Analysing a Transnational Advocacy Network of Internet Data Affordability in Malawi

Frank Makoza, Cape Peninsula University of Technology, South Africa*

https://orcid.org/0000-0002-5818-3810

ABSTRACT

This paper analysed how advocacy groups and consumers influenced government, telecommunications regulators, and mobile network operators to reduce the cost of internet data. The study used a case of Malawi as an example of a low-income country with high cost of internet. Transnational advocacy network theory was used to analyse secondary data from online databases, websites of regulatory organisations, online news, and social media posts. The findings showed that transnational advocacy network drew members from international, regional and local organisations. Consumers also participated in the transnational advocacy network. Information sharing was crucial in highlighting the high cost of internet data in the country. Local network actors used information, symbolic, leverage, and accountability politics to persuade government agencies, the telecommunications regulators, and mobile network operators to reduce the cost of internet data. The study provides insights into the understanding of issues related to internet data affordability in the context of a developing country.

KEYWORDS

1. INTRODUCTION

About 66% of the world's population have access to the internet (ITU, 2022). In developing countries, some consumers access internet using mobile devices (e.g. smartphones, tablets) because mobile devices are easy to use and may not require electricity in their households. The majority of consumers use internet data packages for mobile devices to communicate, search or share information and access online services (Inegbedion, 2020; Moyo & Munoriyarwa, 2021; Stork, Esselaar & Chair, 2017). Malawi is an example of a developing country in Africa where internet access is problematic and universal access to the internet is yet to be achieved. The country has an internet teledensity of 9.9% leaving a large part of the population not connected to the internet and unbale to access online services (ITU, 2022). One of the inhibiting factors of internet access is affordability (del Portillo, Eiskowitz, Crawley & Cameron, 2021). In this context, affordability is the ability of individuals or households to pay for internet services in relation to their disposable income (Goggin, 2014). Recent media reports indicate that Malawi is among countries in Africa with high cost of internet data (UK Cable, 2022).

*Corresponding Author

International organisations, non-government organisations, government departments, private sector organisations and internet users in Malawi engage in dialogue and exchange regarding affordability of internet data. While the debates on internet affordability have become popular among internet users, there are few but growing academic studies mention in passing the phenomenon (e.g. Banda, 2022; Bichler, 2010; Chaputula, 2012; Makoza, 2017). To the knowledge of the author, studies on how dialogue and exchanges among organisations and consumers influence government strategies on reduction of the cost of internet data in Malawi are missing in literature. Against this discussion, this study aims to address part of this knowledge gap. The study was guided by the research question:

- *How does dialogue and exchanges among organisations and consumers influence government strategies on cost of internet data to achieve affordability?*

To answer this question, the study used Transnational advocacy networks theory (Keck & Sikkink, 1998). The theory was useful in understanding the composition of networks, approaches used to exchange of information and different types of political strategies that stakeholders used to influence government strategies and regulations on internet affordability (Goggin, 2014; Makoza & Chigona, 2016; Mansell, 2010). This was important so that lessons could be learnt, and unresolved issues brought to the attention of stakeholders e.g. policymakers, telecommunications regulators, academics, services providers and consumers.

The rest of the paper is presented as follows. Section 2 summarises the background of the study. Section 3 discusses the theory guiding the study. Section 4 presents research methodology used in the study. Section 5 summarises research findings. Section 6 discusses the research findings followed by conclusions drawn from the study.

2. BACKGROUND TO THE STUDY

Internet has become the primary means of interaction and sharing information among people in many societies across the globe. The internet offers benefits that can be viewed from demand and supply perspectives (Gillwald & Mothobi, 2019; Myovella, Karacuka, & Haucap, 2020). On the supply side, the internet is used in supporting business processes and activities of organisations to achieve better performance, productivity, efficiency in meeting the needs of customers. Public organisations are also using the internet to support efficient and effective public services delivery (Adam, 2020; Dias, 2020). On the demand side, individuals are also using internet in their day to day activities for convenience, low-cost in accessing products or services and improving their well-being. At national level, internet is perceived to be a driver of productivity, innovation in the economic sectors, facilitating international trade through digital networks, supporting economic growth and reduce poverty (Abeliansky, Hilbert, 2017; Myovella, Karacuka, & Haucap, 2020).

Researchers have argued that the prevalence and integration of internet in many areas of activities of individuals and communities signifies human rights. In other words, internet access has become a new human right (De Hert & Kloza, 2012). The United Nations Human Rights Council declared the internet as a human right in 2012 (Barrios, 2019). Internet as a human right promotes (a) individuals to access the internet (b) access to information (c) freedom of expression and opinion (d) individuals to be protected when accessing the internet (Barrios, 2019). African countries supported the declaration of internet as a human right through ratification of Resolution 362 of the Africa Commission of Human and Peoples Rights (e.g. right to freedom of information and expression on the internet in Africa) (Marchant & Stremlau, 2020). While African governments have set priority on providing internet access to promote human rights of their citizens, there are many challenges inhibiting internet adoption and access (Bergere, 2020; Gillwald & Mothobi, 2019). The cost of internet is one of the

persisting challenges that is affecting individuals and households to access internet and reap the benefits of using the internet and transform their lives.

Against this backdrop, the study focused on the case of Malawi as an example of a country with high internet cost (UK Cable, 2022). Issues of internet cost have been raised in online discussion groups and reported in media. However, to the knowledge of the author, scholars mention in passing the problem of high internet cost (see Banda, 2020; Bichler, 2008; Chaputula, 2012; Makoza, 2021; Maseko, Gondwe, Winiko & Chiziwa, 2021). The studies have not analysed how exchanges and discussion on cost of internet influence the decisions of government, telecommunications regulator and mobile network operators to address the cost of internet in Malawi. The subsequent subsections outline in detail the context of Malawi.

2.1. Context of Malawi

Malawi has a population of about 18.6 million (World Bank, 2022). The country faces challenges of low productivity in economic sectors, low performance in public services delivery, population boom, the effect of COVID-19 pandemic resulting in slow gross domestic production (Munthali, George & Xuelian, 2020; World Bank, 2022). Despite these challenges, part of the population especially in urban centres accesses internet mainly through mobile devices. Social media use is popular among internet users (See Table 1). Social media is becoming the primary means of communication, sharing information and space for discussion of issues that are affecting the country (Chaputula & Majawa, 2013; Makoza, 2020).

