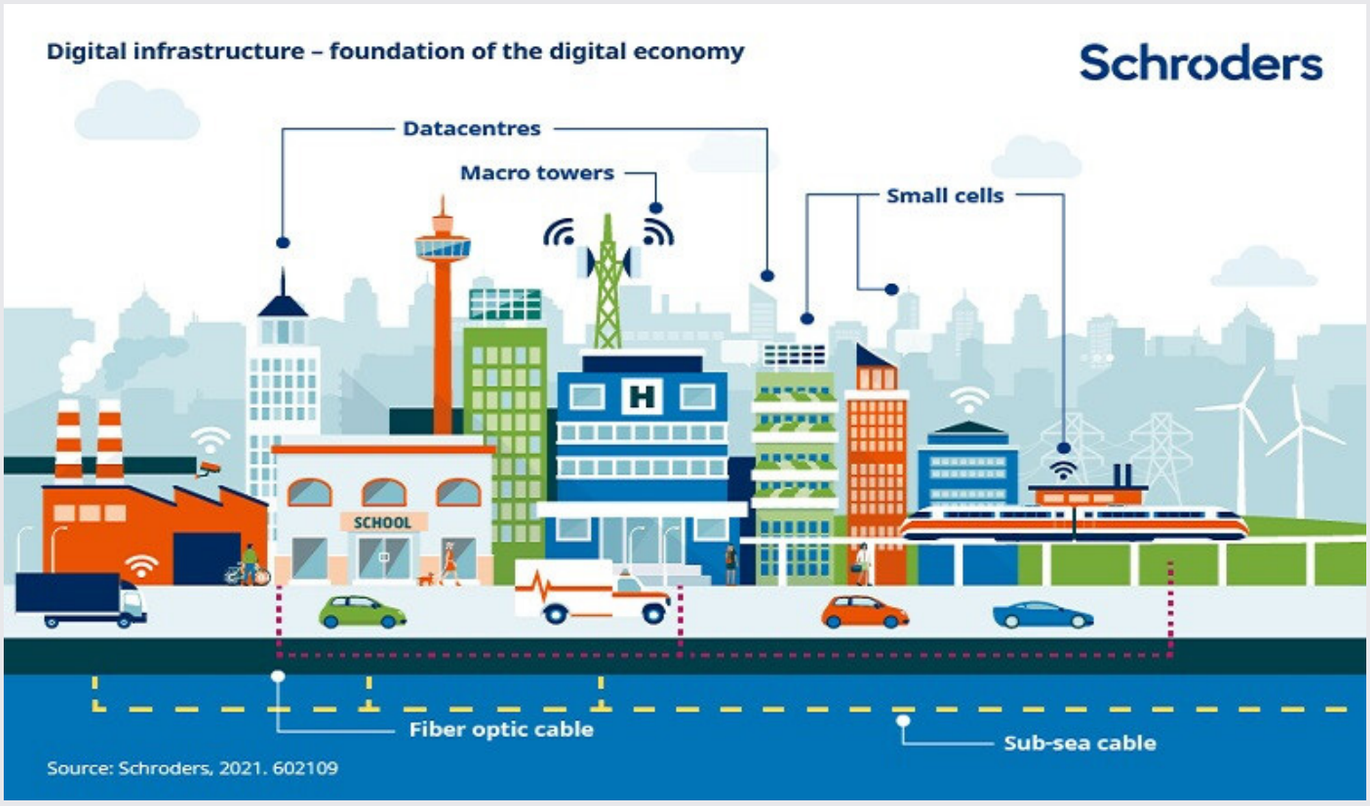


Fig. 1: A simple illustration of digital infrastructure hardware

24 *Korea Development Institute (KDI). (2023). Digitalization: aGovernment-Driven, infrastructure-First approach. Global Solutions Journal, (9), 179 - 187. Digitalization: a Government-Driven, infrastructure-First approach*
25 *Definition for Digital infrastructure. (n.d.). Sustainable Digital Infrastructure Alliance. Retrieved May 1, 2024, from Definition for Digital infrastructure*
26 *Asian Infrastructure Investment Bank (AIIB). (2020). Digital Infrastructure Sector Analysis; Market analysis and technical studies. Asian Infrastructure Investment Bank. Digital Infrastructure Sector Analysis*
27 *Economic Commission for Latin America and the Caribbean (ECLAC). (2021). Digital technologies for a new future. UN Publications. Digital technologies for a new future*
28 *International Telecommunication Union (ITU). (2020). Economic impact of COVID-19 on digital infrastructure. Report of an Economic Experts Roundtable organized by ITU. ITU.*
29 *César Calderón, & Catalina Cantú. (2021). The Impact of Digital Infrastructure on African Development. Office of the Chief Economist, Africa Region. https://documents1.worldbank.org/curated/en/382651637242152978/pdf/The-Impact-of-Digital-Infrastructure-on-African-Development.pdf*

