

Communication distortions in reporting about the implementation of Consolidated ICT Regulatory Management System in Malawi

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ABSTRACT

The paper presents a critical analysis of media reports about the implementation of an ICT Information and Communications Technology (ICT) sector regulatory system called Consolidated ICT Regulatory Management System (CIRMS). The study draws upon Habermas' Theory of Communicative Action to analyse media reports on CIRMS implementation using the case of Malawi. The findings showed that there were potential benefits for implementing the CIRMS to address challenges of regulating the ICT sector including supporting billing, revenue collection and quality of ICT services. However, there were also communication distortions on CIRMS in the media that affected the processes and decisions of implementing the system that had wider implications beyond the ICT sector regulator. The study contributes towards literature on implementation of ICT sector regulatory systems in the context of developing countries.

Keywords: Consolidated ICT Regulatory Management System, Theory of Communicative Action, Malawi

INTRODUCTION

ICT sectors are significant in the supporting the provision of ICT services to other economic sectors and stimulating economic growth (Makhaya, & Roberts, 2003; Rohman & Bohlin, 2015). The ICT sector delivers services to finance and banking, education, tourism, broadcasting, manufacturing, education, health and agriculture. However, the provision of ICT services to the various economic sectors require regulations and standards to support sector efficiency and protection of consumers (Cohen, 2003; Melody, 2013). Governments enact laws that support the establishment of ICT regulatory organisations which are mandated to enforce regulations and standards in the ICT sector. In this vein, African governments have established ICT sector regulatory organisations following the global wave of deregulation, liberalization and privatisation of the telecommunications sectors in the 1990s (Gasmi & Virto, 2010).

The roles of ICT sector regulatory organisations include enforcement of laws and regulations on development and use of ICTs, arbitration of disputes among telecom network operators, coordinating implementation of ICT policies, promoting market competition, licensing of telecom network operators, supporting harmonisation regional and international standards and management of spectrum (Colandro, Gillwald, Moyo & Stork, 2010; van Gorp & Maitland, 2009; Volker, 2013). Unfortunately, the ICT sector regulatory organisations in African countries face challenges in performing their roles. The challenges include weak economic markets, poor governance practices, and ineffective management of crucial resources such as spectrum and issues of corruption (Sutherland, 2014; Gasmi & Virto, 2010). The organisations are investing in information systems to mitigate some of the problems and perform their regulatory roles effectively.

Consolidated ICT Regulatory Management System (CIRMS) is an example of ICT sector regulatory systems that support billing of telecom network operators, management of spectrum, monitoring quality of services and network traffic management. The implementation of such information systems, like any other technological innovations, can be problematic because of the influence of wider contextual issues (Avgerou, 2001; Tarafdar, Gupta & Turel, 2015). Political, social and economic discourses can shape the perceptions and decisions of stakeholders in the implementation of information systems (Doolin, 2004; Gwillim, Dovey & Wieder, 2005; Myers, 1995). We argue that communication distortions in form of unwarranted beliefs and assumptions

can affect the decisions on implementation of CIRMS (Cukier et al., 2008; Stahl, 2008). The stakeholders in the ICT sector have different views on CIRMS implementation and it is necessary to examine the CIRMS discourse to ensure that unnecessary tensions and limitations are highlighted.

The study was guided by the research question: What is the nature of communication distortions on the ICT sector regulatory system? To address this question, the study draws on Habermas' Theory of Communicative Action (Habermas, 1984) to analyse media reports on CIRMS. The case of Malawi on CIRMS implementation was a promising in dealing with challenges for ICT sector regulations in a low-income status country. The implementation of CIRMS had attracted the attention of stakeholders beyond the ICT sector organisations. Therefore, the case presented an appropriate study to demonstrate the effects of communications distortions on the implementation of an ICT sector regulatory system and its wider implications in society.

The rest of the paper is presented as follows. The next section outlines the background to the study followed by the summary of the theoretical underpinning of the study. The research methodology is the presented. This is followed by the summary of key findings from the data analysis. Finally, the results of the study are discussed and the summary of the conclusions drawn from the study.

BACKGROUND TO THE STUDY

The following section presents the background to ICT sector in the context of an African country. The challenges faced in regulating the ICT sector are highlighted and the context of the study.

The ICT sector

ICT sector comprises broadcasting, content providers, postal services, hardware and software vendors, ICT services providers/communications providers, ICT training providers, telecom network operators and regulatory institutions. The ICT sector organisations play an important role in providing services related to components of information society e.g. ICT infrastructure, skills development and use (Cohen, Solomon & Nijkamp, 2002; Gasmi & Virto, 2010). Regulation of the activities in the ICT sector is important to ensure that the sector effectively supports economic activities of other sectors (e.g., manufacturing, education, banking, tourism

and transport). Regulatory activities may include enforcement of laws and regulations in the sector to ensure that policies and sector development goals are realised; coordinating the implementation of ICT policies which may involve working with different stakeholders in the ICT sector; promoting effective market competition and eliminating anti-competitive behaviours among ICT services providers; licencing of telecom network operators; and supporting harmonisation regional and international standards and coordination of ICT policy issues to ensure that current and future needs of societies are addressed (Colandro, Gillwald, Moyo & Stork, 2010; Li, Qiang & Xu, 2005; Wallsten, 2005). In addition, ICT sector regulatory organisations are responsible for protecting consumers, setting up rates and tariffs and monitoring of telecommunications services (Cohen, 2003).