Table 1. Summary of internet and social media users

ICT and services	Number of users
Internet users	4.03 million
Mobile phone users	10.23 million
Social media	820, 400
Facebook	752, 000
Instagram	78, 600
Facebook messenger	37, 600
LinkedIn	190, 000
Twitter	43, 000

Source: Digital 2022 Malawi (DT, 2022)

The Government of Malawi invested in internet infrastructure so that the country can benefit from information and communication technologies. The government obtained a loan from the World Bank of US$20,000,000 to improve internet connectivity, enhance legal and regulatory frameworks, human capacity and national strategies for ICTs. The project was implemented through the Regional Communication Infrastructure Program of the World Bank. One of the justifications for the project was that Malawi had increased adoption of mobile technologies and that such increase if enhanced could improve the conditions of citizens in the country (Kayira, 2013; Makoza, 2017). Hence, the government supported the investment in telecommunication infrastructure e.g. internet connection to the undersea cables and virtual landing point to make the telecommunications sector competitive, allow more services providers and reduce the cost of internet for consumers (Makoza, 2021).

Despite the government prioritising ICT as demonstrated in policies and programmes, high cost of internet data remains a crucial issue. The country enacted the National ICT policy (from 2013 to 2016) which among other themes prioritises ICT infrastructure and universal access to ICTs (see

Makoza, 2019). For instance, the objective of universal access to ICT indicates that "*Government shall ensure that all people in every part of the country have access to affordable, reliable and efficient essential ICT services in their community by 2016*" (NICTP, 2013). Further, the country is implementing Malawi Development Strategy III (from 2018 to 2022) that has tenets of improving ICT infrastructure and enhancing human capacity. However, access to the internet is still problematic where universal access targets have not been achieved. The country has an internet teledensity of 9.9% leaving many people not connected to the internet and unable to access online services (ITU, 2022b). In 2020, the government developed a Digital economy strategy that set a target of improving access to ICT from 14% to 80% by 2025 (MDES, 2021). There is interest among officials in government agencies and stakeholders on achieving the target and make low cost of internet a reality.

2.2. Why High Cost of Internet Services

Reasons for high cost of internet in the context of developing countries in literature (Gillwald & Mothobi, 2019). These include high cost of ICT infrastructure investments, lack of competition and tax regimes that is not flexible, limited demand due to limited integration of ICT in business and other economic activities, lack of ICT skills for potential users of ICT services, lack of disposable income for consumers to create demand of internet services and political interference in price regulations (Adam, 2020; Bergere, 2020; Gillwald & Mothobi, 2019; Marchant & Stremlau, 2020; Nyirenda-Jere & Biru, 2015; Reddick, Enriquez, Harris & Sharma, 2020).

Issues of high cost of internet services have been raised in several studies conducted in the context of Malawi. Bichler (2008) reported on differences in the uses of internet in urban centres of Malawi. Internet was mainly used by the elite and rural communities were excluded because of cost. The study note that high internet cost created a divide between those who can afford internet services and the economically excluded. Chaputula (2012) analysed the use of the internet in the education setting. The study noted different uses of internet e.g. use of the internet in supporting learning activities, research and communication among learners and lecturers. The study raised the concerns of students on internet cost and those students accessed internet mainly on campus because they could not afford the cost of internet services and lack of devices. Makoza (2021) analysed the telecommunications regulatory context of Malawi. The study highlighted issues of power relations between the telecommunications regulator and other government departments, interference of politicians on the licencing of mobile network operators and the failure of competition in the sector in contributing to high cost of ICT services.

While these studies note some aspects of internet cost, there are limited in-depth analysis on how various stakeholders perceive the issue internet cost and influence government and the telecommunications regulator to act. Further, the emerging of COVID-19 pandemic in the country (in April 2020) led to high demand of ICTs in many areas of society. ICTs are crucial for the management of health interventions e.g. data collection and reporting, dissemination of information on preventive measures and supporting tracing of cases (Cobelli, Cassia & Burro, 2021; He, Zhang & Li, 2021). Lockdown and COVID-19 safety responses created high demand for ICTs in economic, education and social activities. Some of these activities were accessed via online platforms e.g. video conferencing, social platforms, e-learning and virtual tutoring systems as preventive measures to minimise face to face contact (Banda, Dube, Brumfield, Crampin, Reniers, Amoah & Helleringer, 2021; Maseko, Gondwe, Winiko & Chiziwa, 2021). However, some people were failing to interact and access ICT enabled services due to the high cost of internet data bundles (Munthali, George & Xuelian, 2020).

2.3. The Telecommunications Sector of Malawi

Malawi's telecommunications sector was liberalised in the late 1990s like many countries across the African continent. The public telecommunications operator: Malawi Post and Telecommunications Limited was split into two (Malawi Telecom Limited and Malawi Postal Corporation) (Gebreab, Clarke & Mgombelo, 2003). The country enacted the Telecommunications Act in 1998 (revised

in 2016) that led to the establishment of the Malawi Telecommunications Regulatory Authority (MACRA) as a telecommunications sector regulator. The role of MACRA includes licensing of operators, management of tariffs, spectrum management, supporting universal access and arbitration of disputes among operators in the sector (Makoza, 2021).

There are two main mobile network operators (e.g. Airtel Malawi and Telecom Networks Malawi), two fixed telephone operators (Malawi Telecommunications Limited and Access Limited) and about 46 internet services providers that offer telecommunication services to organisations and individuals. Other private organisations (about 230) have VSAT systems that are directly linked to external services providers in Europe or America (MACRA, 2015). Other authors have argued that more MNOs in the telecommunication sector can make the market competitive and resulting in reduced prices on ICT services (Reddy, 2013; Son, Son, Jha, Kumar, & Chatterjee, 2019). For a long time, increasing number of mobile network operators has been challenging in Malawi. New mobile network operators have often been granted licences but fail to rollout of network infrastructure and licences are revoked (Makoza, 2021). Hence, there no new operational mobile network operators, limited competition in the telecommunication sector and the high cost of internet services.

2.4. State of Affordability Drivers

Access to internet access has become an important issue in society and international development agencies are considering internet access as a human right (De Hert & Kloza, 2012). To understand the state of internet affordability in Malawi, we looked at the affordability driver's index. The affordability drivers index measures the state of a country in terms of implementation of drivers that affect the cost of internet access. The drivers are categorised into access factors (e.g. internet penetration rates and universal access fund) and infrastructure factors (e.g. international bandwidth and spectrum policy). Table 2 Summarises internet access and affordability in the context of Malawi.