The global demand for digital infrastructure is growing very fast. Resultantly, its impact on global and national economic development cannot be overlooked.[30] Additionally, the rapid growth of the digital economy and electronic services have further fuelled demand for digital technologies increasing the demand for digital infrastructure.[31] In 2023 the global market size of digital infrastructure was 233.71 Billion dollars and this is expected to hit one trillion dollars in 2032.[32] Digitalization, the leveraging of digital technologies and digital data in processes is picking up equally fast. In 2022, over 13 billion devices were connected to the IoT around the globe and these are expected to double between 2023 and 2028.[33]

Digital Infrastructure is expected to play a crucial role in driving Africa's digital transformation[34] and economic growth.[35] As of January 2024, 66% of the world's population was connected to the internet, an equivalent of 5.35 billion people[36] and only 577 Million of these were Africans.[37] Of the latter, only 13 million Ugandans were connected to the internet as of 2024.[38] Digitalization is a key component in unlocking the potential of the African Continental Free Trade Area (AfCFTA) and a powerful tool for achieving Africa Agenda 2063. This agenda represents Africa's blueprint and master plan for transforming the continent into a global powerhouse by 2063.[39] It is no surprise therefore that both the African Union Digital Transformation Strategy for Africa and Uganda's Digital Transformation Roadmap focus on digital Infrastructure development as one of the foundational pillars in achieving digital transformation.[40]

Components of Digital Infrastructure

Digital Infrastructure exists as an ecosystem composed of both virtual and physical integrated and interconnected components across the world.[41] For this study, digital Infrastructure has been categorized into four categories adapted from the 2020 Digital Infrastructure Sector Analysis[42] by the Asian Infrastructure Investment Bank as follows;

Connectivity and Transport: This comprises the physical infrastructure that carries digital data between devices, data infrastructure & services. These are further subdivided into shared infrastructure i.e., Towers, Satellites, Nodes, Internet Exchange points; Telecommunication networks & Broadband infrastructure such as Internet backbone, Fibre optic networks, servers, Masts. Etc.

30 Oloyede, A. A., Faruk, N., Noma, N., Tebepah, E., & Nwaulune, A. K. (2023). Measuring the impact of the digital economy in developing countries: A systematic review and meta- analysis. Science Direct, 9(7). https://doi.org/10.1016/j.heliyon.2023.e17654

31 Korea Development Institute (KDI). (2023). Digitalization: aGovernment-Driven, infrastructure-First approach. Global Solutions Journal, (9), 179 - 187. https://www.global-solutions-initiative.org/wp-content/uploads/2023/11/Yoon-Hyun-Kang.pdf

32 Global Digital Infrastructure Market Size, Trends,Share 2032. (2023, June). Custom Market Insights. Retrieved May 4, 2024, from https://www.custommarketinsights.com/report/digital-infrastructure-market/

33 World Bank. (2023). Digital Progress and Trends Report 2023. World Bank. https://www.worldbank.org/en/publication/digital-progress-and-trends-report#Data

34 The Role of Digitalization in the Decade of Action for Africa. (2020, September 7th September). UNCTAD.https://unctad.org/news/role-digitalization-decade-action-africa

35 African Union. (2020). THE DIGITAL TRANSFORMATION STRATEGY FOR AFRICA (2020-2030). African Union. https://au.int/sites/default/files/documents/38507-doc-dts-english.pdf

36 Petrosyan, A. (2024, January 31). Internet and social media users in the world 2024. Statista. Retrieved May 7, 2024, from https://www.statista.com/statistics/617136/digital-population-worldwide/

37 Galal, S. (2024, January 10th). Internet usage in Africa - statistics & facts. Statista. Retrieved May 7, 2024, from https://www.statista.com/topics/9813/internet-usage-in-africa/#editorsPicks

38 Kemp, S. (2024, February 23). Digital 2024: Uganda — DataReportal – Global Digital Insights. DataReportal – Global Digital Insights. https://datareportal.com/reports/digital-2024-uganda

39 African Union. (2020). THE DIGITAL TRANSFORMATION STRATEGY FOR AFRICA (2020-2030). African Union. https://au.int/sites/default/files/documents/38507-doc-dts-english.pdf

40 Ministry of ICT and National Guidance. (2023). Digital Transformation Network 2023/2024 - 2027/2028. https://ict.go.ug/wp-content/uploads/2023/08/Digital-Transformation-Roadmap.pdf

41 https://assets.kpmg.com/content/dam/kpmg/pdf/2014/12/CII-CONNECT-2014-final.pdf

42 Asian Infrastructure Investment Bank (AIIB). (2020). Digital Infrastructure Sector Analysis; Market analysis and technical studies. Asian Infrastructure Investment Bank. https://www.aiib.org/en/policies-strategies/operational-policies/digital-infrastructure-strategy/.content/_download/Full-DISA-Report_final-with-Appendix-2020-01-10.pdf

Storage and Processing: This category refers to computing power to run services and storage of data of users. It includes data centers, cloud computing services and the physical locations in which they are housed. All the digital data needs to be stored, managed and processed somewhere to be transferred across the ecosystem in real time.

Services and Applications: This category consists of functions/applications that create economic value-add to business sectors and customers. This includes digital services and applications which make digitalization possible as well as the cyber security measures for data protection Examples include; firewalls and encryptions for security, Social media apps, e-commerce platforms, e-government service portals and systems among others.