Challenges in regulating the ICT sector

ICT sector regulatory organisations in low-income countries are faced with challenges which affect achievement of their goals. Some of the problems are weak economic conditions leading to inefficient taxation and high debts; poor infrastructure due to insufficient deployment of telecommunication technologies; inefficient institutions for supporting regulatory activities because of poor institutional governance; lack of democratic practices which weakens institutional rules and the effects of corruption which may be part of political systems (Cohen, 2003; Gasmi, Um & Virto, 2009; Gasmi & Virto, 2010).

In their analysis of the role of ICT policy in the development of the next generation networks in South Africa, Brown and Brown (2008) observed that the ICT sector faced challenges related to too much focus on technology while ignoring social and political issues, unfavourable licencing laws that created barriers ICT sector market entry and lack of competition among services providers in the ICT sector. Similarly, Gillwald (2005) highlighted that despite liberalising the South African ICT sector to encourage competition there was still a monopoly by the main telecom provider for certain services e.g. value added network services. Makhaya and Roberts (2003) raised the issue of skills shortage in the ICT regulatory organisation which affected its operations to achieve its goals. In his study on mobile banking in East Africa, Nyaga (2014) highlighted the challenges of inconsistent legal and regulatory frameworks among the member states that affected the roles of the ICT sector regulators. The situation led to the regulators in failing to address issues of competition, jurisdiction in cases of disputes among operators and

harmonization of procedures. Sutherland (2015) reports on cases of corruption and bribes among politicians in Kenya involving the ICT sector organisations. The study also highlights the issues of the autonomy of the ICT regulator from the government which funded the budget of the ICT regulator. From these few examples, the challenges can be categorised into administrative, technical, financial and political challenges.

To mitigate some of these challenges, ICT sector regulatory institutions may acquire and implement information systems. The information systems may support effective monitoring of infrastructure, management of spectrum, effective billing of services and address challenges for network by-passing (Volke, 2013). In addition, regulatory management systems may support enforcement of standards and monitoring of quality of ICT services and address security issues (ITU, 2009).

Context of Malawi

Malawi is located in South East of Africa and has a population of about 16.5 million people (NSO, 2015). The country is ranked 170 out of 188 in the human development index rankings and is classified as a low-income economy with a GINI coefficient (GNI PPP) of US\$1073 (UNDP, 2016). The country faces a number of challenges include food security, delivery of health services, limited economic growth and high rate of unemployment. The government of Malawi has integrated ICT in national development strategies to address some of the problems facing the country (Bitchler, 2008). Table 1 summarises the country profile for Malawi.

Indicator	Value
Population	16.8 Million people
GNI (PPP)	US\$1073
Life expectancy at birth	63.9 years
Literacy rate	74.5%
Fixed line Teledensity	0.6%
Mobile phone Teledensity	40.2%
Internet Teledensity	9.61%

Table 1. Summary of country profile for Malawi (ITU, 2017; NSO, 2015; UNDP, 2016)

ICT sector is one of the important economic sectors in Malawi that can support the growth of the country. The sector encompasses broadcasting; ICT services; and postal services. The sector, like

many ICT sectors in developing countries, has undergone reforms (Clarke, Gebreab & Mgobelo, 2003). Some of the sector reforms include the split of the main state owned telecommunications provider Malawi Posts and Telecommunications Cooperation into two companies: Malawi Telecommunications Limited (MTL) and Malawi Postal Corporation (MPC). MTL focuses on fixed line telephone services while MPC concentrates on postal services. Telecom Networks Malawi (TNM) was later established as a mobile cellular provider from MTL (Clarke, Gebreab & Mgobelo, 2003). Another development in the ICT sector was liberalisation of the market which led to new entrants. At the time of the study, there were six licenced mobile network operators and four were operational. Table 2 summarises the telecommunications operators and the services that they provide.

Operator	Service(s)	Status
Malawi Telecommunications Limited	Fixed line telephone services	Operational since 1995
Access Limited	Fixed line telephone services	Operational since 2010
Telecom Networks Limited	Mobile cellular services (prepaid and post-paid)	Operational since 1995
Celtel or Zain now Airtel	Mobile cellular services (prepaid and post-paid)	Operational since 1998
Celcom Limited	Mobile cellular services	Granted licence in 2011 and not yet operational
LaCelle	Mobile cellular services	Granted licence in 2016 and not yet operational

Table 2. Summary of telecommunication operators and their services

Some of the noticeable developments in the ICT sector are improvements in Internet connectivity. Malawi is a landlocked country has benefited from the landing of the undersea cables that have been installed to the Southern part of the African continent. The country was connected to SEACOM at the speed of 1.28 Terabytes per second in 2009 and to EaSSY at a speed of 1.4 Terabytes per seconds in 2010 (Schmid, 2009). There has been a substantial increase in the number of mobile phone subscribers (e.g., from 49,000 in 2000 to 7,178,384 in 2016). For fixed telephone lines, the number of subscribers decreased from 46,444 to 11,234 in the same period (NSO, 2015; ITU, 2017). While there are increases in teledensity indicators, ICT services are concentrated in urban markets where there is demand and businesses and individuals

can afford the ICT services. However, rural and remote areas have limited access to the ICT services because of lack of basic infrastructure for operating ICT services (e.g. accessible roads and electricity). The situation leaves the rural dwellers with limited or no access to ICT services including access to the Internet.

