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## Analyzing policy change of Malawi ICT and Digitalization policy: Policy Assemblage Perspective

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### Abstract

*The Government of Malawi set out to implement national ICT policy from 2013 to 2016. The policy activities were partially executed, and recently reviewed the ICT policy to incorporate digitization. This paper reviewed policy change that led to the development of Malawi ICT and digitalization. Using Deleuze and Guattari's Assemblage Theory, the study analysed policy documents and media reports. Content analysis was used to analyse the secondary data. The findings showed that the policy development activities departed from the conventional process of policy cycle championed in the line ministry of the ICT sector. Instead, the Presidential Delivery Unit coordinated the policy change. The process destabilized policy activities to address service delivery, transformation of economic sectors and created opportunities for policy actors to exercise their distributed agency. The study contributes to the literature on policy change of national digital policies in the context of developing countries.*

**Keywords:** Policy change, Policy Assemblage, National Digital policy, Digitalization policy, Malawi

## 1. Introduction

Advances in digital technologies and increase in adoption among consumers, private organisations and government agencies have led to consideration for public digital policy changes (Filgueiras & Raymond, 2023; Sturgeon, 2021). For instance, adoption and use of digital technologies to access financial, health and education services; supporting business processes and empowering citizens to influence government decisions are leading to changes in economic sectors. Digital technologies capabilities are improving where technologies can store large amount of data, improved processing speed of computers and reduction for cost of technologies (Hilbert, 2016; McLean, 2020). Hence, digitalization is being implemented in organisations to support innovation, efficiency, productivity and value creation of processes, products and services (Aleksandrova, Truntsevsky & Polutova, 2022; Ayakwah, Damoah & Osabutey, 2021; Iddrisu & Chen, 2022; Myovella, Karacuka & Haucap, 2020). These developments are creating dependencies on digital technologies in everyday activities of consumers, operations of businesses in economic sectors and delivery of public services in government agencies and departments (Solleiro-Rebolledo, Mejia-Chavez & Castanon-Ibarra, 2023).

The technological changes will require policies to be revised to guide how digital technologies and data are created or developed, adopted, collected or used, governed and regulated (Hanna, 2021; Sturgeon, 2021; Filgueiras & Raymond, 2023). There are complex interactions between human and non-human, material and non-material (with possibilities of re-composing and emerging) that public policies need to address (Anderson, 2015; Savage, 2019). However, the policy cycle approach that most public policies use has limitations to capture some of the requirements and contextual issues of the recent advances in digital technologies and their use among consumers, in business organisations and government institutions (Cerna, 2013; Valle-Cruz, Criado, Sandoval-Almazan & Ruvalcaba-Gomez, 2020).

Against this backdrop, this study aim to analyse the policy change of national ICT and digitalization using Assemblage Theory (Deleuze & Guattari, 1987). Particular attention is given to the context of Malawi as an example of low-income status economy that recently developed national ICT and digitalization policy to support national development efforts. A better understanding and explanation on the holistic perspective of the policy development is significant for scholars and policy makers to ensure successful implementation of the policy and achieve public service delivery (Hanna, 2021; Sturgeon, 2021).

The rest of the article unfolds in six parts. Section 2 presents background to the study. Section 3 summarises theoretical perspective of the study. Section 4 highlights research methodology. Section 5 summarises research findings. Section 6 discusses the research findings and conclusions from the study.

## 2. Background to the study

### 2.1. National Digital policy

The terms national ICT policy and national digital policies are often used interchangeably in literature (see Abimbola, Aggad & Ndedze, 2021). National ICT policy is a more encompassing term that describe “*any public sector action taken to advance the development of ICT or*

*promote their use by constituents for the benefit of society”* (Cohen, Solomon & Nijkamp, 2002:26). With advances of technologies, there has been a transition from analogue systems to digital technologies (Duarte, 2021). Hence, more scholars are using the term national digital policy (e.g. Gruber, 2019; Foster & Azmeh, 2020; Sturgeon, 2021). This study will use the term national digital policy defined as a set of decisions, guidelines, processes, programs, laws and regulations that shape the production, adoption and use of digital technologies in economic sectors and society to achieve socio-economic growth and development (Foster & Azmeh, 2020; Marcelle, 2000; Makoza, 2017; Makoza, 2022). National digital policy aim to support the development of digital infrastructure, digital skills, access to digital financial services, access to digital public platforms and enhance business innovation to support integration to digital global markets to support digital economy (Malisuwan, Tiamnara & Suriyakrai, 2016; Foster & Azmeh, 2020; Hanna, 2020).

Recent advances in digital technologies related to fourth industrial revolution (4IR) are transforming the way technologies are produced and used in organisations, communities and society. Digital technologies including artificial intelligence, big data analytics, cloud computing, internet of things, robotics, three dimension (3D) printing, blockchain technologies, mobile technologies, broadband etc. are influencing digitization and digitalization (Hanna, 2020; Makoza, 2022b; Ramalingam, Hernandez, Prieto Martin & Faith, 2016). In this context, digitization is the conversion or data from analogue or manual format to digital where digital data can be captured, processed, stored and transmitted using digital devices (Bloomberg, 2018). Digitalization is where digital technologies are being embedded in many aspects of individuals and organisation to support communication, access to products and services, business processes, creation of innovations and delivery of services (Ayakwah, Damoah & Osabutey, 2021; Leonardi & Treem, 2020; Vrana & Singh, 2021). Hence, there is dependency on digital technologies in organisations and society.

## **2.2. Role of national Digital policies and economic development**

Like national ICT policy, national digital policy also plays an important role in guiding the development and use of digital technologies to support social economic development. The national digital policies will guide how inspirations and goals of processes, programs and politics related to digital technologies in economic sectors (Makoza, 2021). The sectors include education, health, finance, banking, social services, agriculture, tourism, mining, telecommunications and banking (Hanna, 2021). Further, Lindgren, Masden, Hofmann and Melin (2019), highlighted that digital technologies are supporting digitalization of public services where government agencies are transforming the delivery of services to improve on how services are offered to the public. In addition, the authors maintain that there is improvements in transparency and accountability among public officials and better interaction between government and citizens (Lindgren, Masden, Hofmann & Melin, 2019). Foster and Azmeh (2020) noted that digital technologies can also facilitate changes in organisations to produce new business models that can support growth of digital economy.