Terminals and Devices: This consists of the platforms that form interfaces between users (human or machines) and the digital services and applications. These interfaces are what support mobile communication on phones, laptops and smart appliances as well as advanced tech like simulation, virtual reality, edge computing and the like.

Telecommunications Networks as a component of Digital Infrastructure in Uganda.

For this study, telecommunications networks were chosen as an area of focus as the most advanced sector within the Ugandan digital infrastructure ecosystem. These are crucial for connectivity in digitalization as they facilitate transmission of voice, messages, multimedia content and data. The telecommunications sector in Uganda is regulated by the Uganda Communications Commission (UCC) and one of its functions as set out in the UCC Act of 2013 is the licensing of telecom network operators in the country.[43] With the exception of national telecom operators who may provide one or both, licensees are broadly categorized into infrastructure providers and service providers. The former provide telecommunication infrastructure services to licensed operators while the latter provide voice & data services, or Capacity Resale Services.[44] In addition to the license categories, authorizations are provided to regulate companies in distribution, vending, installation, manufacture and disposal of telecom equipment.

43 Uganda Communications Commission Act 2013, s 22 https://www.ucc.co.ug/wp-content/uploads/2023/10/UCC-Act-2013.pdf
44 Description of Telecom licenses and Authorizations. https://www.ucc.co.ug/wp-content/uploads/2023/10/DESCRIPTION-OF-TELECOM-LICENSES-AND-AUTHORISATIONS.pdf

Digital Extractivism in Uganda's Telecom Sector

Mapping ownership/control of National Telecom Operators in Uganda

To appreciate the link between control and ownership of digital infrastructure and digital extractivism, a mapping of owners, controllers and top management in Uganda was undertaken. Taking into consideration the study objectives, time, capacity & scope of the study, these were restricted to countrywide telecommunication network operators referred to as National Telecom Operators. National Telecom Operators (NTOs) are companies that are licensed to establish and provide both telecommunication infrastructure and services across the entire country.[45] As of 2024, there are only four telecom companies Licensed as NTOs one of which is the national telecom company. These are MTN Uganda Limited, Airtel Uganda Limited, LycaMobile Uganda and Uganda Telecommunication Corporation Company (UTel).

Ownership vs Control Implications

The mapping above confirmed that Uganda's telecom industry is dominated by foreign multinational Telecom companies. MTN Group is the largest mobile telecom provider on the African continent[46] while Bharti Airtel is the second largest telecom[47] company by subscription in the world. The massive scale of operation and reach of these corporations affords them significant financial & technical power and strengthens their autonomy. Ultimately this creates an unequal power dynamic which presents an oversight and regulatory challenge for the UCC as the regulator.

As the core terminologies under exploration in the study, it was imperative to define what "ownership" and "control" refer to. In corporate governance, the former denotes equity distribution or shareholding whereas the latter speaks to management and decision making.[48] When there is a division between ownership and control, as is the case in public companies, ownership is often separate and different from control. This separation while easily made on paper, its implementation on ground is not automatic. It is influenced by internal and external factors such as the power dynamics, the identity of shareholders, independence of the management, corporate governance track record of the company and business legal & policy framework in the country of operation.[49] This distinction, contextualized below to Uganda's NTOs, is crucial in understanding how ownership/control facilitates digital extractivism.

Management & Decision making

MTN UG, Airtel UG and Lycamobile UG have foreign nationals as top executives and at the helm of their business operations. Only the national Telecom Utel has one that is Ugandan. In as much as the choice of top executive may purely be a strategic decision or based on merit and skills, its impact on control and ownership of the company cannot be overlooked. Voting rights and key business decisions are driven by top management who in turn are set on maximizing profits. There are several Ugandans within other executive, senior leadership & management positions, in each NTO however the study does not map this.