Malawi Communications Regulatory Authority (MACRA) was established in 1998 following the enactment of the Communications Act of 1998. MACRA, as an independent ICT sector regulator, is responsible for issuing of licences to broadcasting and telecom network operators, promoting fair competition among ICT services providers, protecting consumers' interests, ensuring quality and continuity of ICT services and management of spectrum (Kauka, 2010). MACRA is also responsible for supporting universal access to ICT and offer incentives to telecom operators to invest ICT infrastructure in rural and remote areas. However, MACRA faces challenges in regulating the ICT sector like many ICT sector regulatory organisations in developing countries (Clarke, Gebreab & Mgobelo, 2003; Gasmi & Virto, 2010). Some of the problems are difficulties in tracing and dealing with illegal telecom network operators, lack of adequate protection of ICT infrastructure such as gateways which is leading to the increase in cybercrimes. The country does not have adequate legal frameworks to support universal access to ICTs. Another problem is the decrease in revenue from international traffic termination due to technical weaknesses and capabilities in the organisation. Issues of network quality and switch bypass are also leading to the decline in taxable income because of ineffectiveness in monitoring the volume and content of network traffic (ITU, 2009). As a result, MACRA is attempting to implement an ICT sector regulatory system to mitigate some of the challenges. However, there are different views on the implementation of the systems in the media (Makoza & Chigona, 2016).

THEORETICAL PERSPECTIVE TO THE STUDY

The study drew the theoretical underpinning on Habermas' Theory of Communicative Action (TCA) (Habermas, 1984). The theory can be used to explain behavioural intentions of people that are aimed at informing actions from words or utterances in a communication. The behavioural intentions or social action can take different forms including instrumental, communicative, discursive and strategic. The instrumental action is oriented towards communication that is aimed at manipulating others to achieve personal wishes or needs. The

communicative action focuses on individuals or a group of people in reaching a common understanding where actors participate or engage in negotiations. The discursive action is oriented towards achieving an agreement for joint action. The groups discuss or debate on issues that form the basis for collective action or restoration of agreements where shared aims are re-established, questions responded to and explanations provided. The strategic action focuses on influencing the behaviour of others to conform to the actor's desires. The actors use strategic action where they treat other actors as objects or resources that can be manipulated or influenced to achieve their personal goals (Habermas, 1984; Ngwenyama & Lee, 1997)

The study concentrated on the communicative action which can be useful to explain how different actors can reach a common understanding of a discourse (Cukier et al., 2008). The concept of discourses in this context are "acts of communication that are aimed at clarifying contentious validity claims" (Stahl, 2004: 5). Discourses are important in democratic societies because they support participation and use of power to influence issues that affect citizens. Habermas (1984) suggests that in democratic societies, social institutions allow rational and open debate among citizens on social issues leading to the formation of common understanding. If the actors engaged in debates fail to understand the meaning, there is an attempt from the actors to discuss issues and arrive at a common understanding. The situation where all parties in a communicative action agree is called ideal speech situation (Stahl, 2004). Ideal speech situation has three conditions summarised as follows (Habermas, 1984):

- Participants in the interaction are allowed to take part as often as they want but with the focus on the issue;
- Participants equally contribute to the discourse thereby adding value to the discourse; and
- Interactions among participants have no limitations where relevant ideas are fully considered and responded to.

Ideal speech situation is difficult to achieve because circumstances and context may limit the way communication is developed and maintained in a discourse (Stahl, 2004; Stahl, 2008). For example, cases where there are unequal powers such as male dominated communities or class in societies. However, ideal speech situation can be used as a means for assessing and promoting communication that is ethical (Stahl et al., 2008). For instance, communicative action can be assessed to establish the participants that are engaged or marginalised on a particular discourse.

Actors use the specific type of social actions and defend that validity claims that are associated with the social action. The four validity claims are comprehensibility, truth, legitimacy and sincerity (Cukier et al., 2008). The four validity claims can be used to examine statements in a communication. Table 3 summarises the four validity claims and means for assessing the claims.