Table 2. Summary of affordability drivers in Malawi

Components	2016	2017	2018	2019	2020	2021
Access	24.77	40.07	36.78	40.76	40.04	40.87
Infrastructure	16.05	28.10	27.71	28.74	40.32	38.85
Affordability drivers index score	**20.06**	**34.64**	**34.14**	**36.20**	**42.29**	**42.27**
Source: Alliance for affordable Internet (A4AI, 2021)						

As can be seen in Table 2, Malawi has steadily improved on affordability over the years but had a decline in affordability between 2017 and 2018 but improved in 2019 and 2020. The country's affordability slightly declined in 2021. One of contributing factors could be rising of transit capacity costs which service providers in landlocked countries like Malawi incur (A4AI, 2021). Discussions on the recent causes high cost of internet services are missing in literature despite other studies mentioning the issue of internet cost (Bichler, 2008b; Maseko, Gondwe, Winiko & Chiziwa, 2021). To the knowledge of the author, studies that have analysed internet cost in detail and how public discussions influence government policies and telecommunication sector regulations are missing.

3. THEORETICAL BASIS OF THE STUDY

The study draws on Transnational advocacy networks theory (TANT) (Keck & Sikkink, 1998) which suggest that organisations form a network to work together based on shared values, common discourse and exchange information. The organisations in these networks may include international organisations,

non-government organisations, social movements, private sector organisations, special interest groups and government departments. More often, transnational advocacy networks work on suppressed issues that require government attention and may include problems of poverty, human rights, climate change, human trafficking, child labour, access to information etc. (Kiel, 2011). The transnational advocacy networks have the following characteristics (Cogburn, 2017; Keck & Sikkink, 1998):

- They are based on values and beliefs.
- The members belief that individuals can make a difference.
- They use information in a creative way.
- They engage non-government organisations with sophisticated strategies for their campaigns.

Because of the nature of the issues, transnational advocacy networks can be cross-border where international organisations with knowledge share information and their services (evidence based on research and experience in policy analysis) to local NGOs or interest groups and social movements to lobby on the issues with governments. The international organisations are viewed as legitimate because they have resources and create spaces where governments across the globe are invited to agree on policies and strategies that affect their economies (Keck & Sikkink, 1998).

Transnational advocacy networks, like any network, have capabilities of flexibility and dynamic to adapt to changes in the environment in which they operate. The networks can expand without limit. For instance, operating at the global, continental, regional, national and local levels (Cogburn, 2017). Often networks began with activists on the local level who attempt to bring the attention of issues to the government to act. Their activities include complaining, arguing, documenting, lobbying and applying pressure to those in power. They hold meetings, press briefings and run media campaigns on the issues so that other organisations can join them. When they are not successful in effecting change, local organisations e.g. NGOs or civil society activists engage international organisations or sympathisers who can put pressure on governments. This process is called the boomerang effect (Keck & Sikkink, 1998).

There are reasons why organisations or individuals participate in transnational advocacy networks. These include a sense of identity, incentives e.g. material, solidarity and purpose (Kiel, 2011). Organisations and people identify themselves with values and beliefs they hold which are meaningful to them. Incentives that can be obtained in transnational advocacy networks include material resources of value that can transform the life of beneficiaries e.g. income, food, infrastructure and access to services. Solidarity is a sense of being part of an event or social activity that successfully brought change. The purpose is the source of motivation to participate in activities based on ideological ideas or a sense of wishing to see a goal being achieved (Kiel, 2011). The study concentrated on three concepts (see Table 3) that were considered appropriate to understand how advocacy groups and users influenced government and mobile network operators to reduce the cost of internet data.

Table 3. Summary of the TANT concepts used in the study

Concept	Description	Guiding questions
Network	formation and development, and membership of the transnational network	• How is the transnational network formed? • Who is included or excluded in the transnational network? • What are network actor's ideas and values related to internet affordability?
Boomerang effect	Activities for mobilisation, lobbying and pressure on government and regulator	• Why local groups approach other network actors? • Why government responded to pressure on internet affordability?
Politics	Tactics used to influence, pressure or persuade on government and regulator	• How information, symbolic, leverage and accountability politics related to Internet affordability? • What are the outcomes of politics?

As summarised in Table 3, the concept of a network can be useful to understand the groups that initiated the agenda for affordable internet, influenced their discursive position to other stakeholders and the government on institutional procedures of the telecommunication regulator and policy changes (Keck & Sikkink, 1998). Exploring the concept of network, we also looked at the values and principles of the network members and which groups were left out in the debate. Further, the concept of boomerang was selected to explore why the initial group approached other groups in lobbying for internet affordability and understand the responses of the government. Different tactics that groups can use to pressure or persuade the government to respond on internet affordance policies and regulations through the telecommunications regulator. The tactics can be summarised as follows (Keck & Sikkink, 1998):

- *Information politics:* information binds the network members together and information can be used to frame stories to persuade others in the network to act
- *Symbolic politics:* issues are presented around events in a persuasive way which create awareness. Events can change people's mind and act on issues.
- *Leverage politics:* actors in the network seek influence of more powerful actors or organisations to bring about change regarding issues being raised.
- *Accountability politics:* once government accept an issue, actors ensure that discourses on the issues are taken into practices to address the problems.

4. RESEARCH METHODOLOGY

The objective of the study was to understand the dialogue and exchanges among organisations and consumers influence government strategies on cost of internet data to achieve affordability. The study was exploratory because the phenomena has not been research in detail. An exploratory case study fitted well to answer the how question guiding the study (Sutherland, 2016). Data for the study was purposefully selected from multiple sources including online news articles, reports from NGOs, government departments and international development agencies. We searched the websites of online news articles (using the following terms: Data must fall, data bundles, data cost, TNM and Airtel). Only data that was relevant on the topic was selected (Patton, 2014). The study also used press statements and feedback from the users that were posted on social media platforms e.g. Twitter and Facebook. The multiple sources of data supported the researcher to verify some of the issues that were emerging from the data (Mose & Korstjens, 2018). The data covered between December 2019 to December 2021. Table 4 summarises the data sources used in the study.

The collected data was checked to ensure that were no duplicates and all the files were stored in electronic format. The files were imported in a qualitative data analysis software for easy navigation between documents and coding and arranging of the codes. Content analysis (Erlingsson & Brysiewicz, 2017) steps were followed to analyse the data. The process began with reading the materials to get ideas and interesting issues that were related to the study. We used key concepts from the Transnational advocacy network theory (Keck & Sikkink, 1998) as a sensitising device with flexibility to ensure a manageable scope of analysis and allow interesting codes from the data to emerge (Erlingsson & Brysiewicz, 2017). The materials were re-read and noting the important points that were assigned to a code. The codes were grouped into categories. Later overarching themes were assigned to the categories. A report was produced to answer the key research question. The process was iterative to improve the focus and understanding of the findings (hermeneutic informed process) and the outcomes of the data analysis process (Paterson & Higgs, 2005).