It is perceived that that national digital polices will transform the economies across the African continent to achieve growth and well-being of citizens (Abimbola, Aggad & Ndedze, 2021; Yilma, 2023). The policies will facilitate development of crucial infrastructure that will

enable development of new businesses support job creation, financial inclusion and better delivery of services for education and health. The digital policies will also support regulators to effectively regulate the ICT sector and manage development of content and telecommunication resources e.g. spectrum and support development of new telecommunication services (Campbell, 2021; Gruber, 2019). Digital technologies are also supporting development of new working patterns e.g. digital work platforms and remote work that are providing work opportunities in some developing countries (Heeks, Gomez-Morantes, Graham, Howson, Mungai, Nicholson & Van Belle, 2021).

Some authors have noted the challenges related to digital policies that must be addressed (Abimbola, Aggad & Ndedze, 2021; Heeks, 2022; Meyer, Li, Brouthers & Jean, 2023; Sturgeon, 2021). For example, issues related to cyber security, data protection, consumer protection and data sovereignty have been challenging in the context of developing countries (Meyer, Li, Brouthers & Jean, 2023). With increased proliferation of digital devices, Manda and Ben Dhaou (2019) highlight the challenges of cyber security and privacy concerns. Further, lack of leadership in championing the technology development programs. Another area of concerns were related to digital divide where there are still disparities between people who have access and those without access to digital technologies. Some of the causes are lack of infrastructure, electricity and disposable income to meet the high cost of internet services (Heeks, 2022). Hanna (2020) note that national policies will require a holistic perspective to address digital related challenges in the economic sectors. Further, policies will need to be aligned with national development goals (Hanna, 2018). Sturgeon (2021) offers similar view that technology policies in context developing countries are outdated and will require to be revised to match with the recent development of digital technologies. While there are studies that have extensively looked at national ICT policy in the context Malawi (e.g. Makoza, 2017, Makoza, 2020; Makoza, 2021), there are few studies related to digital technology policies and strategies (e.g. Makoza, 2022b; Jiya, 2021). This study will attempt to look at policy change from national ICT policy to nation ICT and digitalization policy. The concept of policy change is discussed in the next sub-section.

### **2.3. Policy change**

Public policies are not static and do not always follow a linear path when being executed (Hochtl, Parycek & Schollhammer, 2016). Some of the factors that affect policies are difference in interpretation of policy goals among policy actors because of differences in beliefs, assumptions and perceptions about policy problems (Sabatier & Weible, 2007). Endogenous and exogenous shocks can also influence policy change. For example, changes in economy, social and political conditions can affect the decision of policy actors related to policy objectives and execution policy processes and programs (Mitrom & Norman, 2009; Sabatier & Weible, 2007).

For technology related public policies, the frequent advancement in digital technologies can also influence policy change (Manda & Ben Dhaou, 2019; Vrana & Singh, 2021). Digital technologies continue to evolve to improve processing speed, storage capacity and integration with other digital systems and technologies. The digital technologies are also creating interdependencies that require a more integrated approach when framing problems

and policy agenda of digital policies (Hochtl, Parycek & Schollhammer, 2016; Valle-Cruz, Criado, Sandoval-Almazan & Ruvalcaba-Gomez, 2020). Although there are studies on public policy change, there still few studies emerging from the context of Africa on policy change for national digital policies (Abimbola, Aggad & Ndedze, 2021; Diercks, Larsen & Steward, 2019; Heeks, 2020). This study will attempt to address this knowledge gap.

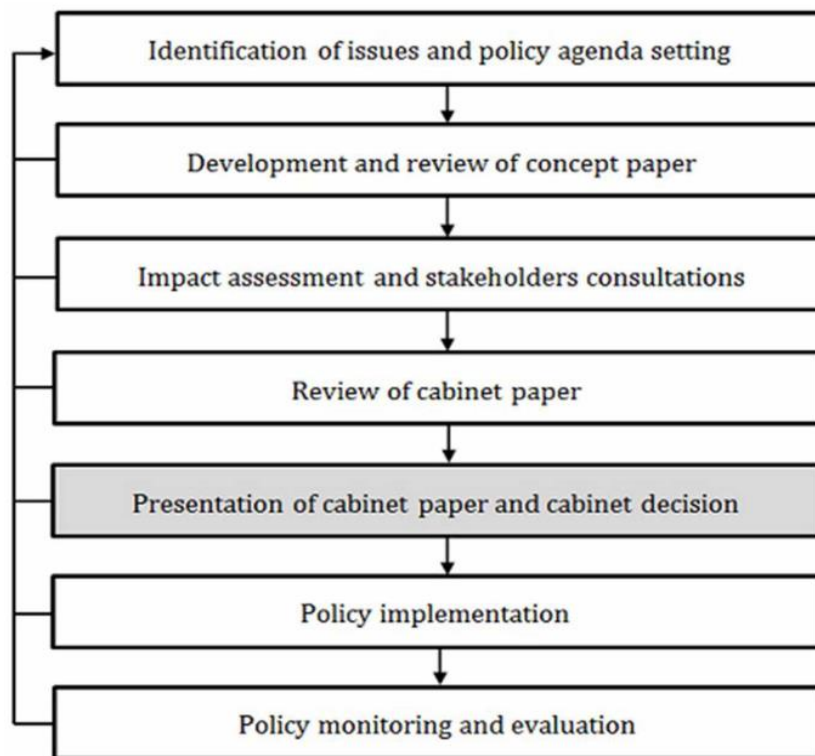
#### **2.4. Context of Malawi: National digital policy**