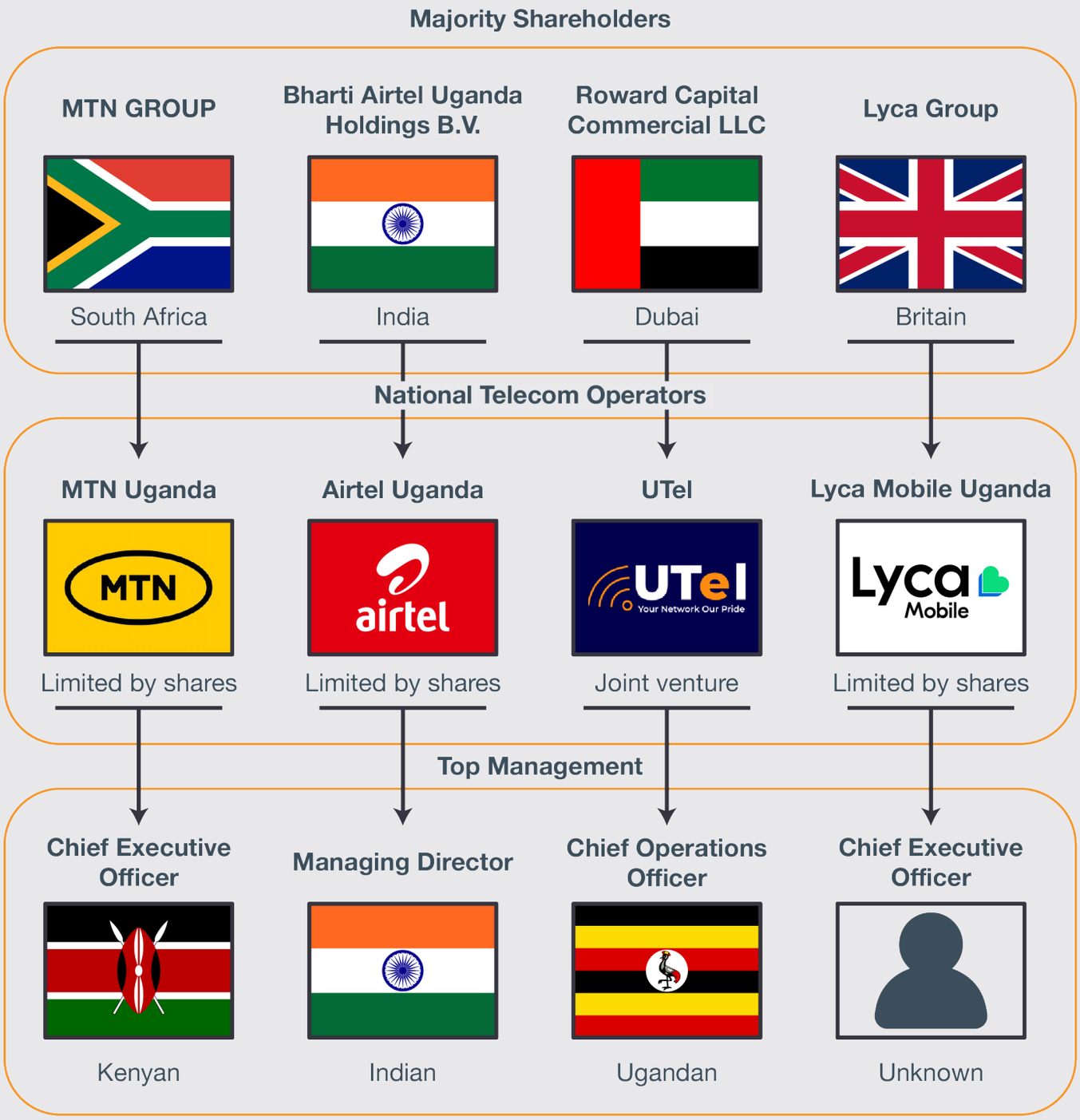
45 Ibid

46 Derrick, M. (2023, July). Top 10 Telco providers Transforming Africa. Mobile Magazine. https://mobile-magazine.com/articles/top-10-telco-providers-transforming-africa

47 Sun, S. (2023, September). Number of customers of Bharti Airtel Limited from financial year 2013 to 2023. Statista. https://www.statista.com/statistics/740315/india-number-of-bharti-airtel-customers/

48 Vaia. (n.d.). Divorce Between Ownership And Control. https://www.vaia.com/en-us/explanations/business-studies/change-management/divorce-between-ownership-and-control/#:~:text=Ownership%20is%20typically%20about%20having,reducing%20conflicts%20and%20aligning%20interests.

49 Amusan, L. (2018). Multinational Corporations' (MNCs) Engagement in Africa: Messiahs or Hypocrites? Journal of African Foreign Affairs, 5(1), 41–62. https://www.jstor.org/stable/26664051


Majority Shareholders
MTN GROUP
South Africa
Bharti Airtel Uganda Holdings B.V.
India
Roward Capital Commercial LLC
Dubai
Lyca Group
Britain
National Telecom Operators
MTN Uganda
MTN
Limited by shares
Airtel Uganda
airtel
Limited by shares
UTel
UTel
Your Network Our Pride
Joint venture
Lyca Mobile Uganda
Lyca Mobile
Limited by shares
Top Management
Chief Executive Officer
Kenyan
Managing Director
Indian
Chief Operations Officer
Ugandan
Chief Executive Officer
Unknown

Notwithstanding Ugandans in the executive and management positions, as agents of the principal i.e. the owners or shareholders, it should be noted that they are awarded depending on how well they represent and advance their principal's interests.

Shareholding

The country has four licensed National Telecom operators and three of these Lycamobile UG, MTN UG and Airtel UG are subsidiaries of foreign companies. Overall, Uganda's telecommunication sector is dominated by foreign companies; both in terms of number and market share. At the end of 2023, Uganda had 35 million + mobile subscriptions with Airtel and MTN accounting for 19.5 million[50] and 17 million[51] respectively. As subsidiaries, this implies that their parent companies own the majority stake and as such have controlling rights. NTOs are required by law[52] to be public companies with at least 20% ownership primarily ring fenced for Ugandans and East Africans. This requirement was fully effected by MTN UG[53] as of July 2024 and Airtel is progressing towards compliance.[54]

