A COMPARATIVE STUDY OF THE DIGITAL SWITCHOVER PROCESS IN NIGERIA AND NEW ZEALAND.

BY

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DEDICATION

I dedicate this thesis to the God that makes all things possible.

Also, to my awesome and loving Wife and Daughter, Marissa and Enïola.

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ABSTRACT

The Digital Switchover (DSO) process was conceived at the International Telecommunications Union (ITU) Regional Radiocommunication Conference (RRC-06) on June 16, 2006 in Geneva, Switzerland. Digital transmission was viewed as a global solution to the problem of frequency congestion associated with analogue television transmission. Subsequently, the New Zealand government announced its final shut-down of analogue television transmission and completed transition to digital transmission in 2012, but the implementation of the global agreement is yet to be completed in Nigeria. This thesis is a comparative study of the DSO process in New Zealand and Nigeria over the first ten years (2007-2017) of this global agreement. The two qualitative research methods used in this study, communication policy analysis and semi-structured interviews, work together to examine the existing power relations between nation states and transnational structures, the direction of policies and approach to governance, and the individual experience of some participants involved in the DSO process in Nigeria and New Zealand. A critique of the neoliberal free market system helps to conceptualize the push for market deregulation of the media environment, as the neoliberal approach to the global mediaspace was instituted by the transnational actors of global and trade and capital. These international actors include the World Trade Organization (WTO) and the Bretton Woods institutions. The theoretical framework summarizes the effect of the WTO's multilateral trade agreements and the policy-centred lending framework of the Bretton Woods Institutions on the market economies in New Zealand and Nigeria. From analysis of the international institutions, the thesis argues that the DSO process is a new strategy to enact the neoliberal free market system on the global mediaspace and redefine the role of global media and communication institutions in the digital era. The analysis of the digitized television environments considered in this study suggests that the DSO process mostly serves the interest of the state and the telecommunication market. Finally, the thesis finds that successful completion of the transition process by the ITU scheduled date is dependent on an inclusive state-market participation.

Keywords: Digital Television, Digital Switchover Process, Policy, Governance, International Telecommunications Union, Neoliberal free market, Nigeria, New Zealand

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LIST OF ABBREVIATIONS

ANC	African National Congress
BBC	British Broadcasting Corporation
BCNNL	Broadcasting Company of Northern Nigeria Limited
BEE	Black Economic Empowerment
BskyB	British Sky Broadcasting
CCK	Communication Commission of Kenya
CCP	Communist Party of China
CCTV	Central China Television
DSD	Digital Signal Distribution
DSO	Digital Switchover
DTH	Direct-to-Home
DTT	Digital Terrestrial Television
DTV	Digital Television
DVD	Digital Versatile Disc
DVR	Digital Video Recorder
ECA	Electronic Communications Act
EFCC	Economic and Financial Crimes Commission
ENTV	Eastern Nigeria Television Service
EOI	Expression of Interest
EPG	Electronic Programme Guide
EPL	English Premier League
FCC	Federal Communication Commission
FDI	Foreign Direct Investment
FEC	Federal Executive Council
FOCAC	Forum of China and Africa Cooperation
FRCN	Federal Radio Corporation of Nigeria
FTA	Free-to-air
GATS	General Agreement on Trade in Services
GDP	Gross Domestic Product
HbbTV	Hybrid Broadcast Broadband Television
HD	High Definition
HSBC	Hong Kong and Shanghai Banking Corporation

IBA	Independent Broadcasting Authority
ICASA	Independent Communication Authority of South Africa
IFI	International Financial Institutions
IMF	International Monetary Funds
ITS	Integrated Television Service
ITU	International Telecommunications Union
JSE	Johannesburg Stock Exchange
MBIE	Ministry of Business, Innovation and Employment
MCH	Ministry of Culture and Heritage
MED	Ministry of Economic Development
MHz	Megahertz
MoC	Minister of Communication
NBC	National Broadcasting Commission
NCNC	National Council of Nigeria and Cameroun
NP	National Party
NP	National Party
NPC	Northern People’s Congress
NTA	Nigerian Television Authority
NTS	Nigerian Television Service
NTS	Nigerian Television Service
NZBS	New Zealand Broadcasting Service
NZD	New Zealand Dollar
NZOA	New Zealand on Air
PAC	Presidential Advisory Committee
PCL	Pinnacle Communication Limited
PSB	Public Service Broadcasting
RDS	Radio Diffusion Services
RSM	Radio Spectrum Management
SABC	South Africa Broadcasting Corporation
SAP	Structural Adjustment Policies
SATRA	South African Telecommunications Authority
SOE	State-Owned Enterprise
SSA	Sub-Saharan Africa
SSS	State Security Service

STB	Set-Top Boxes
TVNZ	Television New Zealand
UNESCO	United Nation Educational, Scientific and Cultural Organization
URTNA	Union of Radio and Television Networks in Africa
VON	Voice of Nigeria
WNTV	Western Television
WTO	World Trade Organization

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Chapter One

1.1 Introduction

Across the television landscape, broadcast technology is changing the medium by which audio-visual content is consumed. The responses of different national governments to the changing television landscape have varied from each other. In the wake of the global initiative of the digital switchover (DSO) process, several national governments and transnational governance structures are rethinking their approach to regulation and governance of television broadcasting. The result of this transition process to digital television has been evident with the shift of the global distribution of digital television services. From a broad overview of the television landscape, among other factors, this technological transition to digital television can be attributed to the efficiency in the minimal frequency requirement for digital transmission and the enormous economic benefits of the released analogue spectrum to the various participating national governments.

Likewise, the priorities of governments for the DSO process appears to be different. Some governments, such as New Zealand and the United States, are interested in the financial benefits of digital television for their respective national economies. For others, such as most African countries, the transition to digital television provided a renewed opportunity for state participation in the business of television and to bridge the technological gaps in their societies. Among other factors, the increasing integration of the global mediaspace as prompted by the dynamics of global trade, the expansion of capitalism, technological advancements and the continuous reforms in international regulatory framework have influenced the approach of these countries to the DSO process. On this basis, this study investigates the individual approach and participation of two digital television environments: New Zealand and Nigeria.

1.2 Background to the Study

Until the transition to digital television, radio and television broadcasts were transmitted in an analogue form through airwaves, antennas and cables from one point to another. Analogue transmission worked very efficiently until the market competition between television broadcast companies necessitated a more efficient transmission for both standard and high definition video quality. However, the technical complexity and bandwidth requirement of increased video quality could not be supported by the high bandwidth required by analogue transmission. Digitally-encoded television signal appeared to fix this restriction because it require less frequency bandwidth.

Furthermore, the analogue radio transmission can only accommodate a limited number of television broadcast services at the same time. For instance, in the pre-digital frequency allocation for broadcast television services in the United States (Terry, 1998), it was very clear that the Federal Communication Commission (FCC) allocation of 6-MHz for television broadcast services could not meet the frequency requirement for the transmission of High Definition (HD) television services. The transmission channels and storage mechanisms of this analogue frequency spectrum are also limited and unable to accommodate an uncompressed video signal (Anastassiou, 1994, pp. 510-519). Simply put, the analogue transmission medium was a trade-off of the quality of video signal because signal compression algorithms of analogue signal reduce the bit rates by using the inherent redundancy of the video signal and the quality of the output signal (Anastassiou, 1994, pp. 510-519). As a result of these limiting factors, the transmission of a high quality television signal through the analogue medium posed a technical constraint to the quality of television broadcast signal both at the transmission and receiver end of the communication channel. For most broadcasters, the analogue transmission medium could not support technical development and significant financial investment.

As a result of the technical constraints on the transmission of HD television signals through analogue transmission, various alternatives for enhanced digital video were introduced at different times. These includes the introduction of the Digital Versatile Disc (Jijun & Conglai, 2017) in 1997, the introduction of the Digital Video Recorder (Sinkovics & Alfoldi, 2012) in 1999, video streaming for mobile devices in 2003, the launch of the Apple iTunes video store and the YouTube video website in 2005, 7th generation home gaming consoles equipped with digital video enhancements and finally, the introduction of digital television services (Dawson, 2010, pp. 95-100). Bivens (2014) notes that while the digital transition has bridged the divide between technological determinism and technology as a social construct, the social shaping of technology innovations will continue to influence the use, the design and overall development of the television medium.

The introduction of digital television services began in the United States in the 1980s out of a competition with the Japanese media market (García Leiva & Starks, 2009; Jeffrey A. Hart, 1998; Terry, 1998). The standard of digital television broadcast services was developed as an industrial response to Japan's proposal to set global standards for high-definition television (HDTV) on the analogue frequency medium (García Leiva & Starks, 2009). Also in response to the Japanese's bid the European Commission developed a rival analogue high-definition satellite system, branded as MAC (Multiplex Analogue Component) in the 1980s (García Leiva & Starks, 2009). However, the technical implementation of this technology at the consumer end was a complete failure. According to Springett, Rice, and Griffiths (2013), Digital Television (DTV) services have widened the digital divide especially in the purchasing, self-installation of equipment and accessibility to digital content and there are still a significant number of people who are struggling to adapt to this era of technology transition.

The global initiative of the Digital Switchover (DSO) process was prompted by the International Telecommunications Union (ITU) as a collective response by member countries to improve the quality of television broadcast services and address the shortage of frequency spectrum for mobile telephony and wireless communication services. At the Geneva conference of the ITU in 2006 (RRC-06), the participating countries agreed to migrate the transmission of television services from the analogue frequency spectrum to new frequency bands that are suitable for the transmission of digital television services and subsequently designate the previous frequency bands of analogue television services for use in mobile telephony, wireless communication and other services such as space and maritime navigations. Based on this collective decision, a treaty on the digitization of the frequency spectrum of television broadcast services in Europe, Middle East, Africa and the Islamic Republic of Iran was signed by the representatives of the participating countries with a collective agreement to complete the process by June 17, 2015 (ITU, n.d). The participating countries were expected to migrate from the analogue frequency bands (174-230 MHz and 470-862 MHz) to the digital frequency bands frequency bands (174 - 230 MHz and 470 - 862 MHz) within the agreed deadline (ITU, n.d).

However, the implementation and approach to this global agreement of the DSO process has varied among the participating countries for different factors. Some of the participating countries, such as the United States, Australia, Canada and New Zealand, have implemented and completed the DSO process within the scheduled time. However, there are other countries, such as the sub-Saharan African countries, where the approach and implementation of the DSO process has been limited by various factors such as financial constraints, technical difficulties and misplaced priorities of the government.

The thesis considers the Digital Switchover (DSO) process as the technological transition of television broadcast services from analogue transmission frequencies to the digital television frequencies. In this study, the DSO process is also referred to as digital migration or transition process to digital television. The transition process is followed by the release of the analogue frequency spectrum, called the digital dividend, which refers to the extra earnings that come from the sale of frequencies previously used for the transmission of analogue television services, to other users (Lords, March, 2010). Digital television systems have also necessitated a shift in the approach to the production and consumption of television services (G. Berger, 2010). Digital television is also more efficient in frequency use, and is compatible with internet protocols that enable television services to be augmented with facilities such as the Electronic Programming Guide (EPG) (Hoelzel, 2014; Wolk, 2015). Digital television has enabled broadcasters to use visual functionality to provide information on programming, promotion of broadcaster websites, and create audience-participation competitions and registration features (Gbenga-Ilori. & Ibiyemi., 2013).

1.3 Research Gap and Significance of the Thesis

There have been several studies on the approach and implementation of the DSO process across several media landscape (For examples, see Agona & Otim, 2009; Anastassiou, 1994; Bennett, 2008; G. Berger, 2010; Beutler & ebrary, 2012; Bonin, 2010; Dawson, 2010; J. Duncan, 2017; García Leiva & Starks, 2009; Jeffrey A. Hart, 1998; Jeffrey A Hart, 2010; Hazlett, 2001; Papandrea, 2001; Southwood, 2011; Given, 2015; Taylor, 2010) but only a few of these studies have focused on a comparative analysis between two different media environments. Despite the fact that the DSO process is a global initiative and still an ongoing process in many countries, very little scholarship have examined and compared the approach of different countries. No previous studies have compared a media environment that has successfully completed the DSO process within the international scheduled completion date with another media environment where the DSO process has been entangled in national priorities that limit the primary objectives of the global DSO programme and completion.

This thesis fills this gap in scholarship of global television study with a comparative study of two different media environments. It presents an indepth analysis of the successful approach to the implementation of the DSO process in New Zealand and the complexities associated with the Nigerian digital television market. New Zealand's digital television transition programme was driven by both market imperatives and intervention of the state. In the case of Nigeria, the ongoing DSO process has been largely driven by the involvement and priorities of the Federal Government, and plagued by an absence of a coherent implementation plan and a complicated relationship between the state and the market. This thesis takes a critical political economy approach to the DSO process in these digital television markets as a sub-section of the global digital television market.

In addition, the thesis extends its critical political economy approach to the analysis of the power relations and interplay of institutional forces, such as the World Trade Organization (WTO) and the Bretton Woods Institutions that shape the global trade of television services and their effects on the direction of the governance and policy framework of Nigerian and New Zealand television. In the

Nigeria television environment, this thesis finds no study that has investigated the effect of these international institutions of global trade and capital on the direction of the digital television market of the SSA region. This thesis emphasizes the direct effect of the structural adjustment policies on the existing complexities of the Nigerian digital television market, as shaped by the Bretton Woods Institutions. The thesis also investigates the control and dominance of a few media conglomerates on the digital television market of the SSA region and why several competitive attempts by locally-owned digital television services have been unsuccessful.

1.4 Objectives of the Research

The primary objective of the thesis is to study the approach and implementation of the digital television transition in Nigeria and New Zealand. The thesis examines the underlying factors and policy framework that have shaped the implementation of the transition digital television in these two media environment. In particular, the study focuses on:

i. The forces shaping the direction of the domestic regulatory policies of the global digital television landscape, along with their underlying interests,
ii. The existing nexus between the neoliberal free market system and the direction of domestic regulatory policies of the two digital television environments,
iii. The influential roles of international institutions of global trade and capital on the digital television markets of New Zealand and Nigeria.

The DSO process in New Zealand, may be compared with the approach, policy framework and implementation of other countries such as Australia, Canada and the United States. Considering the global decision to digital television and the scale of the historical influence of these countries on the trajectory of television in New Zealand (Bell, 1995; Melnick & Jackson, 2002), lessons from the implementation of the DSO process in these countries were also adopted in the New Zealand DSO Programme (Len Starling, personal communication, November 10, 2017).

The analysis of the Nigerian television environment in this study also reviews the South African television environment. From a broad overview, these two African countries collectively defined the nature and direction of the television environment in the sub-Saharan Africa (SSA) as evident in the participation of the dominant media conglomerates and outcome of the market competition. Also, the direction of economic policies and broadcast governance across the entire SSA region is largely influenced by the same institutional forces, similar in colonial past and economic realities. The Nigerian digital television market is the largest in the Africa in terms of households with digital television and market penetration due to its enormous and diverse population (BTVN, 2018). As a result, the Nigerian television environment provides insight into the television market of the SSA region.

Analysis of Nigerian digital television also includes the influence of South African and Chinese investments in the sub-Saharan African (SSA) digital television market. Rising Chinese engagement in the African continent and the crucial decisions made in South Africa have shaped the course of the entire SSA digital television market. Also, across the SSA region, there are only few countries that have completed the DSO process within the scheduled completion date. A leading example here is Tanzania, which became the first country in mainland sub-Saharan Africa to switch-off its analogue television signal in December 31, 2012 (Schumann, 2013).

1.5 Timeline for the Comparative Analysis

The analysis of the implementation of the DSO process in New Zealand and Nigeria is broadly limited to the first ten years (2007-2017) of this global agreement. In New Zealand the transition process unfolded in two phases. The first, between 2006 and 2009, was prompted as a competitive response to the market leadership of the Sky Television Network. This phase occasioned the launch of the Freeview digital television platform in 2006 by a government-backed consolidated alliance of major analogue broadcasters (García Leiva & Starks, 2009). The second phase, between 2009 and 2013, was initiated in response to the ITU global agreement in Geneva and was followed by the auction of the released spectrum to some telecommunication companies.

Although it is still an ongoing process with no coherent timeline in Nigeria, the analysis of the DSO process in this thesis is limited to the first ten years (2008-2018). The actual implementation commenced with the inauguration of the Presidential Advisory Committee (Zamblé, Gbégbé, Kadjo, Asseu, & Brou) in October, 2008, followed by the release of the white paper and inauguration of the Digital Implementation Team (DigiTeam Nigeria). This thesis presents the various approaches to the implementation of the DSO process in Nigeria along with its complexities and challenges in the first ten years.

1.6 Research Questions

Based on the brief background to the study of the DSO process in Nigeria and New Zealand, the central question of the thesis focus on the interplay of institutions and interests shaping the global direction of digital television services in the Nigerian and New Zealand states. The central research questions are:

RQ1. How has the relationship between nation states and international institutions (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the approach to policy and governance of the digital television market in New Zealand and Nigeria?

RQ2. How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand and Nigeria?

RQ2. How effectively was the global agreement on the DSO process implemented in Nigeria and New Zealand?

1.7 The Outline of the Thesis

This thesis, critiques of the neoliberal free market system, and describes the various interplay of interests, the effect of international institutions of global trade and capital and the intervention of national governments in the transition process to digital television in Nigeria and New Zealand.

The second chapter reviews existing literature and previous studies around the Nigeria and New Zealand television environments. In the case of Nigeria, the second chapter presents a historical review of the broadcast environment and cover themes such as the background to the media environment, deregulation of the regulatory framework, ownership structure, governance and mechanism of control. Because of the significance of South African-based media in Nigerian digital television, the historical analysis in this chapter also discusses the effect of the political transition to institutional democracy on the post-Apartheid media environment of South Africa. The chapter further presents an overview of the New Zealand media environment with an emphasis on the deregulation of the media environment that brought a shift from the Public Service Broadcasting (PSB) to the market imperatives that presently drives the media environment. It also reviews the rise of the neoliberal economic ideology and the effect of foreign involvement and ownership in the New Zealand digital television market.

The third chapter presents a critique of the neoliberal free market system, drawing on the critical political economy approach indicated in the research questions. This theoretical approach is important for analysis of the power relations and the interplay of institutional forces shaping the global digital television market and the transition process to digital television. First, the chapter discusses the effect of globalization on the global media landscape and the entangled relationship between the state and the market in the promotion of neoliberal economic ideology. The third chapter also outlines the historical and modern approaches to the New Zealand and sub-Saharan African television market economy. Thereafter, this chapter investigates the effect of neoliberal orthodoxy, along with its institutional apparatus, on the market economy of these countries. It sets the stage to analyze the digital transition process in Nigeria and New Zealand.

The fourth chapter outlines the methodological framework of the thesis, which includes communication policy analysis and indepth interviews. A communication policy analysis of the DSO process enables investigation of the effects of global institutions such as the World Trade Organization (WTO) and the Bretton Woods Institutions, International Monetary Fund (IMF), and the World Bank on the direction of regulatory policies of the global digital television market. The policy analysis of the Nigerian and New Zealand digital television transition is structured on the premise that national regulatory policy models are products of a complex interplay of interests between domestic and global forces. The interviews addressed the gaps in the policy analysis by investigating the experience and role of the participants in the implementation of the DSO process in their respective countries.

The fifth chapter explores the influential roles of the key intergovernmental organizations that influence the global trade of information services via broadcast networks and the important regulatory policies that are shaping the global digital television market. The chapter argues that the transition to digital television services is a renewed effort to strengthen the neoliberal market system on the global television environment. Drawing on the critique of the neoliberal free market, the chapter presents an analysis of the policy framework of the New Zealand media environment as subject to the General Agreement on Trade in Services (Puppis, 2008) of the World Trade Organization (WTO). In the case of the Nigerian television environment, the chapter analyses of the institutional effect of the International Monetary Funds (IMF) and the World Bank on the economic policies of developing countries in the SSA region. The chapter discusses how these financial institutions influence the level of possible domestic capital investments in the broadcast environment of the sub-Saharan African media landscape and why competitive attempts by indigenous broadcast services have been unsuccessful. Furthermore, drawing on the neoliberal economic approach to policy and governance of the media environment, the chapter discusses the participation of the New Zealand market economy in the global trade of media commodities. It also considers the effect of this neoliberal economic approach as evident in the flow of global capital and the participation of foreign-owned media conglomerates in the New Zealand digital television market.

The sixth chapter details the Nigerian approach to the DSO process. In the Nigerian broadcast environment, the ongoing DSO process is shaped by the complex intersection of regulatory framework, state interventions and the inward flow of foreign capital investments. This chapter presents an analysis of Chinese state capitalism in Africa and examines its nexus with the neoliberal free market system on the shifting digital television landscape in Nigeria. The Nigerian digital television market has been determined by a complex relationship of the State with the two major participants in the contemporary digital television environment – MultiChoice and StarTimes Nigeria. This chapter examines the regulatory and governance approach of the Nigerian state, and the effect of various state interventions, on the DSO process in Nigeria. The chapter presents the state of the Nigerian digital television market prior to the commencement of the DSO process in Nigeria, and the complex and slow approach to the DSO process in Nigeria.

The seventh chapter details the New Zealand approach to the DSO Process. The chapter investigates the institutional power relations that have shaped New Zealand's digital television transition. The chapter begins with an analysis of the state of the New Zealand digital television market prior to the commencement of the DSO process in New Zealand, emphasizing the relationship between the economic interests of the television broadcasters and the priorities of the New Zealand government. The chapter discusses the transition process to digital television into two different phases. These involve the market-oriented nature to the transition process of national broadcast services and the strategic intervention of the state, through the *Going Digital* Initiative. The state intervention was an attempt to assist marginalized regional broadcasters and households that were excluded from the commercial scope of the first phase of the transition process.

Finally, the eighth chapter presents a summary of the main findings and the concluding statements of the thesis. The major conclusions from the study in response to its objectives and primary questions are presented in this chapter. Also, the chapter presents the various limitations of the thesis and recommendations for future research. Overall, the thesis finds that the approach of the Nigerian government to the ongoing DSO process is completely different from the market-oriented and inclusive approach adopted in New Zealand. The thesis argues that the ongoing DSO process in Nigeria has been compromised by the complex intersection between the state and the two major participants of the contemporary digital television market, MultiChoice and StarTimes Nigeria.

Chapter Two

BACKGROUND

The technological change from analogue to digital transmission requires states to redefine their approach to governance and participation in the television industry. This is entwined with various deregulation or "liberalization" processes (Herman & McChesney, 1997, p. 112). The technological change also required a new approach to media and communication research, with ongoing attempts to fill the possible gaps in scholarship and other debates among scholars, researchers and policy-makers (Bennett, 2008; Bivens, 2014; Raboy & Padovani, 2010).

In the global media landscape, the switchover from analogue to digital television transmission compelled a rethink of the structure of governance of the global media landscape, and the participation of nation states. The interplay of interests between apparatus of state governance, and the global corporate media institutions has redefined market competition and governance of global media. This interplay of interests prompted the deregulation of the media environment, and the immediate effect of this has been evident in the expansion of media conglomerates in the global television market. As will be established in the theoretical framework of this thesis, the particular interplay of interests and approaches to governance of the media environment has acted to either support or limit the initiative of the DSO process in different countries.

Against this backdrop, this thesis conceives the critical analysis of this interplay of interests and the effect on the ongoing DSO process as two converging discourses. This involves the global trade of broadcast services and the participation and approach of the state to the governance of the digital television environment. Before embarking on this critical analysis of the Digital Switchover process, this chapter provides a background analysis on the structure of ownership and control of the Nigeria, New Zealand and South African media environments.

This thesis argues that different approaches to governance have either restricted or supported the implementation of the DSO process in these countries. In New Zealand this interplay of state and corporate interests resulted in the initial monopoly of the digital television market by Sky Television Services, so the participation of the state in the DSO process created a balanced playing ground for all participating broadcasters. In Nigeria, by contrast, the current structure of governance was a result of policy imposed by Bretton Woods Institutions (IMF and World Bank) and the participation of the government in the DSO process has resulted in a setback of the DSO process.

2.1 The Relationship between the State and the Media Institution in Nigeria

From an historical context, the relationship between the Nigerian government and the media environment remains a weighty topic of contention among communication scholars and analysts of the public space. At the convergence of this argument (Chomsky, 2010; Gehlbach & Sonin, 2014; Jingrong, 2010; Mosime, 2015), media institutions could either exist as an instrument of accountability and a watchdog in a democratic state, or be driven by market necessitates and corporate interests. However, the relationship between the state and the media institution "fluctuates" repeatedly irrespective of the society in which it exist (Gehlbach & Sonin, 2014, p. 163). The Nigerian media environment, including all radio and TV broadcast services, has been viewed as an exclusive propaganda apparatus of the central government used for the dissemination of information to the populace. Overall, however, the governance of broadcasting can be summarized through three distinctive political eras which includes the colonial, military and democratic era.