Validity claim	Description	Communicative distortions	Means for assessing validity claim
Comprehensibility	Message that is clear and not confusing	Ambiguity	Assessing omissions and syntax of languages
Truth	Accuracy of the message	Misrepresentation	Checking false utterances in the corpus
Legitimacy	Conformity of the message to socially and culturally accepted values and norms	Dominance	Examining who is privileged and silence voices in the corpus
Sincerity	Authenticity and motives of utterances	Hiding motives	Use of jargon or metaphors in the message

As summarised in Table 3, communication distortions are related to conditions of communication that affect common understanding between parties (sender and receiver of message) in a communication e.g. ambiguity, misrepresentation, dominance and hiding motives. The four validity claims were selected to assess communication distortions in the reports about CIRMS implementation. This was consistent with similar studies that have applied TCA on analysing organisational and broader societal discourses related to information systems (e.g. Cukier et al., 2003; Ngwenyama & Lee, 1997; Cukier et al., 2009). Comprehensibility is related to whether the speaker is understood by the listeners. This concept can be analysed in checking omission and the syntax of a language. Communicative distortions for comprehensibility can be the ambiguity of a message or a message that causes confusion. Truth is whether what the speaker is saying is accurate and can be assessed in checking false utterances in a corpus. Communicative distortions for truth can relate to misrepresentation where of issues not clearly defined. Legitimacy related to whether the message is socially or culturally acceptable in a given social context. Legitimacy can be examined in identifying who is privileged and silences in a corpus. Communicative distortions for legitimacy can be domination some stakeholders for the discourse. Sincerity is whether there is truth in what is being said and the motives of the speaker. A message can be analysed to check the use of jargon or metaphors. Communicative distortion

for sincerity can relate to the use of words that promote or suppress understanding among the stakeholders of the discourse (Cukier et al., 2008; Cukier, Gagnon, Roach, Elmi, Yap & Roddrigues, 2017).

RESEARCH METHODOLOGY

The study used qualitative research approach with the assumption that social reality is historically constituted and that meanings and constructions that individuals hold are subjective and are created through interactions (Myers, 2013). Media may also shape construction reality and influence the way people perceive situations in their communities (Cukier et al., 2008; Fairclough, 1995). The study considered qualitative data that was generated from the media to understand events and actions of people and whether the media influenced their behaviour (Maxwell, 2008). The analysis was aimed at moving from the interpretation of events, actions and behaviour of people to identify and explain the prevailing assumptions of social conditions that emerged as a result of the implementation of CIRMS. It was assumed that the highlighting the complex relationships that existed among CIRMS stakeholders and the hidden assumptions could lead to the debates where CIRMS implementation could be improved (Cukier et al., 2008; Myers, 2013; Ngwenyama & Lee, 1997).

The sample of qualitative data was drawn from a selection of newspapers articles from March 2009 to October 2012. The newspaper articles consisted of hard copies and electronic copies from the Internet. The online news articles were searched from the websites of newspapers on Malawi (see Table 4). Key words such as “CIMRS”, “spy machine” and “MACRA” were used to search the online articles. Some websites reported on articles from other online newspaper websites. The results were then checked for uniqueness to ensure that there were no redundant data in the corpus. A total of 120 articles were analysed of which 17 were copies of newspapers articles (hard copies) and 103 were online news articles.

Data analysis began with the three steps of content analysis (Elo, & Kyngas, 2008; Vaismoradi, Turunen & Bondas, 2013). The process began with reading the materials and deciding the key focus for the analysis. The next step was coding where pieces of text were assigned to codes that were later grouped into categories. The categories were also grouped into key themes that were clustered according to the four validity claims to ensure that the themes were consistent with the general description of the research topic. We adopted the questions for interrogating validity

claims (Cukier et al., 2008) to assess the themes that emerged and produced a report for the results. Qualitative data software (MAXQDA 12) was used to support the data coding process, categorising the codes and themes; and moving around documents that were stored in a single repository. The process was iterative where the steps were repeated several times. Table 4 summarises the application of the four validity claim in the current study.

Validity claims	Themes	Examples
Truth	Perceived advantages	<ul style="list-style-type: none"> Improved regulation of services Providing opportunities for learning Effective revenue collection
	Perceived impediments	<ul style="list-style-type: none"> CIRMS implementation is expensive Concerns for loss of privacy and confidentiality Lack of confidence in the regulator Causing tension among stakeholders Causing legal disputes
Legitimacy	Participants	<ul style="list-style-type: none"> The regulator, Telecom operators, Media, Legislators, CSO, Farmers, Business community, Judiciary, Government, International Development Agents
	Non-participants	<ul style="list-style-type: none"> The general public
Sincerity	Metaphors	<ul style="list-style-type: none"> Head on, wrong hands, good faith, spy machine, listening in
Comprehensibility	Use of jargon	<ul style="list-style-type: none"> Call Detail Records, privacy, confidentiality
	Inadequate information	<ul style="list-style-type: none"> Social impact of CIRMS

Table 4. Summary of validity claim and themes

The questions adopted to assess the four validity claims for identifying communication distortions and neglected claims on implementation of CIRMS that are summarised as follows:

- **Truth:** What are perceived benefits and impediments of CRMS? Are arguments supported with evidence?
- **Legitimacy:** Who is participating in CIRMS discourse? What is privileged or marginalised?
- **Sincerity:** Is what is said about CIRMS what is mean? What is implied?
- **Comprehensibility:** Is what is said about CIRMS intelligible and comprehensible?