National ICT policy development took a decade from 2003 to 2013 (Makoza, 2019). The process began in 2009 when the country got support from United Nations Development Program and United Nations Economic Commission for Africa. External experts supported the development of the first draft of national ICT policy draft in 2003. There were revisions of the policy draft in 2006 and 2009 due to changes in priorities of those in political leadership. The final policy main objective was to support the development of an enabling environment for integration of ICTs in economic sectors for the country to become information and knowledge economy and society. The policy had ten thematic areas including (Makoza, 2019):

- Strategic ICT leadership
- Human capital development
- E-government services
- ICT in industries
- ICT infrastructure development
- ICT in the priority growth sectors
- Responsive ICT legal, regulatory and institutional framework
- National security
- International cooperation
- Universal access of ICT and ICT related services

While the national ICT policy used the National Information and Communication Infrastructure framework, the policy development followed the Malawi Government public policy formulation process (Makoza, 2017) (see Figure 1 below). The process begin with identification of social issues and setting policy agenda, the line Ministry develop a concept paper that is reviewed with other ministries and departments. Impact assessment of the policy is conducted and stakeholders (legislators, donors, sector players, NGOs and representative of policy beneficiaries) are consulted to comment on the proposed policy and revise the cabinet paper. The line ministry presents the cabinet paper to the cabinet and the decision are made to adopt the policy or reject the policy. Cabinet approval is crucial for allocation of a budget and human capacity for the policy processes and programs. The line ministry implement the policy through programs and sometimes through projects with donors and private sector organisations. The line ministry and policy monitoring and

evaluation desk in the office of president and cabinet is responsible for assessing the progress, outcomes and impact of the policy (Makoza, 2017; Makoza, 2019).



**Figure 1:** Public policy process (Makoza, 2019)

National policy implementation in Malawi has been problematic (Makoza & Chigona, 2016). Some of the problems are turnover of government due to electoral process, lack of resources, poor monitoring of policy programs, over dependence on donor to fund the policy programs and lack of leadership to guide the policy implementation (Kanjo, 2008; Makoza, 2017; Makoza & Chigona, 2017). Further, there are power struggles between politicians and donors on priorities for the policies. Similarly, implementation agencies compete for control over policy programs and agencies with resources control some of the policy programs despite being outside of their legal mandate (Makoza, 2021; Makoza & Chigona, 2016). Consequently, national ICT policy programs are not implemented on time, often have limited impact to improve the economic sectors and support economic growth.

The last version of national ICT policy was set for a period of four years (from 2013 to 2016). The policy was partially implemented during this period and some programs are being implemented. The government of Malawi is in the process of developing a new policy to guide completion of the outstanding policy programs and address the new issues that have emerged e.g. limited adoption of digital technologies in some economic sectors and slow development of digital economy (Makoza, 2022b). Furthermore, the government intends to integrate digital technologies and support public sector reforms for government to adopt digitalization (Chilima, 2016; Kayuni & Chasukwa, 2020). There are few studies that have

analysed national ICT policy change to national digital policy. The current study attempt to address this knowledge gap.

### 3. Theoretical background to the study

The study used Assemblage Theory (Deleuze & Guattari, 1987) that support understanding of complex and contested construction of policy change. This approach departs from dominant way of viewing policy as a structured linear process e.g. policy cycle (Lindblom, 1968) or Policy streams (Kingdon, 1995) or Advocacy Coalition Theory (Sabatier & Weible, 2007). Deleuze and Guattari (1987) draws on ideas from botanic studies to suggest a concept of rhizome (a root systems that has many interconnected parts and multiplicities that can is unstructured and grows into may directions). A rhizome has many assemblages that has multiplicities, homogenous, and multiple levels. The homogenous components of assemblages can be individuals, groups, documents, technology, culture, beliefs etc. These are autonomous and have multiple memberships. Furthermore, components of assemblages include non-human, materials and non-materials that are connected together to and perform material and symbolic roles. Assemblages can be connected to other assemblages e.g. social, political, physical, economic, technology, needs and interests (Lysgard, 2019; McCann & Ward, 2012; Savage, 2020).

The study consider that policy as assemblage for understanding policy change that can be complex and not follow the linear process that often public policies take (Gorur, 2011; McCann & Ward, 2012; Savage, 2020). In this context policy is viewed as policy doing and abandoning the idea about policy making. This approach attempt to understand the “work policy does” in exploring actors, sites, practices, processes and considering both human and non-human, material and non-materials. Hence, policy conceptualization of policy is fluid (non-hierarchical and a-centred). Deleuze and Guattari (1987) further propose the connection between elements in an assemblage to have vertical and horizontal axis in terms of their roles. The vertical axis relate to processes and expression in an assemblage. The horizontal axis are the roles and materials in an assemblage. The two dimensions (vertical and horizontal axis of assemblage) are self-organised and co-exist in practice. Together they have four dimensions summarised as follows:

- **Machinic assemblage:** materials that support what is done and have elements including objects, humans, non-human, actions, practices.
- **Collective assemblage:** expressions that related to what is said and have elements including ideas, thoughts, words and speech acts that support transformation
- **Territorialization:** responsible for establishing stabilization in an assemblage and elements can include identities, positionings, roles and responsibilities. However, these elements are not permanent and are involved in the transition process to deterritorialization.
- **Deterritorialization:** the changes that happens over tine to defy what was normal and stable and lead to transformation where elements can establish new relationships or reconnect with other assemblages and ways of being.



Deleuze and Guattari (1987) does not provide a prescript on how the concept of assemblage can be applied in digital policy studies. The attempt to use the four concepts in line with similar studies (e.g. Gorur, 2011; McCann & Ward, 2013; Prince, 2010, Savage, 2017). The researcher was cautious of using the constructs in a rigid way but allow flexibility to appreciate digital policy change and its complexity (Henry, 2019).