In the colonial era, the media existed as an exclusive preserve of the British government and regulated under strict colonial laws. During this era, the primary role of the media institution was to establish a medium of communication between the British government and the several colonies it governed in Africa (Mosime, 2015). According to colonial discourse, the media institution was a strict instrument that promotes the "subjectivity" of Africans to their colonial masters (Adeyanju & Oriola, 2011, p. 945). It was also a medium to educate and entertain Africans with British civilization and values. Public broadcasting was introduced to Nigeria by the British Government as a colonial instrument in 1933 with the Radio Diffusion Services (RDS) which relayed the overseas service of the British Broadcasting Corporation (Repository, 2015). During the early era of broadcasting in Nigeria, the only existing licensed broadcasters were the public broadcasters that included the Nigerian Television Authority (NTA), the Federal Radio Corporation of Nigeria (FRCN) and the Voice of Nigeria (Auld et al., 2007) (Papandrea, 2001).

Subsequently, The Act of Parliament No. 39 of 1956 granted the Nigerian state the exclusive right to own and control all media services in Nigeria. This was followed by the Nigerian Broadcasting Corporation (NBC) Ordinance No. 39 of 1956, which created of the Nigerian Broadcasting Corporation, to replace the RDS. Similar to the early media environments in many European and African countries, Ariye (2010) noted that this monopoly and control of the broadcast media by the government suggest that the media was seen as a crucial tool for “social change and engineering” that should not be handed over to commercial interests that may undermine the promotion of national values and citizenship.

In its first version, the NBC was managed by four management boards which included regional boards in each of the three regions of the country and the national board of governors appointed by the Governor-General (Aginam, 2010). Later, in 1959, as part of the terms of independent rule, the colonial constitution was reviewed to enable the creation of federal and regional governments, and the transfer of the ownership powers of public broadcasting services from the British colonial government to the Nigerian government (Udomisor, 2013), dismantling the British colonial policies (Taylor, 2010).

During the transition period to political independence, Nigeria was governed by a parliamentary constitution with a centralized federal government in Lagos and three regional governments in the Northern, Western and Eastern parts of the country. These three regional governments represent the governance of the three main ethnic groups (Hausa, Ibo and Yoruba) that made up the Nigerian nation (Oduko, 1987). The development of television broadcast services was made possible by the various partnerships between the government and foreign corporate entities, either in a form of technical partnership or in a joint ownership arrangement. In a partnership between the western regional government led by the Action Group (AG) and a British-owned media company, Overseas Rediffusion Limited, the first African television signal was transmitted in 1959 following the establishment of the Western Television (WNTV) in Ibadan (Udomisor, 2013). Likewise, the eastern regional government governed by the National Council of Nigeria and Cameroun (NCNC) established the Eastern Nigeria Television Service (ENTV) in 1960. Later in 1962, the northern regional government governed by the Northern People's Congress (NPC) established the Broadcasting Company of Northern Nigeria Limited (BCNNL) in another technical partnership with two private British companies, Granada Television and Emi Radio. The development of these television broadcast services by these regional governments was largely made possible by the decentralized fiscal allocation of resources along regional lines (Ekpo, 1994; Nolte, 2002).

In the early days of democratic rule, broadcast radio, which was the most powerful and effective medium of communication, was the exclusive preserve of the federal government. The three regional governments, along with corporate partners, governed and controlled the television broadcast services. Although the founding goals of these television broadcast services were purely for educational and entertainment purposes, television soon became an instrument for "partisan politics" by the various regional governments (Charles C Umeh, 1989, p. 57). The decision by the regional governments to establish television broadcast services was widely criticized as being a waste of scarce resources and a development that was not welcomed by the populace (Charles C Umeh, 1989). At this time, very few households in Nigeria could afford the cost of purchasing television sets. The first attempt at direct governance of the media began in 1961 with an amendment to the NBC Act of 1959, which granted power to the Federal Minister of Information to give directives and appoint the governing board of the NBC (Udomisor, 2013). This background study of media institutions in Nigeria reveals that the independence of the Nigeria state from the British government did not lead to an independent media environment but a transfer of ownership of the media institutions from the British colonialists to the new independent government.

Similarly, the post-independence era was also an opportunity for the Federal Government to participate in television broadcasting in Nigeria. In partnership with the Radio Corporation of America (Alysen, 2006), an American radio company and the leading manufacturer of radio receivers, the Federal Government established the Nigerian Television Service (NTS) in 1962, which was soon managed by the US broadcaster National Broadcasting Company International as a partner. From this brief historical description, it is clear that the development process of television services in Nigeria were made possible by both state and corporate capital. Nevertheless, the state-corporate partnership of the first channel, WNTV, did not last for long as the western regional government purchased the ownership shares of the Overseas Rediffusion Limited. Management of the NTS were transferred to the governing board of the NBC. As the role of overseas corporations in Nigerian media diminished, the commencement of independent rule consolidated ownership and control of the media institutions in Nigeria as the exclusive preserve of the state.

Soon after political independence in 1960, there were accusations of neglect by some ethnic minorities, arguing that their cultural and ethnic values could not be defined within the structure of the three regional governance system. Subsequently, Nigerian democratic rule was overthrown by the first military coup in 1966, because of the exclusive control of oil revenues by the Hausa-dominated Federal government. This action further led to the declaration of independence by the eastern regional government, which led the country into a civil war that lasted between 1967 and 1970, resulting in the death of about three million people (Akresh, Bhalotra, Leone, & Osili, 2012; Collier & Hoeffler, 1998; Ugochukwu, 2010). The civil war prompted the complete collapse of the three regional governments. In an attempt by the military government to 'reconcile' and 'reunify' the ethnic groups neglected by the previous regional governments, the country was divided into 12 states in 1967 and later into 19 states in 1975 (Oduko, 1987). However, the process of restoring peace and stability through the military government resulted in an era of instability with attempted and successful coups. News of the enormous corruption and mismanagement of public resources by the military government featured regularly in the media (Oduko, 1987; T. Ojo, 2007; Olukotun, 2002).

Consequently, the military government reacted to media reports about corruption and mismanagement with a massive crackdown on media houses, unlawful arrests and detention of journalists and the introduction of 'draconian laws' to suppress the flow of information about the military government (T. Ojo, 2007). During the various era of military governance, there was a "sectional consciousness" from the new states created by the military governments (C. C. Umeh, 1989, p. 58), which expressed an urgent need to establish more radio and television broadcast services that could address the cultural differences of the diverse audience. As a result of these conflicting interests between the political instrumentalism of media institutions by the military government and the watchdog role expected of the media, media institutions were placed under the direct governance of the military-led government (Akpojivi, 2014). The military decree No. 24 of April 1976 allowed the central military government to establish the Nigerian Television Authority (NTA). The NTA was assigned power to perform several duties (Oduko, 1987), including to

I. take over all the existing television stations,

II. plan for, establish and operate new stations in the state capitals without television.

Due to this military code, the management and governance of all existing television broadcast services in the twelve states of Nigeria established between October 1959 and 1974, including state government-owned TV networks, were transferred to and controlled directly by the NTA (NTA, 2013). Accordingly, the NTA became the national television service in Nigeria.

The governance structure of the NTA comprises a management team led by a Director-General (Bringer, Johnston, & Brackenridge) and a team of executive directors appointed by the head of the central military government. Based on the appointment of the governance structure, the NTA was largely partisan to the political agenda of the central military government (Akpojivi, 2014, p. 88) and the idea of building a political institution governed on the ordinance of democratic values became a major concern (E. O. Ojo, 2009). The dual existence of the NTA, as a broadcast regulatory agency and national broadcaster, attracted heavy criticism from several academic scholars (e.g Adesonaye, 1990; Akpoghiran & Otite, 2013; Obono & Madu, 2010; Udomisor, 2013), who argued that this would lead to bias in the flow of information.

Subsequently, the military regime of General Ibrahim Babangida initiated the first attempt at deregulation of the Nigerian broadcast environment with the NBC decree No. 38 of 1992, which established a separate regulatory agency, the National Broadcasting Commission (NBC). Decree No. 38 in 1992, which established the National Broadcasting Commission (NBC). The NBC was charged with licensing all television and radio broadcast services, regulating and managing broadcast activities in Nigeria (Repository, 2015). Deregulation of the Nigerian media environment was necessitated as part of the terms of the Structural Adjustment Programme (SAP) introduced in Nigeria in 1986, which became the pivot of the economic policy of the Ibrahim Babangida military administration. As part of the terms of the SAP policies, the Federal Government embarked on the "commercialization and privatization" of all state enterprise, either partly or wholly owned by the Nigerian state, including broadcasting (Opubor, Akingbulu, & Ojebode, 2010, p. 70).

The NBC was responsible for regulating all affairs and concerns of the Nigerian broadcasting environment and mandated to grant operational licences for private and foreign ownership of television broadcast services in Nigeria. Not long after it was established, the NBC issued operational licences to new private and public-owned radio and television broadcast services, which increased the number of television broadcast services from 30 government-owned broadcasters before the deregulation process to about 394 after the deregulation process (Ihechu & Okugo, 2013). Furthermore, the national mass communication policy of the Ibrahim Babangida military administration (1985-1993), as a subset of the policies of the SAP, viewed the state-owned media enterprise as unnecessary. As part of this policy, a regulatory body was established to address the imbalance in the flow of information among rural and urban areas. This imbalance was addressed by a process of deregulation of the broadcast environment and licensing of private-owned radio and television broadcast services. It is evident that the Structural Adjustment Programme and the National Mass Communication Policy were the two critical policies that laid the groundwork of private ownership and the market-oriented policies of the Nigerian television environment.

Subsequently, the deregulation process spawned a new wave of competition between private and public broadcast services in Nigerian television. The first private television broadcast service was licensed in 1994 (Alhassan, 2008), making the transition of the broadcast environment to an industry with both public and private players and enabling consumers with choices on which services to watch and when to watch. Also, the introduction of private broadcast services increased the level of information available to the Nigerian public sphere and increased the agitation for democratic governance in Nigeria (Monitor, 1997). This media pluralism ignited the 'opposition megaphones' that had long been denied a medium of expression in the monopolized government-owned broadcast services and provided alternative platforms for voicing opinion in a free atmosphere (Oketunmbi, 2006 & 2007). However, the autonomous and democratic role expected of an independent regulatory agency was also weakened by decree No. 38 of 1992 (Akpoghiran & Otite, 2013). The management structure and governance procedures of the NBC are not very different from the previous monopolistic regime of the NTA. As indicated on the commission's website (NBC, 2016), the appointment (and termination) process of the chairman and the board of commissioners is an exclusive decision reserved for the President of the Federal Republic of Nigeria upon recommendation by the Minister of Information and Culture. Also, the membership of the State Security Service (SSS) on the NBC board suggests there is little likelihood of the agency acting as an autonomous and independent decision-making regulator. Likewise, Decree No. 38 did not state any prerequisites for the representatives of the Federal Ministry of Communication and Culture and in most cases, they comprise politicians representing the interests of the ruling political institutions.

This analysis of the Nigerian broadcast environment sets out the background of the regulatory framework of the Nigerian television environment before the introduction of digital television in Nigeria. The lack of autonomy and independence by the broadcast regulator means the Nigerian television market has been subject to deliberate interference by the state at any time. Subsequent chapters of this thesis will build on this historical analysis and examine how the regulatory framework of the Nigerian television environment has impeded prospective investors from investing in the Nigerian DSO Programme.

2.2 The Introduction of digital broadcasting in Nigeria

The deregulation of the broadcast environment initiated the PayTV market in Nigeria with the entrance of South African-owned media conglomerate, DStv in 1994. DStv operated on the platform of MultiChoice Nigeria, in a joint venture with MultiChoice South Africa, an established PayTV broadcaster from South Africa (DSTV, 2015). Since its entrance into the Nigerian digital television market, DStv has become a leading pan-African company, with a presence in about 48 countries in sub-Saharan Africa. Today, the Nigerian digital and satellite television market is driven by private interests and remains the largest in market share of the sub-Saharan Africa digital television market with about 22 percent of television households and 29 percent of multichannel subscribers (BTVN, 2018).

With the deregulation of the Nigerian television environment, the DStv became a single supplier of subscription-based television services. The dominance of DStv in the Nigerian digital TV market has been attributed to its wide variety of programmes, especially its exclusive broadcast rights to major sporting events such as the English Premier League (EPL) described as the "Golden Fleece" of the Nigerian PayTV market (Lawrence, 2015). As a result, there have been numerous attempts at different times by other broadcasters to challenge the market leadership position of DStv. For instance, Nigerian-owned digital TV platform, HiTV, challenged the dominance of DStv by acquiring the transmitting rights of the EPL, the Football Association (FA) Cup and the European Champions League for four years but due to financial difficulties, this competitive advantage by the HiTV only lasted a limited time. Apart from the DStv and HiTV, as revealed in Figure 1.0 below, there are other existing digital television broadcasters which include Continental Satellite Limited (Consat), MultiChoice-owned GOtv, StarTimes Television, African Cable Television (ACTV), Metro Digital, Montage Cable Network, MyTV, Trendtv e.t.c. Largely, the Nigerian digital television market is dominated by the participation of the MultiChoice and StarTimes broadcast networks.

Table 2. 1 Ownership structure of the Nigeria digital environment.

Digital TV Providers	**Organization**	**Ownership**	**Satellite Platform**
DSTV	MultiChoice South Africa.	Private	DTT, DTH, Mobile, Online.
Consat	Continental satellite Ltd.	Private	DTH.
GOtv	MultiChoice Africa.	Private	DTH.
HiTV	HITV.	Private	DTH.
StarTimes	NTA/ StarTimes Joint Venture	Public/Private	DTH.
ACTV	African Cable Television	Private	DTH.
Metro Digital		Private	DTH.
Montage		Private	DTH.
MyTV		Private	DTH.
Trendtv		Private	DTH.

2.3 The Historical Analysis of the South Africa Media Environment

In addition to this background of the Nigerian television environment, it is important for the thesis to describe the nature of the South African media environment. As previously noted, the formative years of PayTV and digital television in Nigeria and the rest of the SSA region were primarily shaped by the participation of South African-owned media conglomerates and the decisions made in South Africa. In order to understand these crucial decisions and their influence on the Nigerian digital television environment, the thesis reviews the state of the South African media environment from the pre-Apartheid era to the post-Apartheid era. The analysis details the structure of the Apartheid capitalism which instituted the conglomeration of the few television services, financially supported as an apparatus of the Apartheid regime. Following the withdrawal of economic sanctions imposed on the Apartheid regime, the post-apartheid political transition, coupled with the advancement of neoliberalism, necessitated the expansion of these media conglomerates, such as MultiChoice Africa, beyond the South African television market. Due to the enormous capital portfolio of MultiChoice

Africa, the DStv became the dominant broadcaster in Nigeria and the rest of the sub-Saharan African television market.

The historical context of the South African media environment is not very different from that of most African countries. The discovery of diamonds in 1867 and gold in 1886, prompted the Dutch and British invasion of South Africa and thereafter, white ownership of various gold mines became dominant (Bartlett, 1991). The primary media industry, the print media, was tightly controlled by the industrial mine-owners mainly for the promotion of the Afrikaans language among their descendants in South Africa (Angelopulo & Potgieter, 2013).

Subsequently, a public television service was introduced to South Africa in 1976 by the apartheid regime as a medium of mass mobilization. As conceived from a broad perspective, the analysis of the South African television broadcasting services can be categorized into the two main eras that shaped the South African public sphere. First is the apartheid era before the first democratic election in 1994. During this era, the media institution was viewed as an instrument that differentiated the white audiences from the various indigenous and diverse ethnic groups. In the second, the post-Apartheid regime viewed television as an instrument for "national unification and democratic citizenship" (Barnett, 1999b, p. 649).

2.3.1 The nature of Television in South African Apartheid Era

The Apartheid era in South Africa has been described as a unique form of 'racial capitalism' with the main economic capital and the state political structure controlled by the dominant white Afrikaners (Sparks, 2009, p. 197). The economic dominance of white Afrikaners was extended to the media environment, and a dominant portion of the media institutions were owned by the white Afrikaners. Under this framework, television services were heavily fragmented along racial and ethnic lines with several channels exclusively designated for one of the two racial groups. Some channels engaged the white South African audience in the Afrikaans and the English language, and others were concentrated towards the indigenous South African audience with content and programmes in the nine

African languages recognized by the official language policy of the Apartheid regime (Barnett, 1999b).

The disjointed ownership and fragmentation of television broadcast services along racial lines prompted its adoption as a political instrument during the Apartheid state. The first licensed television operator and national broadcaster, the South Africa Broadcasting Corporation (SABC), widely viewed by the white Afrikaners, was an apparent political instrument of the ruling National Party (NP). The coverage of News and programmes were framed in support of the apartheid regime and staff composition was structured according to the apartheid policies (Sparks, 2009). Also, the finances of the SABC were mostly generated from advertising targeted to the white audience. Later in 1986, a consortium of Newspaper publishers with a predominant white ownership, was awarded operational licence to establish the first commercial and subscription TV broadcast service, M-NET (Angelopulo & Potgieter, 2013). Similar to the operational frameworks of the SABC, the programmes of M-NET targeted the wealthy class, mainly the Afrikaners, who could afford the cost of subscription television. The content of the two television services (M-NET and SABC) were mainly in the Afrikaans and the English languages (Sparks, 2009).

The concentration of television content along audience demand has attracted scholarly interest. Napoli (2001, p. 66) notes that the attention of the audience is the main commodity that is being traded by media organizations and a crucial factor considered by advertising firms when determining which media firms to engage in their campaigns. On the demand side of audience attention, Sutter (2000) argued that the competitive tendencies by broadcast services for audience and resources have resulted in media organizations submitting to consumers' demand. On the supply side, Koschat and Putsis (2000) argued that a large viewership base of media organizations usually increases demand for advertisements. In the case of South African television during the Apartheid regime, the audience was divided along racial and cultural lines that determined which region and for which audience in particular, prospective investors or advertisers were likely to concentrate. As Barnett (1999b, p. 649) further noted, this "differential investment" in the broadcast technologies for radio and television services advanced by policies of the different Apartheid regimes, resulted in a fragmented ownership of the South African broadcast services.

Subsequently, ownership of the subscription-based television service, M-NET, was divided into two companies: MIH Holdings and MultiChoice. MIH Holdings is a subscription management and signal distribution company, while MultiChoice was licensed to create Africa's first multi-channel satellite television, DStv in 1995 (Angelopulo & Potgieter, 2013). The MultiChoice group was listed as a public liability company on the Johannesburg Stock Exchange (Hansen, Cottle, Negrine, Newbold, & Halloran, 1998) and in just two years, it expanded its operations outside of the South Africa by providing satellite television services, first via analogue transmission, and from 1995, digital television services. By 2015, the MultiChoice group reached a total of 5.4 million households in South Africa and had an annual revenue growth of R31.6 billion (Multichoice, 2015). The group credits its success in the South African broadcast environment to the delivery of an "outstanding customer-viewing experience in the financial year by securing the best international and local content and making further technological advances in its product set" (MultiChoice, 2015).

2.3.2 The nature of Television in South African Post-Apartheid Era

The political transition to constitutional democracy in South Africa prompted the beginning of reconciliation between indigenous and white South Africans, and a complete restructuring of the social, political and economic resources (von Holdt, 2013). Before the transition to constitutional democracy, there were attempts by the Apartheid state to reform the organizational and ownership framework of media with the introduction of three black-owned print media organizations (Williams, 2006), but the broadcast environment remained dominated by white ownership. In an address at the general meeting of the Union of Radio and Television Networks in Africa (URTNA), President Nelson Mandela noted;

> "In managing the telecommunications and broadcasting changes which equally affect Africa, we dare not lose sight of the final objective: to empower people to obtain and utilize information relevant to their own lives, and to make them masters of their destiny. On this industry, more than on any other, rests the task of closing the cultural, religious and ethnic

chasms both within and among nations"

Former President Nelson Mandela (1995).

The post-apartheid restructuring prompted a review of the South African broadcast environment and the formation of the Independent Broadcasting Authority (Ribadeneira-Ramirez, Martinez, Gomez-Barquero, & Cardona) (Conradie, 2001). According to the Triple Inquiry Report into the state of broadcasting in South Africa after political transition from the Apartheid regime, the IBA (1995) proposed a review of the "protection and viability of public broadcasting services; cross media control of broadcasting services and local television content and South African music".

Subsequently, after the election of 1994, there was a new wave for democratic inclusion that swept through the South African economic and social landscape and prompted a rethink of the structures of public governance. In this inclusive post-Apartheid era, the media was viewed as a key instrument for "national unification and democratic citizenship" (Barnett, 1999a, p. 649). However, the democratic governance compelled the white South Africans to give up the colonial privilege and accept the post-Apartheid South Africa economic realities (Steyn & Foster, 2008). The post-Apartheid era also witnessed an upsurge in 'capital and portfolio inflow' into the South African economy (Gossel & Biekpe, 2012, p. 926). Media and telecommunications institutions received a continuous inflow of international investments and state-sponsored investment initiative acquired part of the ownership of South African Television companies at an "unprecedented scale" (Teer-Tomaselli, 2004, p. 9).

In an attempt to address the imbalance of economic power between the dominant white-owned businesses establishment and the long neglected indigenous majority (Southall, 2007, p. 67), the Black Economic Empowerment (Beecroft) policy (Ntim & Soobaroyen, 2013; Tangri & Southall, 2008; A. Thomas, 2014) was introduced by the African National Congress (ANC) government. Primarily, the framework of the BEE policy centred on restructuring the nation's wealth by selling stakes in major corporate institutions to indigenous investors at a discounted rate and with a loan scheme provided by the government (Economist, 2013). The BEE was seen as a form of "black capitalism" sponsored by "politically motivated" transactions between 1994 and 1997 but limited the economic interests of the non-indigenous Afrikaners (Southall, 2004, p. 318). In response to this government policy, the MultiChoice Group established the Phuthuma Nathi investments, an initiative for indigenous investors which accounted for about 20% of the shareholder investments in 2007 (Multichoice, 2016). Although the aim of the BEE policy was to encourage indigenous ownership of previous white-held corporations, the primary objectives of encouraging ownership was defeated. There was a decline in black-owned shares in listed companies on the Johannesburg Stock Exchange (Hansen et al., 1998) from 10 percent to less than 3.8 percent by early 2000. The BEE policy was muddled with corruption and served to enrich some privileged indigenous politicians connected to the ruling ANC (Ponte, Roberts, & Van Sittert, 2007).

Furthermore, operational licences were issued to digital television broadcasters in 2007 and the newly created companies, as revealed in Figure 2.0, included digital television companies such as Walking on Water, Super 5 Media, On Digital Media (Angelopulo & Potgieter, 2013). In spite of the entrance of new broadcasters, DStv remained the dominant broadcaster in the South African digital television environment.

Table 2. 2 Ownership structure of the South Africa digital environment as at December 2015.

Digital TV Providers	**Organization**	**Ownership**
SABC(1,2,3,4)	State Broadcaster	Public
OpenView Hd	Platco Digital	Private
Mnet	MultiChoice Africa.	Private
DStv	DStv	Private
Telkom Media		Private
StarSat	StarTimes	Private
e-Sat	On Digital Media	Private
WOWtv		Private

2.3.3 Structures of Governance of the Post-Apartheid Broadcast Environment

The post-Apartheid era also prompted a rethink on the approach to governance of the South African broadcast environment. The South African government restructured the governance of the broadcasting environment with the "transformation" of the state-controlled broadcast regulatory organization, the South African Broadcasting Corporation (SABC) into an independent organization known as the Independent Broadcasting Authority (IBA) (Barnett, 1999b, p. 650). The IBA was governed by legislative provisions of the 1999 Broadcasting Act.

Subsequently, the Independent Broadcast Authority (Ribadeneira-Ramirez et al.) and the regulatory institution of the telecommunication environment, the South African Telecommunications Authority (SATRA) were merged to form an independent organization known as the Independent Communication Authority of South Africa (ICASA), with legislative provision of the Electronic Communications Act (ECA) of 2005 (Z-ComsTeam, 2014). The ECA instituted a significant change to the telecommunications governance and policy, which made provisions for a new licensing regime. However, there was very little change to the regulation of the broadcast environment as the framework of the IBA were repeated in the ECA Act. There were unresolved issues such as the need to balance the ownership structure and control of broadcast services among the "historically disadvantaged groups" (pp. 66) and the barrier to the development of "new black companies" (Libby Lloyd, Jane Duncan, Jeanette Minnie, & Bussiek, 2000). According to Lloyd et al (2000), these unresolved issues prompted a review of the broadcast and telecommunication terrain, and recommendations were forwarded to the Minister of Communications as mandated by the provisions of the ECA Act but they were neither implemented nor forwarded to the parliament for discussion or possible legislation.

