

2016

Moral panics on implementation of Consolidated ICT Regulatory Management System: Case of Malawi

Frank Makoza

University of Cape Town, mkzfra001@myuct.ac.za

Wallace Chigona

University of Cape Town, wallace.chigona@uct.ac.za

Follow this and additional works at: <http://aisel.aisnet.org/confirm2016>

Recommended Citation

Makoza, Frank and Chigona, Wallace, "Moral panics on implementation of Consolidated ICT Regulatory Management System: Case of Malawi" (2016). *CONF-IRM 2016 Proceedings*. 30.

<http://aisel.aisnet.org/confirm2016/30>

This material is brought to you by the International Conference on Information Resources Management (CONF-IRM) at AIS Electronic Library (AISEL). It has been accepted for inclusion in CONF-IRM 2016 Proceedings by an authorized administrator of AIS Electronic Library (AISEL). For more information, please contact elibrary@aisnet.org.

49. Moral panics on implementation of Consolidated ICT Regulatory Management System: Case of Malawi

Frank Makoza
University of Cape Town
mkzfra001@myuct.ac.za

Wallace Chigona
University of Cape Town
Wallace.Chigona@uct.ac.za

Abstract

This paper analysed moral panics on the implementation of an ICT sector regulatory system called Consolidated ICT Regulatory Management System (CIRMS). The study focused on how the media reported on the events and opinions of stakeholders on the implementation of CIRMS for the ICT sector of Malawi. Media reports published between 2009 and 2012 were analysed using thematic analysis. The results showed that the media reported both potential benefits and threats of CIRMS. Some of the benefits included effective billing and revenue generation for the regulator. However, some of the reports indicated that the system had a potential of surveillance to record calls of mobile phone users. Some stakeholders perceived that the system would invade personal privacy which led to moral panics. The study demonstrated the unintended consequences of implementing an information system with a wider scope of stakes. Thus, managers responsible for information systems implementation should be cautious of social implications for ICT sector regulatory systems.

Keywords

Information Systems, ICT sector regulation, Moral panics, Malawi.

1. Introduction

Information and Communication Technologies (ICT) regulatory organisations are vital in supporting the low-income status economies in becoming information and knowledge based economies. The roles of ICT regulatory organisations include enforcement of laws and regulations, arbitration of disputes among network operators, coordinating implementation of telecommunication policies, promoting effective market competition, licensing of telecommunications operators, supporting regional and international harmonisation and coordination of ICT policy issues (Colandro, Gillwald, Moyo & Stork, 2010; Li, Qiang & Xu, 2005; Wallsten, 2001). To effectively perform these roles, the ICT regulatory organisations may implement information systems for monitoring telecommunication services such as spectrum, quality of services and content. Like any other technological innovations, implementation of ICT regulatory systems, has potential intended and unintended consequences to different stakeholders of the systems and the society at large (Litan & Singer, 2007; Rogers, 2003).

Despite the wide perceptions that information systems can bring benefits to organisations and the services they offer to the general public, there are also unintended consequences of information

systems (Majchrzak, Markus & Wareham, 2013; Tarafdar, Gupta & Turel, 2015). While there are studies that have looked at unintended consequences of information systems (Orlikowski, 2000), the studies have focused on the context of organisations. However, in some cases, the unintended consequences of IT extend beyond organisations to the society. For example, implementation of information systems may create moral panics where the public may perceive an information system as a threat to common values (Cricher, 2008; Siltaoja, 2012).

Moral panic theory has been extensively applied in media studies (David, Rohloff, Petley & Hughes, 2011). It has been used to analyse the role of media in highlighting social problems. Nonetheless, there is need to test the theory in diverse contexts: “*This is an area urgently in need of further research – not simply within the ambit of moral panic theory but within wider context of the role played by the media in construction of social reality, an area which, curiously, remains significantly underexplored*” (David et al., 2011:223). To the knowledge of the authors, the moral panic theory remains under-represented in information systems discipline. Few studies mention the concept of moral panic in passing (see Beynon-Davies, 1999; Chigona & Chigona, 2008; Marwick, 2008). The present study seeks to address part of this gap by analysing media reports on the implementation of an ICT regulatory system called Consolidated ICT Regulatory Management System (CIRMS) in Malawi. The study was guided by the research question: How do media reports on the implementation of CIRMS influence moral panic?