#### 4. Research methodology

The objective of the study was to understand the shift of policy that led to the development of national Digital policy of Malawi. The study used qualitative research approach (Bowen, 2009; Morgan, 2021) to understand the historical and context of national digital policy. The case of Malawi was selected because the government recently embarked on policy reforms to ensure efficiency and effective delivery of public services (Makoza, 2021). The study used archival data and policy documents to understand the historical context of the national digital policy (Bowen, 2009). Further, media reports were used to verify facts related to events and activities related the development of the digital policy. Purposeful selection of the documents was used. We selected documents that (a) were relevant to the development of national digital policy (b) document that provided historical context of the policy development (c) media reports that highlighted the activities of presidential delivery unit. Table 1 summarises the documents that were analysed in the study.

**Table 1:** Summary of documents analysed in the study

ID	Document Title	Source
#1	Malawi ICT master Plan 2013	MoID
#2	National ICT policy 2013	MoID
#3	Malawi Vision 2063	NPC
#4	Malawi 2063 First 10-Year Implementation Plan	NPC
#5	Malawi Digital economy strategy (2021-2026)	NPC
#6	Malawi Digital government strategy	PPPMW
#7	Malawi ICT and Digitalization policy Roadmap (2022-2026)	OPC
#8	Media reports and organisation websites	OMW
<p><b>Key:</b>            MoID – Ministry of Information and Digitalization,            NPC – National Planning Commission,            PPPMW – Public Private Partnership Commission of Malawi,            OPC – Office of the President and Cabinet Malawi,            OMW – Online Media and websites (e.g., <a href="http://www.nyasatimes.com">www.nyasatimes.com</a>, <a href="http://www.mwnation.com">www.mwnation.com</a>,  <a href="http://www.malaw24.com">www.malaw24.com</a>, <a href="http://www.times.mw">www.times.mw</a>, <a href="http://www.macra.mw">www.macra.mw</a>, <a href="http://www.worldbank.org">www.worldbank.org</a>, <a href="http://www.uncdf.org">www.uncdf.org</a>,  <a href="http://www.kilinja.com">www.kilinja.com</a>, <a href="http://www.africareport.com">www.africareport.com</a>)</p>		

The documents were read to understand their relevance to national digital policy and later assigned an identification. Content analysis (Kyngas, 2020) was used to analyse the selected

documents. The process began reading and re-reading the text to be familiar with the data. Key and interesting points in the data were assigned a code. The codes that were related were grouped into categories. The categories were then assigned to themes (Bowen, 2009). The themes were then reflected in relation to the assemblage thinking using the concepts of machinic assemblage, collective assemblage, territorialization and deterritorialization. These concepts were applied with flexibility because policy as assemblage attempt to make sense of the world that is not linear, and that policy formulation can take multiple routes different terrains and new directions (Masny, 2016). Hence, the analysis considered actions that emerges from text beyond the meaning of text. The process was repeated, and a report was produced to answer the research question (Kyngas, 2020).

## **5. Summary of findings**

### **5.1. Setting the context of national ICT and digitalization policy (2021-2026)**

National ICT policy was perceived to be an enabler that can support the government of Malawi to transform the economic sectors and improve the well-being of citizens. Vision 2020 as a development strategy, informed the development of national ICT policy (2013 to 2016). However, National Vision 2020 and National ICT policy strategies had reached their designated timelines. The government was looking for new development agendas to address the outstanding and emerging development issues. Malawi Vision 2063 was developed through the National Planning Commission of Malawi. This followed by development of the Digital economy strategy (2021-2026). The National Planning Commission had formal agreement with all major political parties to support the national development strategies. Hence, all political parties developed their party manifestos in alignment to the national development vision. There was government turnover in 2021 due to national elections. The new government set priority on ICT development in line with the national development agenda of Malawi Vision 2063 as noted in the following statement:

*“We shall position our economy as a competitive player on the global market, exporting services and manufactured goods, as well as advancing technology. We will improve our competitiveness and increase global reach by, among other things, using Information and Communication Technology (ICT) to easily access markets” (#5).*

Some of the programs that were set in the national ICT policy (2013 to 2016) were not completed. For instance, the Malawi Digital Project funded by the World Bank aimed at transforming the countries economy, society and public services delivery. Hence, the government was looking for ways to integrate the programs in another policy. The Malawi ICT policy and Digitalization policy (2021-2026) was developed. The policy main objective is to: *“A wealthy and self-reliant nation through provision of integrated and inclusive ICT, digital systems and life enhancing services” (#5).* The policy had ten thematic areas addressing diverse issues for ICT infrastructure, universal access, governance, cybersecurity, entrepreneurship development, human capital, research and innovation, stakeholder collaboration and digitalization (#5). The policy will be implemented between 2021 and 2026 through the various programs and processes in the policy implementation agencies. The implementation agencies include Ministry of ICT and Digitalization, Department of E-Government, Malawi Communication s regulatory Authority, among others.

## 5.2. Machinic assemblage

Machinic assemblage in the policy change concentrated on materials and what was done during the development approach of Malawi ICT and Digitalization policy. The materials include both human (actors involved in the policy development and their duties) and non-human (object, structures and conditions that supported the practices of the actors). The actors identified in the policy were: Government officials, the President, NGOs, private sector organisations, local business chamber organisations, academia and international development agencies. There was diversity the composition of the actors as the policy drew many thematic areas representing the interests of the policy stakeholders:

*“A coherent, harmonized and overarching National ICT & Digitalization Policy was needed due to technology’s transformative nature and cross-cutting characteristics, and provide clarity and guidance to various tech related policies and projects” (#7).*