Moreover, the review of the governance of the South African broadcast and telecommunication environment created a guarantee of independence and autonomy. According to the legislative provisions of the ICASA Acts (Parliament, 2000), the ICASA council is constituted by a democratic process that involves participation from members of the public, stakeholders and the parliament. The public is given the opportunity to submit nominees of the ICASA council to parliament with the requirements that they include people with relevant knowledge and skill in the field of broadcasting and telecommunications, and no political affiliations (Parliament, 2000). The parliament then forward a list of nominees to the Minister of Communication (MoC) to make recommendation to the parliament. If the parliament is not satisfied with the recommendation, it then directs the MoC to make another recommendation. Afterwards, the Parliament makes an approval and constitutes the ICASA council base on the recommendation of the MoC. The ICASA council is only accountable to the parliament, as revealed in Figure 3.0 below and also funded on a budget only approved by the parliament.

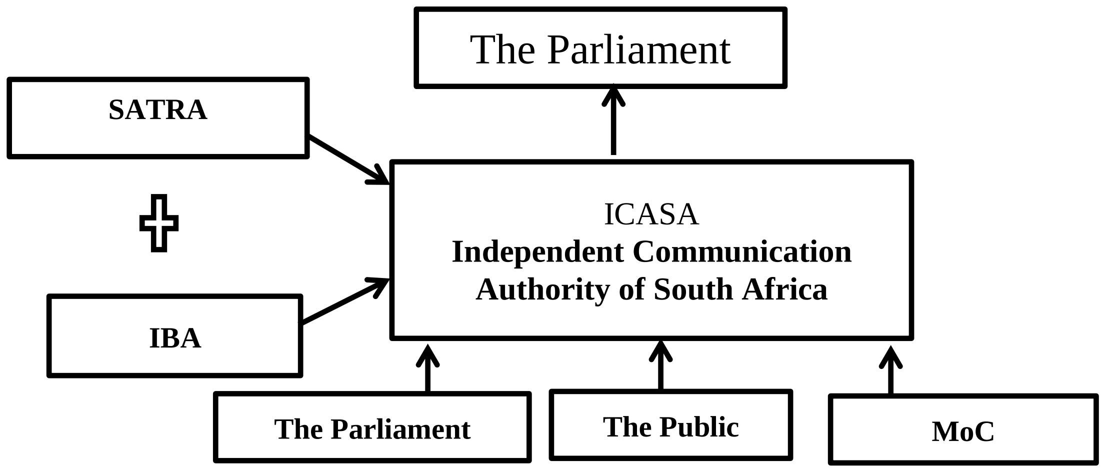

Figure 2. 1 Structure of Broadcast governance in South Africa.

However, this approach to independent governance of the South African broadcast environment does not appear to have been completely welcomed by the central government during the formative stage (Libby Lloyd et al., 2000). In 2006, then South African President, Thabo Mbeki refused to sign the ICASA Amendment Bill into law because he disagreed with some terms in the amendment that concerned the appointment process of the ICASA Council, the introduction of a performance management and removal mechanism for councilors. Likewise, President Kgalema Motlanthe also refused to sign the Broadcasting Amendment Bill in 2008 because he objected to the process involving the removal of the board of the SABC. As later discussed in the analysis of the DSO process in New Zealand and Nigeria, these features of the South African media environment such as the independence of regulator and market competition guarantee the investment of private capital necessary for the transition process to digital television.

2.4 Historical Analysis of the New Zealand Broadcast Environment

Broadcast television services in New Zealand began in June, 1960. The first attempt to television broadcasting commenced with experimental transmissions by the privately-owned Bell Radio-Television Corporation Limited until the New Zealand Broadcasting Service (NZBS) was created to encompass the established state-owned radio broadcasters, and the first state-owned broadcast television service later that year. Similar to the historical context of television broadcast in South Africa and Nigeria, the formative years of the New Zealand broadcast environment was strictly controlled by the state (Dunleavy, 2008). The introduction of television services in New Zealand began with separate regional channels in Auckland in 1960, Christchurch and Wellington in 1961, and Dunedin in 1962. This structure remained until news was networked in 1969 and the rest of broadcasting some years later. The Adam report of 1973 reviewed televisions services, and advised the state to 'restructure' the New Zealand television environment and introduce a second channel to provide audiences with more variety in local content (Dunleavy, 2008).

Television in this early era was based on a mixed model of broadcasting that was characterized by modified version of the British PSB model which viewed the television medium as one that must be made to function on the ideals of citizenship and democratic norms. It was a 'powerful' medium that shaped public opinion and the direction of public engagement between the state and the New Zealand populace (Teer-Tomaselli, 2015). In New Zealand, this important medium was partly funded by Public Broadcasting fees and advertisement revenues.

The economic recession between the late 1970s and early 1980s were crucial moments to rethink the structure of New Zealand television. A reduction in the number of public broadcasting licenses from about 42 percent in 1974 to about 16 percent in 1985 resulted in various proposals for alternative means of generating new streams of income, which also reflected the market-focus policy of the Labour government (Dunleavy, 2008). In an attempt to meet the huge shortfall in funding of the state-owned broadcast services, advertising hours on the two public television services were increased (Dunleavy, 2008).

More fundamentally, the Broadcasting Acts of 1989 restructured of Television New Zealand (TVNZ) as a state-owned Enterprise (SOE), and removed its direct government funding, introducing instead an indirect funding framework through the Broadcasting Commission, New Zealand on Air (NZoA). The Radiocommunication Act of 1989 introduced spectrum auctions, instead of requiring interested broadcasters to make a case to the Broadcasting Tribunal. An amendment of the Broadcasting Act in 1991 withdrew the restriction on foreign ownership and cross-media ownership of television broadcast services in New Zealand (Dunleavy, 2008). As a result of these changes, new and foreign-owned television broadcast services entered the New Zealand market, such as the Sky Television Network. Sky Television commenced operations initially as a locally-owned company but was soon transformed to a foreign-owned after a majority ownership by foreign capital. In addition, Canadian broadcast company, CanWest acquired a controlling stake of the only existing private-owned TV3 network, which launched in later 1989 (Comrie & Fountaine, 2005).

In order to consolidate the market-oriented approach to broadcasting in New Zealand, the National-led government (1990-1999) attempted a complete privatization of TVNZ in 1998. As part of its strategic framework, the Nation-led government requested Ord Minnett, an Australian management company, to review all asset and liabilities including the crown's interest in TVNZ and prepare it for possible sale to interested foreign companies (Ryall, 1998). However, this attempt to privatize the state-owned television service was averted by the incoming Labour Government (1999-2008). Among other factors, the market-oriented approach of the previous National Government failed to consider the need to fund and protect cultural content which are usually outside the scope of a commercialized mediaspace (Dunleavy, 2008, p. 802). The Public Broadcasting License Fee paid to TVNZ prior to 1989, and then to NZoA guaranteed funding for domestic production and cultural content. However NZoA's contestable funding system was accompanied by market-oriented objectives. In response, the Labour-led government restructured TVNZ with the introduction of the TVNZ Charter in July 2003. The Charter was an attempt to return the network to its previous role as a public broadcaster. The blueprint of the charter was summarised by the then TVNZ Chief Executive Officer, Ian Fraser (Sowry, n.d) as

> "…under the Charter we will be driven by content considerations, where creative and cultural objectives are as highly valued as commercial ones. This does not mean 'worthy but dull'. Nor does it mean we are becoming elitist. We are constructing a home place for more New Zealanders, not an ivory tower for a few of them"…Ian Fraser, CEO TVNZ.

The introduction of the Charter guaranteed funding to TVNZ and also reduced its focus on meeting commercial objectives with the expectation of increased public service programe production. At the same time, there was a structural adjustment of the TVNZ which separated its transmission role as a state-owned enterprise known as the Transmission Holding Limited (later known as Kordia Group Limited). However, the attempt by the Labour-led government to reduce the market-oriented framework of the TVNZ was undermined by the continuous expectation of dividends by the Treasury (Thompson, 2011). According to P. A. Thompson (2011), TVNZ was allocated about NZD95 million from the Ministry of Culture and Heritage (MCH) but paid a dividend of NZD142 million to Treasury between 2003 and 2008.

Subsequently, in a renewed attempt to establish the market-oriented approach of broadcasting in New Zealand, the National-led government (2008-2017) introduced a series of measures based on their ideological approach to governance and management of the New Zealand economy. Consequently, the TVNZ Charter was abolished in 2009 and replaced with the Television New Zealand (TVNZ) Amendment Bill (Burr, 2011). In a briefing on the state of the New Zealand economy to the incoming Minister of Finance, Hon. Bill English, the secretary of treasury John Whitehead noted as follows;

> "Economic growth has already weakened significantly around the world accompanied by substantial losses in wealth. These international developments are hitting New Zealand at a time

when the domestic economy has slowed and an extended period of fiscal deficits is projected”

John Whitehead (2008).

Based on the ideological approach to governance of the broadcast environment by the National-led government, the TVNZ was repositioned from its dual mandate as a public broadcaster and enterprise as required by the Charter back to a commercial entity. On the ground of this ideological opposition, the practice of funding the TVNZ directly as stipulated in the Charter were withdrawn and replaced with a new NZD80 million ‘Platinum’ fund for high quality content, administered by NZoA, and accessible by both state-owned media and commercial broadcasters (P. A. Thompson, 2011).

In defense of the new policy framework, the National-led government argued that the TVNZ charter, which had been in place for about six years, made an insignificant impact on the quality of public broadcasting. Then Minister of Broadcasting, Jonathan Coleman noted:

> “we have always considered that the existing charter saddles TVNZ with a dual mandate that's been unworkable. It expected TVNZ to give full effect to the charter while maintaining its commercial performance. Experience has shown that highly prescriptive charters are incompatible with a commercial model of broadcasting.”

Jonathan Coleman (2010).

However, this policy initiative of the National-led government was not welcomed by the opposition Labour Party which introduced the TVNZ charter in the first place. According to the then spokesperson of Labour (Broadcasting), the decision to abolish the TVNZ Charter was a “huge shame for New Zealand” (Burr, 2011). Thompson (2009) argued that the funding framework of the TVNZ, which received funding from the Ministry of Culture and Heritage while it is also expected to deliver a return on investment to the Crown, is the main reason why the TVNZ was limited in meeting the objectives as illustrated in the Charter.

Shortly after the Charter was abolished, a discussion paper (MCH, 2009) on the DSO process was published by the Ministry of Culture and Heritage and the Ministry of Economic Development in August 2009. Inclusive of other objectives, the discussion paper highlighted a commercial priority for the DSO process. The technological shift accompanying the DSO process is a capital-intensive process that requires huge capital investment but is also accompanied by commercial motives both on the side of the government and private investors. As discussed in Chapter Seven of this thesis, the government benefitted in the DSO process through the auction of the released spectrum, known as the digital dividend (Cambini & Garelli, 2011; Evens, Verdegem, & De Marez, 2010; Forge, Blackman, & Bohlin, 2008) because the mobile telephony market is more commercially lucrative than broadcast television. Likewise, private investments benefitted as the auctioned frequencies become a competitive tool for lucrative economic activities such as the mobile telephony, mobile broadband and satellite navigations.

Nevertheless, the era of digital television made advancements to the New Zealand broadcast market largely defined by the participation of privately-owned subscription Television, Sky and the coalition of Free-to-Air broadcasters on the digital television platform known as the Freeview network. Similar to the dominance of the DStv television network in the digital television market of the sub-Saharan Africa, the first digital broadcaster in New Zealand was the Sky television network. From the historical description of the South African and New Zealand television environment, neoliberalism, as addressed in chapter three of the thesis, facilitated financial investment in addition to the government investment needed to complete the DSO process within the scheduled time frame.

2.4.1 Governance of the New Zealand Television Environment

The introduction of television necessitated the reduction of political control over broadcasting in New Zealand. This was evident in the series of discussions and reports on how best to establish and govern television services before 1960. In the experimental days of broadcast television in New Zealand, the Minister of Broadcasting, Raymond Boord was directly in charge of broadcasting (MCH, 2014). By February 1959 and due to the growing attention that the experimental television network were receiving from the public, the Minister of Broadcasting had to stop the transmission of the experimental television signal. About six months later, the department of commerce and industry published a report on the *Economics of Television* which proposed the establishment of television broadcast services in the aforementioned regional centres (MCH, 2014). The report also proposed that these TV broadcast services be kept under the firm control of the state.

Presently, broadcasting governance is part of the remit of the Ministry of Culture and Heritage (MCH). MCH is the Crown monitoring unit that oversees the commercial and ownership roles of four major crown entities which include the public broadcast funding agency, New Zealand on Air, the Broadcasting Standards Authority (BSA), Radio New Zealand Ltd and Television New Zealand Ltd (TVNZ). In addition, the Ministry of Business, Innovation and Employment (MBIE) provides policy advice on issues relating to the management of broadcast and communication spectrum. The state-owned TVNZ exists as the national broadcaster, but is largely self-funded and operates as a commercial entity. Similarly to the Nigerian Broadcasting Commission, the board of directors of the TVNZ is appointed by the Minister of Broadcasting and comprise six members, who usually include retired journalists, former executives of media organizations and investment bankers.

Although, the regulatory framework that established TVNZ guaranteed independence and editorial autonomy with less interference from the state, the board of directors has been reported (on several occasion and under different governments) to interfere into its operations. During the Labour-led government of 1999-2008, which adopted a selective public service broadcasting model, the New Zealand Herald (Trevett, 2005) reported under the headline, *Fraser quits TVNZ over 'meddling'*, that Ian Fraser resigned his position as Chief Executive Officer (CEO) of TVNZ following allegations of an "unacceptable interference by the politically appointed board" after he repeatedly warned the board over interfering in operational matters outside the jurisdiction of the board. Also in 2001, TVNZ reported on political interference by then Chairman of TVNZ governing board, Ross Armstrong into management matters that involved the hiring process of TVNZ senior executives of the News department following the resignation of the Chief of News and Current Affairs, Paul Cutler (TVNZ, 2001). Furthermore, the New Zealand Herald also reported in 2009 on political bias in programming content, *"Focus on the Economy"* which has been aired more than 130 times on TVNZ channels TVNZ One, TV2, TVNZ 6 & TVNZ 7 and amounted to about a million dollars' worth of free publicity to the

National-led government (NZPA, 2009). In a letter to parliament by the opposition Labour MPs, David Cunliffe and Brendon Burns indicated that the programme appeared to repeat lines from the political speeches of the National-led government Finance Minister, Hon. Bill English (NZPA, 2009). Likewise, the Otago Daily Times also reported on several attempts made by some government ministers to influence operational decisions involving the broadcast rights of the Rugby world cup by the Maori Television (Cunliffe, 2009).

In an independent, commercial broadcast environment, Hanretty (2014) argues that there is a higher degree of influence by the state but crucial decisions are still concentrated within the domains of influential private broadcasters. Similarly, Hollifleld (2003) noted that the present level of public ownership of media outlets, from a broad overview, has weakened the role of broadcast institutions as watchdog and in consequence, increasing advertisers-driven content resulted to an increasing marginalized public audience. Similarly, Hope and Myllylahti (2013, p. 204) argued that "financialization" of media outlets in New Zealand, both public and private owned, has been detrimental to the diversity of media content and discouraged media content that debate critical matters of national significance.

In terms of the funding framework of state-owned television services, the New Zealand government approach is arguably unique in the western world. New Zealand on Air is an independent and autonomous Crown entity responsible for funding content across platforms such as radio, television and the new media. Similar to TVNZ, the board of directors of the New Zealand on Air is also appointed by the Minister of Broadcasting. New Zealand on Air was initially funded from the proceeds of annual public broadcast licence fees payable by each household in New Zealand but this was abolished in 1999. Even though the content funded by New Zealand on Air is aired on free-to-air public television channels, funded programming is still driven by commercial imperatives. Although independent, the governing board of NZOA has also been criticized for interference. Scoop Independent News (Frewen, 2012) reported that a member of the NZOA governing board, Steven McElrea, who is also the electorate chairman of Prime Minister John Key, attempted to prevent the broadcast a documentary on *Child*

Poverty aired on TVNZ7 on the ground that the documentary was "discussing topics likely to be an election issue". Although this attempt was widely criticized across the New Zealand Press but it appears that this attempt to block public-funded content due to political affiliation is not a frequent practice by the New Zealand on Air.

The New Zealand broadcast spectrum is managed by the Radio Spectrum Management (RSM) which is one of the business unit of the Ministry of Business, Innovation and Enterprise (MBIE). RSM is also driven by commercial imperatives aimed at promoting a business-oriented and competitive environment among all participants in the New Zealand broadcast and telecommunication spectrum. The process of securing a broadcast licence for public transmission including television and radio services appears to be a very straightforward process because an interested broadcaster is simply expected to bid for frequency with the Radio Spectrum Management (RSM) rather than make a submission to a tribunal. However, unlike Television New Zealand and New Zealand on Air, the RSM does not enjoy autonomy and managerial independence but it is more concerned with issues involving frequency interference management, efficiency and a campaign for a more competitive environment in a commercially-viable transmission spectrum.

2.5 The Global Governance of Distributed Television Services

Previous studies on the process of switching over to digital television across various broadcast landscapes (e.g Beutler, 2012; Forge et al., 2008; Garcia, Moore, & World, 2012; Modlic, Sisul, & Cvitkovic; Mutula, 2008) have demonstrated that the transition process to digital television can be articulated as an efficient use of radio spectrum and also resonates with market imperatives. For instance, both the demand for audio-visual content on multiple digital television platforms and the auction of the released frequencies from the switch-off of analogue TV services have been largely driven by market imperatives. Apart from this efficient and market-oriented perspective on the DSO process, there is an existing interplay between the divergent priorities of the state and private-owned media corporations, which are both battling to control the emerging digital television market. On such interplay of control between the state and private interests, Puppis (2008) notes that the exclusive regulation of the media environment by the state developed into a more inclusive regulation in the form of co-regulation with international structures of governance. In a successive pattern of this control of the media environment, Puppis (2008) highlighted three distinctive forms of global media governance by international structures as will be developed below.

Initially, evolving communication technologies required economic and technical governance of global telecommunication services, which resulted in the formation of the International Telecommunication Union (ITU) in 1932. Before becoming a specialized agency of the United Nations, the ITU was originally founded as the International Telegraph Union and continues to serve as a proxy regulatory organization for international telecommunication connections on behalf of the United States and the United Nations, for the regulation of international communication (Puppis, 2008; Schuster, 2014). At its inception, the direction of ITU governance was determined by a voting decision of the cross-country members but the participation of most developing and underdeveloped countries, which constitute the majority of the ITU membership, has been minimal. The participation of most developed countries in ITU prioritizes the market-oriented approach to the governance of the global telecommunication market which guarantees the expansion and success of their global capital investments. However, developing and underdeveloped countries are interested in the urgent need to bridge the existing technological deficit and the global inequality of technological development.

As a result of the limited participation in ITU decision-making by developing and underdeveloped countries, as Puppis (2008) frames it, there is an unchallenged dominance in the ITU's agenda setting by developed countries. This status quo in the agenda setting is also reflected in the collective decision of the ITU to embark on the global transition to digital television. Although this was not challenged by any consensus of the ITU membership, the poor implementation of the transition process within the scheduled deadline clearly suggests that the global decision to embark on the DSO process was not an important priority for most developing countries in Africa. On such diverging interests between developed countries and developing or underdeveloped countries, McCormick (2007) argues that a shift in the focus or priorities of the ITU into a 'corporate-orientated' organization has increased the involvement of private interests, usually categorized as sector members. Consequently, these conflicting interests and concerns among member nations on issues relating to improving operating standards, regulations and development are often politicized and the immediate interests of the developed countries are often considered (McCormick, 2007; Schuster, 2014).

The second form of global media governance identified by Puppis (2008) is the post-second world war governance by the United Nation Educational, Scientific and Cultural Organization (UNESCO). This is primarily concerned with promoting freedom of expression and cultural diversity across various media and cultural platforms. The UNESCO convention on the Protection and Promotion of the Diversity of Cultural Expressions remains the crucial document that legally binds all member nations of the United Nations and guarantees that "artists, cultural professionals, practitioners and citizens worldwide can create, produce, disseminate and enjoy a broad range of cultural goods, services and activities, including their own" (UNESCO, 2016). In the context of the commodification of cultural values as media content, McCormick (2007, p. 79) argued that the degree of attention assigned to private investments by some global institutions of governance, such as the development sector of the ITU (ITU-D), in developing countries with weak economic and social circumstances is a misplacement of the governance priorities into a mission that is further "enhancing corporate opportunities for capital accumulation".

The third form of global media governance evolved with the emergence of the General Agreement on Trade in Services (GATS) (Puppis, 2008), which established the World Trade Organization (WTO). The WTO replaced the existing agreement on the governance of global trade known as the General Agreement on Tariffs and Trade (Chu, 2014). The GATS is a treaty-like trade arrangement that came into effect in 1995 and consists of several international trade rules signed by the one hundred and forty economic nations who participated in the 'Uruguay Round' of trade talks. Although, the GATS promised to promote the development of international trade through a deregulation of the global mediaspace, this promise has been differently conceived across the different global media markets.

This era of global media governance by the WTO was necessary as media content and information services transformed into tradable commodities promoted by the neoliberal free market system. Some western democracies such as the United States responded to the GATS agreement by pushing for a more liberal media environment especially in the trade of audio-visual services and others viewed these trade agreements in contradiction to their national policies that guaranteed a non-commercialized media environment (Puppis, 2008). Despite the challenges and opportunities offered by the WTO regulatory mechanism of the global market, participation in global trade by most African countries was not a completely voluntary choice. The interdependent relationship between developing countries with borrowing capacities and institutional creditors, such as the IMF and World Bank, influenced the direction of the global media market. On this, as revealed in chapter five of the thesis, the World Bank and the IMF pressured developing countries to accept the "stringent regime" of the WTO through various policy mechanisms (Fasan, 2003, p. 146). Likewise, the dispute settlement system of the WTO is extremely dependent on the fiscal instruments and legal documentation of the IMF relating to the financial transactions and trade activities between developing and western countries (Mosoti, 2006). Meanwhile, developing countries also rely heavily on financial aid and assistance in the form of loans from these global financial institutions. The details of the interdependent relationship between these international institutions and the global digital television market will be discussed in chapter five of this thesis.

2.6 Conclusion

The analysis of the Nigerian broadcast environment identifies the shift from exclusive control and ownership of the broadcast environment by the state to the inclusive participation that was necessitated by the Structural Adjustment Policies. This shift also prompted the deregulation of the

Nigerian media environment, introduced the participation of private broadcasters and enabled the PayTV market as apparent in the entrance of South African-owned media conglomerate, MultiChoice Africa, which dominated the digital television market of the SSA region prior to the commencement of the DSO process.

The analysis of the South African media environment presents the disjointed structures of ownership and the role of television services as a political apparatus of the state during the era of Apartheid. The transition to constitutional democracy in 1994 necessitated the first attempt to restructure the ownership framework and the role of the state in the governance of the South African media environment. The governance of the South African broadcast and telecommunication environment guarantees an independent and autonomous regulatory institution. Likewise, in the New Zealand media environment, the analysis presents the various attempts by the political institutions to adopt a market-oriented approach to the governance and participation of the state broadcaster, TVNZ. The interplay of interests by the various political institutions is evident in the funding framework of TVNZ based on the varying ideology of the political institutions.

Based on this analysis of the structure of ownership and various mechanism of control by the states, this study argues that this independence of regulators in governance guaranteed the success of the market-oriented model of broadcasting in South African and New Zealand broadcast environments. Also, this analysis identifies that this market-oriented framework has attracted the necessary capital investment of both state and of private capital in the transition process to digital television. The assessment of the governance of the global trade of information services suggests that the attempt by the WTO, along with other institutional structures of the neoliberal free market system such as the Bretton Woods Institutions, to develop a global liberal market, are the precipitating influence behind the global Digital Switchover (DSO) process initiated by the International Telecommunications Union (ITU) in 2006.

Finally, on the backdrop of the market approach to broadcasting, this analysis presents the distinctive similarities between the digital television markets in New Zealand, Nigeria and South Africa.

First, the New Zealand and South African broadcast environments were characterized by the ability of new organizations to enter the broadcast markets, the presence of market competition and limited interference of the state in broadcasting regulation. In the case of the Nigerian television market, the NBC, as an institutional mechanism of the state, exclusively determines the direction of the television market. An independent market is a crucial factor considered by any potential investor before making financial investments into the digital television market of any country. The digital market requires lot of capital investment in the acquisition of digital equipment and more importantly, the broadcast rights for key content that drives the market.

Chapter Three

THEORETICAL FRAMEWORK

(Literature Review)

The previous chapter sets out the background of the study. This chapter presents a review of the existing literature based on a broad conception of the main themes of the thesis. In the context of the transition process to digital television broadcasting, it is important to consider how the neoliberal free market system influences the direction of policy and approach to governance of the New Zealand and the sub-Saharan African (SSA) region digital television environments. The approach to policy and governance of the media environment underlies the priorities of nation states and also shapes the implementation of the transition to digital television services.