The rest of the document is presented as follows. Section 2 presents the background to the study. Section 3 summarises moral panic theory used in the study. Section 4 outlines the research methodology. This is followed by the summary of the results. Section 6 discusses the results and conclusions drawn from the study.

2. Background to the study

2.1 ICT sector in context of developing countries

ICT sector comprises of hardware manufacturers, software development and support, ICT training institutions, network operators, media and broadcasting houses (Wallsten, 2001). These organisations provide services to consumers and support other economic sectors such as health, education, finance, agriculture and tourism (Mansell, 2010). Regulation of the activities in the ICT sector is necessary to ensure that the sector effectively supports economic activities of other sectors. Regulatory activities include enforcement of laws and regulations in the sector to ensure that policies and development goals are realised; coordinating the implementation of ICT policies which may involve working with different stakeholders in the ICT sector; checking anti-competitive practices among telecom operators; licensing of telecommunications operators; and supporting regional and international harmonisation of ICT policies; 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 regulatory organisations are responsible for protecting consumers, setting up rates and tariffs and monitoring of telecommunications services (Cohen, 2003). However, regulators in developing countries are faced with many challenges such as 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). ICT regulatory organisations may implement information systems to be more efficient.

2.2 Context of Malawi

Low-income status economies are countries that “*citizens are subjected to conditions of poverty and unable to meet their basic human needs and exercise their human rights*” (Rahman, 2011: 66). Malawi represents a case of a low-income status economy and is ranked at 174 of 186 economies in the Human Development Index (UNDP, 2014). The country as a population of 16.3 Million (World Bank, 2015) and has low teledensity values as summarised in Table 1.

Teledensity Index	Fixed-line	Mobile phone	Internet	Fixed broadband
Malawi score	0.21%	32.33%	5.4%	0.02%
Average of developed country	40.8%	120.8%	78.3%	25.7%

Table 1: Summary of Teledensity of Malawi (ITU, 2014)

There are attempts to improve the low teledensity, competitiveness of the ICT sector, regulation of telecommunications and investment in ICT infrastructure (Kauka, 2010; Bande, 2013). Malawi Telecommunications Regulatory Authority (MACRA) is responsible for regulation of the ICT sector. The sector comprises of mobile network operators (e.g. Airtel Malawi Limited and Telecom Network Limited), fixed telephone network operators (e.g. Malawi Telecom Limited and Access Limited) Media houses (public and private Television and radio stations), ICT training providers, hardware and software suppliers (Makoza & Chigona, 2012). Like other ICT regulatory organisations in African countries, MACRA faces challenges in regulating the ICT sector of Malawi. Consolidated ICT Regulatory Management System (CRMS) is a regulatory system designed to overcome some of the challenges for regulation of network infrastructure e.g. tracking and monitoring of illegal telecommunication operators, prevention of cybercrimes and fraudulent activities on national and international network gateways. CIRMS has the capabilities to access and monitor local and international network data for telecommunications operators, monitoring of quality of services for telecommunications services, generate traffic data to for pricing of services and support of effective account of revenues from the telecommunication operators (ITU Operational Bulletin, 2009).

3. Moral panic theory

A moral panic is “*a social condition in which many people in a society overreact to a (newly) perceived threat to their well-being from social deviants, even though the actual threat is exaggerated*” (Bulc, 2002:301). Other perspectives of moral panic may include “a condition, episode, person or group of persons emerges to become a threat to social values and norms” (Cohen, 1987:9). There are four sets of agents that may lead to the formation of a moral panic. These are mass media, moral entrepreneurs, the control society culture and the public (Cohen, 1987; Critcher, 2008). The roles of the agents are summarised as follows:

- **Mass media:** media may be responsible for the creation of moral panic and the process involve three phases: exaggeration and distortion (what is done or said), prediction (the outcomes of failing to act) and symbolisation (words that suggest threats). Media organisations may perceive the process of moral panic as normal in publishing news that focuses on events and people, thereby likely to disrupt social order. When presenting moral panics the media may portray the groups with deviant behaviour to society as folk devils.
- **Moral entrepreneurs:** individuals or groups who promote corrective action on the threats to society. Moral panics concentrate on motives and strategies of these groups. The control society culture: institutions or organisations with power in society may include courts, politicians and the police. In a moral panic, institutions are informed about the events or people and may take action or controlling measures in dealing with deviance to achieve social order.
- **The public:** during a moral panic the general public provides opinions on disruption of socially accepted norms and values as well as on the defiant behaviours. The interactions of the four agents of moral panic may result in consequences such as changes in laws as a means of dealing with the moral panic and strengthening society values. The interactions between the four agents are presented through different communication channels e.g. print media, television, forums and public hearings (Goode & Ben-Yehuda, 1994; Critcher, 2008).

Moral panic theory has five critical elements which may be used to assess a moral panic (Goode & Ben-Yehuda, 1994). The elements are concern, hostility, disproportionality, volatility and consensus. A concern is highlighted over the behaviour of a certain group in society which causes a moral panic. The concern may be assessed through public opinion polls, public comments in the media on issues of social interest e.g. legislation or events. Hostility is the level of increase for the behaviour in question that is causing a moral panic. The social conditions of interest must be seen to be causing a threat to social order. The social conditions are distinct from the threatened group and those causing the threat. Consensus deals with the level of agreement on the issues causing moral panic from different segments of the society. For example, whether the threat to society is real or the people with deviant behaviour are causing the moral panic.

Disproportionality concentrates on the level of public concern for the moral panic with the harm it may cause. Evidence on conditions and events for a moral panic is important. In most cases, the evidence e.g. figures and numbers may be exaggerated. Hence, the actual harm to society as a result of threats must be considered in a moral panic. Volatility is the nature of occurring and sudden subduing conditions or events causing a moral panic. Some of the moral panics may be dormant over a period of time and may reappear from time to time (Goode & Ben-Yehuda, 1994; Critcher, 2008). Table 2 summarises a list of agents, constructs and themes that can be used to analyse moral panics.

This study used the constructs: concern, hostility, disproportionality, volatility and consensus to analyse moral panic in the implementation of CIRMS. In the context of the study, mass media were different sources for news (print as well as online news articles). Moral entrepreneurs were the groups of stakeholders that were perceived to be causing moral panics. The controls society culture was how often the news articles related to moral panics appeared in the various print and electronic media. The role of the public was conceptualised as acceptance or rejection of the

concerns and consensus on events, conditions or actions that were perceived to be posing a threat to the well-being of the society (Goode & Ben-Yehuda, 1994; Critcher, 2008).

Moral panic agents	Moral constructs	Themes
Mass media	Disproportionality	Exaggerations
Moral entrepreneurs	Hostility	Folk devils
The control society culture	Volatility	Nature of panics
The public	Concern	Real threats
	Consensus	Counter claims

Table 2: Summary of moral panic constructs (Critcher, 2008)

4. Research methodology

The study used a qualitative approach with the assumption that social reality is historically constituted and that meanings that individuals hold are subjective (Myers, 2009). Media shape construction reality and the study considered qualitative data that was generated from the media (Maxwell, 2008). The study focused on interpretation media reports on the events, actions and behaviour of people to identify and explain the prevailing assumptions of social conditions that emerged as a result of CIRMS implementation.

The sample of qualitative data was drawn from a selection of newspapers articles from March 2009 to October 2012. The media reports comprised of online news articles and newspapers (See Table 4). The newspapers (17 articles) were sourced from a local library. These were scanned and stored in electronic format. The online news articles were searched from the media organisations websites using keywords e.g. “CIRMS”, “spy machine” and “MACRA”. The results of the search yielded 152 articles from which 103 were selected. The articles were checked for uniqueness to ensure that there were no redundant data in the corpus.