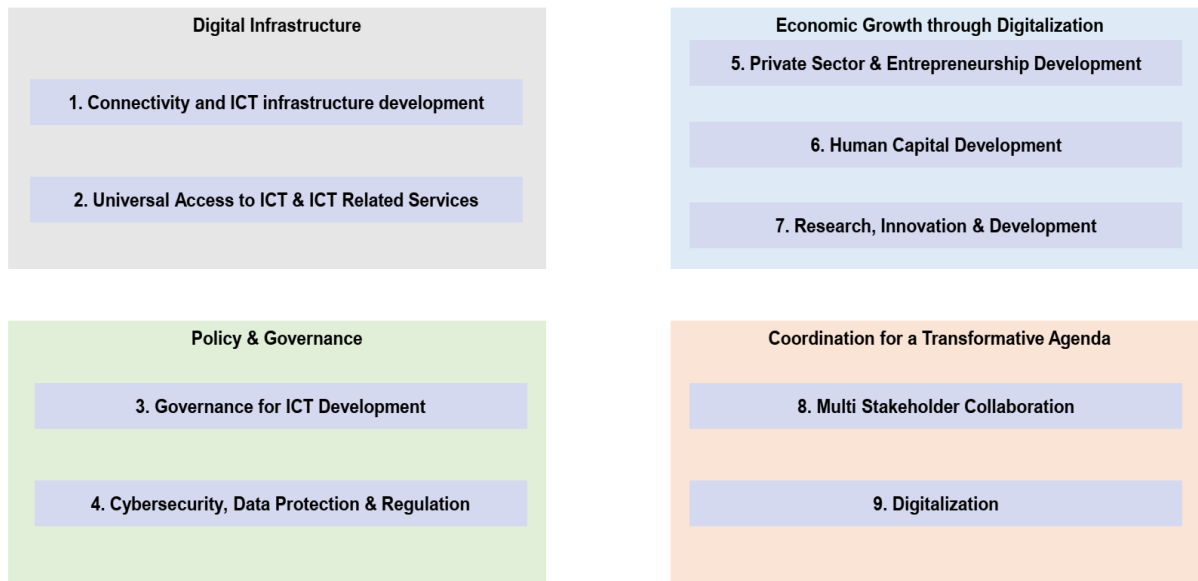
For structures, the President established a Presidential Delivery Unit in the Office of the President and Cabinet. Among its roles of Presidential Delivery Unit were to produce solutions that addressed inefficiencies in public services delivery and supporting implementation of critical infrastructure projects. The Presidential Delivery Unit organised a policy lab to develop national ICT and Digitalization policy:

*“The Presidential Delivery Unit organized the Digitalization Labs from 25th April – 10th May, 2022. Malawi has entered into a new long term development planning cycle given the conclusion of ‘Vision 2020’ and the adoption of Malawi 2063 (MW2063)” (#7).*

Situational analysis was conducted to understand the technology landscape of the country and appreciate the challenges in the sectors of the economy. Some of the challenges were related to digital skills, digital gender divide, taxation, coordination of initiatives, lack of digitalisation and incomprehensive data protection frameworks. There was also consideration of what previous policies attempted to achieve and their limitation. Hence, previous strategic documents (as objects) were used in the policy development:

*“Nine priority areas were identified in ICT & Digitalization. Previous actions and challenges in these nine areas were analyzed. Fifteen previous policies, acts, strategies were analyzed in Malawi as well as regional and global best practices in digitalization” (#7).*

Among the strategic documents included the Constitution of Malawi, Communications Act of 2016, Local Government Act of 2017, Electronic Transactions and Cyber Security Act of 2016, Access to Information Act National ICT policy (2013-2016), Malawi Vision 2063. Etc. The output of the process was the policy draft addressing nine thematic areas that were categorised into digital infrastructure, economic growth through digitalization, policy and governance and coordination for transformative agenda. Figure 2 summarises the thematic areas of the draft policy.



**Figure 2:** Policy themes (#7)

As can be seen in Figure 2, the themes in the policy had common areas that required complementary solutions to ensure that the policy implementation can be holistic. Hence, the four these were classified as cross cutting themes (Governance for ICT development, Multistakeholder engagement, Cyber security, Data protection and regulation, Research, innovation and technology) and others supporting pillars (Connectivity and ICT infrastructure, Human Capital development, Private sector development and Universal ICT accessibility). The overall policy objective was: *“A wealthy and self-reliant nation through provision of integrated and inclusive ICT, digital systems and life enhancing services”*(#7). Thus, supporting the idea that digital technologies can support transformation of various sectors of the economy and society.

The conditions that prevailed immediately after the new administration was expectation of change to improve the way government operated and deliver public services. The public expectations and willingness of government to engage with policy actors led to participation of stakeholders in the policy development process: *“The PDU Labs engaged with 130 stakeholders in the tech ecosystem across Malawi”* (#7). This created opportunities for stakeholders to exercise collective agency in policy change process.

### 5.3. Collective assemblage

Collective assemblage concentrated on understanding of expression of ideas, standards, speech acts that supported transformation in the development of Malawi ICT policy and Digitalisation. The analysis focused on interactions and utterances related to the development of policy. Statements regarding policy change emerges from government officials, private sectors organisations and international development partners. There were claims that the national ICT policy did not adequately address the development needs of the economic sectors. Some of the reasons where incoherent policy that did not consider other policies e.g.

broadcasting policy. Another challenge was the high cost of data compared to other countries in the South African region. International development partner also highlighted that the country was not able to move towards digital economy because of high cost of data and services. Further, lack of digital skills was limiting access of few digital services that were present in the country. Private sector organisations and consumers also raised issues related to cyber security and mobile money frauds. Table 2 summarises themes for problems that influenced policy changes.