Drawing on a critique of the neoliberal free market orthodoxy, as a dominant ideology of contemporary globalization, this chapter presents the connection between the television governance and policies of nation states and the international structures of the WTO and the Bretton Woods Institutions. The chapter analyses the neoliberal orthodoxy, both with its positive and negative implications, and its relevance to the New Zealand and Nigerian digital television markets. Briefly, it also explores the Neo-Marxist analysis of economic hegemony.

Against this backdrop, the chapter analyses the neoliberal free market orthodoxy in these two digital television markets through two main perspectives. The first is the role of the World Trade Organization (WTO) in the promotion of a neoliberal free market system and its effect on the dynamics of global trade. With several bilateral and multilateral trade negotiations promoted on its trading platform, this study views the WTO as an institutional apparatus of the free market agenda. Particularly, the analysis investigates the effect of global trade dynamics on the global digital television market. The second is the role of the Bretton Woods institutions, the IMF and the World Bank, in guaranteeing the expansion and dominance of giant media corporations in the PayTV market of the SSA region. This chapter argues that the free market instigated by the policy-centred lending framework of these international institutions has shaped a SSA digital television market that is largely dominated by a few established foreign-owned media corporations.

The chapter begins with a discussion of contemporary globalization and its effect on global mediaspace, and reviews the political economy of the transition to digital television. Subsequently, the chapter presents a critique of the neoliberal free market system through a Neo-Marxist analysis of the capitalist state. Finally, the chapter presents the role of the aforementioned international organizations and the path to a neoliberal free market system in the New Zealand and South African states. The critique of the Neoliberal free market in sub-Saharan Africa is analyzed in the context of the South African market economy. From a historic context, the digital television market of the SSA region has been primarily shaped by the monopoly of the South African-owned media conglomerate, MultiChoice Africa. However, the recent expansion of the Chinese-owned media conglomerate, Star Communication of China, has created a shift in the market competition of the SSA region.

3.1 Neoliberalism as an Ideology of Globalization

Neoliberalism is a dominant ideology that promotes pro-market policies in the global market economy and shapes the actions of key international institutions such as the World Trade Organization (WTO), International Monetary Fund (IMF) and the World Bank (Saad-Filho & Johnston, 2005). In the article, *Neoliberalism as Creative Destruction,* David Harvey (2007, p. 22) describes the ideology of Neoliberalism as a “hegemonic discourse with pervasive effects on ways of thought and political-economic practices to the point where it is now part of the common-sense way we interpret, live in, and understand the world”. Neoliberalism values a global market without trade blockades or protectionist market policies in the bilateral and multilateral trade relationships between countries. Among various institutional frameworks and strategies for promoting neoliberal ideology on a global scale, the policy-centred lending framework of the Bretton Woods institutions (IMF and the Work Bank) and the rule-based system of the WTO incorporate the neoliberal free market orthodoxy as a global set of rules. As Harvey (2007, p. 23) further illustrates, all states that are signatories to the WTO and IMF “agree to abide by these rules or face severe penalties”.

Herman and McChesney (1997, pp. 136-156) notes the pervasive dominance of the global mediaspace by American corporate media establishments, which are mostly financed by advertising revenues and the incessant necessity to yield a return on capital investments. Likewise, Panitch, Gindin, and Aquanno (2015, p. 126) have noted that the expansion of corporations and financial institutions from the American capitalist state constitute the basis of "global capitalism”. The frontiers of these capitalist establishments have been integrated into the global market economy through various strategies, including multilateral trade agreements (Emanuel Sebag de, Farias, & Vieira, 2015; Fairbrother, 2014; Grocott & Grady, 2014; Mraovi, 2011; Raffer, 2011). On this note, Paul Lee (2000, p. 193) argues that the United States (US) has strategically imposed a single global market economy on the global market through various “deregulatory” mechanisms that are directed to break down protectionist policies acting as blockades to the flow of capital investment and the extension of its multinational corporations.

In the mediaspace, the investments of major global financial institutions and the continuous expansion of some dominant media conglomerates have shaped the direction of the global media market and also prompted a market-oriented approach to the policies and governance following the deregulation of the global mediascape. In line with this viewpoint, Penner (2011, p. 187) noted that the push for deregulatory market policies resulted in a metamorphosis of the global market from competition heavily concentrated in multinational (media) corporations and financial institutions, to a form of “monopoly capitalism” which comprises a small number of dominant institutions arising from mergers and acquisitions. However, the nature of this conglomeration of the media environment is changing with technological advancements.

Similarly, globalization is important in the analysis of the global mediaspace. The role of media and communication, since the inception of the study of globalization, has become a focus of political, social, cultural and economic analysis. Pro-Globalization theorists (For example, See Edoho, 2013; Linstone & Phillips, 2013; Mathew, 2014; Qureshi, 2011; Raikhan, Moldakhmet, Ryskeldy, & Alua, 2014; Scholte, 2008) have argued for the importance of an integrated world interconnected by communication technologies and the ongoing liberalization of markets. Rantanen (2005, pp. 8-11) describes globalization as a “process in which worldwide economic, political, cultural and social relations have become increasingly mediated across time and space”. This emphasizes the role of media and communication in globalisation and the struggle for the control of the mediaspace between nation states and global capital.

The increasing integration and interconnectedness of the global mediaspace has been shaped by global trade, expansion of capitalism, technological advancements and continuous reforms in international regulatory frameworks and other elements of globalization. Furthermore, the promotion and intensification of the neoliberal free market on a global scale integrates with the central agenda of globalization, which according to Kotz (2002, p. 70), requires continuous “cross-border economic interaction and resource flow between national economies and between nation-states”. This thesis focuses on the economic dimension of globalization and its role in the digital television environment. As a result of this integration and interconnection of the global mediaspace, the global television market is interdependent on western media capital (Hope, 2006; Myllylahti & Hope, 2011; Schiwy, 2009; Tienari, Vaara, & Björkman, 2003).

International institutions of trade and capital, primarily the WTO and the Bretton Woods Institutions ensure the flow of global capital into developing countries. This is evident in the requirement to transform media policies and governance, at national level, to align with the global media system (Bielby & Harrington, 2008; Chalaby, 2016; Elasmar, 2014; Fenton, 2011; Pierre, 2015). The IMF and the World Bank are fiscal instruments that advance the neoliberal free market system on the global market economy (Friedrichs & Friedrichs, 2002; M. Miller, 1995; Skidelsky, 2005; Stiglitz, 2004). The interdependent relationship between the WTO and the Bretton Woods institutions is evident in the dispute settlement framework of the WTO, which depends on the processes and legal documentation of the IMF relating to trade activities between developing countries and western countries (Mosoti, 2006). In the case of the SSA region, the push for open market policies was prompted by financial aid and credit facility programmes of the Bretton Woods Institutions. The lending criteria of loans and financial aid include stringent market policies that require market deregulation to reduce the involvement of states and the withdrawal of trade restrictions (Bordo, 2014; Chornyy, 2011; James, 2012). The effect of this in the media market of the SSA region is discussed in chapter five of this thesis.

As a result of this economic liberalization, some dominant media conglomerates have expanded their influence on the media market of the SSA region. Attempts by domestic competitors to challenge their dominance are counteracted by the Structural Adjustment Policies (SAP) of the Bretton Woods Institutions. The Structural Adjustment Policies were an immediate response by the Bretton Woods Institutions to stabilize the market economies of developing countries in financial distress following the economic crisis of the 1970s. They provided financial support on the condition that neoliberal economic policies were adopted. The long term objective was to restructure and position the distressed market economies for long-term economic stability and limited involvement of the government (Adedeji, 1999; Fonjong, 2014; Hope Sr & Kayira, 1997; Skosireva & Holaday, 2010). These policies set the direction of regulation and governance of the financial markets in most developing economies.

The implications of this neoliberal orthodoxy on the global media landscape have also been widely critiqued. Herman and McChesney (1997, p. 136) have argued that the continuous intensification of the global mediaspace with market imperatives results in an uninformed public sphere, as commercially-focused media organizations are less likely to invest in news and political debates that appear less attractive to sponsors or advertisers. Similarly, Castells (2010) stressed that the outstretched dominance of developed economies and the continuous expansion of their media conglomerates over developing and less-developed economies displaces domestic competitors from the local market. Equally, viewed from the lens of cultural imperialism, Balnaves, Donald, and Shoesmith (2009, pp. 296-303) have noted that with the rising dominance of foreign capital institutions, which are part of a complex and deep-rooted system of the media market, "dominant, powerful, cultures are starting to erode or destroy weaker, indigenous culture or languages around the world". Ampuja (2012, p. 282) has argued for the need to focus critical analysis on the "material relations of power" with respect to the upswing of "neoliberalism and the intensification of capitalism which overlaps with the emergence of globalization theory". Hafez and Skinner (2007, p. 165) argue there is a need to shift the direction of scholarly debates on globalization of the mediaspace from the "fixated" pattern, that views the effect of a few dominant global players, to theories that are focused on a wide range of perspectives of globalization.

3.2 The Political Economy of the Transition to Digital Television

Few studies take a macroeconomic approach to the shifting dynamics of the digital television environment. Nonetheless, a critical political economy approach offers insights into the interplay of forces shaping the global transition process to digital television. This may take different forms (Golding & Murdock, 1997; Klaehn, 2010; Mansell, 2004; Meehan & Wasko, 2013; D. A. Schwartz, 2014; Wasko, 2014; Wittel, 2012). Some approaches emphasize "materiality and technological conditions" (Wittel, 2012, p. 312), "overall social and economic dynamics" (Mansell, 2004, p. 98) or "the evolution of media as commodities that are produced and distributed by profit-seeking organizations in capitalist industries" (Wasko, 2014, p. 261).

The political economy approach developed here is grounded in Neo-Marxist analysis for various reasons. It addresses the first research question of this thesis, which asks 'How has the relationship between nation states and international institutions (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the approach to policy and governance of the digital television market in New Zealand and Nigeria? In answering this, a Neo-Marxist analysis identifies the "complex forces" underlying the political economy of the digital television environment (Horrocks, 2004, p. 56), including the direction of governance and policies of the digital television market. Thompson (2011) argues a Marxist framework provides an analysis of the modern realisms of the political economy and the institutional influence that has dominated the neoliberal logic of the global media market. Wasko (2014, p. 263) notes that classical political economy develops as capitalism expands and as a result, the "ownership patterns and the dynamics of corporate control" of media institutions become a central issue in understanding the role of media in the society.

Answering research question two, 'How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand and Nigeria?' from the traditional Marxist Framework, depends on a few criteria of analysis of the neoliberal free market system. These include the nature of the domestic media markets, regulatory policies of the television environment and the individual priorities of participating states. For instance, considering the political economy of the South African digital television environment, the objectives of the domestic regulatory policies conceived in the interest of the public have been threatened by the emerging market approach to regulations (J. Duncan, 2017). Similarly, several studies on the political economy of the New Zealand television environment (Havens, 2002; Horrocks, 2004; P. A. Thompson, 2011; Wood, 2005) suggest that the neoliberal policies and approach to governance that drive the digital television environment undermine the public interest approach.

The following section presents a critical Marxist analysis of the capitalist state and its entangled relationship between the political and capital institutions. On the basis of this Marxist conception on the rise of capitalism, this chapter discusses the path to the neoliberal orthodoxy in the market economies of New Zealand and SSA region.

3.3 The Marxist Analysis of the Capitalist State

Primarily, the Marxist argument attempts to describe the entangled relationship between a series of events conceived from the lens of "historical materialism" (Wright, 2005, p. 4). It describes the multifaceted sovereign role of the state, along with its apparatus of power, and the social conditions that institute an economic system based on the continuous accumulation of wealth. From the lens of this

Marxist framework, Jessop (1990, p. 25) notes that this economic system comprises: capitalism as a mode of production; the central role of the class struggle in the process of capital accumulation; and an independent and autonomous relationship between the political and economic apparatus. Marxism also argues that institutions of the state exist to advance capital accumulation by the owners of productive assets.

Marxist analysis builds on the instrumentalist perspective (Barrow 1993, p. 12). The instrumentalist perspective analyses the symbiotic relationship between the "modern capitalists", earlier described as the owners of productive assets, and the structures of power that primarily exist to promote the interest of capital accumulation (Barrow, 1993, p. 12). Through various means that include lobbying efforts, modern capitalists influence the direction of public policies to their favour, which are subsequently enacted by the state institutions. Using this power structure analysis of the capitalist state, Barrow (1993, pp. 13-50) explored the institutionalized mechanism of control over significant resources through a network of corporations and financial institutions, and the overlapping effect of such control on the institutions of the state.

Analysis of this power structure analysis makes two central claims: the existence of "corporate owners and managers" as a comprehensible ruling class, and the ability of the capitalist class to "dominate" civil society based on its influence on the state and its constituted apparatus (pp. 17-24). In the historical development of capitalism, Barrow (1993, p.24) identifies the "financial institutions and nonfinancial corporations" that became prominent as the "dominant economic institutions" of the nineteenth century. These corporate entities increased their influence on the administrative and regulatory institutions of the state to a point where they become difficult to challenge by the central mechanism of control such as the legislative and executive arms of government. As Barrow (1993, p. 28) further notes, "this magnification of their state power [by the dominant corporations and financial institutions] provides monopoly capitalists with a platform from which to initiate, modify, or veto a broad range of national policy proposals." Consequently, the governance of the public sphere by the state is fundamentally defined to pursue the interests of these corporate entities.

Beginning from this Marxist perspective on the classical liberal relationship between the state and corporate entities, the chapter now examines a contemporary Marxist perspective on the neoliberal orthodoxy and global capitalism in the context of an integrated global market. This examines the relationship between the autonomy of the capital class and the sovereignty of dependent states. It examines the flow of capital into the global market and its effect on the interplay of power between the state and established global conglomerates in domestic markets. As previously noted, global capitalism has been instituted in New Zealand and SSA through multilateral trade agreements and the policy-centred lending framework of the aforementioned neoliberal structures (WTO, IMF and the World Bank).

3.4 The Neo-Marxist Analysis of the Modern Capitalist State

The capitalist state has been described from a Neo-Marxist perspective as any civic society in which the capital economy is indirectly governed by autonomous institutions that are completely separated from the governing political institutions (Bieling, 2008; Panitch et al., 2015). This means that the sovereignty of the modern capitalist state depends on various market dynamics that support the pursuit of profit in the capitalist economy (Panitch et al., 2015, p. 114). In a modern capitalist state, the process of capital accumulation remains the exclusive occupation of private corporations and multinational conglomerates, and the sovereignty of the state depends upon the revenues from such capital economy.

The interdependent relationship between the state and the corporate entities of the capitalist market economy begins with the "monopoly powers" of corporations, established out of the British and Western European Imperialism (Porritt, 2007, pp. 118-121). In the governance framework of the colonial era, control of invaded territories, such as India and parts of Africa, was transferred to groups of investors and owners of corporate entities such as the East India Company and the Royal Africa Company. The proceeds of their market occupation were shared between the Crown (the British

Monarchy) and state institutions that supported these corporations with protective legislation that safeguarded their continuous dominance over domestic competitors. After the Second World War, the United States became, and remains, the epicentre of the global capital market. As previously noted, the global capital market is governed through international institutions, such as the World Trade Organization (WTO) and the Bretton Woods Institutions. The neoliberal free market that drives their approach to governance and policy guarantees the expansion and dominance of multinational corporations on the global capital market (2007, p. 120).

As a result of the dependent relationship between these international institutions and the governance of the global capital market, political institutions at the level of nation-states have become an apparatus that enforces the free market agenda on their domestic market economies (Bracking, 2003). The regulatory policies of domestic markets are structured to support capital accumulation, which is further intensified by the global expansion of "financial and non-financial corporations" outside of their domicile capital markets (Bieling, 2008, p. 4). The momentum of this corporate expansion beyond their powerbase has been sustained by financial assistance in the form of Foreign Direct Investment (FDI) from western financial institutions, which resonates with this free market agenda (Bremmer, 2010; Herrmann & McChesney, 2001; Lapavitsas, 2009).

The following sections of the chapter discuss how neoliberalism has shaped New Zealand and the SSA region mediaspace from three different approaches. The first approach focuses on the Bretton Woods institutions' financial intervention and policy-centred lending framework and the implications of this on the direction of governance and policies of the market economies in the SSA region. The second approach discusses the development of neoliberalism in New Zealand, and the restructuring of the market economy and deregulation of the television environment. The third is a brief review of the role of the World Trade Organization (WTO) in the development of a neoliberal global market. Chapter five of the thesis analyses the implication of the global television market for the New Zealand and sub-Saharan African PayTV markets.

3.5 Bretton Woods Institutions and Neoliberalism in Sub-Saharan Africa

As a result of the fall in the global price of oil in the 1980s and overdependence on the export market, most African countries defaulted in their schedule of loan repayments to western commercial banks (Ismi, 2004; Neu, Rahaman, Everett, & Akindayomi, 2010). The export of primary economic products, such as oil, gold, and cash crops, is the major source of revenue for the economies of most African states. The economic shock and the resulting discrepancy in the balance of payments (Fasano-Filho, 1996) necessitated the intervention of the IMF and the World Bank in the form of loans which necessitated major economic structuring decisions. These included renegotiating terms and agreement of the loans, and required most African countries to comply with strict Structural Adjustment Policies (Shandra, Shircliff, & London, 2011), such as currency devaluation, deregulation of certain sectors of the economy, removal of import duties and tariffs, cut in government expenses, and the sale of national assets.

The Bretton Woods Institutions' promotion of a free market in developing countries has been straightforward as evident in the policy-centred lending framework which has had a "harsh" effect on the domestic market economies (Abbott, Andersen, & Tarp, 2010). This agenda mandates developing countries to deregulate their domestic economies toward increased participation in global trade and foreign capital investment (Sharma, 2013). As Ismi (2004, p. 7) puts it, "the role of both [IMF and the World Bank] has been to fully integrate the Third World into the U.S.-dominated global capitalist system in the subordinate position of raw material supplier and open market."

There has been an increasing focus on the effect of these regulatory policies on the SSA economic region. The banking institutions of the SSA economic region were restructured and subsequently governed by fiscal mechanisms authoured by the Structural Adjustments Programme. From an empirical analysis of the financial sector reforms of the SSA region and their subsequent effect on private investments across the SSA, Fowowe (2011) argued that the interest rates policy imposed on banks bailed out by the financial interventions resulted in increased savings, which subsequently increased the domestic bank capital base, and better positioned it to grant credit facilities for private investments. Nonetheless, the lending decisions of most domestic financial institutions of the SSA economic region are largely based on loans having collateral capital that is sufficient to absorb possible financial shocks and guarantee the repayment of acquired loans irrespective of the commercial criteria of the business proposal (Amidu, 2014).

According to the World Bank (WB, 1994), the implementation of the Structural Adjustment programme in Nigeria required the Nigerian Government to adopt the following policies:

I. To restructure and rationalize the public enterprise sector,
II. To ensure positive returns on investment in enterprises to be retained in the public domain,
III. To reduce commercially viable parastatals' dependence on the federal budget and encourage their entry into the Nigerian capital market,
IV. To reduce the size of the public sector through the sale of public enterprises that can be operated better by the private sector.

The Nigerian Government implemented these policies following the issue of Decree No. 25 which listed some 145 federal parastatals for privatization or commercialization under the supervision of the Technical Committee on Privatization and Commercialization (TCPC) in July 1988 (WB, 1994). The goal of these institutional reforms was to establish a market-oriented approach to the policies and governance of the market economy. The Central Bank Decree of 1991 provided the Central Bank greater "nominal control" over monetary and banking policy in the implementation of a "market-based indirect monetary policy" (WB, 1994). As a result of the policies, the heavily regulated Nigerian mediaspace was deregulated with the establishment of the Nigerian Broadcasting Commission (NBC) on August 24, 1992 by Decree 38 of 1992. This reform of the Nigerian mediaspace resulted in the licensing of private and foreign-owned broadcast services and a Nigerian PayTV market exclusively controlled by the South African-owned MultiChoice Africa.

Variation in the political and economic climate across the SSA region, especially due to varying population, differential effects of colonial civilization, diverse geographical landscape and natural resources, has produced different outcomes from these structural economic policies across the SSA economic region. From a "country-specific" analysis of the long-run effect of the IMF-World Bank reform policies on the rates of investment, GDP and net export of eighteen economies in the SSA region, Gebregziabher (2015a, p. 171) noted that very few countries actually witnessed significant growth and increase in net exports, due to falling exchange rates that undermined the growth of portfolio investment in most of African economies. Similarly, from an empirical viewpoint, Adeniyi, Ajide, and Salisu (2015) argued that the economic growth of developing economies of the SSA region, in some exceptional cases, prompted by the inflow of foreign capital was made possible and sustained by the reform of the IMF and World Bank.

Of particular relevance to this thesis, across the SSA region, the SAP policies also necessitated the deregulation of the broadcasting industry (Lawrence, 2015) which was previously domestically-focused, and controlled by the individual African states. In most countries of the SSA region, deregulation of the broadcast industry meant the withdrawal of state control and licencing of private and foreign ownership of media institutions. The direction of capital investments and foreign ownership in the digital television services across the SSA region has demonstrated the free market agenda of the neoliberalism. In Nigeria the major foreign-owned broadcaster is the South African company MultiChoice Group, so it is useful here to outline South Africa's shift from apartheid capitalism to the neoliberal orthodoxy and its effect on the SSA economic region.

3.5.1 Neoliberalism and the South African Capital State

From an historical viewpoint on the South African capitalist state, particularly in the apartheid era, S. Clarke (1978, p. 67) described the ruling political class as a "direct representative of an omniscient and omnipotent class of monopoly capitalists, supported by a racist white working class". The capitalism of the apartheid state, dominated by a capital class of Afrikaans descent, was deeply entrenched in the economic ideology of the ruling National Party (NP) (Wiseman, 1988). This capital class dominated the South African market economy and profited enormously from the economic disparity between the indigenous black South Africans and the dominant white ethnicity, the Afrikaners. Likewise, there was a high level of political capital in the Apartheid state dedicated to creating policies and a favourable economic climate for the incessant increase of capital accumulation by the Afrikaner capital bloc (S. Clarke, 1978). As a result of this connection between the Afrikaner capital bloc and the NP, the market economy of the South African state was dominated by few ‘conglomerates’ (Carmody, 2002; Davies, 2012). Just before the end of the apartheid era, 87 percent of the "issued capital" on the Johannesburg stock exchange (JSE) was owned by six conglomerates (Kaplinsky & Manning, 1998), the largest being the Anglo-American Corporation with an annual turnover of about $20 billion (Carmody, 2002).

Subsequently, despite the political transition from the National Party to the liberation movement of the African National Congress (ANC), there was little change to the nature of the market economy in the post-apartheid era. On this note, Schneider (2003, p. 24) argues that the path to the open market system promoted by the ANC is synonymous with the ideology of the previous "racial capitalism" that characterized the capital economy of the apartheid state. As a result of the open market system of the post-apartheid state, the participation of South Africa in the global market economy took a different path from the rest of the sub-Saharan African region. As previously noted, the participation and involvement of most countries in the SSA region were necessitated by the imposed Structural Adjustment policies of the neoliberal free market system. However, the path taken by the post-Apartheid South African market was a pre-emptive strategic decision that directly challenged this neoliberal orthodoxy (Carmody, 2002). According to a speech by former President Thabo Mbeki at the Non-Aligned Movement (*NAM*) conference in 1998;

> “In as much as the slave cannot ask the slave-master to provide the strategy and tactics for a successful uprising of the slaves, so must we, who are hungry and treated as minors in a world of adults, also take upon ourselves the task of defining the new world order of prosperity and development for all and equality among the nations of the world.[….] Further, it would seem to us that, as a Movement, we must radically review the manner in which we make our interventions

into such important organizations as the World Trade Organization, the International Monetary Fund and the World Bank."………(Mbeki, 1998).

South African participation in the global market was largely decided by the open market policies of the post-apartheid state, but the agenda was to benefit South African-owned corporate entities as they extended their market dominance to the SSA market economy. Part of the pre-emptive open market policies of the post-apartheid South African state included a tariff-reduction regime that guaranteed open market policies normally required by the WTO. According to Carmody (2002, p. 259), the main strategic reason for the tariff policy is "to try to force industry to restructure to become internationally competitive ahead of the next round of global trade liberalization, and to create space for some (constrained) autonomy in policy making."