Qualitative data analysis software (MAXQDA version 10) was used to effectively manage data where all media reports were stored in a single repository. Thematic analysis was employed in analysing the corpus (Braun & Clarke, 2006). The process was iterative and began with reading and re-reading of the data to note key ideas. Codes were identified and pieces of the data were assigned to the codes. The coding process was applied to all the data and the codes were collated into categories and subcategories using the software. The moral panic theory concepts (Critcher, 2008) informed the categories and sub-categories. The categories were collated into themes which were checked to ensure that they categories corresponded to the themes. The themes were refined to form a thematic map which was used to come up with a storyline for the results. The final stake was rewriting the report for the results (Braun & Clarke, 2006). The second author checked the initial results to ensure the quality of the results. The researchers reflected on the process to ensure that there was consistency been the interpretation of the data and the concepts of moral panic informing the study (Klein & Meyers, 1999).

Online news	Website	No. of articles
BizCommunity	http://www.bizcommunity.com	9
Daily Times	http://www.bnltimes.com	12
Engineering News	http://www.engineeringnews.co.za	1
ITU operational Bulletin	http://www.itu.int/pub/T-SP	1
Malawi Democrat	http://www.malawidemocrat.com	14
Malawi Gazette	http://malawigazette.com	6
Malawi News	http://www.bnltimes.com/index.php/malawi-news	2
Malawi Today	http://www.malawitoday.com	3
Malawi Voice	http://www.malawivoice.com	5
Maravi Express	http://www.maraviexpress.com	1
Maravi Post	http://www.maravipost.com	3
Nyasatimes	http://www.nyasatimes.com	22
Talk RA	http://talkra.com	1
Telecompaper	http://www.telecompaper.com	1
The Nation online	http://www.mwnation.com	8
The Sunday times	http://www.bnltimes.com/index.php/sunday-times	6
Zodiak Online	http://www.zodiakmalawi.com	8
Newspapers	Source	
The Nation	Local library	2
Daily times	Local library	15
TOTAL		120

Table 4: Summary of sources for the articles on CIRMS

5. Research findings

The moral panics identified in the corpus were the potential loss of privacy and misuse of CIRMS. The themes were categorised in relation to the constructs of moral panics: disproportionality, hostility, volatility, concern and consensus.

5.1 Disproportionality

One of the concerns that caused moral panic for implementation of CIRM to the general public was the perceptions that the system may be used for eavesdropping or listening conversation for mobile users. The reports indicated that members of the media, civil society organisations and members of opposition political parties in parliament may be victims of eavesdropping because of their role in publically expressing discontentment with the government. For instance, it was reported that using CIRM the regulator will be able to monitor interactions of certain groups of society: *“This is so because MACRA will have Call Details Records (CDRs) for all subscribers and easily check which journalist has been calling which politician or indeed news sources”* (ON52). This implied that using the detail on CDRs the regulator will be in a position to get more information related to activities of people using technologies: *“Interactions between among*

other businessmen, politician, civil society and other interest groups and their associates can be easily established by analysis of the raw CDRs” (ON51).

The claims that were reported did not have a strong basis on whether the perceived disadvantages for CIRM were legitimate. For example, it was reported that a member of parliament for the opposition parties claimed that they had evidence that their messages were being tapped: *“The minister of Information should not cheat the nation. MACRA has the capacity to read people's private messages and listen to their conversation. I personally saw and read an e-mail from MACRA which they tapped” (ON59).* From the analysis of the articles on this theme, it was not clear whether the statements were just exaggerations as no further reports emerged to substantiate the claims as evidence on the activities of the regulator. On the contrary, the regulator emphasised that it had no legal mandate to spy as reported in the following statement made by officials from the regulator: *“MACRA is not responsible or mandated to eavesdrop or conduct espionage activities, therefore we have no business to spy” (PN13).*

The conditions reported in the media from the perspective of those against the implementation of CIRMS created moral panics to the public. The moral panics were mainly the negative effects for implementation of CIRMS. Nonetheless, some of the claims were exaggerated in the media with limited evidence to support the claims.