Table 4. Summary of documents used in the study

Source	Description	Quantity
Reports		
International Telecommunications Union	Measuring digital development: ICT price trends 2020	1
United Nations	UN Universal Periodic Review - Submissions	2
National Planning Commission	Malawi's Digital Economy Strategy 2021	1
ACHPR	African Union - Guidelines on access to information and elections in Africa	1
World Bank	Malawi Economic Monitor: From crisis response to a strong recovery 2020	1
UK Cable	Worldwide data costing Report 2020	1
Online news websites		
www.nyasatimes.com	Nyasa times - Online news articles	14
www.mwnation.com	The Nation – Online news articles	11
www.times.mw	The Times Group Malawi - Online news articles	8
Social media handles		
#Datamustfall (Twitter)	Online Social movement – Twitter posts	4
MACRA Facebook	Regulator - press statements and comments	2
Airtel Malawi Facebook	MNO – press statements and comments	2
Telecom Network Malawi Facebook	MNO – press statements and comments	2
Malawi Consumers Forum Facebook	Online Social movement – Facebook posts	1
Non-Government Organisations		
NGO Coalition	CHRR, YAS, CIPESA & HREP – Press Statement	2

5. SUMMARY OF FINDINGS

5.1. Emerging Transnational Advocacy Network

The emerging transnational advocacy network from the data analysis comprised local, regional and international actors. The local actors were consumer association organisations, a coalition of NGOs and human rights activists, government departments, politicians, regulatory organisations and private organisations operating in the telecommunications sector. There were continental organisations, NGOs and online social movements at the regional level that participated in the transnational advocacy network. Further, there were international organisations that participated in the network e.g. international development agencies and private organisations. Figure 1 summarises the categories of organisations in the transnational network advocacy networks.

As can be seen in Figure 1, the formal organisations at the international level were the World Bank and UK Cable provided information through reports confirming the high cost of internet services in the country. The organisations provided information that could support best practices for evidence-based decisions. Such information was made available to the public through the internet.

Formal organisations at regional level that participated in the transnational advocacy network were African Union on Human Rights and Peoples Rights (ACHRR) and Collaboration on International ICT Policy in East and Southern Africa (CIPESA). These organisations collaborated with local NGOs to raise the issues of high internet cost in the country and shared information with international organisations e.g. United Nations Human Rights Council.
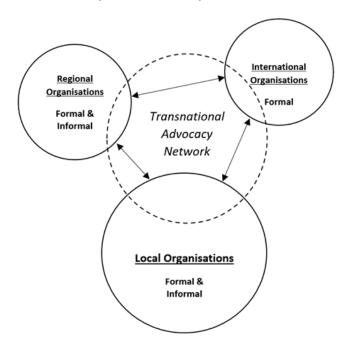
Figure 1. Summary of the internet affordability transnational advocacy network

There were informal organisations that participated in the transnational advocacy network for internet affordability. #Datamustfall movement in South Africa participated in the internet affordability discussions of Malawi. The group showed solidarity on the issue of high cost internet data. The #Datamustfall movement had run a successful campaign that led to investigations and reduction of data cost in South Africa.

The formal organisations at local level in the network were the coalition of NGOs, civil society organisations, human rights activists, consumer associations, government departments, the telecommunications regulator, politicians and mobile network operators. The coalition of NGOs comprise Centre for Human Rights and Rehabilitation (CHRR), Youth and Society Malawi (YAS) and Health and Rights Programme (HREP). The Consumer Association of Malawi participated in the network. The government departments that participated in the network were Ministry of Information and Malawi Revenue Authority. The Malawi Telecommunications Regulatory (MACRA) participated in the transnational advocacy network together with the two main mobile network operators operating in the country: Airtel Malawi and Telecom Networks Malawi.

It was interesting to note the participation of individuals or internet users in their own capacity as those directly affected on issues raised in the network. The internet users participated in debates on social media platforms e.g. Facebook and Twitter of social movement groups and consumer forum groups. The Consumer Association forum comprise individuals in Malawi who raised issues affecting consumers through social media platforms (e.g. Facebook, Twitter and YouTube).

The value of the actors was based on affordable access to internet for many Malawians and that internet access was a basic human right that could support access to information, communication and transacting online. This was more relevant when the Government of Malawi implemented lockdown when the country experienced rising cases of COVID-19 deaths:

"In light of the new COVID-19 restrictions announced by the government, affordable internet access is crucial to enable continuity in public service provision, business operations, access to health services, eLearning, and remote work." (#PD)

The actors were also motivated in ensuring that the universal access strategies incorporated in the National ICT policy were implemented: "*Implement the provisions of the Universal Service Fund to ensure affordable and accessible internet in the country*" (#PD). This statement was consistent with the strategy for developing ICT infrastructure in the national development plan.

5.2. Boomerang Effect

The problem of high internet cost was persistent in Malawi since 2009. Local consumer associations and print media highlighted the problem of high internet cost for the network actors (e.g. Ministry of information, the telecommunications regulator, revenue authority and mobile operators) to address the problem. The high cost of internet services was attributed to taxation and lack of competition among MNOs: "*The World Bank in its 2019 Economic monitor indicated high taxation as a major factor for the exorbitant prices while citing the entry broadband packages at 19 per capita of Gross Domestic Product. The Bank also noted lack of competition on the market has been a critical factor*" (#WB). While MNOs reduced prices in 2015 and 2017, the cost of internet services remained high.

In 2019, the local and regional actors participated in the international forums where they were able to raise the issues of high internet cost. For instance, the local NGOs participated at the United Nations Universal Period Review where issues righted to human rights are often reported so that the United Nations can lobby incumbent governments to address the issues: "*A growing but limited number of submissions are focused on both online and offline rights including on access to information, access to the internet, free speech and media freedom, freedom of assembly and association, and privacy*" (#UPR). As highlighted in the statement, not many issues beyond human rights were raised because of the lack of capacity for lobby groups in the African countries. However, Malawi was among the few countries that submitted their reports related to human rights, information access and access to the internet. The fora supported the development of the transnational network where there were dialogues among network actors and exchange of information including government agencies, local NGOs, regional organisations, private organisations and international development organisations.

The external organisations shared information with local NGOs and supported capacity building activities: "*a coalition of regional partners will be working to support civil society organisations across Africa to engage with the UPR process through research, capacity development and advocacy*" (#UPR). Online groups (local and regional) expressed their concerns via social media in highlighting the case of high internet data cost in Malawi. The users of one group expressed disappointment with the way government was handling the issues of high internet cost and regulation of the telecommunications especially mobile network operators: "*Internet in Malawi remains scam straight from the source, hence Mobile services providers are a bunch of cowards and our government is not doing enough in monitoring the quality and growth of telecommunication companies. worst people at the top do not have a clue*" (#DMF).