However, this voluntary neoliberal logic was challenged by economic campaigners, mainly comprising marginalized indigenous groups, who demanded that the economic path of the post-apartheid era be directed to challenge the shackles of the institutionalized capital segregationism from the preceding apartheid state (Sinwell, 2011). The expansion of South African conglomerates beyond the South African market in the Apartheid era had been impeded by economic sanctions from the United States and the United Nations (Fletcher, Cole, & McMorran, 1988; Klotz, 1995; Liebenberg & De Wet, 2014). However, the withdrawal of the economic sanctions on the South African state and the open market policies of the ANC provided a renewed opportunity for conglomerates, such as the Standard Bank of South Africa (Stanbic) and retailers such as Shoprite, Metro Cash and Carry, to expand their market operation into the SSA market (Daniel & Lutchman, 2004).

During this period of expansion for South Africa, the export-dependent economies of the SSA region deteriorated with the fall in the global demand of the region's raw materials and a debt crisis that plunged the region into an economic recession. The market economies of the SSA region were further weakened by the Structural Adjustment Policies (SAP) that required an unrestricted market with minimal control by state mechanisms. According to World Bank data, the Gross Domestic Product (GDP) of the South African economy at the end of the apartheid regime in 1994 was around US$140 billion, while the combined GDP of the remaining 47 countries in the SSA economic region (aside Nigeria) was around US$154.12 billion (Report, 2016). The South African apartheid economy accounted for about 47.5% of the total GDP in the SSA economic region, making it the largest capital economy in the region. In terms of debt, the combined debt portfolio of the SSA region escalated from US$84 billion in 1980 to US$223.3 billion in 1995 (Ajayi, Khan, & Institute, 2000, p. 10) of which South Africa has a relatively minimal share. The influence of the South African economy is also demonstrated in the size of its investment in the market economy of the SSA region. In 2003, about 29% of the combined GDP (of US$653.5 billion) of 53 African countries came from direct capital investments by South African conglomerates (Luiz & Charalambous, 2009).

As a result of this market expansion, the mediaspace of the SSA region became dominated by established South African media conglomerates. These include the state-owned South African Broadcasting Corporation (SABC) and media giant, Naspers Limited which owns the MIH Group. The MIH Group is the parent company of MultiChoice Africa, M-net Television Network and GOtv. The expansion of these media conglomerates initiated the PayTV market in most countries of the SSA region. Prior to the expansion of these South African-owned media conglomerates, the television market in most countries in the SSA region mainly comprised state-owned television services and few private television services operating on the analogue frequency spectrum. As noted in chapter one, the thesis is primary centred on the transfer of this frequency spectrum from analogue television services to mobile telecommunication companies, a process known as the DSO process. Without any major competition or market barrier to their digital television companies, these South African-owned media conglomerates became the dominant digital television broadcasters in the SSA region. For instance, in terms of subscription rate, DStv is still the most established private-owned digital television service provider in Nigeria (DSTV, 2015). As a result of this outstretched dominance, the formative stage of the transition to digital television services across the SSA region meant in practice a transition to the DStv digital television platform. However, as is explained in Chapter Six, the market dominance of DStv in the digital television of the SSA region has been challenged by the presence of Chinese-owned conglomerate, Star Communication of China.

3.6 Neoliberalism and the New Zealand Television Environment

In New Zealand, the path to neoliberal economic ideology was characterized by a systematic dismantling of national assets and state-controlled sectors of the economy in the 1980s (Bedggood, 1999; Curtis, 2015). As the New Zealand economy was heavily affected by the global economic crisis of the 1970s, the economic policies of the Labour Government (1984-1990) commenced the restructuring of the New Zealand economy into a free market state (McCraw, 2001; Reardon & Gray, 2007; Weaver, 2015). As a result, New Zealand became one of the countries in the developed world that first implemented the neoliberal free market system (Curtis, 2015) following the implementation by the Margaret Thatcher (1979 - 1990) and Ronald Reagan (1981 - 1989) regimes in the United Kingdom and United States respectively.

The implementation of neoliberal economic ideology in New Zealand is best understood when viewed from the Marxist analysis of "primitive accumulation," according to Bedggood (1999, pp. 135-136). In this analysis, the neoliberal economy evolved from the consolidation of some privileged privately-owned corporations (with local and foreign investments) through various incentives such as waivers and government contracts from the government. As a result, the Labour Government dismantled the policy framework of the social democratic economic model and transferred the control and ownership of some state-owned enterprises and others in the energy and transport sectors to these privileged privately-owned corporations (Lunt, 2008; Reardon & Gray, 2007). During the economic restructuring, it was argued that the state could no longer afford the running costs required for the continuous operation of some state-owned corporations (SSC, 1998). This period of economic restructuring, between the late 1980s and early 1990s, was characterized by the removal of state employment structures and withdrawal of import tariffs, which resulted in the collapse of the manufacturing industries (Ramia & Wailes, 2006, p. 69).

The Labour governments of the 1980s (1984-1987 and 1987-1990) initiated the neoliberal reforms. The succeeding National Governments (1990-1999) consolidated the neoliberal economic policies by increasing the privatization of state-owned enterprises and further deregulation of the New Zealand economy (G. Duncan & Chapman, 2010; Nicholls, 2002). The New Zealand transition to a neoliberal free market also dismantled the counterbalancing power of trade unions through the systematic policies of capitalist-sponsored political institutions (Barry & Walsh, 2007; McAndrew & Risak, 2012; Nicholls, 2002). Thompson (2011, p. 11) has argued that the policy directions influenced “macroeconomic forces” of the demand and supply market to adhere to the critique of the neo-Marxist ideology of “capital accumulation" in media as in other spheres of the economy.

For television, the neoliberal model meant the restructuring of TVNZ to become a purely commercial entity, supported by advertising rather than the public broadcasting license fee. As outlined in chapter two, the license fee was granted to the new broadcasting commission (New Zealand on Air) to support local content on any television channel, not just TVNZ. The 1989 Radiocommunications Act created a market system for allocating radiofrequency licenses, so that the television and radio markets became a matter of purchasing a frequency at auction, rather than applying for a licence from the broadcasting tribunal. The ownership structure of television broadcasters, as will be discussed in chapter five, soon comprised notable financial investments by global media and financial corporations. The bankruptcy of new broadcaster, TV3 in 1990 and a subsequent Broadcasting Act amendment enabled the acquisition of the controlling shares of TV3 by Canadian broadcast company, CanWest (Comrie & Fountaine, 2005). The Broadcasting Act amendment removing restrictions on foreign ownership of television broadcast services in New Zealand also enabled the entry of the subscription channel, Sky Television Network.

3.7 Neoliberalism and the World Trade Organization

Global trade was conceived as one of the post-second world war peace strategies of the western economic alliance by establishing the General Agreement on Trade and Tariffs (GATT). The World Trade Organization (WTO) was established in 1995 after the failure of the GATT, to further promote the neoliberal free market agenda in the international market economy. When compared with the role of other institutional apparatus, the WTO has been perceived to be a "better gatekeeper and more effective enforcer than the IMF" (Chorev & Babb, 2009, p. 480) in the collective interests of expanding the neoliberal free market on the policies and approach to governance of domestic market economies. The WTO has promoted the neoliberal free market through various strategies including influencing the removal of trade barriers among member countries to an insignificant level (Iida, 2003).

Regulation and the governance of bilateral and multilateral trade relationships among member nations is the core responsibility of the WTO. It remains the only international organization that is responsible for maintaining a smooth flow of trade negotiations and guarantees important trade rights of members. The WTO arose from the shift in the focus of post-cold war global policy debates and disputes on trade and tariffs. To redress these issues, the dispute settlement system introduced at the Uruguay Round agreement presented a renewed opportunity which was completely different from the GATT model. The WTO was established with three distinctive duties, which include being an assembly of negotiation of global trade matters, managing the operations of existing trade agreements, and establishing a dispute settlement system (Davey, 2014; Iosifidis, 2011, p. 126). The trade negotiations and agreements of the WTO shape the possible direction of the global broadcast landscape. As Iosifidis (2011, p. 126) puts it, the WTO is "currently the most powerful global media policy institution, as it creates pressure to liberalize and privatize state-run media and telecommunications firms and can legally enforce its rules by imposing large trade sanctions on member nations that hinder the free movement of goods or services".

Global trade is negotiated on the economic model of comparative and competitive advantage across international boundaries which have long created a new market dimension to cross-country trade relationship. This global market dimension of trade has contributed to domestic economic growth but can also harm local economies through market competition (Kummer-Noormamode, 2014). The varying agenda of participating nations in trade agreements may be confronted by local trade policies in the form of "tariff measures" that act as trade barriers designed to protect local commodities, or "non-tariff measures" that complement international trade policies and standards in trade-off for commodities that cannot be sourced locally (de Chazournes, 2016, p. 308).

However, the core point of difference in this global dimension of trade lies in the decisions made by participating nations on the contracts of trade agreements. The participating nations are likely to respect the contracts and rules of international trade as agreed at the WTO assembly, or simply disregard these agreed terms of trade by taking advantage of a robust economy especially in trade with weaker economic countries. Due to this challenge, global trade negotiated on the platform of the WTO was widely viewed as an emblem of "corporate globalization" because of its 'closed and imbalanced' decision-making on trade matters between developing nations and their developed counterparts (Iosifidis, 2011, p. 126). Likewise, as Jensen and Gibbon (2007, p. 7) have noted, most WTO members participate in trade negotiations with a "mercantilist" intention to protect their local commodities, but attempts to balance these clashing interests have an opportunity cost to trade.

As a result of this possible disregard for trade rules, settling disputes between participating countries in any trade agreement remains one of the crucial challenges of the WTO. The WTO dispute settlement system has been perceived as 'too great a shift' from the diplomatic process of the previous General Agreement on Tariffs and Trade (GATT) to a more organized judicial process of dispute settlement (Davey, 2014; Elsig & Stucki, 2012). The previous GATT model of dispute settlement was a negotiation-centred mechanism in which a panel of legal experts made recommendations directly to the GATT council or its contractors, after establishing the argument between the complainant and defendant (Davey, 2014). However, there was no structured timeline or binding decisions and the process of establishing a consensus agreement remained the major challenge for the GATT dispute settlement system.

Moreover, the various objectives and concerns of developing countries, which constitute about seventy-five percent of the WTO membership, have been characterized by an imbalance of power in the settlement of trade disputes with their developed counterparts. Apart from procedural imbalances, developing countries express the need to address fundamental issues, such as the current disparity in infrastructural advancement and low foreign exchange, which are outside the central agenda of the WTO (Jensen & Gibbon, 2007; Udombana, 2005). Similarly, Elsig and Stucki (2012) have also identified some macro-economic factors that discourage developing countries from bringing disputes against developed countries of the WTO. These factors include the difference in economic power between developed and developing countries, the fear of reciprocated measures in the form of trade sanctions that could arise from an unfavourable dispute settlement against developed countries, and the priorities of the developing nations after trade negotiations (Elsig and Stucki, 2012). Likewise, from the descriptive analysis on the effect of global trade on the development of the African continent, Udombana (2005) argues that the trade rules of the WTO were conscripted by developed nations to resonate with the central agenda of the neoliberal free market system. As a result of this imbalance of power in the settlement of trade disputes, the corporate institutions from the developed countries expand in a manner that exploits the economic sovereignty of developing nations and limits the possibility of any viable growth. On this note, achieving a balanced playing field remains a challenge for most trade negotiations between developing nations and their developed counterparts. However, an attempt by the WTO to balance these differential interests led to the "rule-based system" that binds all participating member countries in any trade agreement which has been widely accepted by member countries but criticized for its weak structure of compliance and enforcement (Davey, 2014; Pfumorodze, 2011, p. 83).

The effect of global trade on domestic market economies has varied across different countries. For New Zealand's export-dependent market economy, there was a shift in influence on the domestic economy from the western trade region following the UK joining the EU in 1975, to the Asian-pacific trade region (Ayson, 2011). In addition, New Zealand's major economic policies have been designed to expose its domestic market to these global market dynamics. New Zealand economic growth is highly dependent on export commodities, supported through initiatives that involve "rewards for export performance, additional import license entitlement for exporters and investment incentives […and] the devaluation of the domestic currency" (Singh, 2015, p. 93). The global trade participation of the New Zealand market economy has been perceived as successful and making a major contribution to economic growth (See for example Chetty & Campbell-Hunt, 2003; Hamilton & Dana, 2003; Westphal, Browne, MacKinnon, & Noble, 2008).

However, for most African countries, the economic realities are very similar to each other, especially due to the colonial era that ravaged the continent of its rich natural resources for decades. The trade policies that defined most African countries' involvement in global trade can be summarized into three distinctive phases (Fontoura & Crespo, 2015). The first phase preceded political independence from colonial regime before the 1960s and involved a two-way trade relationship with the export of primary products from most African countries to the colonial powers and the import of processed goods from these primary products back to the African continent. The second phase came after political independence of the 1960s with trade policies that exchanged importation of manufactured commodities from the colonial powers for an industrial revolution that promoted domestic production from abundant natural resources. According to Fontoura and Crespo (2015), these trade policies failed with the gross decline in the global demand for oil and other primary commodities from most African countries in the late-1970s. The third phase followed this decline in primary commodity demand, and the subsequent trade policies comprise the restructuring programme designed by the policy-based loans from Africa's major financial institutions, the World Bank and the International Monetary Fund in the mid-1980s, as discussed above.

From a broad overview, the aim of these restructuring policies was to prepare the African economy for an export-oriented market by cutting export tariffs and encouraging foreign investments. These trade policies may have been successful if well implemented by the various African governments but over time, they have proven to be disastrous to local production, especially the agricultural sector, and encouraged the flight of both human and financial capital in the midst of widespread corruption by

African leaders (Stone, 2004). In the midst of sustained growth in the GDP of a few countries in the SSA region (Jerven, 2013), the effect of the SAP programmes has also been evident in the depreciation in exchange rates (Gebregziabher, 2015b), decline of various manufacturing industries and export markets (Brooks & Simon, 2012; Hilson & Potter, 2005) and a rising cost in the importation of processed foods (Nuetah & Xin, 2017).

In recent times, most African countries have developed a growing trade relationship with China (Maswana, 2015; Monson & Rupp, 2013; Zeleza, 2014). Similar to previous trade agreements, the Africa-China trade relationship has been defined as an advanced version of the previous colonial relationship. On one hand, there are immense benefits from this trade relationship for domestic economic growth, especially with the profitable export of natural resources from African countries to China (Zeleza, 2014). On the other hand, the import side of this trade relationship with China, with the rising demand for the voracious consumption of cheap Chinese commodities, may threaten local manufacturing, and lead to mass unemployment (Kummer-Noormamode, 2014).

Finally, the effect of global trade dynamics on the trade of television services in the era of digitized media is discussed in chapter five of this thesis. It discusses the flow of global capital and participation of media conglomerates in the domestic media markets of the New Zealand and the SSA region. The chapter also outlines the effect of these attributes of the neoliberal orthodoxy on the transition process to digital television in these countries. The next chapter of the thesis sets out the methodology for this research, detailing its two main research methods, communication policy analysis and semi-structured interviews.

Chapter Four

METHOD & DESIGN

The review of literature and theoretical approach to the DSO process in Nigeria and New Zealand outlined in the previous chapter lays the background to this study. This chapter sets out the methodological framework of the research, which uses communication policy analysis and an in-depth semi-structured interview process. The two research methods are appropriate for addressing the primary questions and objectives of this thesis, and bridging the different limitations associated with each method.

A communication policy analysis of the DSO programmes in Nigeria and New Zealand helps to investigate the main questions of the thesis. These questions focus on the effects of the international institutions of global trade and capital (such as the World Trade Organization and the Bretton Woods Institutions) on the direction of global communication policies and governance:

RQ1. How has the relationship between nation states and international institutions (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the approach to policy and governance of the digital television market in New Zealand and Nigeria?

RQ2. How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand and Nigeria?

RQ2. How effectively was the global agreement on the DSO process implemented in Nigeria and New Zealand?

Communication policy analysis, as a research method, helps to explain the influence of these international institutions on the direction of policies and governance of the Nigeria and New Zealand digital television environments. This policy analysis is structured on the premise that national regulatory policy models are products of a complex interplay of interests between domestic and global forces. The semi-structured interview method was used to understand the role and experience of some participants involved in the transition programme to digital television in New Zealand and Nigeria. This chapter presents a broad overview of these research methods and why they were considered to be appropriate for this study. The chapter begins with an overview of the communication policy analysis process. It then sets out the approach used for the in-depth semi-structured interviews, the criteria considered in selecting interviewees, and how the collected interview data was analyzed.

4.1 Communication Policy Research as a Qualitative Research Method

Communication Policy Research as a qualitative research method is used in the field of digital television studies to evaluate the connections between the 'cause and effect' of social changes. It is important to investigate the underlying agenda of the global transition programme to digital television and its effect on the television environment of the two countries considered in this study. Broadly, communication policy research involves a comprehensive analysis of documented information, investigating the existing connections "between events, and the context" in which events are being framed (Hansen, 1998, p. 68). According to Bertrand and Hughes (2005, p. 126), regulatory policies are "dominated by statements of value rather than facts, statements which cannot be proven and so are always contestable and the subject of ongoing political debate". The direction of the global decision on the technological transition to digital television has been shaped by various policies and approaches to governance.

From a media-centric point of view, a study of the cause, effect or the context of any social event requires a wide assessment of the ways communication policies are implemented and the resulting effect on the variables in question (R. J. Schwartz & Panacek, 1996). In the context of technological development, policy analysis helps to explain the relationship between the structures of power and the institutional apparatus of governance across global media and policy studies (Castells, 2009; Davis, 2007; Tumber, 2000). Largely, the policies and governance of the global media environment have been shaped by influential linkages with structures of state and corporate power. Consequently, the nature of this interplay has a direct effect on national participation and also influences the direction of domestic regulatory policies.

4.2 Justification of Communication Policy Research Method

Since the transformation of the media environment from a highly-regulated to a market-centred environment, a transformation driven by the forces of globalization as Ots et al. (2016) puts it, Communication Policy Research has helped in understanding and identifying the effect of the technological shift on the global mediaspace. For this thesis, Communication Policy Research is the basis of understanding the impetus of this transformation in the context of market integrations and the rising influence of international institutions of governance such as the WTO, IMF, ITU and the World Bank.

An incorporative approach to communication policy research (Canary, Blevins, & Ghorbani, 2015; Picard, 2016) provides an understanding of the institutional influences on the direction of policies across a broad context. From this context, the field of media and communication policy research has been undermined by "disciplinary narrowness" (Picard, 2016, p. 135) and a limited perspective that does not encompass a wide range of alternative perspectives from other field of study. However, as Hansen, Cottle, Negrine, Newbold, and Halloran (1998, p. 87) noted, communication policy research helps to understand the broad range of issues regarding the "structure and organization of communication systems in the past, in the present and in the future".

Furthermore, communication policy research, as a separate field of study, helps to understand the "regulatory convergence" and effect of information and communication technology on the media environment (Herzog & Ali, 2015a, p. 38). From a well-grounded theoretical framework, communication policy research has also helped communication researchers to understand the implications of this convergence on the structure of the policy-making process. Particularly in the wake of the global transition to digital television broadcasting, communication policy analysis helps to understand the various institutional influences and direct effect on the regulatory policies of the television landscape.

4.3 Communication Policy Analysis of the Digital Switchover Process

The Digital Switchover (DSO) process was largely shaped by the global consensus of the International Telecommunications Union (ITU) in 2006. The ITU, as a governance institution of the global broadcast and telecommunication environment, exists outside national boundaries but influences the direction of domestic regulation regarding broadcasting and telecommunications. The digital transition required changes to national spectrum allocation and reshaped national participation in the global digital television and mobile telephony market. In view of this, the study uses communication policy analysis to address the three research questions:

- RQ1. How has the relationship between nation states and intergovernmental organizations (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the digital television switchover processes of New Zealand and Nigeria?
- RQ2. How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand and Nigeria?
- RQ3. How effectively was the global agreement on the DSO process implemented in Nigeria and New Zealand?

As noted in RQ1, the direction of domestic policy and governance of the national broadcast and telecommunication in member countries is not determined by the ITU alone. Global institutions such as the World Trade Organization (WTO) and the Bretton Woods Institutions, International Monetary Fund (IMF) and the World Bank, are crucial in understanding the regulatory policies of the global and domestic digital television market. In the course of the DSO process, the campaign for a global single market, supported by the Bretton Woods institutions, has influenced the direction of media policy and governance of the digital television market. Deregulation of previous state-controlled media environments has created competitive media markets, open to both state-owned media enterprises and privately-owned media conglomerates. As will be discussed in subsequent chapters of this thesis, these privately-owned media enterprises are mostly financed by both foreign and domestic capital. For example, the Nigerian digital television market is primarily dominated by two foreign-owned media conglomerates, Chinese-owned StarTimes and South African-owned MultiChoice Africa. In New Zealand, the digital television market is shared by subscription-based Sky Television Network and a partnership of Free-to-air (FTA) broadcasters on the Freeview digital television platform.

The institutional forces shaping the global digital media market have attracted scholarly research and debate among communication and policy analysts. In order to understand the effect of some global institutions of governance, Castells (2009, pp. 31-48) noted that it is important to identify the "network interaction" between established global institutions that are not confined within any territorial structures. Chapter five discusses the connection between non-territorial bodies such as the WTO, IMF and the World Bank in the institutional influence on the direction of policy and governance in Nigeria and New Zealand. Many scholars (For example, see Detomasi, 2007; Iosifidis, 2011; Mansell & Raboy, 2011; Ots et al., 2016; Puppis, 2008; Raboy, 2007; Valcke & Verschakelen, 2014) agree that the changing landscape of global media policy and governance has affected the course of global media and communication. However, some diverge sharply on how nation-state policies on the media environment are affected by these changes. According to various scholarly reviews of the changing global media landscape (For example, see Blackman, 2007; Golan, Johnson, & Wanta, 2010; McPhail, 2010; Roosvall & Salovaara-Moring, 2010; G. Wang et al., 2000), the regulatory policies of individual governments have raised significant questions concerning the institutional forces and factors that are shaping such regulatory policies on a national and global basis. This study will investigate the implication of these institutional forces on the policy direction of the DSO process in Nigeria and New Zealand.

4.4 Sources of Policy Documents

The communication policy analysis at the centre of this study focuses on the key regulatory policies that define the technological shift of these two television environments in the DSO Process. In reviewing the policy documents, I was primarily concerned with themes including the composition of the implementation team, the objectives of the DSO process, possible regulatory changes and the auction of digital dividends. Specifically, these themes help to answer some crucial questions of the study, about the interplay of corporate and political interests shaping the direction of the DSO process and the key national interventions that facilitated the DSO process in New Zealand and Nigeria.

Accessibility of policy documents is the major challenge faced using this research method. The policy documents and guideline reviews were largely sourced through working with government agencies and departments participating in the DSO process of New Zealand and Nigeria. These policy documents include committee reports, recommendations, government white papers and announcements, such as:

i. The White paper on the DSO process in Nigeria. The terms of reference for the white paper were accessed through the website of the DigiTeam Nigeria (www.digiteamnigeria.govt.ng). The document was published by the Nigerian Broadcasting Commission (NBC) on June 17, 2012 and contains the framework of the transition to digital television in Nigeria.
ii. The Discussion Paper of the DSO process in New Zealand was accessed through the website of the Radio Spectrum Management (www.rsm.govt.nz). The discussion paper was published by the Ministry of Culture and Heritage and the Ministry of Economic Development (now Ministry of Business, Innovation and Employment) in August 2009 and contains the framework for the digital transition in New Zealand.
iii. The Discussion Paper on the allocation of the Digital Dividend in New Zealand (www.rsm.govt.nz) was accessed through the website of the Radio Spectrum Management. The

policy document was published by the Ministry of Economic Development in August 2011 and contains the policy framework for the digital dividend in New Zealand.

In addition, some regulatory agencies in these countries make their updates and periodical reports on the on-going process of the digital switchover available via social media. For example, the Nigerian Broadcasting Commission has a Facebook page in its name and issues regular updates on the programmes of the NBC (See https://www.facebook.com/nbcgovng/). Also, some of the regulatory policies of these countries have an influence on the policy direction of other countries in the region. For example, the direction of regulation and governance of the DSO process for the West African region is shaped by the Nigerian policy framework, especially on issues involving policy objectives, choices of digital terrestrial platform, content, equipment standards and compatibility. Likewise, the South Africa Broadcast Corporation (SABC) operational framework is used in other Southern African Countries like Namibia and Lesotho.

In circumstances where policy documents are not readily made available, or accessible, because of complicated administrative procedures, in-depth interviews were conducted to overcome these limitations. As will be explained later in this chapter, this methodological overlap addresses the gaps in documentation. Once the study set out the direction of regulatory policies of the DSO Processes in Nigeria and New Zealand, the in-depth interviews were adopted to further explain the policy data arising from the communication policy analysis.