5.2 Hostility

The behaviour which was considered to be causing threats to social order was being perpetuated by two groups: the regulator and the mobile network operators. The two groups were considered as folk devils depending on the two dominant perceptions on CIRMS. From the standpoint that CIRMS was beneficial, folk devils were mobile network operators with defiant behaviour that they were perpetuating loss of revenue to the government. In contrast, the folk devils would be the regulator. It was perceived that the regulator would use the CIRMS and cause loss of privacy of mobile phone users. This may mean that folk devils in moral panics may be perceived differently depending on opinions of those being threatened and causing the threats.

5.3 Volatility

The nature of occurrence and subduing of events or conditions for moral panic were assessed using the number of articles that were publishing over a period of three years. A total of 120 articles were analysed for the period between February 2009 and October 2012. In 2009, there were fewer articles on CIRMS. This was the period for procurement of the system. Implementation of the system began in August 2011 and the peak of published articles was in the month of November 2011. In conformance to the volatility of moral panics, the number of articles representing issues subdued in February and March in 2012 but later reappeared with more articles in May and July 2012. One of the reasons that may be attributed to the patterns of reports on the implementation of CIRMS was the legal process for the cases which took a long period of time. Figure 1 summarises the trend in the number of articles on the implementation of CIRMS representing the volatile of moral panics.

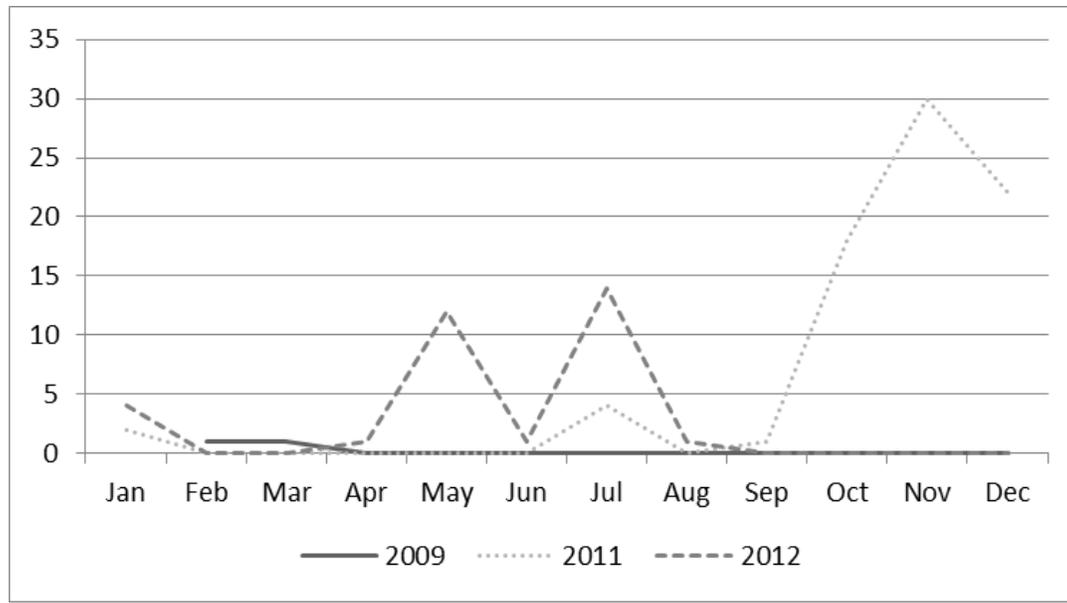


Figure 1: Trends for articles on CIRMS implementation

5.4 Concerns over CIRMS

The concerns over defiant behaviour were analysed from two perspectives. The first perspective was from the reports that were supporting the system. For example, government and the regulator perceived that CIRMS was necessary to improve telecommunications regulation and prevent loss of revenue. At the time of the study, the regulator was generating revenue which was based on the estimates submitted by the telecom operators. There were speculations that the estimates were not accurate and the government was losing revenue.

The second perspective of the concerns was on the reports from the stakeholders who were against the implementation of CIRMS. The stakeholders included telecom operators, concerned citizens, journalists and opposition members of parliament. Their main concern was that CIRMS was a threat to privacy and confidentiality. It was reported that CIRMS had the capacity to record call details of mobile phone users and hence it was branded as “spy machine”. This led to misinformation about the other functions of the system. The regulator confirmed on the surveillance capabilities of the system. However, it was indicated that the regular will operate the system under the mandate of the Communications Act (1998) and that its primary function was not to eavesdrop the public. The government considered those who were against the system as a threat who were perpetuating the loss of revenue. Table 5 summarises the themes of CIRMS concerns and threats from the stakeholders.