The Fourth NTO is the official national telecom, Uganda Telecommunications Corporation Limited (UTel) formerly Uganda Telecom Limited. UTel is 40% owned by the government of Uganda through the Ministry of Finance, Planning and Economic Development and the Ministry of ICT, and so meets the ownership criteria. It operates as a joint venture between the Ugandan government and Roward Capital Commercial LLC, an investment firm headquartered in Dubai which holds a 60% stake, and thus boasts controlling rights. Over the years the National Telecom has faced significant challenges in establishing itself in the sector, including issues ranging from mismanagement, government interference, poor corporate governance, under investment, and stiff competition foreign NTOs MTN and Airtel.[55]

50 MTN Uganda Limited. (2024). MTN Uganda Limited: Audited financial results for the financial year ended 31 December 2023. https://www.mtn.co.ug/wp-content/uploads/sites/7/2024/03/MTN-Uganda-Limited-FY2023-Earnings-Release.pdf

51 Airtel Uganda Limited. (2024). Airtel Uganda Limited 2023 Annual Report. In Airtel Uganda Limited 2023. https://www.airtel.co.ug/assets/pdf/Airtel-Uganda-Limited-2023-Annual-Report.pdf

52 The National Broadband Policy. (2018). Ministry of Information, Communications Technology & National Guidance. https://www.ict.go.ug/wp-content/uploads/2018/10/NATIONAL-BROADBAND-POLICY-2018.pdf

53 ITWeb. (2024, June). MTN concludes shares offer in Uganda. IT Web. https://itweb.africa/content/mYZRXM9g9ZZvOgA8

54 Juma, V. (2024, July). Airtel Uganda's parent to offload extra 9.1pc stake. The East African. https://www.theeastafrican.co.ke/tea/business/airtel-uganda-s-parent-to-offload-extra-9-1pc-stake-4680714

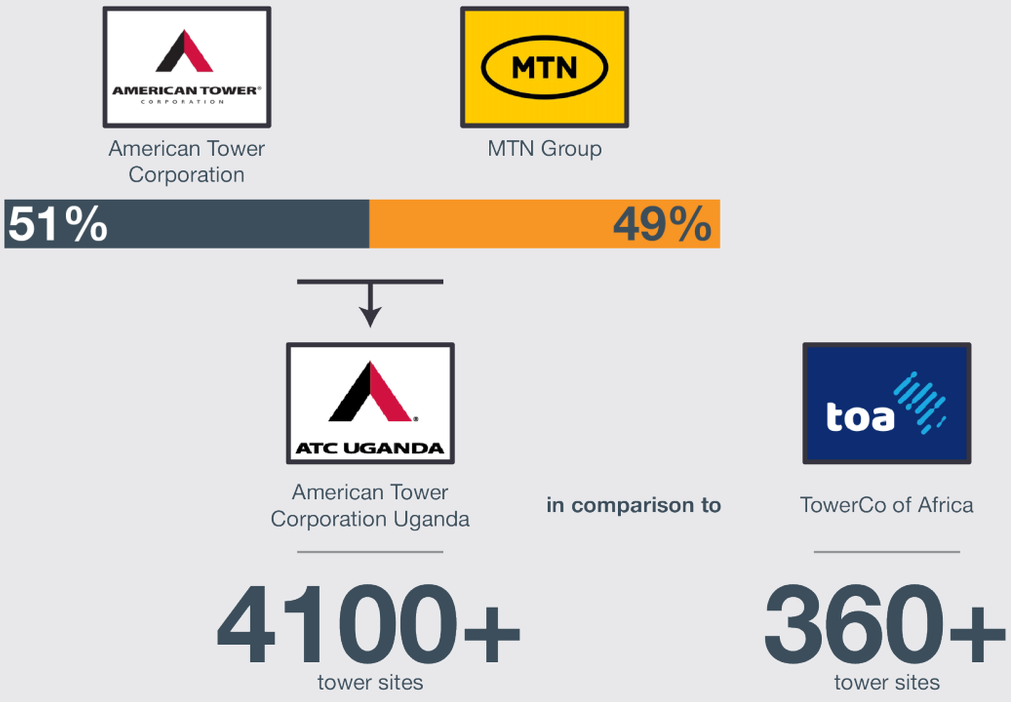
55 The rise and death of Uganda Telecom and the birth of the new UTCL, a new 100% state-owned telco. But has Gov't really learnt or forgotten anything? (2022, November). CEO East Africa. https://www.ceo.co.ug/the-rise-and-death-of-uganda-telecom-and-the-birth-of-the-new-utcl-a-new-100-state-owned-telco-but-has-govt-really-learnt-or-forgotten-anything/#:~:text=An%20obsolete%20network%20caused%20by,Uganda%20Telecom%20to%20its%20knees.

How Digital Infrastructure Control and Ownership facilitate Digital Extractivism

Case study of American Tower Corporation Uganda

The Telecom industry saw a trend in which Telecoms were divesting their towers to tower companies in a bid to focus on their core business.[56] MTN and Warid telecom, the largest telecoms in Uganda at the time followed suit selling off their towers to multinationals American Tower and Eaton. In 2011, American Tower Corporation (ATC) Uganda was created as a provider of wireless and broadcast towers, other right-of-way options, managing rooftops and services in the wireless and broadcast communications industry.[57] It is managed by American Tower, and controlled by a holding Joint Venture company of which American Tower holds a 51% stake and MTN Group 49% stake. As of Jan 2024, American Tower was the largest Tower company in the world[58] and with the most valuable Real Estate Investment Trust (REIT) stock.