We extended the questions on the validity claims to supplement the critique. The questions were adapted from Cukier (2003:242) and include: What distortions or misrepresentation for CIRMS have occurred? Why have distortions on CIRMS occurred? What might undistorted communication about CIRMS look like?

SUMMARY OF RESULTS

This section presents the summary of findings and focuses on the key thematic outcomes of the four validity claims. The section for truth claims summarises the perceived advantages and impediments of CIRMS implementation. The section for legitimacy claims concentrates on participants to the discourses on CIRMS implementation. The section for sincerity claims summarises the metaphors used in the discourses of CIRMS implementation. The Comprehensibility claims are summarised focusing on the use of jargon and issues that were not considered in the implementation of CIRMS.

Truth claims for CIRMS implementation

Truth claims were examined by closely looking at the supporting evidence on the statements about the potential benefits for implementing CIRMS. There were claims that CIRMS implementation was beneficial to the regulator, telecommunications sector and the government. The benefits include improved regulation of services, providing opportunities for learning and effective revenue collection.

The regulator claimed that CIRMS would improve effective regulation of the sector including monitoring of the quality of services for the telecommunication operators that were offered to other sectors and consumers: *“the purpose of the new system include monitoring quality of service, fraud management, revenue assurance and spectrum allocation”* (PN2). More strikingly the government took a similar stance with the regulator on the perceived benefits of the system: *“government says the CIRMS Project is aimed at enhancing the monitoring, verification and validation of the quality of service, revenue assurance, fraud management and spectrum management”* (BC11). Apart from indicating the quality of services, there was limited evidence to support the claim of poor quality services from the regulator. Similarly, the number of incidents of fraud were not provided and the monetary value of the loss or damage to the network infrastructure were not highlighted.

There were suspicions that the regulator was not generating enough revenue from the telecom network operators because of inaccurate data that was being used for billing. It was assumed that CIRMS would address the challenges of accurate data collection from the operators: *“the machine will also help MACRA to verify revenue collected from operators, monitor international phone calls so that Malawi does not lose out on terminating inbound calls and that it will also be able to arbitrate any traffic disputes”* (DT10). The claim for loss of revenue was highlighted noting that the regulator based the calculation on the revenue information from the operators which could not be accurate: *“Currently MACRA collects 5 percent operating levy from mobile telecom operators which is determined by operators' audited accounts, but with CIRMS machine in place MACRA will independently verify such figures and also ensure that correct taxes are remitted to government.”* (DT7). However, the regulator did not provide evidence for the details on how CIRMS would verify the information obtained from the telecom network operators.

Another claim was that CIRMS implementation was beneficial related to learning of implementing such a system in the context of African countries. This debate was viewed from local and regional perspective. The local interests in learning about the system emerged from government officials. For example, an official wanted to understand how the system function before making decisions related to the system: *“I had great interest in that machine. I had to be told much about it. I should say we will only do anything that is good for Malawians. I still need to get more information about the machine to know it better but what I can promise you is that, as government, we will only do what Malawians want”* (DT20). This excerpt demonstrates that lack of knowledge about CIRMS could have led to wrong decisions by government and that knowledge about the system was crucial in the decision process. Similarly, journalists wanted to learn more about the system so that they could effectively report on how the system will operate: *“Association of Business Journalists (ABJ) facilitated the meeting and in his opening remarks, ABJ national coordinator [Person Y] said the media is eager to learn the operations of the ICT regulatory system”* (BC12). Media houses as main institutions that shape the public sphere were important in understanding and in providing accurate information about CIRMS. However, there was limited information on how effective the learning process was conducted and evaluated from the regulator in ensuring that the media got the correct information about CIRMS.

At regional perspective, there were interests from other governments on learning how the system was being implemented in Malawi. For example, government officials from Burundi visited the

country to learn about the system: “A three member high-level delegation from Burundi arrived in the country to learn from MACRA on how best to implement CIRMS. We are aware that Malawi want to implement this machine and we was this as an opportunity to learn from this country” (PN65). From the excerpt, it could imply that Burundi could learn how the system was being implemented so that the country could also deal with challenges in its ICT sector. The countries faced similar challenges in their ICT sectors. The visit of the officials from Burundi in a way gave government the support of the claims that the systems was beneficial: “the coming of the Burundian delegation to enquire about the CIRMS clearly demonstrates that many countries that many countries in the continent are interested in implementing the machine” (NP66).

While there claims that CIRMS would be beneficial to the regulator, government and the ICT sector, other stakeholders such as the telecom network operators perceived the systems was a waste of resources and the telecom operators supported their claims in providing details about the cost of the system: “He also questioned why government would procure a US\$6.8 million during a difficult financial atmosphere just to target mobile phone operators as they have been claiming” (DT71). Further, articles related to the argument about the cost of the system noted that: “the value of the machine, claiming that while some countries like Gabon spent about (US\$1.5 Million) about K250 million on similar machine, MACRA spent about (US\$6.5 Million) about K1 billion on the machine” (NP31). In way, the cost of the system was expensive considering the number of organisations that provide ICT services in the sector and their contribution towards meeting the CIRMS costs could not guarantee low costs or contributions. The regulator's response to the cost of the system was that the organisation would recover the money spent for procuring the system within 18 months: “MACRA said the machine which costed K990 Million, will bring back money and make profit within 18 months of procurement” (NP15). However, there were no specific details to indicate how the revenue will be generated and the contribution of the organisations in the ICT sector towards the recovery of the sums spent in procuring the system.