Local NGOs and human rights activists performed demonstrations in May 2020 to lobby the government to reduce internet data cost: "*Hundreds of people have taken to Malawi's streets to protest against rising mobile call and data charges. There were demonstrations in Lilongwe, the capital, in the city of Blantyre, and in the southern district of Mulanje on Wednesday.*" (#CD). The government of Malawi implemented lockdown due to the rise in cases of COVID-19 virus in May 2020. The Coalition of NGOs (comprising CHRR, YAS & HREP) held a press conference to lobby the government to act on the high cost of internet services. Their main concerns were that limiting physical activities related to work, schools and other activities while encouraging people to use online means could not be possible with high internet data cost. The cost of internet data was almost half of minimum wage which meant that the majority of households could not use services that were accessed via the internet e.g. banking services and online learning.
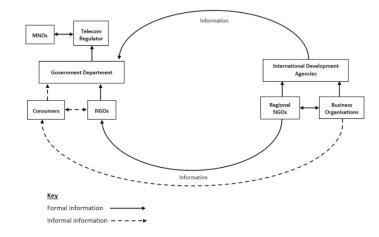
Figure 2. Summary of flow of information among network actors

In July 2020, there was a change in government administration because of elections. The newly elected government officials from the Ministry of Information and Communication supported the ideas regarding the redress high cost of internet services: "*The statement also pointed out the new government's campaign manifesto, which included a commitment to reduce the cost of ICT services*" (#TN). The government position was to ensure that ICTs were accessible: "*Malawi to forge ahead in the digital era, it is of paramount importance that ICT services be accessible and affordable at all times*" (#NT). The telecommunications regulator engaged with the Mobile Network Operators and agreed to address the concerns of the government, lobby groups and consumers in reviewing the internet tariffs. The Mobile Network Operators finally reduced the cost of some packages of the data services (e.g. 1 Gigabyte package): "*Data prices in Malawi have been reduced following recent engagements between the Malawi Telecommunications Regulatory Authority (MACRA) and telecommunications operators. Under the new rates, the cost of 1GB to 4GB bundles are down by between 10% and 31% across the country's two leading internet service providers – Airtel and TNM.*" (#TN). However, consumers perceived that the cost reduction was still not adequate: "These 1 or 2GB data plans are the most useless childhood planking I have ever seen. Taking advantage of Malawians for being technologically naive; someone should be able to see this up there." (#DMF). Additionally, the price revisions did not consider the expiry period of the data bundles and that some people were still excluded from accessing the internet because of the cost of data. Figure 2 summarises the flow of information in the transnational advocacy network for data affordability.

As can be seen in Figure 2, the concept of boomerang effect can be explicated from the findings. There was information exchange among the actors in the transnational advocacy network. The information was passed through formal and informal means. For example, formal interactions between international development organisations (e.g. United Nations, World Bank and International Telecommunications Union) with government departments (e.g. Ministry of Information) on issues raised in the UN UPR reports. Private organisations that produce affordability reports (e.g. UK Cable, Alliance for Internet Affordability and Data Report) that were shared with International Development Organisations, Regional NGOs and local NGOs. Examples of informal interactions include information shared and posted on social media between consumers (e.g. Malawi Consumer Forum and #Datamustfall) and NGOs, government officials, MNOs and the telecommunications regulator (i.e. MACRA). Further, Local consumers shared ideas on the high cost of internet in the country with other consumers in other countries via social media platforms e.g. Facebook and Twitter.

5.3. Politics

Information played a crucial role in tactics that actors in the transnational advocacy network used to persuade the government, the telecommunications regulator and mobile network operators to act towards the reduction of cost of internet services. The NGOs used information on the cost of internet services from business organisations that had the capacity to compile information on the charges for internet data. Consumers provided details of their own experiences to highlight the high cost of services. The government used information from its party manifesto and national development policy to highlight its aspirations to improve access and cost of internet services to the electorate. International development organisations also used information from business organisations and regional NGOs to persuade the government of Malawi to consider strategies in the reduction of internet data cost. Information use was not neutral but supported the transnational advocacy network actors to influence their interest over actors. The following tactics emerged from the analysis: information politics, symbolic politics, leverage politics and accountability politics. These are explained in detail in the subsequent paragraphs.

Information politics were demonstrated in framing stories around the high cost of internet services in the country compared to other countries in Africa. For instance, the Minister of Information reported that consumers were paying more for the internet services compared to the neighbouring country: "*Internet data is being sold at 80 cents per second and expires within the specified time usage yet in our neighbouring country, Tanzania, the cost of data is as less as 4 cents per second*" (#NT). Further, stories were framed around the annual profits of the Mobile Network Operators that were high. Consumers highlighted the profits of MNOs reported in the media: "*According to the mobile phone network operator's financial statement signed by its chairperson [Person Y], the company recorded revenue growth of MK 110 billion in 2020 up from MK 92.8 billion in 2019. Revenue growth of 18.8 percent was largely driven by the growth of our customer base which was up by 25.1 percent to 5 million.*" (#NT). While there was growth in number of the subscribers, consumers complained that the situation created network congestion resulting in poor quality of internet services regardless of paying the high cost of the services.

Symbolic politics were illustrated in the events for COVID-19 lockdown and public demonstrations. The government of implement COVID-19 lockdown restrictions as highlighted in the following statement: *"… the new measures announced by the government to contain the spread of the contagium, including suspension of all public gatherings such as meetings and workshops, individuals and organisations will have to rely on the internet for communication, meetings, ecommerce and eLearning*" (#NT). The lockdown changed people's minds in the way they conducted their daily activities, and the situation created a reliance on the use of the internet. However, the majority of the people could not afford internet services hence NGOs began to raise the issues with the government, the telecommunications regulator and MNOs. The consumers also raised their concerns through social media platforms of government officials, MNOs and telecommunications regulator. The consumers with NGOs conducted demonstrations. The government were responded to the petitions because previous demonstrations (e.g. for political issues related to elections) affected social and economic activities in the country.

Leveraging politics were highlighted in actors influencing more powerful actors to act of the information on the high cost of internet services. First, it was the consumers using social media platforms to engage with government officials. For instance, consumers directly interacted with the Minister of Information through his personal website to highlight the issues of the high cost of internet services: "*the public ran a massive campaign to reduce data cost that was dubbed 'Data Must Fall' which Minister of Information also joined.*" (#NT).