4.5 Framework of the Communication Policy Analysis

In the transition to digital television, this study analyses the challenges faced by nation-states, as a result of the institutional influence on planning the implementation and policies that regulate and shape the direction of their digital media markets. Research questions are conceived from a policy analysis viewpoint that investigates, among other factors, the effect of global trade on the shifting global digital market. A comprehensive policy analysis of the two digital television markets is structured on the premise that these national regulatory policy models are products of a complex interplay of interests between domestic and global forces as illustrated in Fig 1 below. As Lievrouw and Livingstone (2002) frame it, “the nature and character of the state, the strengths of its institutional framework and its relationship to domestic and international forces will largely determine the form and content of [telecommunication] policies”. Likewise, the communication policy analysis also investigates global fiscal governance, as conceived from the involvement of the Bretton Woods Institutions, and the flow of financial capital into the digital television market through corporate participation. The analysis also investigates the underlying role of these institutions in the digital television market and why it remains difficult for several domestic digital television services to compete on the basis of investment capital with the established foreign broadcasters.

Considering the interconnection between the technological infrastructure of global communication and social events, Hansen (1998, p. 73) has asked “why do some technologies develop rapidly and others not?” and “what forces aid, or inhibit, such development?” These questions prompt investigation into the implications of changing global media policies and governance and how they directly affect the two digital television markets. For instance, in the Nigerian digital television environment, deregulation instigated a shift from exclusive state control to a market-centred framework characterized by the inflow of foreign-owned media conglomerates. This policy review identifies crucial lessons for DSO non-transitional countries, including most countries in sub-Sahara Africa, from successful transition countries, such as New Zealand where digital television operates on a dual-market structure between private and state-owned digital television services.

Specifically, this communication policy analysis of the DSO process in New Zealand and Nigeria takes two directions. On the one hand, the study investigates the heavily-contested interplay between political and corporate players as viewed through a critique of the neoliberal free market system. As discussed in subsequent chapters, the media environment of modern states remains largely governed by regulatory policies that ensure the dominance of the political class and some media bureaucrats that promote or protect public interests and national objectives. According to Lievrouw and

Livingstone (2002), this is evident in the protectionist economic policies that are usually structured to restrain the involvement of private participation or foreign involvement in the business of the media. A justification of this regulatory model (O'Driscoll & Hoskins, 2006) argues that state control of the market economy often undermines the "complex systems of market-based institutions" and creates a price control system. Critics of protectionist state regulatory policies, such as Cobin (2014), argue that their success is limited by the failure of government in the provision of basic welfare services and creation of jobs, which are usually available in a market-controlled economy. State regulatory policies tend to be opposed to global trade movements.

On the other hand, the communication policy analysis reviews the regulatory policy framework of a market-centred media environment whose possible trajectories have been determined by free market participation. In this environment, Cobin (2014, p. 598) notes that the role of the state and its mechanism of governance shifts from protection of public interests to becoming the "regulatory apparatus" of the corporate players, and guarantee commercial interests by reducing market competition in return for budget financing and expected job creation. An argument in support of a market-centred media environment notes that while digitization of media, particularly digital television, lowers production cost and increases competition among participating broadcasters, such media environments are also defined by a scarcity of premium digital content (Dewenter, 2008). For instance, the extended market presence of the Sky Television Network in New Zealand and the South African-owned MultiChoice Africa in the sub-Saharan Africa is largely attributed to the exclusive control of broadcast rights of major Sport events. From a regulatory viewpoint, Evens and Lefever (2011, p. 34) argued that the outcome of the exclusivity of broadcast rights (by the dominant players of any digital television market) suggest an "exploitation" of fair market competition.

Similarly, Turner (2007) has noted that exclusive control of broadcast rights forms the basis for the development of a broadcasting price regime premised on the interaction between market forces and regulation. The lightly-regulated market-based media environment is dominated by a handful of "dominant economic formations" evident in the ownership structure and investment capital that largely represent the interests of capitalist market economies (Lievrouw & Livingstone, 2002, p. 389). This light-regulation is also evident in digital television markets with the entrance of giant capitalists, largely interested in the development of a media market that would be largely shaped by market mechanisms with minimal state interference.

Against this backdrop, the communication policy analysis in this study includes a comparative review of the policies shaping the New Zealand and Nigerian digital television environments. As demonstrated in Fig. 1 below, the review of global media policies incorporates the transnational alliance between the key players of global media governance and policy, which according to Miller T. and Kraidy (as cited by Ghiglieri & Waidner, 2016), exist as an interdependence of "multiple forces engaged in various interactions".

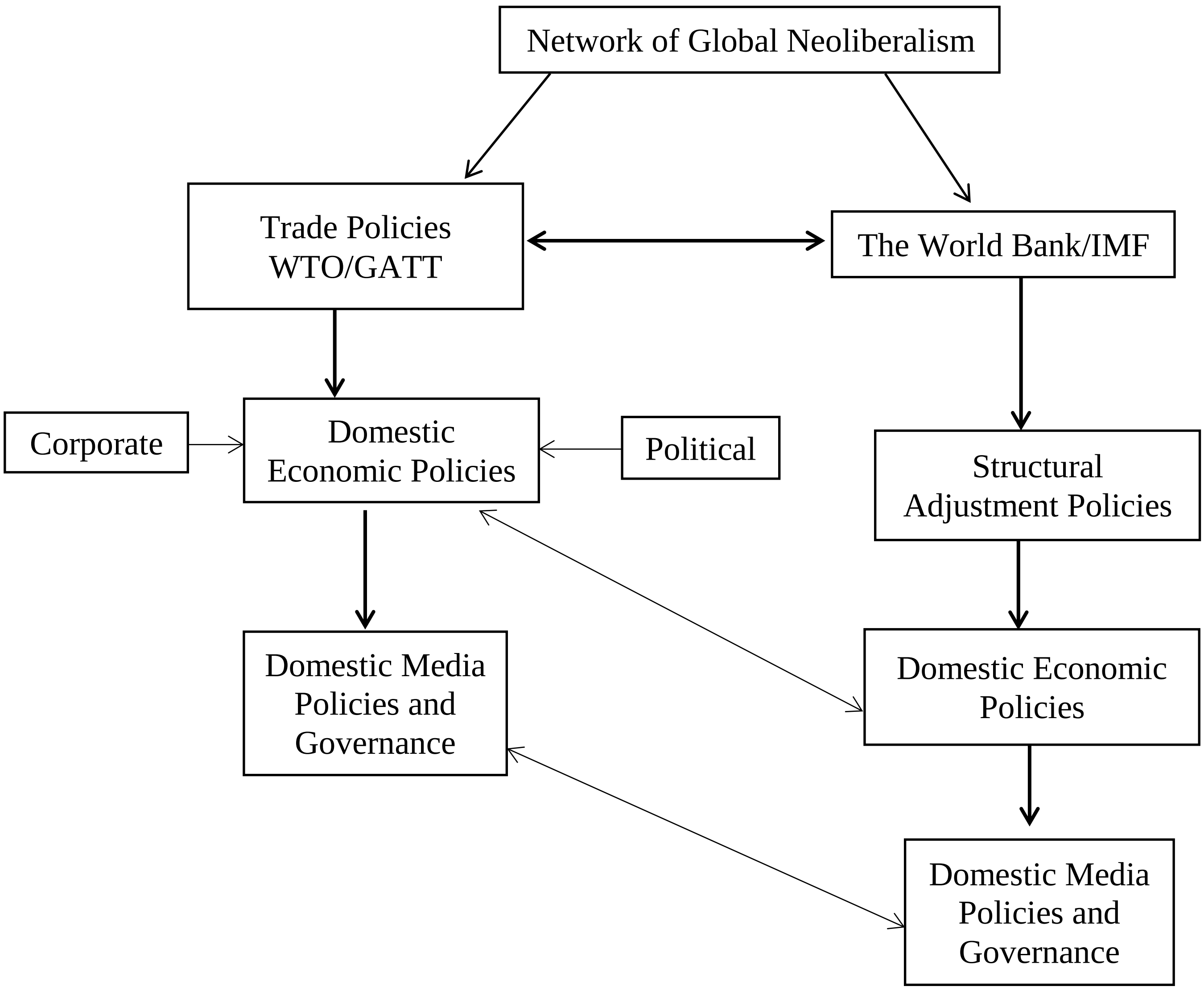

Figure 4. 1 The conception of the global network of Neoliberal Institutions

In the case of the Nigerian digital television services, within the broader context of sub-Saharan Africa, there are two main approaches to the communication policy analysis involved in this study, addressing:

- The multilateral trade of global information and broadcast services, and the influence of international structures of the governance of global trade, primarily the World Trade Organization.
- Secondly, the study reviews the role of International Financial Institutions (IFI) such as the World Bank and the International Monetary Fund (IMF), specifically, the World Bank Report of the Structural Adjustment Programme in Nigeria. As will be established, the fiscal

mechanisms of these two international financial institutions complement the global trade activities of the WTO and the mechanisms of global capitalism enforcing trade policies on developing market economies such as the sub-Saharan African countries.

From the lens of the communication policy analysis, the study also investigates the policy directions of the New Zealand digital television environment. This focuses on the role of political and corporate participants, and the underlying interests embedded in the regulatory policies that set the path for the transition to digital television. Particularly, in the case of the New-Zealand digital television market, the study focuses on:

- A review of the relationship between New Zealand political institutions and the global trade of television services,
- a review of the process of deregulating of the New Zealand broadcast environment to the current neo-liberal model,
- an in-depth analysis of the various state intervention programmes and policy reviews that paved the way to a successful DSO process in New Zealand, comprising a dual market-system shared between Freeview and Sky Television.

4.6 Methodological Framework of Qualitative Interview Research

In-depth interviews, as a qualitative research method, are commonly used across media and communication studies (A. A. Berger, 2014; Chadwick, Gill, Stewart, & Treasure, 2008; Delbert C. Miller. & Salkind, 2002; Hsieh & Shannon, 2005; Warren & Karner, 2010; Winstone, Huntington, Goldsack, Kyrou, & Millward, 2014). Broadly speaking, the in-depth interview research method, as used in communication studies, involves two-way communication between a researcher interested in seeking detailed information about a particular topic and an informant who has the required information (A. A. Berger, 2014), which may not be obtainable from other sources. With increasing use of digital mediated platforms and in a period of big data research, qualitative interview techniques have further gained emphasis as an investigative method for data collection and analysis in social research (Alexander, 2014; "Big Data? Qualitative Approaches to Digital Research," 2015; Dicks, Coffey, Mason, & ebrary, 2005; Dowling, Lloyd, & Suchet-Pearson, 2016; Hynan, Murray, & Goldbart, 2014; Palys & Atchison, 2012; Whelan, Teigland, Vaast, & Butler, 2016).

The three main types of research interviews include unstructured interviews, Semi-structured interviews and structured interviews (A. A. Berger, 2014, p. 112). The semi-structured in-depth interview method has been widely viewed as an efficient qualitative research method that enable researchers to gain a deeper understanding of a particular issue or topic from the perspective and experiences of the respondent(s) (For examples, See Burwell, 2017; R. Clarke & Adam, 2012; Galletta & Cross, 2013; Gugiu & Rodríguez-Campos, 2007; Hughes, Jones, Feemster, & Fiks, 2011; Kallio et al., 2016; Özdemir, 2017; Paine, 2015; Peters & Halcomb, 2015; Solmaz, 2017; Song, 2017; Yang, 2016). A semi-structured in-depth interview is usually conducted around a set of questions in the interview guide that may be sent to the respondents prior to the interview, but it also provides an opportunity for the interviewer to ask further questions based on responses. This opportunity of asking further questions helps the interviewer to gain further clarity and so produce "powerful data" (Peters and Halcomb 2015, p. 6), on the position and perspective of the participants. In media and communication studies, the semi-structured interview method has been widely used in data collection either alone, or in combination with other research methods (Burwell, 2017; R. Clarke & Adam, 2012; Özdemir, 2017; Peters & Halcomb, 2015; Solmaz, 2017; Song, 2017; Yang, 2016). Semi-structured interview techniques can "complement or supplement" other methodological techniques in analysis of social intervention (Dowling et al., 2016, p. 679). For example, qualitative interview methods have been used in recent analysis of the political economy of mediated discourses (Akinwotu, 2014; Ballesteros, Lujan, & Pedro, 2010; Cawthorne, 2001; Chamlee-Wright, 2010; Herzog & Ali, 2015b). Also, semi-structured interview methods have been used inclusive of other research methods in the collection and analysis of social network data (Rice et al., 2014), and health research into patient satisfaction with HIV Healthcare centre (Chow, Quine, & Li, 2010).

In the design of this study communication policy analysis, as the primary method, was limited to documented reports and regulatory policies that largely overlooked the perspectives and experience of the participants in the DSO Process of the Nigerian and New Zealand television environments. The semi-structured interviews were particularly useful for gaining a detail understanding of state intervention programmes from the individual experiences of policymakers and experts in the digital transition process in New Zealand and Nigeria. They helped to identify and understand the issues that were not addressed in the implementation polices by investigating the individual experience of the participants and the role of their respective organizations. The insight gained from both critical and analytical perspectives of the participants during the interview process identified some of the limitations and short-comings of the various state intervention and policy processes particularly in their descriptive and verbal expressions.

4.7 Framework of the Semi-Structured Interview Guide

A semi-structured interview requires the interviewer to have a thorough understanding of the subject of the research. In spite of the several benefits of the semi-structure interview method, one of the major challenges in adopting this research method is developing the framework for the interview process, interview guide. The interview guide is the set of questions that guide the interviewer toward the desired objectives (Battle, Bragg, Delaney, Gilbert, & Roesler, 1985; Doody & Noonan, 2013; Kallio, Pietilä, Johnson, & Kangasniemi, 2016; Schmidt, 2007) of the interview process.

In developing a structured guide for the interview process, this study adopts the framework suggested by Kallio et al. (2016). This involves five phases that ensure credibility in the data collection process. Kallio et al (2016) assessed interview guides based on a systematic methodological review of several academic papers that were peer-reviewed and published in leading academic journals between 1994 and 2015 and developed a framework based on these five phases which involve identifying the prerequisites of using semi-structured interview, retrieving and using previous knowledge, formulating the preliminary semi-structured interview guide, pilot testing the interview guide and presenting the complete semi-structured interview guide. In the context of this study, these five phases involved the following;

I. *Prerequisites and Retrieval of previous knowledge of using semi-structured interview*;

In the preliminary phase, a serious evaluation of previous information and events relating to the central subject of the research will form the abstract basis of the discussion (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). The interviews in this study explored the experience of key players in the transition to digital television in New Zealand and Nigeria. The background information for this study required an analysis of the interplay of forces shaping the current development of the global digital television market, as detailed in chapter two.

In the case of the New Zealand digital television market, the experiences and viewpoints of the interview participants make it possible to explore the scale of market control and dominance of the two digital television platforms, the Freeview and Sky Television Networks. The interviews also explored New Zealand's state intervention in the DSO process, the '*Going Digital'* programme that provided public consumers, who were unable to access the subscription-based Sky Television Network, with digital television services through the Freeview channels.

From a comparative lens, other interviews explored the DSO process in the Nigerian Television market. The questions of these interviews were centred on the institutional forces shaping the market economy of the SSA region and the scale at which other broadcasters are affected by the market dominance of the two main subscription-based television services (StarTimes and MultiChoice Africa).

II. Formulating the preliminary semi-structured Interview Guide

This process involved designing a list of participant-focussed questions to guide the interview process towards collecting in-depth and detailed information (Kallio et al., 2016). On the formulation of the interview questions, O'Keeffe, Buytaert, Mijic, Brozović, and Sinha (2016) have noted that these should draw on the central objectives of the study, using clear-cut questions with supporting data that are easy to understand and relating to the experience of the participants involved in the interview process.

In this study, the interview guide consists of two main sets of questions; the main theme and follow-up questions. The main theme questions of the interview guide addressed the three main research questions of the study. These were followed by questions designed to further elaborate on the main theme questions, some of which arose from the responses of the informants. Because of the comparative nature of the study, the interview questions followed two main trends. First, country-specific questions structured to explore the main theme of the study as it applied to the participants' respective digital television environments. Second, general questions structured to explore some core questions about the participants' particular experience and expertise.

III. Pilot Testing of the Interview Guide

This phase of the interview guide involves verifying the interview guide's coverage and the relevance of its content in line with the central objectives of the study (Kallio et al., 2016). However, this phase of the interview guide was not possible for this study, because there was no opportunity and no resources for a follow-up interview process.

IV. The final semi-structured Interview Guide

This final phase of the interview guide is complete after a thorough and detailed review of the previous phases, and the finalized interview guide is ready for use. At the end of this final phase, I arranged the interviews with the participants and informed them about the details of the interview process. As required by the University of Canterbury's Human Ethics review process, this detailed information included how the data would be stored, a detailed description of the purpose of the interview and what the recorded conversation would be used for. Subsequently, participants were then requested to sign the consent forms.

The interview guide included the following questions for specific interview participants:

i. The Planning and Policy Manager, Radio Spectrum Management, New Zealand.

- Why do you think the DSO process was successful in New Zealand and how was the Radio Spectrum Management involved? This question corresponds to RQ3.
- What regulatory changes were made to the digital television environment for a successful transition process? This question responds to RQ3.

ii. Director, National Broadcasting Commission, Nigeria.

- As the regulator of the Nigerian Broadcast Environment, how was the NBC involved in the DSO process in Nigeria? This question corresponds to RQ2 and RQ3.
- What regulatory changes were initiated by the NBC towards a successful DSO process in Nigeria? This question corresponds to RQ1 and RQ3.

iii. Former CEO, HiTV Television Network, Nigeria.

- What is the nature of the digital television market in Nigeria? This question corresponds to RQ2.
- As a private broadcaster of digital television services, and how do you think it helps the DSO process? This question corresponds to RQ2.

iv. The Former CEO, Freeview Television Network, New Zealand.

- What is the nature of the New Zealand digital Television Market? This question corresponds to RQ2.
- Why was the Freeview Television Network successful despite the dominance of Sky television services in New Zealand? This question corresponds to RQ2.

v. The Chief Operations Officer (COO), MultiChoice Africa.

- What led to the success and widespread presence of DSTV Television Network across the sub-Saharan Africa? This question corresponds to RQ2 and RQ3.
- As a private broadcaster, how do you think DSTV Television Network is involved in the DSO process in the sub-Saharan Africa? This question corresponds to RQ2.

4.7.1 Selection of Interview Participants

This study focused on specific broadcast organizations and regulatory institutions that were directly involved in the DSO Process in New Zealand and Nigeria. In New Zealand, these organizations included all privately-owned and state-owned television and radio broadcast services, the ‘Going Digital’ Organization that coordinated the participation of the entire Broadcast Industry, and the Radio Spectrum Management Group, which is the regulator of the New Zealand Broadcast Industry. In Nigeria, this included the NBC, which as the regulator of the Nigerian broadcast environment) is the main organization involved in the Nigerian DSO Process. Through DigiTeam Nigeria, the NBC has been responsible for the coordination of the Nigerian broadcast industry based on a White Paper that specified the modalities for the Nigerian DSO Process. As will be discussed in the sixth chapter of this thesis, the white paper contains the detailed framework and guideline for the implementation of the DSO process in Nigeria.

In the final selection, I chose the interview participants after reviewing the roles played by different individuals in the DSO processes in Nigeria and New Zealand. I contacted the participants by email and in some cases, by post, using contact details retrieved from the webpages of their organizations. I provided the organizations with detailed information about the study, the purpose of the interview process and interview guide containing guiding questions for the proposed interview process. In situations where the representatives of the organizations in the DSO Process were known, I contacted them directly.

Finally, seven of the people contacted were willing to participate in the study. Three participants in New Zealand represented the regulatory authority, the state-owned television broadcast service, and Freeview New Zealand, a consortium of all Free-To-Air (FTA) Television Broadcasters:

1. Len Starling, Planning and Policy Manager, Radio Spectrum Management,
2. Sam Irvine, Former Chief Executive Officer, Freeview New Zealand,
3. Wayne Huggard, Chief Transmission Officer, Television New Zealand.

There were four participants from Nigeria, from the regulatory body of the Nigerian broadcast industry, the state-owned national television service, the Nigerian Television Authority and the Chief Operation Officers of the two dominant digital television services in Nigeria, the StarTimes Nigeria and MultiChoice Africa. The interview participants include:

1. Engineer Friday Ugwelu, Director of Engineering, Nigerian Broadcast Commission.
2. Mr. Tunde Aina, Chief Operations Officer, NTA-StarTimes Nigeria.
3. Nyiko Shiburi, Chief Operations Officer, MultiChoice Africa.
4. Maxwell Loko, General Manager, Nigerian Television Authority (NTA).

4.7.2 Interview Process

Each of the participants were contacted via email or telephone conversation and were informed of the prospective interview process. As required by the University of Canterbury's Human Ethics review process, the details of the research and interview process were presented in the information sheets that were sent to each of the participants. After an interview time was arranged with each of the participants, I sent the interview guide which contained five questions that illustrated but were not limited to the main objectives of the study. As part of my preparation for the interview process, I also sent the information sheet to each of the participants which informed them of the specifics surrounding the use of the interview transcripts and the interview process.

Due to the distance between the location of the participants and the researcher, telephone calls via Skype were the most appropriate and flexible means of carrying out the interviews. All interviews were conducted in English and lasted approximately thirty minutes. With the consent of the participants, all interviews were recorded directly into MP3 format and were later manually transcribed. The transcripts were reviewed to correct typographical errors or omissions during the typing of the response. Before the coding process, the respondents received copies of the interview transcripts and were informed that while the analysis of the interview transcript was already in process, they were welcome to review and provide corrections or further information before a given date.

4.8 Interview Data Analysis

I. NVivo and Coding the Interview Data

Computer-assisted analytic software programs have become a valuable supporting tool for qualitative data analysis (Hutchison, Johnston, & Breckon, 2010). In the analysis of mixed method data, social researchers have found computer-assisted analytic programs such as the NVivo software program to be effective for investigating "trends" over a particular period of time and also help to avoid the complex task of analyzing qualitative data manually (Sorensen, 2008, p. 106). I decided to use NVivo for the qualitative analysis of the interview dataset based on the analytical and organizational functions of its coding process (Bazeley & Richards, 2000; Bringer et al., 2006). NVivo is considered useful for coding interview data into a category or classification system that allows for "easy identification, indexing, or retrieval of data during analysis" (Auld et al., 2007, pp. 37-38). With the help of training tools from different online-based tutorials and workshops on its coding functions, NVivo saves a considerable amount of time in the analysis of the interview transcripts when compared to manual tools of analysis, such as Microsoft Word, which are usually cumbersome and time consuming.

The transcripts of the interviews were imported into NVivo as a qualitative project and the coding process involved a distribution of the descriptive texts from the interview transcripts into Nodes. The full transcripts of the interviews are available in Appendices 3-9. The "drag and drop" function of NVivo allows for flexibility in coding text into different Nodes and also allows easy movement between the data that is being coded and the different Nodes (Richards (1999, p. 420).

II. Categories of Coding Classification

In coding, this study classified the interview transcripts into different categories centralized around a number of themes that emerged from the review of literature and the research questions. As A. A. Berger (2014, p. 122) notes, the NVivo coding process helps researchers to classify interview transcripts into "common themes and topics" that attempt to separate primary facts from secondary information that may be less important to the study. The coded texts of these interview transcripts were structured around a pattern of analysis that is similar to the analytical path used in a comparative study on semi-structured qualitative method by Irvine, Drew, and Sainsbury (2013, p. 89).

In order to make a summary of the data coding process, the study also adopted a two-process pathway that involved clarification and acknowledgement; the clarification process identified any phrasing or non-verbal elements that may need further clarity and the acknowledgement process confirmed the position and adequacy of the responses given by the informants during the interview process. The end data were then coded and classified into descriptive main themes of the study:

I. Organizational role in the DSO Process of their respective countries,
II. Role of the Participants in the DSO Process of their respective countries,
III. Regulatory changes during the DSO Process,
IV. State Intervention Initiatives,
V. Description of the Digital Television environment,
VI. Funding/Financial Support of the DSO Process,
VII. National and Organizational Priorities,
VIII. Market Competition and,
IX. Key success factors.

4.9 Limitations of the Semi-Structured Interview Method

In the process of collecting the interview data, three main limitations of the interview research method for this thesis were identified:

i. The interview process was limited to just seven participants. Several attempts to establish communication for an interview with some government officials and broadcast organizations were unsuccessful in both countries. In some cases, simply scheduling a possible and convenient time for the interview process was complex and highly bureaucratic.

ii. The transcription and analysis of the interview data was extremely time consuming and required a lot of energy and time because the interview recording was manually transcribed and edited to remove typographical errors.

iii. The response of some participants during the interviews may have a certain degree of bias and confirmation of a pre-existing view of the subject of the interview (Hill, Memon, & McGeorge, 2008; O'Brien, 2009). In a few of the interviews, the participant’s responses were framed to confirm pre-existing views, which does not necessarily reflect the true state of the DSO process in their respective countries. Also, some responses of the participants reveal a poor memory of the state policies and influential factors in the implementation of the DSO process in their respective countries.