There were tensions among the stakeholders as a result of the differences in opinions regarding the perceived CIRMS benefits and its potential negative effects. The stakeholders engaged in the tensions include government officials, the regulator, telecom network operators, civil society organisations, journalists, politicians and concerned citizens. On one hand, the regulator, government officials and traditional leaders supported the implementation of CIRMS. On the

other hand, telecom network operators, opposition legislators, civil society organisations and concerned citizens were concerned about the negative effects of CIRMS noting that: *“This is total lack of trust in the systems which is damaging the industry. MACRA should help improve the industry environment which will improve the industry rather than fighting us”* (ON64). This implied that the telecom network operators did not expect implementation of the system from the regulator and that the role of the regulator was to improve the ICT sector. CIRMS implementation was perceived as not beneficial to some of the stakeholders because it did not support their interests and expectations.

The government took a firm stance in responding to the legal actions for the telecom network operators when there was resistance in form of legal action against the implementation of CIRMS. This means that the regulator could not operate CIRMS. One article reported that the government response to the legal action was that: *“... they (telecommunication operators) have decided to take us head on and we will also take them head on”* (PN54). This meant that the government contested the court’s decision. The government justified its response to the legal action on the argument that the telecom operators were making more profits and did not roll out their services to rural areas. The government claimed that it was protecting the public: *“... MACRA is also mandated by the same act [Communications Act of 1998] to protect the interests of consumers, purchasers and other users of communication services ...”* (DT07). Further, the government was attempting to address the issues of affordability which was the major constraint for access for ICT services. However, there was limited evidence to substantiate the claims that the telecom operators were making more profits.

Another issue that emerged on the negative effects on CIRMS was litigation. The regulator engaged legal experts to conduct a feasibility study whether the existing legal framework could support CIRMS and identify legal reforms. It was reported that there was need for legal reforms to be enacted by Parliament, the need for maintaining constitutional rights for democratic societies and that CIRMS capabilities for telecommunications interception be given to law enforcement agents. Further, it was noted that direct access to Call Details Records (CDRs) and intercept was not possible within the existing legal framework. Nonetheless, the regulator resumed the implementation of the systems. Consequently, three court cases emerged during the process of implementation of CIRMS involving concerned citizens, the telecommunication operators and the regulator.

In October 2011, it was reported that the High Court in Blantyre granted two concerned citizens a restraining order to stop MACRA from implementing CIRMS. The ruling was based on the grounds that the systems would violate human rights, privacy and confidentiality of mobile phone users. The regulator appealed against the ruling. Simultaneously, another concerned citizen filed a case against the telecommunication operators (ACL, Airtel, MTL and TNM) regarding CDRs over concerns for violation of privacy and confidentiality of mobile phone users. In May 2012, the High Court in Lilongwe ruled in favour of concerned citizens that the telecommunications operators will breach the rights to privacy in implementing CDR for CIRMS. At the same time, the Commercial Law Court in Lilongwe granted a permanent injunction to the telecommunications operators so that they do not submit CDRs to the regulator as requested in the implementation of CIRMS. The regulator appealed against the ruling. In September 2012, the High Court in Blantyre made a ruling on the appeal for the restraining order for implementing CIRMS in favour of the concerned citizens. The ruling challenged the use of CIRMS that it was not reasonable, with no legal support and that it would infringe the rights to privacy for mobile phone users. Interestingly, it was reported that the government was planning to appeal against the ruling. However, the system was not operational despite the high expenditure and the challenges in the ICT sector. There was no evidence to indicate that the regulatory had considered alternatives to overcome the issue of high cost of the systems.

Legitimacy claims for CIRMS implementation

In examining the participants to the discourse on the implementation of CIRMS, different stakeholders were identified who presented interests in relation to what was perceived as socially and culturally accepted values and norms. The stakeholders included the regulator, telecom network operators, legislators, government officials and civil society organisations. The contribution of the regulator and government officials to the discussion was mainly in providing information of the benefits of CIRMS and why it was necessary to clear the misinformation on CIRMS. Statements on CIRMS implementation from the civil society organisations were contradictory. For instance, some civil society organisations claimed that CIRMS was beneficial but the regulator was not supposed to host the system while other civil society organisations expressed concerns that implementation of CRMS would breach peoples' rights to privacy. Telecom network operators also participated in the discourse and their claims were concentrating

on the disadvantages of CIRMS implementation. Table 5 summarises the claims on CIRMS for participants of various stakeholders.