Second, it was the Minister of Information engaging with the regulator to review internet services tariffs in accordance with the Communications Act of 2016. The Minister of Information initiated the dialogue between the regulator and the MNOs: "*There have been high spirited meetings the past 55 days after my Ministry [Ministry of Information] directed MACRA to engage Airtel and TNM*

on the issue bordering on abuse of the public through exorbitant data prices" (#FM). The minister supported the actors to act in revising the cost of internet services.

It was interesting that government officials agreed with consumers and NGOs that internet services costs were high. For instance, the minister of Information acknowledged that: "*Minister of Information has admitted that the costs of internet services in the country are exorbitant but was quick to say that government working out solutions with Internet Service Providers (ISPs)*" (#NT) Part of the reasons was that the new government administration was willing to effect changes on internet services to deliver the elections campaign promises and delivery of the declarations in the manifestos. This was an interesting development because previous governments never implemented their campaign promises to the electorate once they were voted in power.

The telecommunications regulator and MNOs demonstrated accountability politics towards the discourses of high internet services. The telecommunications regulator engaged the MNOs to ensure reduction of internet services. Further, MNOs complied with the request of the consumers and the Telecommunications regulator to reduce the internet costs: "*We have listened very carefully to feedback from our customers and hope this increase in data benefits in the bundles goes a long way to helping our customers get the best possible value across all of our bundles. Our other bundles, outside of those that are changing, continue to remain fairly discounted to meet varying customer requirements. We are committed to making high-quality digital services affordable to all*" (#AM).

6. DISCUSSION OF FINDINGS

The study set out to analyse how dialogue and exchanges among actors in a transnational advocacy network influenced government strategies of internet costs to achieve affordability. Our findings showed that the composition of transnational advocacy network included international development organisations, business organisations, formal and informal regional NGOs, consumers, MNOs, the telecommunications regulator and government departments. The transnational advocacy network was formed because of the high cost of internet data that consumers were experiencing in Malawi. International development organisations and business organisations produced information that highlighted the high cost of internet services in the country. The information supported the idea that the high cost of internet data was causing the exclusion of some people especially low-income households who could not afford to spend half of their income on internet data. In a way, the actors felt that the low-income household's inability to access information and use the internet was promoting exclusion in accessing essential services e.g. transacting using the internet, communicating and eLearning.

The findings also showed that local NGOs and consumers engaged in dialogue with other informal groups, MNOs, government officials and the telecommunications regulator through social media platforms, press conferences and public demonstrations. The aim was to raise the issue of high internet costs. The findings were consistent with other studies that demonstrated the role of the internet in supporting consumers raising of issues of internet affordability (Bergere, 2020; Moyo & Munoriyarwa, 2021). The contribution of the study to this debate was that while the number of internet users in Malawi was relatively small (about 9.9% Internet teledensity) (ITU, 2022b), the collaboration of the consumers and NGOs with regional formal and informal organisations added voice to the mobile data cost campaign. Similar studies have often shown consumers within the country engaged in online campaigns to raise issues of data cost. The regional formal and informal organisations showed solidarity on the concerns of the consumers in Malawi. Interestingly, consumers from rural and remote areas of the country were left out in the dialogue and exchanges.

The findings demonstrated the diversity of techniques the transnational advocacy network actors used to engage with the government and raise concerns of consumers (e.g. online discussions, press conferences and public demonstrations). In a way, the combination of the different lobbying techniques were effective and compelled the government officials to act on the concerns. For instance, the exchanges between International Development Agencies with government through reports e.g.

The World Bank, United Nations UPR and Telecommunications Union supported raising awareness of high mobile data cost. Further, online platforms facilitated access to actors with influence (e.g. government officials) to engage consumers. While other countries provide the political space for consumers to raise issues via social media platforms as noted in similar studies (George & Leidner, 2019; Moyo, & Munoriyarwa, 2021), the current study showed the effect of the political will of the politicians engaged in the process to implement campaign promises of political parties. The dialogue and exchanges led to the government to respond and act on the pressure on mobile data cost.

The findings provide insights into the tactics that transnational advocacy network actors used to persuade the government to address high data cost. The tactics were consistent with information, symbolic, leverage and accountability politics (Cogburn, 2017; Keck & Sikkink, 1998). Information politics supported the argument that internet data was expensive in the country. This finding was consistent with previous studies that have noted in passing the high cost of data led to some consumers not using the internet (Bichler, 2008; Bichler 2008b; Bichler, 2010; Chaputula, 2012). The implications for symbolic politics were demonstrated in events for COVID-19 lockdown and public demonstrations. Other scholars have noted that the COVID-19 pandemic was also driving digital transformation in societies (Maseko, Gondwe, Winiko & Chiziwa, 2021; Munthali, George & Xuelian, 2020). The findings showed that the government was compelled to consider the reduction of the cost of Internet data because it had implemented the COVID-19 lockdown and was required to support the use of ICTs. Politics supported the transnational advocacy network actors to identify power actors that could influence change on the cost of internet services. The interactions with the Minster of Information made a difference to the campaign as he supported the idea of reducing cost of internet data. His influence led the telecommunications regulator to accept responsibility in addressing the regulatory aspect of the issue in line with the Communications Act of 2016.

The outcomes of the politics were that the telecommunications regulator engaged the MNOs and reduction of the internet cost. While there was an improvement in overall affordability (recall Table 2), the issues of infrastructure and competition were persisting. This meant that other parts of consumers were marginalised e.g. those in rural and remote communities. Other scholars have highlighted the rural and urban disparities in access to the internet that has not yet been addressed (e.g. Bichler, 2008; Nyirenda-Jere & Biru, 2015). This may mean that the government responses to the petition on data cost were not holistic. The government responses could also consider competition, quality of services and infrastructure investment (Ali, Alam, Taylor & Rafiq, 2019; Gillwald & Mothobi, 2019; Makoza, 2021).

The study was without limitations, the study relied on secondary data. However, we used multiple sources of data to verify the insights that were emerging from the data obtained from social media platforms and reports and data from international development organisations and business organisations (Mayr & Weller, 2017). Further studies can arise from this study to explore other data collection techniques including interviews with actors in the transnational advocacy network and the consumers in rural and remote areas. Other fruitful areas of research that can look at issues beyond data cost reduction are (a) understanding of ICT sectors competition among MNOs in Malawi (b) how MACRA (the telecommunications regulator) regulates the prices and manage the universal access fund (c) understanding of consumer protection in relation to data pricing. We are cautious of generalisations of the findings of the study, our view is that the findings offer rich insights into internet affordability in the context of Malawi. Similar studies can be conducted in other contexts and compare the findings. Hence, the findings from the study showed analytical generalisations rather than statistical generalisations (Guenther & Falk, 2021).