The concern related to privacy emerged from the telecom operators that once the CIRMS was implemented, the organisations will not be able to protect the privacy of the customers. The situation led to some members of society especially journalists, politicians and concerned citizens to be agitated. The stakeholders claimed that they had lost trust in the telecommunications regulator. Their perceived threat was that the system will be used to track journalists who write stories that were not in favour of government and members of parliament who oppose the government plans in the national assembly

Themes	Examples of statements on supporting CIRMS
Loss of revenue	<p>"government is losing a lot of revenue in the process and subscribers are getting a raw deal" (ON42)</p> <p>"He said claims that the system can be used to listen to conversations is a complete lie as it is aimed at blocking government from realising enough revenue" (ON46)</p>
Misinformation	<p>"allegations that the machine is a 'spy machine' and MACRA will be 'listening in' to telephone conversations is not technically possible for the CIRMS to do so, as it will be connected at the operators mediation point where only data on information can be collected" (PN4)</p> <p>"Phone operators of cheating Malawians on the machine, claiming that the new machine would enable government and clients to know how much the companies are realising from phone charges" (PN5)</p> <p>"There has been a misconception propagated in the media that this is a spy machine" (PN13)</p>
	Examples of statements on against CIRMS
Privacy concerns	<p>"Once the systems has been implemented, the operators will no longer be in a position to safeguard the privacy and confidentiality of customer" (PN2)</p> <p>"That machine has a potential to trace the whereabouts of everybody including the state president." (ON115)</p> <p>"... warn that implementing the system will expose all the privacy of subscribers to these networks in Malawi" (ON52)</p>
Political victimisation	<p>"The information minister however found it tough to convince opposition legislators who argued that government want to use MACRA for political witch-hunt" (ON58)</p> <p>"They want to check what their enemies are saying. But in life, everybody has an enemy. The friends today could be your enemies tomorrow and the same machine is going to be used against you" (ON18)</p> <p>"The opposition politicians will also be tracked down on their conversations including the civil society activists" (ON53)</p>
Trust in the regulator	<p>"... did not mince words, saying the credibility of MACRA has been compromised given questions raised thus far about the agency's intentions"(ON66)</p> <p>"MACRA can be justified to revoke a license of any infringing station or communications player, but we find their role in this case going beyond that of a regulator. The government-controlled body has become the censorship board itself, trying to tell people what to say, or getting annoyed with any utterances against government" (ON19)</p>

Table 5: Summary of concerns on CIRMS

5.5 Consensus on CIRMS

The agreements on issues causing moral panics on CIRMS were examined on based views expressed by different stakeholders on the effects of the system. The regulator, Government officials, traditional leaders, non-governmental organisations and some civil society organisations made statements that were supporting the implementing of CIRMS. Some of the statements lacked evidence to support their arguments. There were also articles which reported counter claims that CIRMS was beneficial. Legislators from opposition parties, human rights activists, special interest groups, telecommunication operators and journalists made counter claims on the benefits of CIRMS. The consensus from this group was noted in the joint statement reported in the press. The association of the telecom operators took legal action and requested a permanent injunction to stop the implementation of CIRMS.

The analysis also noted the events where the regulator, government, legislators, telecommunication and the media met to discuss the implementation of CIRMS. The articles reporting on the events showed that the meeting raised tension among stakeholders. The representatives from the regulator expressed their concerns over implementation of CIRMS

noted in the following statement: *“There have been misconceptions propagated in the media that this is a spy machine. I would like to assure you and all Malawians that this is not the job. In fact, it will help to raise revenue and bring forex into the country”* (PN13). The telecom operators maintained that their perceptions that the implementation CIRMS was not addressing the challenges of the ICT sector. Further, that the role MACRA as a regulator was questionable as indicated in the following statement made by one of the managers of the mobile network operators: *“I am not certain of the independence of MACRA, the same with many Malawians and no amount of talk will make people trust the machine or its intentions”* (ON70). This meant that there was no consensus between those supporting the CIRMS and those against the implementation of systems e.g. groups that perceived CIRMS would cause threats to society.