Participant	Claims	Frequency	Percentage
The regulator	CIRMS may support effective regulation	83	50.00%
Government officials	CIRMS would support revenue generation	36	21.69%
Telecommunication operators	With CIRMS there is no guarantee of privacy and confidentiality	11	6.63
Legislators	CIRMS will violate privacy and confidentiality	1	0.60%
Civil society organisations	CIRMS will cause loss of privacy and confidentiality	10	6.02%
The media	CIRMS is a spy machine	22	13.25%
Total		166	100%

Table 5. Summary of legitimacy claims on CIRMS implementation

As illustrated Table 5, the regulator and government officials had a higher percentage of the claims on the CRMS as compared to other stakeholders. This may be attributed to access to the media and having resources to mobilise public awareness campaigns on CRMS. Civil society organisation had less percentage of claims on CIRMS although they represented beneficiaries who may be affected indirectly by the implementation of the system. From the results, it is clear that evidence on views of the general public was not reported in the media (such as opinion polls) although there were claims that implementation of CIRMS would infringe their rights to privacy.

Sincerity claims

Sincerely claims were analysed to establish motives of the speakers focusing on the use of expressions or words conceptualised as metaphors. Metaphors that emerged from the corpus were related to the disadvantages of using CIRMS and confrontation between the stakeholders. These included words such as spy machine, head on, wrong hands, good faith, big brother, lawful intercept, cell phone war and. Spying machine was the dominant (with 198 occurrences in the corpus) metaphor in the corpus. The motives for using spy machine as a metaphor was to express the perceptions on the disadvantages of CIRMS. The stakeholders that were not in

favour of implementing CIRMS claimed that the systems will breach their right to privacy: *“It’s now official. The privacy and confidentiality of telephone records for subscribers of TNM, Airtel, MTL and Access will now be in the hands of government following its directive to telecommunication operators to proceed with the implementation of a system that monitors and analyses calls.”* (DT14). Similarly, another article noted that: *“... there will no longer be confidentiality with respect to customers call details: customer social, economic, political links and call history; journalist sources of information and contact details; interaction between and among business, politicians, civil society, other interest groups and their associates.”*(NP10). However, there missing details on the actual capacity of the regular to execute such activities because the number of mobile subscribers was not indicated. Table 6 summarises the metaphors that emerged from the analysis of the statements made by stakeholders on the implementation of CIRMS.

Metaphor	Frequency	Stakeholders	Motives
Head on	8	Government officials	Challenging the opposition for CIRMS implementation
Wrong hands	5	Civil society organisations and legislators	Limited trust in the regulator in the right use of CIRMS
Good faith	4	Civil society organisations and legislators	Limited trust in the intentions for use of CIRMS
Big brother	4	Journalists, legal experts and telecommunication operators	Capacity to monitor the activities of people using CIRMS
Lawful intercept	7	The regulator and legal experts	Legal mandate to access private communication of people
Cell phone war	2	Journalists	Confrontation in the media regarding CIRMS which will monitor cell phone users
Spy machine	198	The regulator, government officials, telecommunication operators, legislators and journalists	The ability to monitor use of telecommunications which may result in loss of privacy and confidentiality

Table 6. Summary of results on sincerity claims

The metaphor for lawful intercept was used to describe the potential activities that the CIRMS was capable of being used to monitor or listen the conversation or communication of mobile phone users: *“the machine has the capacity to lawful interception, internet interception, GSM and CDMA, GPRS interception and equipment identity registry”* (BC12). Similarly, it was reported that *“On Lawful Intercept, [Official Z from the regulator] pointed it is an exception to the general monitoring mandates and can only happen at the request of the operator or consumer who has a genuine grievance within the scope of the CIRMS”* (DT20). While the regulator claimed that CIRMS had such capacity, it maintained that the organisation's aim for using the system was to protect consumers and other organisations in the ICT sector and operated within the confines of the Communications Act of 1998. In other words, the role of the regulator was to regulate the ICT sector and that *“the regulator will not be listening to people conversations as widely feared”* (NP9). However, there need for further clarification on the assurance for individual's privacy and confidentiality to guarantee the safety of the consumers. It appeared that the message from the regulator was not clear on its mandate and functions.

For the statements related to “wrong hands”, civil society organisations perceived that CIRMS was beneficial but did not trust the regulator in the responsibility of handling the system noted in the following statement: *“The machine is a good thing but may be it has been placed in wrong hands and its purchase process is questionable”* (PN12). This statement may imply that some of the civil society organisations considered CIRMS to be useful in the process of regulating the ICT sector but did not trust the regulator. Thus, main concerns for the stakeholders were the potential use of the system that can violate the privacy and confidentiality of mobile users.

Comprehensibility claims of claims

The articles that were analysed were clear and did not contain grammatical errors. The assumption was that the articles were prepared with expectations that they were to be published in the media, to a large audience and had to be correct and accessible. Nonetheless, some of the articles reported terms that were not explained such as privacy and confidentiality and often they were used interchangeably. Other terms were intercept law, eavesdropping and big brother. The lack of clarity on these terms could have posed challenges to some of the stakeholders on their decisions on CRMS.