The study makes the following recommendations that the Ministry of information, telecommunications regulator, MNOs, NGOs and Consumer representative bodies: (a) Review of regulatory processes to include consumer feedback mechanisms where consumers can express their concerns including the cost of internet data (b) Implementation of universal access fund to ensure that rural and remote households benefit from affordable internet. Collaboration of NGOs and consumer organisations with telecommunications sector organisations in ICT sector.

7. CONCLUSION

The study analysed the transnational advocacy network in the context of Malawi. The transnational advocacy network drew actors from international development organisations, government departments, consumer organisations, NGOs, business organisations and MNOs. In addition, were there organisations from the regional level and the consumers. The main belief that brought together the network was that the internet had become a primary means of communication and transacting; and that it was a human right for consumers to access affordable internet services. The study showed diversity of political tactics that network actors used to influence powerful actors to act on reduction of the internet cost. The study offers insights on advocacy for reduction of high internet cost in the context of developing countries.

REFERENCES

A4AI. (2021). *Alliance for affordable internet.* Access on 06 October 2022 from: www.a4ai.org

Abeliansky, A., & Hilbert, M. (2017). Digital technology and international trade: Is it the quantity of subscriptions or the quality of data speed that maters? *Telecommunications Policy*, *41*(1), 35–48. doi:10.1016/j.telpol.2016.11.001

Adam, I. (2020). Examining e-Government development effects on corruption in Africa: The mediating effects of ICT development and institutional quality. *Technology in Society*, *61*, 1–10. doi:10.1016/j.techsoc.2020.101245

Ali, M., Alam, K., Taylor, B., & Rafiq, S. (2019). Do income distribution and socio-economic inequality affect ICT affordability? Evidence from Australian household panel data. *Economic Analysis and Policy*, *64*, 317–328. doi:10.1016/j.eap.2019.10.003

BandaJ.DubeA. N.BrumfieldS.CrampinA. C.ReniersG.AmoahA. S.HelleringerS. (2021). Controlling the first wave of the COVID-19 pandemic in Malawi: Results from a panel study. MEDRXIV, 2021, DOI: <ALIGNMENT.qj></ALIGNMENT>10.1101/2021.02.21.21251597

Banda, T. (2022). Student Experiences in Accessing Learning Higher Education During COVID-19: Case of a University in Malawi. *South African Journal of Higher Education*, *36*(4), 188–204. doi:10.20853/36-4-5186

Barrios, R. (2019). Reflections on access to the Internet in Cuba as a human right. In Research handbook on human rights and digital technology: Global politics, law and international relations. Edward Elgar Publishing. doi:10.4337/9781785367724.00018

Bergere, C. (2020). "Don't tax my megabytes": Digital infrastructure and the regulation of citizenship in Africa. *International Journal of Communication*, *13*, 4309–4326.

Bichler, R. (2008). Southern Africa and the digital divide: A Malawian case study. *International Journal of Technology, Knowledge and Society*, *4*(6), 41–50. doi:10.18848/1832-3669/CGP/v04i06/55944

Bichler, R. (2008b). The dawn of the information age in least developed countries (LDCs): Lessons learned from four case studies. *TripleC: Communication, Capitalism & Critique*, *6*(2), 77–87.

Bichler, R. (2010). Information and communication technologies for least developed countries: A case study of the Republic of Malawi. In *Emerging Digital Spaces in Contemporary Society* (pp. 324–326). Palgrave Macmillan. doi:10.1057/9780230299047_51

Chaputula, A., & Majawa, F. (2013). Use of social network sites by mass media organisations in Malawi. In *Aslib proceedings: New information perspectives*. Emerald Group Publishing Limited. doi:10.1108/AP-06-2012-0055

Chaputula, A. (2012). State, adoption and use of ICTs by students and academic staff at Mzuzu University, Malawi. *Program: Electronic Library and Information Systems*, *46*(4), 364–382. doi:10.1108/00330331211276477

Cobelli, N., Cassia, F., & Burro, R. (2021). Factors affecting the choices of adoption/non-adoption of future technologies during coronavirus pandemic. *Technological Forecasting and Social Change*, *169*, 1–7. doi:10.1016/j.techfore.2021.120814 PMID:36311463

Cogburn, D. L. (2017). *Transnational Advocacy Networks in the Information Society: Partners or Pawns?* Springer. doi:10.1057/978-1-137-48361-4

De Hert, P., & Kloza, D. (2012). Internet (access) as a new fundamental right. Inflating the current rights framework? *Framework*, *3*(3), 1–24.

del Portillo, I., Eiskowitz, S., Crawley, E. F., & Cameron, B. G. (2021). Connecting the other half: Exploring options for the 50% of the population unconnected to the internet. *Telecommunications Policy*, *45*(3), 102092. doi:10.1016/j.telpol.2020.102092

Dias, G. (2020). Global e-government development: besides the relative wealth of countries, do policies matter? *Transforming Government: People*, *Process and Policy*, *14*(3), 381–400.

DT. (2022). *Digital 2022 Malawi*. Accessed 06 October 2022: from: https://datareportal.com/reports/digital-2022-malawi

Erlingsson, C., & Brysiewicz, P. (2017). A hands-on guide to doing content analysis. *African Journal of Emergency Medicine*, *7*(3), 93–99. doi:10.1016/j.afjem.2017.08.001 PMID:30456117

Gebreab, F. A., Clarke, G. R., & Mgombelo, H. R. (2003). *Telecommunications reform in Malawi*. Policy Research Working Paper 3036. World Bank.

George, J., & Leidner, D. (2019). From clicktivism to hacktivism: Understanding digital activism. *Information and Organization*, *19*(3), 1–45. doi:10.1016/j.infoandorg.2019.04.001

Gillwald, A., & Mothobi, O. (2019). *After Access 2018: A demand-side view of mobile Internet from 10 African countries*. ICT Research Africa, Cape Town, South Africa.

Goggin, G. (2014). New ideas for digital affordability: Is a paradigm shift possible? *Journal of Telecommunications and the Digital Economy*, *2*(2), 4–1. doi:10.7790/ajtde.v2n2.42

Guenther, J., & Falk, I. (2021). Generalising from qualitative evaluation. *Evaluation Journal of Australasia*, *21*(1), 7–23. doi:10.1177/1035719X21993938

He, W., Zhang, Z., & Li, W. (2021). Information technology solutions, challenges, and suggestions for tackling the COVID-19 pandemic. *International Journal of Information Management*, *57*, 1–8. doi:10.1016/j.ijinfomgt.2020.102287 PMID:33318721

Inegbedion, H. (2020). Digital divide in the major regions of the world and the possibility of convergence. *The Bottom Line (New York, N.Y.)*, *34*(10), 68–85.