Despite the two groups claiming that they were acting in the interests of the people of Malawi, they did not reach a consensus regarding the implementation of CIRMS. Cases of litigation were reported where concerned citizens obtained a court injunction to restrain the regulator from implementing CIRMS. In 2012, the regulator appealed against the court injunction. At the time of the study, the regulator was still waiting for the conclusion of the legal processes. Therefore, CIRMS was not operational.

6. Discussion and conclusion

The study attempted to understand how media reports on the implementation of CIRMS influenced moral panics. The study showed that the media highlighted issues potential issues that could cause threats to society in the implementation of the CIRMS. The moral panics related to the implementation of CIRM were potential loss of privacy and misuse of CIRMS which affected the decisions of stakeholders. The results highlighted that moral panics were volatile they appeared, subdued and reappeared over a period of time (2009 to 2012). This was consistent with theoretical suggestions on the nature of moral panics (Cohen, 1973; Goode & Ben-Yehuda, 1994).

The results showed that moral panics in the implementation of CIRMS affected the decisions of the stakeholders. The decisions of telecom operators to obtain court injunction on CIRMS implementation, concerned citizens decisions to obtain restraining order on CIRMS implementation and the regulators decision to conduct civic education campaigns, media briefing, legal feasibility reviews and appeals against a court ruling on restraining orders for CIRMS implementation. Thus, confirming the role of media in influencing the decisions that people make on issues that affect their organisations or lives (Cricher, 2008; Maxwell, 2008).

The analysis noted that folk devils in the moral panics were changing depending on views for the system being beneficial or the systems being a threat to society. From the perspective of those against the implementation of CIRMS, the regulator was perceived as a folk devil that was deviating from norms and values of democratic society e.g. the right to privacy. In contrast, government and the regulator perceived those against CIRMS implementation as folk devils deviating from norms and values of meeting their obligations e.g. business organisations as legal entities were supposed to pay tax from their revenue. The contribution of the study to is the changing perceptions on folk devils between the two groups. This implied that folk devils may be perceived differently depending on the position of social groups in society. The groups which their behaviour conforms to the accepted norms and values may be privileged. However, the fork

devils which are normally marginalised may also view the privileged groups not understanding their behaviour and consider them a threat to their norms and values. This concept can be explored further to validate the findings in a different context.

ICT regulatory organisations are crucial in supporting the achievement of information society e.g. instance, supporting well developed and affordable infrastructure, facilitating accessible and relevant content and development of human intellectual capacity (Britz, Lor, Coertz & Bester, 2006). While information systems can support the ICT regulatory organisations to perform their roles, this study has demonstrated the unintended consequences of implementing information systems. CIRMS was related to organisations in the ICT sector but had implications beyond the sector organisations and included mobile phone users. The moral panics were the potential loss of privacy and misuse of CIRMS which created threats to the society. Hence, there is need to consider societal implications when implementing information systems (Litan & Singer, 2007; Majchrzak, Markus & Wareham, 2013).

The researchers do not take a stand on whether CIRMS is beneficial or a threat to society but make the following recommendations: (i) ICT regulatory organisations needs to take into consideration of intended and unintended consequences to include technical, social, economic, legal and ethical issues when implementing information systems (ii) ICT regulatory organisations may consider regulatory governance which may support their democratic mandate and satisfy the principles of credibility, legitimacy and transparency in the delivery of regulatory services.