DISCUSSION OF FINDINGS

We revisit the research question guiding the study: What is the nature of communication distortions on the ICT sector regulatory system? The findings from the study showed that there were unsupported claims for the both perceived benefits and negative effects of implementing CIRMS. The claims for the benefits were related to effective regulation of ICT sector, support for learning and effective generation of revenue. The perceived negative effects that were reported in the articles include the high cost of the system, concerns for loss of privacy for stakeholders and lack of confidence in the regulator. Communication distortions were demonstrated in claims that were not supported by evidence. The examples of the distorted communication were on the functions of the system, the cost of the systems and knowledge about the systems for the stakeholders in ICT sector and the general public. In spite of the claims that the systems would benefit the general public, the results showed that the general public was marginalised in the discourse about the system. The study also showed that the metaphor for spy machine was dominant in the corpus. The use of the term was related to the capacity of CIRMS to listen to the conversation of mobile phone users. The corpus did not provide adequate information on the social impact of the CIRMS. One of the consequences of the communication distortions was the delayed implementation of the systems due to litigation.

While the findings for the benefits of implementing CIRMS were consistent with other studies (Maitland & van Gorp, 2008; Volke, 2013) and the idea for CIRMS supporting learning was interesting. Studies on information systems implementation that highlight issues for learning mostly focus on internal learning as part of supporting change and performance improvements (Goulden, 2005; Schware, 2003). The findings in the study extend this debate to note the wider implications of ICT implementation where there was a need to consider learning for stakeholders outside the organisation. It emerged that learning was one of the benefits of the system. The implementation of CIRMS to some extent supported learning for local (e.g. journalists and government officials) and external (e.g. Government officials from Burundi) stakeholders. In a way, learning the functions of CIRMS supported the regulator and government position in justifying the need to implement the system. However, the strategies for learning could have considered methods of feedback. The regulator could have ensured that there was understanding for both benefits and potential negative effects of CIRMS to all stakeholders including the citizens who were marginalised in the CIRMS discourse.

The statements on the benefits of CIRMS were reported in the articles, however, the benefits focused more on the regulator and government. There was less clarity in terms of how the system would benefit the general public part from access to cheap calls “... *this is what many Malawians have been looking for and we believe that this will end up reducing the cost of making calls in Malawi*” (NP11). This was consistent with the findings for Brown and Brown (2008) in their study on the role of government in explaining the role of National ICT policy in the context of South Africa. There was a need for the government to explain the potential benefits beyond making cheap calls to relate to the real needs of the beneficiaries e.g. in relation to knowledge and income generating. It appeared that the message was not consistent with the needs of the beneficiaries. Part of the reasons could be the exclusion of the general public in the CIRMS implementation discourse. Thus, when members of a public do not participate in the public sphere where issues that affect their lives are deliberated, communication distortions are likely to occur (Cukier et al., 2008; Habermas, 1984).

At the beginning, CIRMS was presented as an all-encompassing concept that stakeholders had knowledge about its functions and purposes. However, there were communication distortions about the systems functions and purposes demonstrated in the system being branded as a spy machine. This finding was consistent with other studies that have demonstrated implementation of information systems in terms of improving efficiency but having hidden motives to monitor staff (see Doolin, 2004; Gwillim, Dovey & Wieder, 2005; Selander & Henfridsson, 2011). While previous studies focused on the tactics that employees within the organisations use to resist new information systems, the present study extends the debate where external organisations and concerned citizens took legal action against the regulator on the implementation of CIRMS. It appeared that despite the regulator and government engaged in the discussion about CIRMS implementation, there were still communications distortions on the purposes and functions of the system. This may mean that more time was required to clarify and agree on the purposes CIRMS before the decision to invest in CIRMS. The consequences were that the regulator could not operate CIRMS despite the high cost of investment in the system because of the court injunction obtained by the telecom operators and the concerned citizens.

CONCLUSION

The study was set out to explore the communication distortions about the implementation of an ICT sector regulatory system in the context of a developing country. The study attempted to highlight taken for granted issues in the discourse that emerged from CIRMS implementation using the Habermasian four validity claims. The findings showed communication distortions to the benefits and negative effects of implementing CIRMS, use jargon in representing issues related the system and marginalisation of the general public in the CIRMS implementation discourse. The consequences of communication distortions were limited understanding of the purposes and functions of CIRMS especially for the external stakeholders of the system. There were litigation and delays in the implementation of the system. The study extends the understanding of challenges for implementing ICT regulatory system in the context of an African country.

A key lesson from the study in relation to ICT for development is that communications distortions about ICT investments can affect the implementation process. The study showed that broader societal discourses about the role of information systems can shape the decisions and actions of the stakeholders in the implementation of information systems. Theory of Communicative Action was useful for identifying communication distortions in the media reports about CIRMS. Further, the study showed the effects of distorted communication on the decisions and actions of stakeholders. It is important to ensure engage all stakeholders, encourage learning among the stakeholders and consideration of wider contextual issues (e.g. political, cultural and economic) for information systems before the ICT investments.

Further work that may arise from the study is to conduct interviews with members the general public (which have been marginalised in the corpus as noted in the section for summary of legitimacy claims for CIRMS implementation) to obtain and understand their views on their understanding and expectation on CIRMS implementation and how they can influence the decisions on implementing the system. The tenets of resistance in the implementation of CIRMS that emerged from the study offer a good starting point for further research on power relations among the various stakeholders identified in the study.

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