In 2019, American Tower acquired Eaton Towers business interests including Eaton Uganda. This created a monopoly tower company in ATC Uganda, as the only tower company in the country prior to the creation of Ubuntu Towers in 2020. Even with the entry of Ubuntu which later became TowerCo of Africa Uganda (TOA), ATC remains a de facto tower company monopoly in Uganda in light of its market share, scope, and scale controlling about 90% of the Ugandan tower market. It currently operates 4100+ sites in comparison to TOA's 360+ sites. ATC Uganda is in a dominant position leaving little substitutes for the consumers to consider. With towers as a core part of the telecom value chain, being a de facto monopoly has established ATC Uganda's position in the market.



56 *Lipscombe, P. (2023, August). The Great Telecom Tower sell-off. Data Center Dynamics (DCD). https://www.datacenterdynamics.com/en/analysis/the-great-telecom-tower-sell-off/*

57 *American Tower Corporation. (n.d.). What We Do. https://atcuganda.ug/en/*

58 *Taylor, P. (2024, February). Ranking of leading cellular tower companies worldwide as of January 2024, by tower count. Statista. https://www.statista.com/statistics/1324684/leading-telecom-tower-companies-worldwide/*

This has been seen as problematic in terms of maintaining fair competition and has been at the core of a back and forth battle with now defunct telecom operator Smile.[59] In November 2021, Ubuntu Towers also dragged ATC Uganda to UCC over breach of rules of fair competition and abuse of its dominant position over its contract with Airtel as Eaton's successor. In early 2024, American Tower was under investigation by the COMESA competition commission for another alleged anti-competitive rules violation related to its 2022 agreement with Airtel Africa[60]. Smaller operators also raised concerns regarding ATC's pricing and lease terms which they cited as being "not indicative of market circumstances" and "restrictive" all of which they attributed to its monopolistic position[61]. Notwithstanding ATC's assertions of compliance and regulation by UCC,[62] the control it wields over the market raises concerns about its potential abuse given the power dynamic involved both at a local and global level.

Extractivist tendencies and practices facilitated by dominance of foreign companies in Uganda's Telecom sector.

National Telecom operators contribute significantly to the Ugandan economy through; tax revenue and Licensing fees derived from their business operations, Corporate Social Responsibility efforts, direct and indirect employment for hundreds of thousands and development of digital infrastructure. Airtel UG and MTN UG are among the country's long standing top tax payers[63] a position that has since been enhanced with their entry into fintech through airtel money and Momo Pay. Notwithstanding, their business operations have facilitated digital extractivism in the following ways explained below;

Unfair Competition

Airtel and MTN dominate the Ugandan mobile market, holding an artificial duopoly with over 90% of the Market share divided between the two of them. By the end of 2023, Uganda had over 35 million mobile subscriptions with Airtel and MTN accounting for 19.5 million[64] and 17 million[65] respectively. Despite the UCC's regulatory efforts and policies aimed at preventing unfair competition, the telecom landscape remains challenging for smaller telecom companies that have to compete with them. These large operators benefit from economies of scale, accessing shared digital infrastructure at lower costs and in addition to possessing advanced proprietary infrastructure smaller companies cannot afford. Furthermore, the huge capital requirement to operate a national telcom, moreso in Uganda whose digital infrastructure is still underdeveloped, have contributed to restricted entry into the market strengthening the dominance of these major players.

59 https://www.ceo.co.ug/we-cant-breathe-small-telcos-and-isps-squirm-and-writhe-over-atc-ugandas-towering-market-dominance/
60 https://developingtelecoms.com/telecom-business/telecom-regulation/16243-regulator-investigates-atc-airtel-africa.html?utm_source=related_articles&utm_medium=website&utm_campaign=related_articles_click
61 https://www.ceo.co.ug/we-cant-breathe-small-telcos-and-isps-squirm-and-writhe-over-atc-ugandas-towering-market-dominance/
62 Ibid
63 https://marcopolis.net/top-10-taxpayers-in-uganda.html
64 MTN Uganda Limited. (2024). MTN Uganda Limited: Audited financial results for the financial year ended 31 December 2023. https://www.mtn.co.ug/wp-content/uploads/sites/7/2024/03/MTN-Uganda-Limited-FY2023-Earnings-Release.pdf
65 Airtel Uganda Limited. (2024). Airtel Uganda Limited 2023 Annual Report. In Airtel Uganda Limited 2023. https://www.airtel.co.ug/assets/pdf/Airtel-Uganda-Limited-2023-Annual-Report.pdf

High Pricing

Notwithstanding the high cost associated with running and profitably operating a telecom company in Uganda[66], the relatively high cost of data and voice services cannot be completely detached from limited competition. As of 2024 Uganda has one of the highest broadband costs within East Africa[67] but with few operators available, consumers have limited options and have to bear with whichever service is presented. As digital technologies entrench themselves, the economic drawbacks of expensive broadband and voice services are significant. This situation highlights a self perpetuating cycle of extractivism where high costs reinforce themselves and result in additional negative effects, either directly or through the actions of the dominant operators.