ITU. (2022). *Global Connectivity Report 2022*. Accessed on 06 October 2022 from: https://www.itu.int/dms_pub/itu-d/opb/ind/d-ind-global.01-2022-pdf-e.pdf

ITU. (2022b). *Digital Development Dashboard.* International Telecommunications Union. Accessed on 06 October 2022: from https://www.itu.int/en/ITU-D/Statistics/Dashboards/Pages/Digital-Development.aspx

Kayira, T. (2013). Challenges in promotion of universal ICT access and services in rural Malawi. CPRsouth8/CPRafrica2013 conference, 1-16.

Keck, M., & Sikkink, K. (1998). *Activists beyond boarders: Advocacy Networks in International Politics*. Carnell.

Kiel, C. (2011). How Transnational advocacy networks mobilize: Applying the literature interest groups into international action. *Josef Korbel Journal of Advanced International Studies*, *3*, 77–101.

MACRA. (2015). *Strategic Plan 2015-2020*. Malawi Communications Regulatory Authority.

Makoza, F. (2017). *What's the problem presented (WPR) on poverty and development in ICT policy of Malawi*. Working Paper, University of Cape Town.

Makoza, F. (2019). How and Why: A decade of national ICT policy formulation in Malawi–A historical analysis. *International Journal of Information Communication Technologies and Human Development*, *11*(2), 38–65. doi:10.4018/IJICTHD.2019040103

Makoza, F. (2020). Analysis of discourses on WhatsApp coup reported in the media: The case of Malawi. *International Journal of Social Media and Online Communities*, *12*(2), 42–60. doi:10.4018/IJSMOC.2020070103

Makoza, F. (2021). Critical analysis of Telecommunications regulatory governance in Malawi. *International Journal of Interdisciplinary Telecommunications and Networking*, *13*(1), 49–67. doi:10.4018/IJITN.2021010105

Makoza, F., & Chigona, W. (2016). Ex-post stakeholder analysis of national ICT Policy subsystem: Case of Malawi. *International Journal of ICT Research in Africa and the Middle East*, *5*(1), 15–34. doi:10.4018/IJICTRAME.2016010102

Mansell, R. (2010). The information society and ICT policy: A critique of the mainstream vision and an alternative research framework. *Journal of Information. Communication and Ethics in Society*, *8*(1), 22–41. doi:10.1108/14779961011024792

Marchant, E., & Stremlau, N. (2020). The changing landscape of internet shutdowns in Africa. *International Journal of Communication*, *14*, 4216–4223.

Maseko, B., Gondwe, F., Winiko, S., & Chiziwa, S. (2021). Online learning amidst COVID-19 emergency: A case of the University of Malawi's School of Education. *African Journal of Teacher Education*, *10*(1), 346–364. doi:10.21083/ajote.v10i1.6554

Mayr, P., & Weller, K. (2017). Think before you collect: Setting up a data collection approach for social media studies. The SAGE handbook of social media research methods, 108-124.

MDES. (2021). *Malawi Digital Economy Strategy*. National Economic Planning Commission.

Mose, A., & Korstjens, I. (2018). Series: Practical guidance to qualitative research. Part3: Sampling, data collection and analysis. *The European Journal of General Practice*, *24*(1), 9–18. doi:10.1080/13814788.2017 .1375091 PMID:29199486

Moyo, D., & Munoriyarwa, A. (2021). 'Data must fall': Mobile data pricing, regulatory paralysis and citizen action in South Africa. *Information Communication and Society*, *24*(3), 365–380. doi:10.1080/1369118X.2020.1864003

Munthali, C., George, N., & Xuelian, W. (2020). COVID-19 lockdown measures on least developing economies in Africa-a case of Malawi economy. *Technium Social Science Journal*, *7*, 295–301. doi:10.47577/tssj.v7i1.394

Myovella, G., Karacuka, M., & Haucap, J. (2020). Digitalization and economic growth: A comparative analysis of Sub-Saharan Africa and OECD economies. *Telecommunications Policy*, *44*(2), 1–12. doi:10.1016/j.telpol.2019.101856

NICTP. (2013). *National ICT Policy – ICT led development*. Ministry of Information and Civic Education.

Nyirenda-Jere, T., & Biru, T. (2015). Internet development and Internet governance in Africa. Internet Society, 1-44.

Paterson, M., & Higgs, J. (2005). Using hermeneutics as qualitative research approach in professional practice. *Qualitative Report*, *10*(2), 339–357.

Patton, M. Q. (2014). *Qualitative research & evaluation methods: Integrating theory and practice*. Sage Publications.

Reddick, C., Enriquez, R., Harris, R. J., & Sharma, B. (2020). Determinants of broadband access and affordability: An analysis of a community survey on the digital divide. *Cities (London, England)*, *106*, 102904. doi:10.1016/j.cities.2020.102904 PMID:32921864

Reddy, M. (2013). Telecommunications market in a small economy: Is there a need for price control? *Asian Economic and Financial Review*, *3*(7), 843–857.

Son, P., Son, L., Jha, S., Kumar, R., & Chatterjee, J. (2019). Governing mobile virtual network operators in developing countries. *Utilities Policy*, *56*, 169–180. doi:10.1016/j.jup.2019.01.003

Stork, C., Esselaar, S., & Chair, C. (2017). OTT - Threat or opportunity for Africa Telcos? *Telecommunications Policy*, *41*(7-8), 600–616. doi:10.1016/j.telpol.2017.05.007

Sutherland, E. (2016). The case study in telecommunications policy research. *Info*, *18*(1), 16–30. doi:10.1108/info-07-2015-0040

UK Cable (2022). *IGB Data Cost*. Accessed on 06 October 2022 from: https://www.cable.co.uk/mobiles/worldwide-data-pricing/

World Bank. (2022). *Malawi country data*. World Bank. Accessed on 06 October 2022 from: https://data.worldbank.org/country/malawi

Frank Makoza is a Lecturer in the Department of Entrepreneurship and Business Management at Cape Peninsula University of Technology, Cape Town, South Africa. He holds a PhD in Information Systems and Master's degree in Information Systems from University of Cape Town. His research interests are assessing societal impact of ICT in context of developing countries and ICT use in small businesses.