4.10 Conclusion

This chapter has outlined the two main research methods used in this study, and how they relate to the three research questions. From a critique of the neoliberal free market system, the next chapter analyses of the trade of digital television services and the interplay between the priorities of nation states, and the ‘coercive decision’ to favour the neoliberal orthodoxy in the Nigerian and New Zealand digital television markets.

Chapter Five

GLOBAL TRADE OF DIGITAL TELEVISION SERVICES

By nearly all accounts, the media, as a tradable commodity, plays an important role in the expansion of the neoliberal orthodoxy in the international market economy. The global media system has shifted from a role as an instrument of nationalism to a lucrative commodity of the "global commercial-media market" (Robert W McChesney, 2001, p. 2). Likewise, due to the flow of capital and advancement in technology, the global media market has been dominated by few media conglomerates. The promotion of this market-oriented approach to the global media system and the expansion of the dominant media conglomerates on a global scale has been necessitated by the institutional apparatus of the neoliberal free market system. However, the effect of this neoliberal orthodoxy of the global media system on the approach to policies and governance of digital television services in domestic media environments in different countries have varied from each other.

This chapter of the thesis discusses the interplay between the priorities of nation states, and the coercive decision to favour the neoliberal orthodoxy in the Nigerian and New Zealand digital television markets. Drawing on the critique of this neoliberal free market system, this chapter of the thesis addresses RQ1, 'How has the relationship between nation states and international institutions (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the approach to policy and governance of the digital television market in New Zealand and Nigeria?' In an attempt to answer this question, this chapter discusses the effect of the neoliberal orthodoxy, as promoted by these international institutions, on the approach to governance and policies of the domestic media market. More specifically, following the reforms and liberalization of the global economy by these institutional structures, the chapter looks at the effect of the institutional reforms, necessitated by this neoliberal orthodoxy, on domestic competition of the regional digital television market in sub-Saharan Africa. It then investigates the degree of the flow of foreign capital and participation into the New Zealand television market.

Drawing on relevant examples, the chapter begins with an overview of the global trade of media commodities such as digital television services. It presents the interplay of interests between the international structures of the neoliberal free market system and the degree of participation by various nation states in the global trade of media commodities. From the lens of the institutional reforms of the Bretton Woods institutions, the chapter discusses the participation of most African countries in the global trade of digitized television services and its effect on the PayTV market economy of the SSA region. Furthermore, drawing on the neoliberal free market approach to policy and governance of the media environment, the chapter presents the participation of the New Zealand market economy in the global trade of media commodities. It presents the effect of the flow of global capital and the participation of foreign-owned media conglomerates in the New Zealand digital television market.

5.1 Neoliberalism and the Global Trade of Digital Television Services

The promotion of the neoliberal free market has been very prevalent in the approach of state institutions to policies and governance that reflect a media environment driven by market imperatives (Iosifidis, 2011). As established in chapter two, these changes to the regulatory policies were largely influenced by the shift from the protective regulatory policies of the state, inherent in the Public Service Broadcasting (PSB) model to a regulatory policy regime that prioritizes some attributes of the neoliberal logic such as profit, efficiency, market stability and the need to meet consumer demand. In New Zealand, for example, the market-oriented approach to the governance of the media environment was influenced by global trade policies, as evident in the withdrawal of the protectionist policies. This promotion of the neoliberal free market system also resonates with the economic ideologies of the various governing political institutions. Across the global digital television market, especially in the ongoing transition process to digital television, there has been increasing demand by institutional structures of the neoliberal free market system for various nation states to relax the protective regulatory policies and state control of the media environment. As Iosifidis (2011) emphasizes, the underlying agenda for this withdrawal of the trade barriers is to necessitate the flow of global capital and foreign participation in the domestic television markets.

The major influence in the global trade of media commodities such as television services and content can be primarily traced to the United States (Aksoy & Robins, 1992; A. H. Arsenault & M. Castells, 2008; Bielby & Harrington, 2008) and other western countries with successful media content exports such as the United Kingdom and France (Schlesinger, 1986; Steemers, 2014). However, the United States dominates international trade in media commodities (Chalaby, 2016; Elasmar, 2014) as prompted by its copyright law and trade agreements with other countries (Havens, 2002). In a comprehensive analysis of the United States' media market, Herman and McChesney (1997, pp. 140-149) noted that the competitive tendencies and the quest for returns on investment compelled media institutions to concentrate mainly on the production of programmes and audio-visual content that attract large audiences and subsequent advertising revenues. As a result, the United States is influential in the global trade of media commodities (Baker, 2000; Havens, 2002) and often promotes the governance of the trade of media commodities of the WTO (Magder, 2004).

However, the degree by which various national television environments are exposed to this neoliberal free market system of the global mediaspace and trade of media commodities varies (Christophers, 2014, p. 124). Among other factors, the global trade of media commodities has made it difficult to sustain national media production (Swinnen & McCluskey, 2006). The nature of the global media market suggests that once a "commercial system is firmly in place, it becomes difficult to challenge, and as economic power increases so does its ability to keep threats at bay and gradually remove all obstacles to commercial domination of the media" (Herman & McChesney, 1997, p. 148). In response to this free market ideology of the global television space, especially in most developing economies, various nation states have maintained a tough stance and responded by imposing protectionist policies in the attempt to protect national television environments.

Nevertheless, the free market framework of the global digital television market has necessitated that the policies of nation states be framed to neutralize protectionist policies that may serve as a barrier to the flow of global capital and trade of media commodities. On this note, this thesis argues that national television markets cannot be protected completely from this neoliberal logic of the global television space in the era of digital television. Against this backdrop, the next section of this chapter will describe the influence of international institutions of global trade and capital such as the WTO and the Bretton Woods institutions on the market economy of sub-Saharan Africa. Likewise, the theme also presents an analysis of how these international institutions induced the free market ideology and the main attributes of the flow of global capital across the digital television market of the SSA region.

5.2 The Dynamics of the Digital Television Market in sub-Saharan Africa

For most developing countries, the process of transition to digital television has provided access to more television channels through satellite and cable networks. Also, the implementation of the transition to digital television services has generated two distinctive markets involving the trade of digital dividends from the transition process, by mobile and telecommunications companies, and the distribution of television content on digital platforms. The distribution side (Havens, 2002) of this international media market involves the flow of tradable films and television programming across different countries. However, the promotion of this international media market for audio-visual content has been limited, to a certain degree, by protectionist policies of some African states that maintain a need to create a balance between cultural priorities and the logic of neoliberalism.

As a result of the neoliberal free market system, the mediaspace of the SSA region was primarily dominated by the participation of the South African-owned media conglomerates, as detailed in previous chapters. These include state-owned South African Broadcasting Corporation (SABC) and media giant, Naspers Limited which owns the established MIH Group. The MIH Group is the parent company of the MultiChoice Africa, M-net Television Network and GOtv. The expansion of these media conglomerates commenced the PayTV market in most countries of the SSA region. Prior to the expansion of these

South African-owned media conglomerates, the television market in most countries in the SSA region mainly involved state-owned television services and few private television services operating on the analogue frequency spectrum. However, as noted in chapter one, the thesis is primarily centred on the DSO process' transfer of this frequency spectrum of analogue television services to mobile telecommunication companies. Without any major competition and market barrier to their digital television companies, these South African-owned media conglomerates became the dominant digital television broadcasters in the SSA region. For instance, DStv was the most established private-owned digital television service provider in Nigeria (DSTV, 2015).

As a result of this outstretched dominance, the formative stage of the transition to digital television services in the SSA region meant a transition to the DStv digital television platform. As a result of its huge capital portfolio and massive investment in infrastructure and coverage of its network, the DStv enjoyed the dominance of the PayTV market of the SSA region for a very long time. The next theme addresses the nature of the market competition in the digital television environment of the SSA region. It briefly outlines the attempts of few domestic competitors with the dominant DStv. However, this market dominance of the DStv in the digital television of the SSA region has been challenged by the presence of Chinese-owned media conglomerate, Star Communication of China. The subsequent theme of this section of the chapter presents the shift in the nature of this market competition in the context of the neoliberal free market system and the rising influence of Chinese soft power in Africa.

5.2.1 Market Competition and Digital Television in Africa

The digital television market of the SSA region has been shaped more by market forces than by state participation. In terms of subscription base and network coverage, it is presently dominated by two major Media conglomerates, the South African- MultiChoice Group, owners of the DStv digital television network and Chinese-owned Star Communication Network, owners of the StarTimes and StarSat digital television brands. French-owned Canal+ is prevalent in the French-speaking African countries but when compared with the Star Network and MultiChoice Africa in relation to overall network coverage and market share across the SSA region, it is not as dominant as these established media conglomerates.

While mindful of the importance of the ongoing DSO process in the sub-Saharan African countries, it is important to investigate the participation and the nature of market competition of the region's digital television services. Largely, as previously mentioned, participation of foreign-owned media services in the region's digital television market has been necessitated by the international structures of the neoliberal free market agenda in the rhetoric of bridging the digital divide between developed and developing countries. However, this study argues that the fiscal policies promoted by these neoliberal institutions in the digital television market of the sub-Saharan African countries have necessitated the dominance of the region's digital television market by a few foreign-owned media conglomerates.

The dominance of these media conglomerates has produced a form of 'established Oligopoly' in the SSA digital television market and has remained difficult to challenge. As will be discussed further in chapter six, two major factors account for the dominance of these media conglomerates across the sub-Saharan African digital television market. First, the acquisition of broadcast rights for premium content, in particular live coverage of European Football Leagues, that primarily drives the digital television market, is an expensive project that requires an enormous capital investment over a long period of time. Due to their large financial portfolio and extensive network operations across the entire sub-Saharan African market, these conglomerates were favourably positioned and acquired the broadcast right to this premium content. Secondly, there is a lack of major competition with sufficient financial capacity to challenge the market dominance of these two media conglomerates. Challenging the dominance of DStv across the SSA digital market would require, among other factors, significant capital investment to acquire premium content, generated through private capital or loans from financial institutions. However, few broadcasters have attempted to compete with these media conglomerates in their respective domestic markets. This is a brief analysis of these attempts in the Nigeria and Kenyan PayTV markets.

In Nigeria, there have been several attempts by different private-owned media companies to challenge the dominance of the foreign-owned media conglomerates. These market attempts were initiated by the acquisition of the broadcast rights for the English Premier League (EPL) by the HiTV cable station in 2007. HiTV is locally owned by Entertainment Highway Limited and prompted an era of market competition with the DStv. As mentioned in chapter two, from the inception of digital television broadcast service in Nigeria in 1994, the South African-owned DSTV digital television network has been the dominant digital television service provider and HiTV's acquisition of the broadcast rights to 'premium content' was the first major challenge to the established market leadership of the DStv.

However, this much-celebrated market success of HiTV in the Nigerian digital television market only lasted a short time. This was largely due to the failure of HiTV to meet the high cost of the premium content. According to the Managing Director,

> "We paid 40 million dollars [USD] for the first year of the second term of the EPL [broadcast right] from mostly equity. But still had to come up with a guarantee of about 70 million dollars for the latter 2 years and in Nigeria, guarantee requires cash in bank. The alternative bank we were forced to use despite all their assurances and being offered half of the amount by another Bank failed to issue same on that fateful Tuesday and only offered it to us on Thursday. Meanwhile the EPL sold it to our competition on Wednesday morning".

Toyin Subair (2016),
Managing Director, Entertainment Highway Limited.

Due to the inability to secure a Bank Guarantee, a process that was impeded by the regulatory policies of the Central Bank of Nigeria, HiTV defaulted on the schedule of payment of its EPL broadcast rights. As previously noted, the fiscal policies and approach to governance of the capital economies in the SSA region are primarily influenced by the Structural Adjustment Policies (SAP) of the Bretton Woods Institutions. According to the Managing Director of Entertainment Highway Limited,

> "At 25-27% interest on debt, most businesses cannot survive and you will be a slave to the

> banks for life. That is why they take collateral from you. They lend against your collateral not your business case. Regardless of our strong cashflows, the funding requirements continued to increase. Similar businesses in Europe like Sky, Virgin, Polsat e.t.c had worse debt profiles whilst building up their Brands and subscription models but their markets have sophisticated equity and debt."

Toyin Subair (2016),

Managing Director, Entertainment Highway Limited.

Consequently, the EPL broadcast right was immediately re-issued to the DSTV digital television network. HiTV later approached the management of DStv to propose a sharing arrangement for the EPL rights, but this request was declined by DStv.

In another related attempt to challenge the market dominance of the MultiChoice Group around 2012 in the Kenyan Pay TV market, the regulator of the Kenyan broadcast environment, Communication Commission of Kenya (CCK) recommended a content sharing initiative between MultiChoice Africa (owners of DStv) and local market competitors. The content sharing initiative required MultiChoice Africa to resell its acquired Broadcast right to premium contents to other market competitors. The initiative was primarily aimed at challenging the dominance of DStv in the Kenyan PayTV market and creating a balanced competitive market. While this progress was welcomed across the Kenyan television environment, it was rejected outright by the MultiChoice Group on the basis that the initiative reduced the value of the premium content. According to the management of MultiChoice Africa (Wokabi C, 2013),

> "[…] exclusivity is the principle on which pay TV works. The only reason a customer will want to stay with a particular provider is because they get what they can't get from a different provider. Sharing rights would affect our revenues. […] The sport rights periodically come up for renewal and anyone is free to bid"

Nolo Letele,

Executive Chairman, MultiChoice Africa.

As a result of the legal framework of the digital television market in Kenya, the CCK retracted its policies on the content sharing initiative, as DSTV is not legally required to share its acquired broadcast rights with any of its competitors.

Similar to these attempts by HiTV and the CCK at challenging the dominance of the DSTV, most of the competitors of the established media conglomerates in the SSA region are confronted by the same financial constraint and the inadequacies of their domestic financial institutions to support their market campaigns. As previously stated, the domestic financial institutions are strictly regulated by fiscal policies that can limit their ability to provide credit facilities that meet the capital requirement of the digital television market. Consequently, the exclusive control on premium content that defines the digital television market favourably positions the dominant media conglomerates with ready access to funding, ahead of any possible domestic competition. These attributes of this neoliberal orthodoxy are evident in the limits of capital investments in the digital television services across the SSA region.

5.2.1 The Influence of Chinese Soft Power and Media in Africa

The shift in the dynamics of the digital television market of the SSA region, is largely subject, as previously noted, to the complex intersection of regulatory frameworks, state interventions, but also the flow of Chinese capital investments which is a by-product of the expanding Africa-China relationship. This flow of Chinese capital has become evident in various bilateral partnerships and concessional lending frameworks between China and several African states. However, the conditions for these credit facilities have been mostly concealed with inaccessible details. Likewise, as Samy (2010) noted, the volume and policy conditions for the Chinese credit injections into the African economy has not been available for public scrutiny or disclosed to the populace.

The rising influence of China across the African media landscape is now evident in ongoing partnerships between Chinese media establishment and several state-owned media enterprises as necessitated by the neoliberal free market system. As such, in line with the objectives of this thesis, it is important to investigate the extent of this Chinese influence on the digital television market of the

SSA region. This discussion is approached from the perspective of Chinese soft power in the African media landscape.

The increase in the presence and influence of China on the political and economic landscape of the African continent arises from the third Forum of China and Africa Cooperation (FOCAC) in November 2006. The nature and scope of the rising influence of China on the African continent has attracted several scholarly debates (Chan, 2013; Cheru, Obi, & ebrary, 2010; Mohan, 2013; Rotberg, 2008; Tull, 2006). However, it is still not clear what China intends to achieve with its rising political and economic influence in Africa in the long term. Broadly speaking, there are two possible reasons for the economic transformation of China from a third-world country to a major economic and political power. The first is attributed to the enormous size of its bilateral and multilateral trade activities (Barris, 2013; Jijun & Conglai, 2017; Kastner, 2016; Qiu & Zhan, 2016). The second centres on the outstretched influence of its soft power─the ability to make others desire a China-favourable outcome on a global scale (Joseph S. Nye, 2008, p. 95). The nature of Beijing's soft power, as evident in the global projection of its diplomatic interests, cultural and political values, has created a major disruption to the established neoliberal global order (Breslin, 2013; Cho & Jeong, 2008; Dugué-Nevers, 2017; Ghosal Singh, 2016; Joseph S Nye, 2005; Joseph S. Nye, 2012).

China's rising influence on the African continent has also been attributed to the shift in Beijing's foreign policies (Tull, 2006). As Zhang (2010) notes, the overall perception of China's identity from western news media representation has been centred on economic, business, finance and trade issues. As a result, it has become an important communicative tool in shaping the trend of global economic policies. Apart from several challenges associated with Chinese economic transformation and global influence, the global perception of its national identity has been characterized by a perception of its cultural and economic influence as a hard rise (Chu, 2014, pp. 257-258; Kang, 2012; Y. Wang, 2008). Understanding the crucial role of its national identity on the global stage, the Communist Party of China (CCP) developed a long-term strategic management plan that represents Chinese influence and public diplomacy as a peaceful process with genuine interests in investments in other countries, in a manner that would be globally acceptable (Barr, 2012; Courmont, 2013; Servaes, 2016). In mediating its soft power, part of China's long-term strategy involves the global expansion of its propaganda machinery into the African mediaspace. The expansion strategy is also illustrated by the production of multilingual varieties of Chinese media content, and increasing media investments beyond China (Bailard, 2016; Franks & Ribet, 2009; Leslie, 2016). The mediation of this strategic framework in Africa is evident in the presence of prominent state-controlled media establishments such as Xinhua News Agency, China Radio International, Central China Television (CCTV) and China Daily (Zhang, Wasserman, & Mano, 2016).

However, the expansion and participation of Chinese-owned digital television services in the SSA region is one of the crucial forces shaping the region's ongoing transition process to digital television. Participation of Chinese-owned businesses is evident in a series of substantial investment initiatives, as an independent licensed broadcaster of digital television services, or in a joint ownership arrangement with state-owned national broadcast services (Gagliardone & Geall, 2014). As a result, Chinese participation in the region's PayTV market has caused a major disruption to the market position of the South African-owned MultiChoice Africa. The presence of Chinese media investment was first witnessed in the SSA region through the diplomatic agreement between the Chinese government and several national governments on the need to support the DSO programme in Africa.

Furthermore, among several strategic initiatives to establish Chinese presence in the region's digital television market is the participation of Chinese-owned multinational media company, Star Communication Technology of China operating with the brand names StarSat or StarTimes. The StarTimes/StarSat broadcast operations in the region commenced in Rwanda and expanded to more than thirty African countries. According to research on the SSA digital TV market by London-based research firm, Digital TV Research, the total subscription base of the MultiChoice Africa had reached 11.61 million subscribers (from its satellite platform on DStv and DTT platform on GOtv) by the end of 2016 and was projected to reach about 17.66 million by 2022. In comparison, the Star television network subscription base was 4.18 million and projected to grow by 10.61 million by 2022. With its deepening penetration and the low-cost offering of its Pay TV digital television services, the Star television network is becoming a major competitive threat to the South African-owned MultiChoice group across the SSA region.

5.3 Global Trade Dynamics and the New Zealand Digital Television Market

As established in chapter two of this thesis, the regulatory policies of New Zealand digital television environment are characterized by a neoliberal free market system (Myllylahti & Hope, 2011). This prioritises market imperatives such as profit motives and the need to meet demand for quality and entertainment content from a small population. Under the neoliberal approach, as in the United States, the primary role of the New Zealand government is to structure, protect and defend the profit motives of private and public investment in the media market (R. W. McChesney, 2001). Consequently, this means state participation is minimal and the environment is structured to allow complete participation of both domestic and foreign capital. This neoliberal approach to its television environment has also defined the level of its participation in the global market. For instance, while a vast majority of countries at the Uruguay Round of GATT negotiations in the 1990s advocated in support of the PSB model and the need to allocate substantial quotas for local content, New Zealand was one of the western countries that opted for a complete liberalization of their television services (Aukett, 2002).

Broadly speaking, the General Agreement on Trade in Services (Puppis, 2008), which established the WTO, became the main trade instrument that further established foreign participation and ownership into the New Zealand TV environment. As previously noted in this chapter, the GATS agreement provided a well-defined system of participation and the specific terms of trade that allow each participating country to decide the specific sectors of their domestic market that are available for foreign investment. It also provided the necessary boundary conditions that must be respected and the limits to participation by all member countries. The option for New Zealand to allocate a minimum of six per cent of its broadcasting commission budget to television content for cultural promotion and assistance for its film commission were the only reservations made by the New Zealand government (Aukett, 2002). There were no limitations or any defined guidelines that defined the level of involvement of foreign investment or provisions for quota on local content.

Consequently, it is important to explore the existing relationship between the neoliberal ideology that prompted foreign investment and its influence on the direction of domestic regulatory policies of the New Zealand television environment. There are few studies on effect of the neoliberal free market system on the shifting dynamics of the television environment in New Zealand. However, the decision to open the New Zealand broadcasting environment up to global trade has its basis in distinctive policy directions (Aukett, 2002; Dunleavy, 2008). First, the restrictions on foreign ownership of television channels were lifted with amendment to the broadcasting act in 1991 so that TV3 which was initially established with local funding but later became bankrupt, could be purchased by Canadian broadcast company, CanWest. Also in 1991, a transmitting license was issued to foreign-owned media conglomerate and the first multichannel subscription network, Sky television. This foreign investment expanded the competitive market between these newly licensed TV broadcast services and the state-owned but commercial broadcaster, Television New Zealand (TVNZ).

On the distribution side, imported content accounted for the majority of New Zealand television content, because it was more affordable when compared with the production cost of local content (Dunleavy, 2008). An argument in support of local content and programming (Dunleavy, 2008, p. 799) is at odds with the neoliberal orthodoxy that drives the New Zealand broadcast market. This is because imported television content is more likely to fit appropriately with market imperatives and attract advertisement revenues (Howard-Williams, 2011). However, there have been times when New Zealand has made considerable investment in the production of local content that rated well and was commercially successful. In summary, the competitive television market framed television content and programming across all channels as necessarily “lucrative” and “strategic” (Dunleavy, 2008, p. 802).

As established in previous studies, regulation of the New Zealand television environment by successive governments moved in two directions. As evident in the TVNZ charter, the Labour-led government of 1999-2008 promoted a policy direction that shifted back towards a PSB model. However, the direction of this regulatory policy revealed an unbalanced interplay between the PSB model, which the Labour-led government portrayed as a central agenda of its administration, and profit motives that challenged the fundamentals of any PSB model. The succeeding National-led government was ideologically opposed to the government investment in the TVNZ and as a result, the TVNZ Charter was suspended in 2011 on the basis that it made no significant impact on the quality of public broadcasting it aims to accomplish. Consequently, the withdrawal of the TVNZ charter reduced the influence and involvement of the state in the business of television and the New Zealand television environment became once more clearly structured in the interests of neoliberal free market system.

The next section of this chapter investigates the degree of foreign participation and flow of foreign capital investment in the New Zealand television environment. As RQ1 asks, how has the relationship between nation states and intergovernmental organizations (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the digital television switchover processes of New Zealand and Nigeria? In New Zealand, this relationship is evident in the flow of foreign capital and participation into the domestic digital television market. The next section discusses the level of this foreign capital and participation in the domestic digital television market and how it affects the DSO process in New Zealand.

5.3.1 Foreign Investment in the New Zealand Digital Television Market.

Prior to the agreement of the global transition to digital television in 2006, New Zealand digital television broadcasts consisted simply of the Sky digital television network. It commenced analogue satellite broadcast services in New Zealand in 1990 as Sky Media Limited and had no competition in the PayTV market for many years. Sky television programming has relied on foreign content, and it acquired exclusive broadcast rights for major sports content such as the Champions League, the English Premier League and the Rugby League. Unlike other countries such as Australia and some European Countries where “anti-siphoning legislation” (Curtis, 2015) prevents the monopoly of transmission on key television content, the most in-demand sport programmes, particularly All Blacks test matches, are fully controlled and only aired by Sky television network (Scherer & Sam, 2012). The sale of broadcast rights to Sky was the mechanism by which Rugby, Cricket and Netball were able to become professional in New Zealand.

Apart from the market imperatives that defined the New Zealand broadcast environment, investment of foreign capital also contributed to the emergence of digital television services. During the era of its monopoly of digital television in New Zealand, Sky Media Limited was primarily foreign-owned. According to Figure 1 below, the annual report of the Sky (2005) Network Television Limited shows investments that include a 43.6 percent controlling stake owned by Rupert Murdoch's News Limited, and 11.11 percent stake owned by New Zealand company Todd communications, with the remainder divided between local and foreign investment companies. Before the commencement of the transition to digital television by the New Zealand government, digital television in the country was under the exclusive control of this largely foreign-owned media company.