Capital Flight

In response to the rapid growth of the telecommunications sector, which generated UGX 1.36 trillion in revenue in June 2023 alone,[68] the Government through the 2018 National Broadband Policy[69] together with the Uganda Communications Commission, set in place measures to intentionally retain more value in the country. According to the Policy and as a condition for the award of new or renewal of NTO licenses, companies are required to list at least 20% of their company shares on the Uganda Securities Exchange (USE) within two years of License award.

This policy aims to provide nationals an opportunity to own a stake in these companies and to mitigate the control wielded by foreign companies by making them accountable to local shareholders. Both Airtel and MTN have complied by listing on the USE, a move anticipated by the Capital Markets Authority to capitalize the Exchange by approximately $1Billion.[70] However, the effectiveness of this measure in retaining value in country is limited as the unlisted 80%[71] of the shares remain owned by parent companies and are repatriated as dividends to foreign shareholders.[72] Consequently, this wealth remains largely inaccessible to Ugandans whose demand sustains these businesses.

Illicit Financial flows

One of the channels of extractivism is illicit capital flows which Global Financial Integrity defines as *"illegal movements of money or capital from one country to another"*.[73] The ownership structures of Multinational Corporations (MNCs) in the telecommunications sector, where these companies often function as s subsidiaries, within a group of companies incorporated in different jurisdictions with different tax laws, complicate efforts to track tax liabilities and financial movements. Given the substantial revenue generated and significant amount of money in circulation through their fintech operations, these companies have

66 *Kasibante, M. H. (2022, October). Why the cost of internet is higher in Uganda. Business Times Uganda. https://businesstimesug.com/the-cost-of-internet/*

67 *Mutabazi, H. (2024, July). Hefty costs stifle Ugandans' internet rights. New Vision. https://www.newvision.co.ug/category/report/hefty-costs-stifle-ugandans-internet-rights-NV_191318#google_vignette*

68 *https://www.ucc.co.ug/wp-content/uploads/2024/03/UCC-Market-Report-for-June-2023-FY-4Q22-3.pdf*

69 *Ministry of ICT and National Guidance. (2022). National Broadband Baseline Survey & Infrastructure Blueprint. National Information Technology Authority. National Information Technology Authority (NITA-U). https://ict.go.ug/wp-content/uploads/2022/01/Uganda-Broadband-Baseline-and-Infrastructure-Blueprint-Draft-2.pdf*

70 *Mobile network operators in Uganda given one year to sell 20% of shares to locals. (2021, June). Africa CEO Voices. https://www.africaceovoices.com/mobile-network-operators-in-uganda-given-one-year-to-sell-20-of-shares-to-locals/#:~:text=According%20to%20authorities%2C%20listing%20on,ownership%20of%20the%20telecommunications%20industry*

71 *MTN Uganda Limited. (2024). MTN Uganda Limited: Audited financial results for the financial year ended 31 December 2023. https://www.mtn.co.ug/wp-content/uploads/sites/7/2024/03/MTN-Uganda-Limited-FY2023-Earnings-Release.pdf*

72 *Airtel Uganda Limited. (2024). Airtel Uganda Limited 2023 Annual Report. In Airtel Uganda Limited 2023. https://www.airtel.co.ug/assets/pdf/Airtel-Uganda-Limited-2023-Annual-Report.pdf*

73 *Illicit financial flows. (n.d.). Global Financial Integrity. https://gfintegrity.org/issue/illicit-financial-flows/*

come under suspicion of illicit financial flows.[74] The National Broadband Policy[75] highlights an example of this concern: *"In October 2015, a joint investigation by the Observer and Finance Uncovered, a global investigative journalism network, unearthed how between 2003 and 2009 MTN Uganda had shifted 3% of its revenue every year to MTN International in Mauritius in the name of 'management services' even when the company itself (MTN) confirmed that the Mauritian company employs no staff at all."*

Value grabbing

In 2018 the Government introduced the Intelligent Network Monitoring System (INMS) to monitor daily earnings of telecommunications companies.[76] Previously, the government had depended entirely on self declaration of revenues by the NTOs, assessing tax on what they reported through company filings with URA. The INMS initiative was prompted by revelations of widespread under-declaration of revenue[77] and tax evasion by telecom players leading to an estimated annual loss of 1.2 trillion shillings in government revenue.[78] Five years into its implementation, the effectiveness of the INMS in recovering the previously lost revenue remains uncertain.[79]

Data Extractivism

Last year, Uganda joined several African countries in sim regularization, an exercise to verify identity of registered sim card holders, and performed by telecom operators[80]. The exercise provided for in The Regulation of Interception of Communications Act, 2010 involved sim holders physically visiting telecom shops to be verified or risk disconnection[81]. This saw telecom companies collect comprehensive and sensitive information on their customers including; National Identification Number, residential and business addresses, biometrics and any other info which the companies deemed necessary to comply with the Act[82]. As foreign companies, having access to such sensitive data on the majority of a country's populace is a risk especially when the responsibility to protect it also lies primarily with them. Additionally, it provides an open data mine through which more value can be created and extracted by these companies at little to no pay by simply leveraging data analytics.