References

- Beynon-Davies, P. (1999) "Human error and information systems failure: the case of the London ambulance service computer-aided dispatch system project". *Interacting with Computers*, 11(6), pp. 699-720.
- Braun, V. and Clarke, V. (2006) "Using thematic analysis in psychology". *Qualitative research in psychology*, 3(2), pp.77-101.
- Britz, J., Lor, P., Coertz, I., and Bester, B. (2006) "Africa as a Knowledge Society: A reality check". *The International Information and Library Review*, 38, 25-40.
- Bulc, G. (2002) "Kill the cat killers: Moral panic and Juvenile Crime in Slovenia". *Journal of Communication Inquiry*, 26(3), pp. 300-325.
- Chigona, A., and Chigona, W. (2008) "Mixit up in the media: Media discourse analysis on a mobile instant messaging system". *The South African Journal of Information and Communication*, 9, pp. 42-57.
- Cohen, S. (1987) *Folk Devils and Moral Panics*. St. Albans, UK: Paladin.
- Colandro, E., Gillwald, A., Moyo, M., and Stork, C. (2010) "Comparative ICT sector performance review 2009/2010". *Towards evidence based ICT policy and Regulation*, 2(5), ISSN 2073-0845.
- Critcher, C. (2008). *Moral panic analysis: Past, present and future*. *Sociology Compass*, 2(4), 1127-1144.
- David, M., Rohloff, A., Petley, J., and Hughes, J. (2011) "The idea of moral panic – ten dimension dispute". *Crime, Media, Culture*, 7(3), pp. 215-228.
- Gasmi, F., and Virto, L. (2010) "The determinants and impact of Telecommunications reforms in developing countries". *Journal of Development Economics*, 93, pp. 275-286.

- Gasmi, F., Um, P., and Virto, L. (2009) "Political Accountability and regulatory performance in Infrastructure industries: An empirical analysis". *The World Bank Economic Review*, 23(3), pp. 509-531.
- Goode, E., and Ben-Yehuda, N. (1994) *Moral Panics: The Social Construction of Deviance*. Cambridge, MA: Blackwell.
- ITU (2014). International Telecommunications Union (ITU) Statistics. Access on 14 June 2015 from: <http://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx>
- ITU Operational Bulletin (2009). International Telecommunications Union, Bulletin No. 928. Accessed on 16 July, 2012 from: http://www.itu.int/dms_pub/itu-t/opb/sp/T-SP-OB.928-2009-OAS-PDF-E.pdf
- Klein, H. and Myers, M. (1999) "A set of principles for conducting and evaluating interpretive field studies in information systems". *MIS Quarterly*, 23(1), pp.67-93.
- Li, W., Qiang, C., and Xu, L. (2005) "Regulatory reform in Telecommunication sector in developing countries: The role of democracy and private interests". *World Development*, 33(8), pp. 1307-1324.
- Litan, R., and Singer, H. (2007) "Unintended consequences of net neutrality regulation". *Journal on Telecommunications and High Technology Law*, 5(3), pp. 533-572.
- Majchrzak, A., Markus, M., and Wareham, J. (2013) "ICT and societal challenges". *MIS Quarterly*, pp. 1-3.
- Marwick, A. (2008) "To catch a predator? The MySpace moral panic". *First Monday*, 13(6).
- Maxwell, J. (2008) *Qualitative research design: An interactive Approach*. London: Sage Publications.
- Myers, M. (2009) *Qualitative research in business and management*. London: Sage Publications.
- Orlikowski, W. (2000) "Using Technology and constituting structures: A practice lens for studying technology in organisation". *Organisation Science*, 11(4), pp. 404-428.
- Rogers, E. (2003) *Diffusion of Innovation*. Free press.
- Siltaoja, M. (2012) "Moral panic, moral regulation and essentialisation of identities: Discursive struggle over unethical practices in Finish national media". *Culture and Organisation*, pp. 1-23.
- Tarafdar, M., Gupta, A., and Turel, O. (2015) "Special issue on 'dark side of information technology use': an introduction and a frame-work for research". *Information Systems Journal*, 25, 161-170.
- UNDP (2014) *Sustaining the Human progress: Reducing vulnerabilities and Building resilience*. Human Development Report 2014. UNDP, New York, USA. Accessed on 14 June 2015 from: <http://hdr.undp.org/sites/default/files/hdr14-report-en-1.pdf>
- Wallsten, S. (2001) "An econometric of Telecom competition, privatization and regulation in Africa and Latin America". *The Journal Industrial Economics*, 49(1), pp. 1-19.
- World Bank (2014) World Bank data. Access on 14 June 2015 from: <http://data.worldbank.org/country/malawi>