**Table 2:** Summary of issues related to ICT policy

Themes	Description	Examples of statements
Cost of data	High cost of internet data	<i>"I spoke about the high cost of data because, as you know, Malawi is ranked the second most expensive data market in Africa. I also shared with my counterparts that broadband investment is concentrated in urban, yet 80 percent of Malawi's population is rural. We have low access to energy, at 14.9 percent" (#8N)</i>
Policy coordination	Poor coordination among government agencies and partners	<i>"there are challenges in coordination between and within government departments, private sector and development partners" (#8U)</i>
Incoherent policy	Incoherent policies that were not addressing sector needs	<i>"... the country's National ICT Policy and the Malawi Digital Broadcasting Policy as "myopic" and "counterproductive" saying they limit the growth of local businesses in the sector" (#8NT)</i>
Cyber crimes	Increase of threats and risks when using digital technologies	<i>"I also shared with colleagues that digital literacy and cybercrimes are on the rise, that is mobile money fraud targeting low-income subscribers" (#8N)</i>
Digital skills	Lack of ICT skills and capabilities	<i>"Lack of coordination and the shortage of technical skills in the country may lead to imperfect distribution in digitization investments and increase the likelihood of failed projects, and further foster inequality" (#8U)</i>

The problems highlighted in Table 2 led to the policy stakeholders to consider policy change and expectations that government would address the problems. The Presidential Delivery Unit organised consultative session to gather ideas on the problems and suggestions from the policy stakeholders.

#### 5.4. Territorialization

Territorialization was part of movement from machinic to collective assemblage. The analysis focused on the roles and positioning of policy actors and stakeholders that led alteration or changes of policy development process and altered context. Public policy development in the context of Malawi was structured and followed the processes and standards of government procedures. The line ministry of each sector and the policy desk in the Office of President and Cabinet were champions in leading the policy development. They consulted other government departments (e.g. Ministry of Justice and Law Commission of Malawi) and Parliament and Legislative Committees to ensure that policies are consistent with laws and not in conflict with other policies.

There was change of government in 2021 due to tripartite elections. The new President established a Policy Delivery Unit in the Office of the President. The aim of establishing Presidential Delivery Unit was to address limitations of the existing structures related to how the incumbents in ministries, departments and agencies were appointed and performing their duties and roles:

*“There are issues of unprofessionalism, incompetence and people occupying positions they are not qualified for, among others, so one of the things President Chakwera has out on his agenda is to set up delivery unit that diagnoses capacity deficiencies in the State machinery so that his Cabinet, advisers and staff can address the gaps”(#8NT)*

The assumptions were that the Presidential Delivery Unit would complement efforts in the government structures to deliver public services, improve governance and achieve economic growth. There were also assumptions that the Presidential Delivery Unit would work in the context of Malawi like in other countries: *“I fully expect this to amount to nothing short of a delivery revolution for Malawi, not least as the PDU is not some ephemeral concept – but a tried and tested method of administrative change-making, which is already in operation in 30 other governments of the world.” (#8RA).*

Some policy actors perceived the establishing of Presidential Delivery Unit was deviating from the existing structures that were undergoing public sector reforms championed by the Office of the Vice President: *“it is surprising the government sees merit in setting up the PDU despite it having ministries, departments and agencies” (#8KL).* Similarly, another policy stakeholders questioned the merit having a Presidential Delivery Unit: *“Is the creation of PDU acceptance of a failing Government system? And now he wants a personalized system? Are they going to run parallel?” (#8KL).* This may mean that the new leadership in government did not have the command to ensure that all government ministries and departments performed according to the expectations of their roles and duties in supporting the incumbent government. The Office of Vice President Office was still in the process of public sector reforms that could also oversee any suggestions of government structural changes. Some policy actors were convinced that the Presidential Delivery Unit was just a duplication: *“This is what we call "repeating again and again twice more for the third time. Unnecessary duplication of duties" (#8KL).* However, government maintained that it was not side-lining staff in the ministries, departments and agencies as indicated in the following statement:

*“My first priority for our Delivery Unit is to accelerate the development of the agribusiness sector – building upon Malawi’s agricultural economy. As with all methods of rapid development, there will be those whose cosy roles in government administration will feel pressured by the creation of the PDU. This is not to suggest there are not many talented civil servants across ministries and within government agencies” (#8AR).*

Beyond limited consideration of the structure, the Tony Blair Institute for Global Change was engaged as a collaborative partner of the unit. The engagement of the foreign experts to support the activities of the Presidential Delivery Unit drew criticism within some quarters of the society: *“During the campaign, they told us about all the gaps in our governance structures. They told us they knew those gaps and they had solutions of how to fix them. Now, after victory, they say they do not know those gaps. They need Europeans to come and tell them where those*

gaps exist and how to fix them” (#8M2). Similarly, another stakeholders also pointed that: *“This country has got capable institutions that can deliver exactly what TBI has been hired for, we have public sector reforms programs in this country which are running under the Ministry of Economic Planning and Public Sector Reforms that are exactly dealing with the same governance in terms of improving and strengthening the system, delivery of public services including the governance lapses”* (#8M2). This may mean that the leadership in the government was marginalizing the local knowledge and capacity in addressing policy changes.

### **5.5. Deterritorialization**

Deterritorialization was the second part of movement from machinic to collective assemblage. The analysis focused on the changes that emerged from a stable context of policy to a new form of policy change. In the context of the study, the traditional way of developing policy was disrupted, and new identities emerged from the various positions that the policy actors took. Hence, there were attempts to create new ways of being for the policy actors in consideration of political, social and economic context.

The roles of policy actors and stakeholders changed during the national ICT and Digitalization policy including the President, government officials, private sector organisations, academia and non-government organisations. The structural changes in policy development led to positions and new identities (that were often taken for granted). The President as a leader and the President as an agent for policy change. This was evident in the President being directly to the Presidential Delivery Unit: *“Accordingly, I have recently set up a new body in my office at the very seat of government. The Presidential Delivery Unit (PDU) is a critical step in driving change through government”* (#8AR). Thus, creating possibilities of establishing relationships with other policy actors within the structures of government and create new ways of working e.g. policy development through the Presidential Delivery Unit.