74 Daily Monitor. (2018, July). Uganda regulator sets up system to track daily telco revenues, social media tax. The East African. https://www.theeastafrican.co.ke/tea/business/uganda-regulator-sets-up-system-to-track-daily-telco-revenues-social-media-tax-1397450

75 Ministry of ICT and National Guidance. (2022). National Broadband Baseline Survey & Infrastructure Blueprint. National Information Technology Authority. National Information Technology Authority (NITA-U). https://ict.go.ug/wp-content/uploads/2022/01/Uganda-Broadband-Baseline-and-Infrastructure-Blueprint-Draft-2.pdf

76 Daily Monitor. (2018, July). Uganda regulator sets up system to track daily telco revenues, social media tax. The East African. https://www.theeastafrican.co.ke/tea/business/uganda-regulator-sets-up-system-to-track-daily-telco-revenues-social-media-tax-1397450

77 Ibid

78 he Independent. (2016, June). BUDGET: Museveni warns telecoms on tax evasion. The Independent. https://www.independent.co.ug/budget-museveni-warns-telecoms-on-tax-evasion/

79 Priezkalns, E. (2022, May). Does Uganda intend to replace its $20mn national RA system with GVG? CommsRISK. https://commsrisk.com/does-uganda-intend-to-replace-its-20mn-national-ra-system-with-gvg/

80 The Independent. (2023, November). UCC, Telecoms face 600,000 unregistered SIM Card dilemma. The Independent. https://www.independent.co.ug/ucc-telecoms-face-600000-unregistered-sim-card-dilemma/

81 Government of Uganda. (2010). The Regulation of Interception of Communications Act, 2010. Uganda Legal Information Institute (ULII). UPPC. https://ulii.org/akn/ug/act/2010/18/eng@2010-09-03

82 O'Grady, V. (2023, November). Ugandan SIM registration comes up short as deadline approaches. Developing Telecoms. https://developingtelecoms.com/telecom-business/telecom-regulation/15765-ugandan-sim-registration-comes-up-short-as-deadline-approaches.html

Recommendations

UCC should enhance its capacity in terms of funding, manpower, skills, monitoring technology, to firmly regulate the sector. It is pertinent however that this regulation is not constrictive of the free market that it stifles investment. Striking this balance between national and investor interests will not be without challenges and is dependent on the government's success in creating a strong policy environment in which UCC can function independently.

The minimum percentage for listing of NTO shares on the USE should be increased by UCC from 20% to at least 35%. Other African countries like Ghana, that are dominated by foreign telecoms yet have more control have set a market precedent which if followed should effectively increase the nationals shareholding, control and in-country value retained.

The government should prioritize the establishment of a national telcom UTel into a competitive company that is capable of thriving in the market. Collaborating with its partner Roward, this calls for proper management and a stop to destructive government interference as was the case in UTL.

Conclusion

The significance of digital Infrastructure in Uganda's economic development cannot be understated particularly as the Telecom sector ranks among the top contributors to taxation and employment in the country. However, foreign ownership and control of NTOs presents both as a manifestation and a perpetuator of extractivism, proving the magnitude of challenge this presents for the regulator. The Ugandan National telecom Operations are dominated by foreign national telecom operators MTN Ug & Airtel Ug which together control over 90% of the market share. These companies are largely owned and controlled as subsidiaries of established Multinational Corporations. Supported by the global capitalist model which itself is extractivist in nature, they wield unbridled power, largely unchecked due to Uganda's weak state systems and limited government autonomy. This leaves the Uganda Communications Commission (UCC) at a disadvantage, struggling to regulate entities that surpass it in technology capability, funding, and manpower.

With only a minimum of 20% listed on the Uganda Securities Exchange, the remaining 80% shareholding held by parent companies of the company effectively locks out Ugandans from contributing meaningfully in affairs of how these companies are run. Through this majority ownership, they are able to maintain a strong internal chain of control especially in regards to decision making. The absence of a strong and competitive national Telecom reflects a failure of the Government to fulfill its social obligation to the citizens in meeting the country's telecommunication infrastructure development and needs. This gap has fostered the dominance of foreign NTOs, that persists to date, making it nearly impossible for indigenous telecoms to compete with. This has strengthened the position of these entities making them indispensable as the country relies on them heavily. Driven by profit, their investment into areas that bring the highest return perpetuates extractivism as less profitable areas remain underdeveloped with very infrastructure they need to, remaining further behind.

Further Research

The study did not assess the management composition in detail beyond the nationality of the top executive. This can be a further area of study.

Extractivism is layered therefore while recognition is made of extractivism arising from the government's policies and weak state systems in operation, this is not covered. The study suggests as an area of further research an exploration of this and how it fosters extractivism within Uganda's Telecom Sector.

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