Government officials changes their roles as policy implementers and governance agents on policy change. The officials from the government ministries, departments and agencies worked with the Presidential Delivery Unit in these new roles to support change and their interaction with those with political authority in government: *“This small, handpicked team from across the civil service is already focusing on delivering my administration’s core priorities – and using relationships across government, as well as the political authority of State House, to manage their implementation”*(#8AR). The private sectors organisations as policy stakeholders and policy entrepreneurs who lobbied for their interests in the policy change process. For example, ICT sector Association highlighted the need for changes related to cost of services: *“Efforts should be made to reduce the cost of Internet services and digital devices such as smartphones and tablets, to make them more accessible... the country should also focus on improving digital literacy, observing that many people may not have the digital literacy skills necessary to fully engage with digital services”*(#8NW). Additionally, issues related to cybercrimes and mobile money fraud were also highlighted. Non-government organisations as policy agents and lobbyists, Academia (political scientists) as experts on policy and also policy watchdogs in highlighting areas that were problematic in the policy process. Some stakeholders perceived that the approach to policy should be championed by local stakeholders: *“The administration [government] has engaged the Tony Blair Institute to identify*

gaps in governance institutions and address the deficiencies... However, Malawians are still demanding the administration [government] to cancel the arrangement which commentator Y has described as neo-colonialism”(#8M2). This may mean that some policy actors did not like the external influence and control over policies. International Organisations as experts and agents for policy transfer in influencing policies and governance practices.

In a way, the introduction of Presidential Delivery Unit created an environment of new ways of policy development where there was collective agency among the policy actors. Some of the old practices were changed or muted. Government officials were assigned more responsibility for implementation of policies and reporting:

*“Through gathering and analysing a stream of performance data, and conducting regular stock-takes with implementing ministries, departments, and agencies, the PDU is identifying which priorities are off-track or delayed and why. By pinpointing issues and bottlenecks, it will subsequently bring resources to support those necessary arms of government to unblock obstacles, using my executive prerogative as head of state and government to drive through change” (#8AR).*

New relationships were created where government officials engaged policy actors on regular basis as part of the governance arrangements. A stable context/territory for creating a new policies e.g. national ICT and digitalization policy. The policy development process was shorter compared to previous approaches of policy development.

#### **1. Discussion of findings and conclusion**

This paper set out to analyse policy change of ICT and digitalization policy of Malawi using Assemblage theory (Deleuze & Guattari, 1987). The findings showed that changes of government through elections, new development agenda and incomplete policy programs from the previous national ICT policy compelled government to consider policy changes. The policy actors of national ICT and digitalization were government official from ministries, agencies and department, the president, private sector organisations, international development organisations and non-government organisations. The stakeholders reviewed previous policy documents, legal documents and national development strategies. The government also formed new structured to support the development of the national ICT and digitalization policy. Thus, part of the machinic assemblage had both human and non-human elements that interacted together.

The findings also showed that stakeholders presented different ideas, expressions and utterances about the national ICT and digitalization policy and process that was followed to develop the policy as part of collective assemblage. As part of territorialization, the findings showed that there were changes in roles and practices among the policy actors. The policy development of national ICT policy and digitalization through Presidential Delivery Unit transformed the identity of the government officials in ministries, departments and agencies of being custodians of the policy but also partners in collaborations with policy stakeholders from outside government structures. Moreover, there government officials had more responsibilities and being more accountable to improve on governance: *“[The President] said the PDU and the lab place emphasis on delivery. He told Ministers, principal secretaries and directors that when they are invited into the delivery lab, they should consider the invite as*



*coming from [The President] himself and should expect to work with the president's office on delivering something to Malawians that cannot be done without collaboration" (#8M2).*

Interestingly, the findings also highlight changes of the perceptions about the role of international development partners and local experts in policy development. Often in the past the ideas, knowledge and position of internal development partners were privileged partly due to lack of capacity local capacity in technology related policy formulation (Makoza & Chigona, 2013; Makoza, 2019; Makoza, 2022). The study demonstrated new policy practices where local experts wanted to apply their local understanding of their context and influence the national ICT and digitalization policy. Furthermore, the findings showed claims that international development were supporting the Presidential Delivery Unit without any cost:

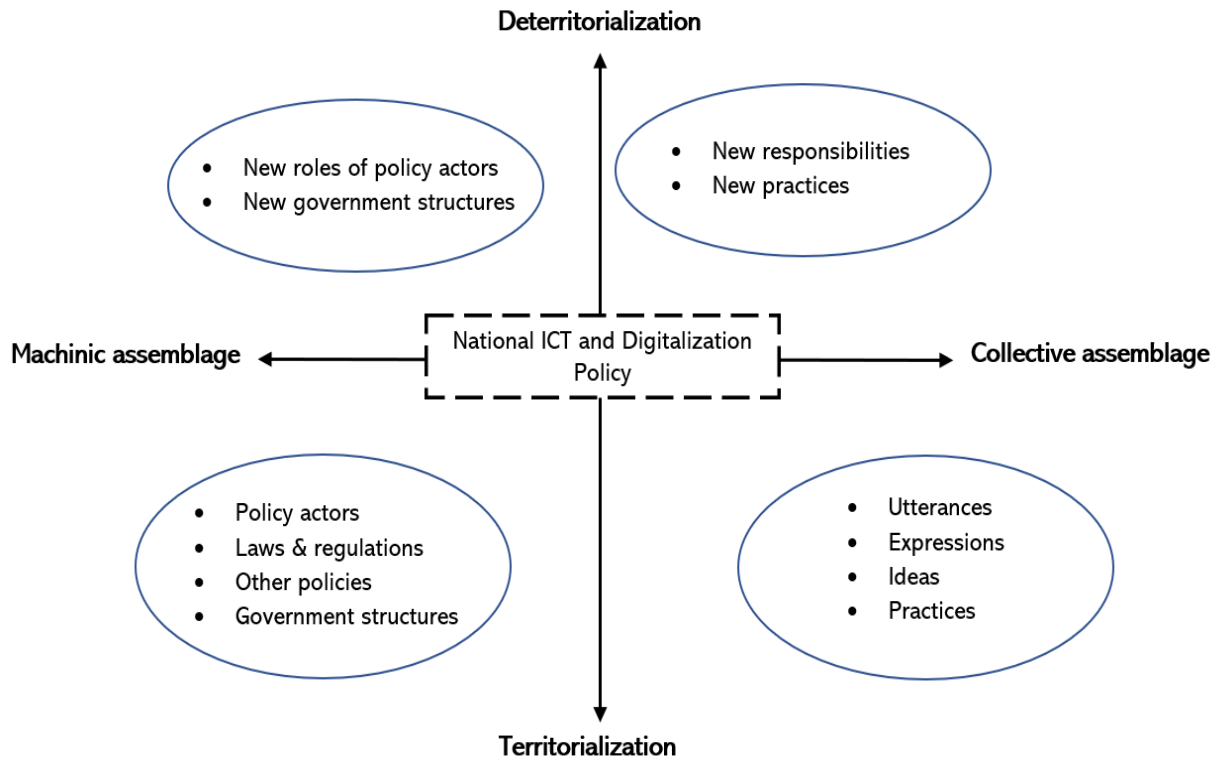
*"These people are here, committed to assist the country, and the President is welcoming of any help, from any experts, who are willing to do so without taking advantage of the Malawian people, and taxpayers money" (#8NT).*

*"TBI [Tony Blair Institute] is so moved with our poverty that unlike the many other countries which paid USD17 million in 2018 for TBI's services, Malawi will not pay a cent. Implying that the Country Head and his team will either work pro bono or get paid by some other well-wisher(s), on our behalf" (#8M2).*

Their motivation was to support development of governance capacity that was lacking in the public service. The local policy actors perceptions for international development was a change in policy development because previous policies have often failed because of lack of financial resources and government had always relied on donors (Kanjo, 2008). Thus, part of policy was beyond thinking about resources but also the influence and agency of policy actors in the policy development process (McCann & Ward, 2012; Savage, 2020). The study demonstrated new ways of being of the local policy actors e.g. from being recipients of prescripts of external experts to active participants who applied their knowledge and local practices in the national digital policy.

From the theoretical perspective, our findings confirms the coming together of institutions, policy actors, discourses, non-human objects (laws, policies, strategies) and practices as an assemblage (Deleuze, G. & Guattari, F. 1987; Gorur, 2011). Policy change was demonstrated in movement from machinic assemblage to collective assemblage in development of national ICT and digitalization e.g. engaging of policy actors, use of previous laws, development strategies and establishing of Presidential Delivery Unit. Policy actors expressed their ideas and made utterances that influenced their policy development practice. Further, the movement from stable context to destabilization where new roles and responsibilities among policy actors emerged. The study demonstrated the complexity of national ICT and digitalization where there were dependences with other contextual factors in the policy change process e.g. relations among policy actors, economic factors, politics, resistance to external domination or influence and government structures. The findings highlight a better understanding of policy change beyond believes of policy actors (Sabatier & Weible, 2007), politics, problems and the policy (Kingdon, 1995). Further, the findings showed that policy change can also take different forms and not taking the steps of the policy cycle (Lindblom, 1968; Hocht, Parycek & Schollhammer, 2016) to include material, discursive

and practice dimensions. Figure 3 summarises the theoretical perspective of the study and suggest a national ICT and Digital policy assemblage.



**Figure 3:** Emerging national ICT and digitalization policy assemblage

Our study was not without limitations, we focused on policy change for national ICT and digitalization and a policy assemblage related to technology. Other policy assemblages were not considered as part of this study. Assemblage can have multiplicities that are connected to other assemblages related to political, physical, social etc. (Gogur, 2011; Savage, 2020; Lysgard, 2019). This open up new areas for further research. For instance, the power relations that emerged during the policy change, other studies can look at the contemporary practices in policy development beyond neo-colonialism and hegemony to understand the power relations between international development agencies and local policy experts. It would be interesting to understand how the relationships can be managed. The current study looked at a snap short (short-term) of national ICT and digitalization policy change. Another fruitful area of further study is longitudinal analysis of the national ICT and digitalization because policy assemblage to do not remain the same over time. The parts of an assemblage can change or detach or connect to another new assemblage and establish new interactions and relationships over time (Deleuze & Guattari, 1987; McCann & Ward, 2012). Lastly, proposed national ICT and digital policy assemblage can be validated in similar studies especially in the context of African countries where national ICT policy require revisions or reforms to address the fourth industrial revolution phenomenon and support socio-economic development (Abimbola, Aggad & Ndzendze, 2021; Aiginger & Rodrik, 2020; Heeks, 2022).

The study makes the following recommendations for policy makers and practitioners (a) ICT policy change and reforms will require a holistic perspective beyond technology, hence wider consultation and engagement of stakeholders is paramount. The stakeholders can bring wider perspective to the new digital policies (b) Change management is recommended in public institutions for the managers responsible for policy development and implementation as custodians of public digital policies, policy assemblage perspective to national digital policies opens up state institutions that will need to embrace change and collaborate with both internal and external partners.

In conclusion, the study analysed policy change of national ICT and digitalization using Assemblage Theory (Deleuze & Guattari, 1987). The findings showed that policy change can involve many parts including human, non-human, material and non-materials that involve complex interactions in the policy context. The study showed that national ICT and digitalization policy attracted government officials, private sector organisations, international development agencies, non-government organisation who collaborated in the development of new policy. The policy actors had different interests and ideas about the policy. The study offers insight into the transition from machinic assemblage to collaborative assemblage where new government structure emerged during the policy change e.g. the Presidential Delivery Unit that supported the development of national ICT and digitalization. Further, there was change from stabilised policy context to destabilised context where policy actors used their collective agency, and some actors had more responsibilities and roles as part of the new practices. The study contributes towards literature on national digital policies in Africa.

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