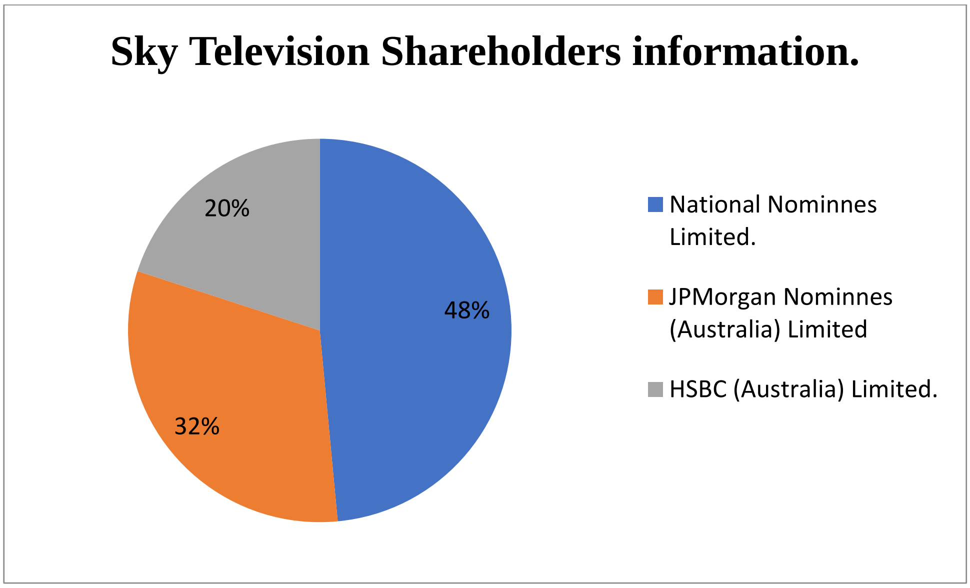

Figure 7. 1 A pictorial representation of major shareholders (2006-2012) in Sky Television Network Limited before the Going Digital campaign in September 2012. Data retrieved from the Sky Television Network Limited Annual Reports (2006-2012).

Prior to the transition to digital television in New Zealand, other major investments in the Sky Network Television Limited, according to the company's annual reports (2006-2012), can be traced to investment giants such as such as the Citibank, Citicorp, HSBC Banking group, Westpac Banking Corporation e.t.c. Before the public initiative towards a complete digital television in New Zealand, the foundation for a market-oriented digital television environment was prepared since the transformation of TVNZ from its role as a public broadcaster to a commercial broadcaster in 1989. As noted in chapter seven, the transition process to digital television (September 2012-December 2013) introduced an era of competitive open market between the new Freeview channels and the Sky Television Network. However, the ownership restructure of Sky Television Network, following the withdrawal of controlling stakes by Todd communications and Rupert Murdoch's News Corporation, resulted in a larger flow of global capital through investments in the New Zealand digital television environment. As illustrated in Figure 4 below, the New Zealand post-digital era is also a new era of ownership by global financial institutions such as JPMorgan Chase Bank and the Hong Kong and Shanghai Banking Corporation (HSBC). It is important to note that the Sky television network is also a listed company that is almost entirely owned by these international financial corporations, which makes it a tradable commodity.

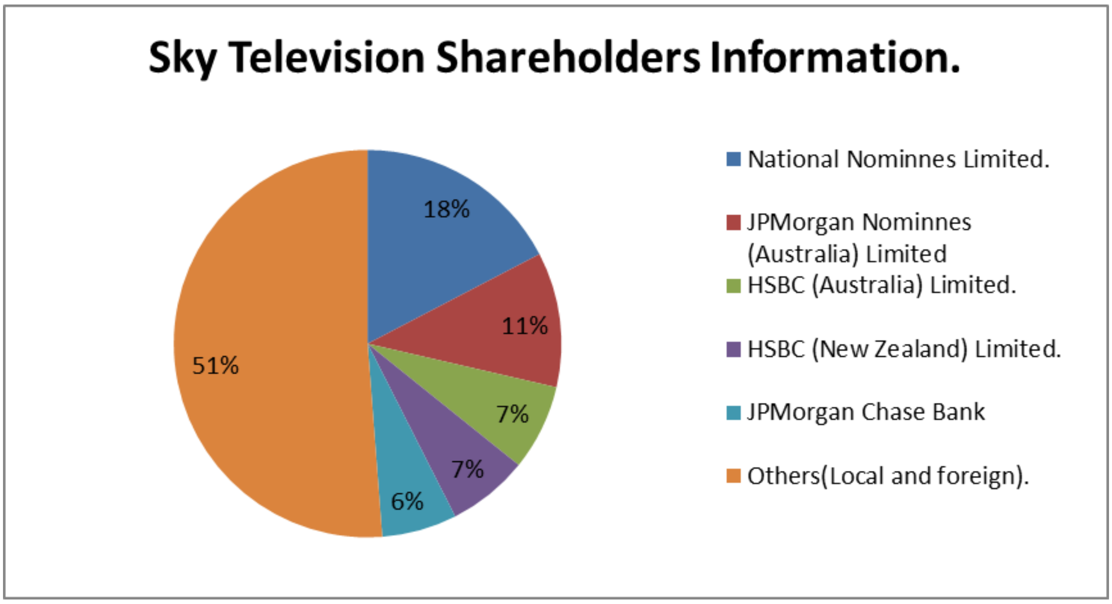

Figure 7. 2. A pictorial representation of major shareholders (2013) in Sky Television Network Limited during the Going Digital campaign in September 2012. Data retrieved from the Sky Television Network Limited Annual Reports (2013).

Apart from the foreign capital investment in the Sky television network, the auction of the released 700MHz frequency spectrum from the switchover process to digital television also benefitted mobile telecommunication companies with foreign capital. The purchase of these frequencies and associated infrastructure requires huge capital investment that is expensive for domestic companies. As illustrated in Table 3.0 below, three private companies were primarily involved in the purchase of the digital dividend frequencies, namely Telecom NZ Ltd, Two degrees mobile Ltd and Vodafone mobile NZ Ltd. A brief summary of the ownership structure of these companies helps to understand the degree of foreign capital investments.

Table 5. 1 700 MHz Auction on June 19, 2014: Notice of Provisional Results.

Bidder	**Lots purchased (MHz)**	**Frequency**	**Total bid Price (+GST)**
Telecom NZ Ltd.	Four (2x20MHz)	**703-723 MHz** **758-778 MHz**	**$158, 100, 000**
Two degrees mobile Ltd.	Two (2x10MHz)	**738-748 MHz** **793-803 MHz**	**$44, 000, 000**
Vodafone mobile NZ Ltd.	Three (2x15MHz)	**723-738 MHz** **778-793 MHz**	**$68, 000, 174**
Total	**Nine (2x45MHz)**	**-**	**$270, 100, 174**

Note. Retrieved from the webpage of the Radio Spectrum Management, Ministry of Business, Innovation and Environment.

I. Telecom Corporation of New Zealand

Telecom Corporation was originally a state-owned company but purchased in 1990 by two American corporations, Ameritech and Bell Atlantic following the deregulation of the New Zealand economy of the late 1980s. The transfer of ownership from the New Zealand government to these American-owned companies initiated the flow of foreign capital into the New Zealand telecommunication market. The mobile telecommunication giant was later rebranded as Spark New

Zealand in 2014. As indicated in Figure 5 and 6 below, the annual reports (Ribadeneira-Ramirez et al., 2016) of Spark New Zealand revealed prominent investments which can also be traced to global financial institutions such as JPMorgan Chase Bank, Citibank, BNB Paribas, the HSBC e.t.c. Also, the annual reports of Sky Television Limited (Sky, 2001, 2002) also revealed about 12 percent stakes ownership by Telecom New Zealand.

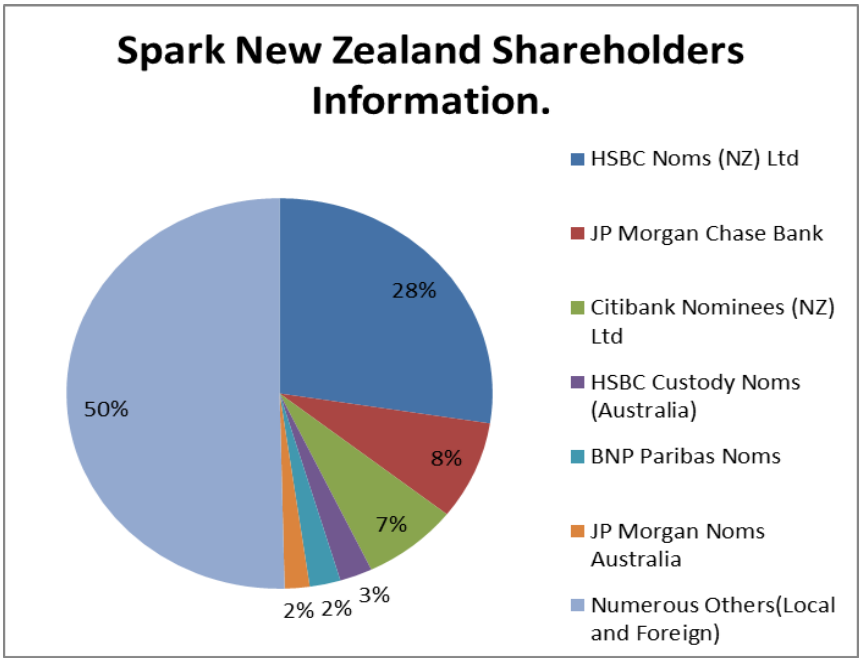

Figure 7. 3. A pictorial representation of the major shareholders (2015) in Spark New Zealand after the Going Digital campaign in September 2012. Data retrieved from the Spark New Zealand Annual Reports (2015).

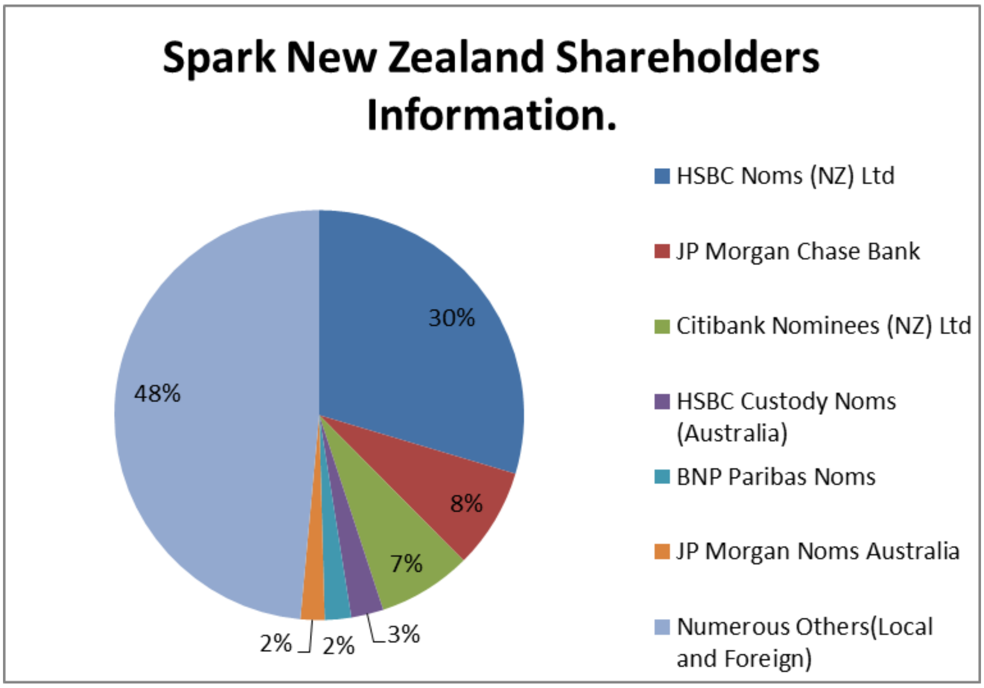

Figure 7. 4. A pictorial representation of the major shareholders (2016) in Spark New Zealand after the Going Digital campaign in September 2012. Data retrieved from the Spark New Zealand Annual Reports (2016).

II. Vodafone New Zealand

Vodafone New Zealand is a subsidiary of the British multinational telecommunication company, Vodafone Group plc. The New Zealand operation commenced in 1998 after the acquisition of BellSouth New Zealand's operations and has risen to be the New Zealand largest mobile phone operator with a base of over two million customers (Vodafone, 2016). Recently, the shareholders of Sky television network approved a merger with Vodafone, a decision that, if it had been approved by the Commerce Commission, would have merged the New Zealand's largest mobile operator and the largest digital television services. Due to the ongoing competition between Sky television services and internet television services such as Netflix, the merger was described as a strategic attempt to maintain its dominance of the New Zealand digital television market (T Pullar-Strecker, 2016).

However, the Commerce commission rejected this merger proposal on the basis that it would minimise competition in the internet broadband market (CCNZ, 2016). The two major competitors of Vodafone in the internet broadband market, Spark New Zealand and Two degrees mobile "strongly objected" to this merger between the two giant companies on the grounds that it would be difficult to compete with the giant merged company (T. Pullar-Strecker, 2016). Before the proposed merger, Sky Television owned an exclusive monopoly of the broadcast rights for Rugby, a premium sport content and the Vodafone New Zealand is the largest mobile phone operator in New Zealand. A merger of these two foreign-owned conglomerates with a 'deep pocket' would define the direction of competition in the era of digital convergence. If the merger between the companies had succeeded, the new company was expected to value around three billion dollars with Britain's Vodafone holding 51 percent in ownership of the joint company (T. Pullar-Strecker, 2016; Ryan, 2016).

III. Two degrees mobile Ltd

Arising from a claim made to the Waitangi Tribunal in 1999, Two Degrees Mobile Limited (TDML) won access into the 3G spectrum with initial capital investment from three main private investors: Tex Edwards, the pan- Māori trust Hautaki and the South African company Econet Wireless group (2Degrees, 2016). Before it commenced operations, the New Zealand mobile telephony operated as a complete duopoly market between Telecom and Vodafone.

At the time of the transition to digital television, the major foreign investor in Two Degrees was an American company, Trilogy International Partners. Trilogy International Partners initially acquired 26 percent of Two Degrees in 2008 and on commencing commercial services in 2009, it increased its ownership stake to 52 percent and later to 62.5 percent stakes (Trilogy, 2013). The other major investor was the European Investment company, Communication Venture Partners, with 28 per cent and the pan-Maori trust, Hautaki with 10.3 percent which was later reduced to 7.4 percent after a transfer of some of its stake to its American major shareholder, Trilogy International Partners (T. Pullar-Strecker, 2015).

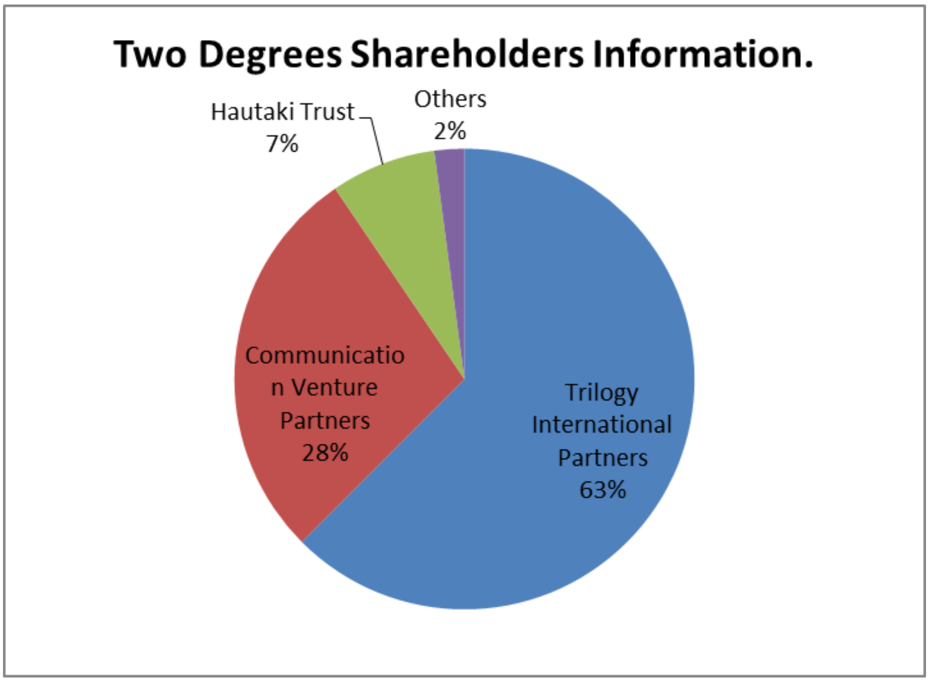

Figure 7. 5. A pictorial representation of the major shareholders (2016) in Two Degrees Mobile Limited after the Going Digital campaign in September 2012.

This brief summary of the ownership structure supports the argument that investments in all of these companies are globally tradable commodities in themselves, and this means the purchased frequencies from the DSO process are also drawn into these global flows of capital. From the viewpoint of an American campaign for a global free market, Petras and Veltmeyer (2001, p. 140) have argued that the economic concept of neoliberal free market is a renewed form of "aggressive capitalism". The post-digital market in New Zealand revealed a further concentration of global capital investments in New Zealand which were necessitated by market policies that depicts the neoliberal orthodoxy.

Against this backdrop, literature on the effect of conglomeration of the mediascape (A. Arsenault & M. Castells, 2008; Carlson & Berkowitz, 2014; Kirkland, 2007; McKnight, 2010) addresses the dual nature of media conglomerates existing as both media and political power, through their wide network operations on a global scale and their ability to influence the direction of policies and approach to governance of the global media market. For instance, in the context of the neoliberal free market system, McKnight (2010) highlights the intertwined relationship between the profit motives of News Corporation and its influence on the political culture of the Anglosphere. The political power of media conglomerates is necessitated by the reliance of political institutions on media platforms to promote their policies to the populace. The campaign for a neoliberal free trade market in the global mediascape was also prompted by this formation of political and media power.

Apart from the influence of these media conglomerates, another attribute of the neoliberal free market system in the New Zealand digital television environment is commodification. This is also evident in the withdrawal of funding of the only public-funded, public service, digital channels, TVNZ6 and TVNZ7 in 2011 and their subsequent replacement with commercial channels, as discussed in Chapter seven of the thesis. Reducing public service broadcasting means public opinion on issues on collective importance is neutralized as commodities and becomes predominantly shaped by market necessities (Christophers, 2014).

Based on these attributes of the neoliberal free market in the New Zealand digital television environment, it is apparent that the global initiative of the DSO process further established a media sphere that is predominantly driven by global capital investments. The analysis of the New Zealand digital television market identifies the possible outcomes of the neoliberal free market system embedded in the global agreement towards the transition to digital television. The study argues that the neoliberal logic of the digital television environment as evidenced in the concentration of global capital suggests that the global initiative of the DSO process further establishes a market-driven global media sphere. The next two chapters presents the effect of this neoliberal orthodoxy on the implementation of the global agreement on the DSO process in Nigeria and then New Zealand.

Chapter Six

THE DIGITAL SWITCHOVER PROCESS IN NIGERIA

The global digital switchover process has brought a shift from the nation state as the centre of governance and regulation of media, to a global regulatory framework with an influential power relation between corporate media conglomerates and the regulatory institutions. As noted in chapter three, the increasing integration and interconnectedness of the global media environment has been prompted by aspects of the neoliberal free market system including the shifting dynamics of international trade, expansion of capitalism, technological advancements and continuous reforms of international regulatory framework and other factors that typify the trends of modern globalization. For Nigeria, Ojebode (as cited in Ojebuyi, 2011, p. 317) notes that the path to a neoliberal free market system "was not a policy option but a policy imposition". On the positive side, Adejunmobi (2015, pp. 33-36) emphasizes that the global acceptance of the "New Nollywood" films have been promoted by the neoliberal orthodoxy.

The introduction of neoliberal free market system to the policies and governance of the media environment in developing countries (McChesney & Schiller, 2003) has been necessitated by institutional structures, in particular the World Trade Organization (WTO) and the Bretton Woods institutions (International Monetary Fund and the World Bank). As outlined in the conceptual analysis in chapter three, these international institutions promoted the dominant neoliberal logic in the Nigerian television environment. Wallsten (as cited in Harris, 2016) notes that this involved various strategies, including privatization of state ownership and introduction of private broadcasters across the broadcasting sector. However, there are a plurality of approaches to the governance of the Nigerian television environment by the state that display neoliberal policies and ideologies. The first approach was the deregulation of the Nigerian television environment, a process that was necessitated by the institutional reforms of the IMF and World Bank. The attributes of neoliberal logic were also displayed in the licensing of private-owned television services, which brought an era of market competition and the participation of South African-owned media conglomerate, MultiChoice Africa. The second approach was the participation of the Nigerian television environment in the global DSO process, as necessitated by the ITU. This chapter of the thesis focuses on the role of the neoliberal free market in the ongoing DSO process in Nigeria.

Using a critique of the neoliberal free market system, this chapter specifically addresses research questions two and three: How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in Nigeria? And how effectively was the global agreement on the DSO process implemented in Nigeria? The chapter critiques the complex intersection of regulatory framework, state interventions and the inward flow of foreign capital investments shaping the ongoing transition to Digital Terrestrial Television (DTT) in Nigeria. It sets out the effect of the complex state-market relationship and how it affects the participation of the two major companies in the contemporary digital television market economy –South African-owned MultiChoice and Chinese-owned StarTimes Nigeria. The chapter examines the regulatory and governance approach of the Nigerian state, and the effect of various state interventions on the complex and slow approach to implementing the global agreement of the DSO process in Nigeria.

This analysis of the DSO process in Nigeria views the global expansion of Chinese state capitalism as a counterbalance to the Neoliberal Orthodoxy that drives the global digital television market. The effect of Chinese state capitalism has been evident in the continuous expansion of the state-sponsored Chinese media conglomerate, Star Communication of China, across the entire African television landscape. Specifically, in the case of the Nigerian television environment, the study argues that the active relationship between China and the Nigerian state, negates a balanced and favourable market competition in the Nigerian PayTV market and is a major setback to implementing the digital migration. This chapter analyses Chinese state capitalism in Africa and examines its nexus with the neoliberal free market system on the shifting digital television landscape in Nigeria.

The chapter also draws on indepth interviews to detail the experience and participation of some broadcast organizations in the Nigerian DSO process. It uses communication policy analysis to review the strategic path of Chinese state capitalism in Africa, particularly the various Chinese investments and their effect on the direction of governance and policy in the Nigerian television environment. The chapter also reviews the report of the Presidential Advisory Committee (Zamblé et al.) and terms of reference of the White paper. These two policy documents set out the approach to implementing the DSO process in Nigeria. The analysis begins by reviewing the competitive shift in the Nigerian PayTV market necessitated by the investments of the Chinese state in the Nigerian DSO process. It then details the Nigerian digital television environment prior to the commencement of the DSO process. Finally, the chapter analyses the current state of the ongoing DSO process in Nigeria.

6.1 The Global Emergence of Chinese State Capitalism

As identified in chapter five, there are two possible reasons for the economic transformation of China from a third-world country to a major economic and political power. The first is attributed to the enormous size of its bilateral and multilateral trade relationships (Barris, 2013; Jijun & Conglai, 2017; Kastner, 2016; Qiu & Zhan, 2016). The second centres on the outstretched influence of its soft power‒the ability to make others desire an anticipated outcome on a global scale (Joseph S. Nye, 2008, p. 95). The nature of Beijing's soft power, as evident in the global projection of its diplomatic interests, cultural and political values, has created a major disruption to the established neoliberal orthodoxy (Breslin, 2013; Cho & Jeong, 2008; Dugué-Nevers, 2017; Ghosal Singh, 2016; Joseph S Nye, 2005; Joseph S. Nye, 2012).

Apart from soft power, there are other factors that account for the rise of China and the transformation of its market economy from complete ownership by the state to a state-market economy. These include the strategies and nature of Chinese state capitalism, which is defined by

Xing and Shaw (2013, p. 95) as “a distinct form of state capitalism shaped and determined by its internal political reality and characterized by the active state intervention and corporative state-business relations”. The ideology of Chinese state capitalism is characterized by its dual nature (Xing and Shaw 2013, p. 89). On the one side, it encompasses attributes of free market capitalism such as market competition, free enterprise, property rights and capital accumulation. On the other, it is characterized by the control and backing of the Chinese state, the Communist Party of China.

The effect of Chinese state capitalism has been evident in the continuous rise of Chinese state-sponsored corporations and capital investments, and forms a counterbalance to the long-held dominance of corporations and financial institutions backed by western free market capitalism. The continuous expansion of Chinese state capitalism has exposed the weakness and confines of the liberal free market system. The bankruptcy and bailouts of major capital corporations such as the Lehman Brothers and American International Group (AIG), and acquisitions of dominant financial institutions such as Bear Stearns by JP Morgan Chase, Merrill Lynch and Countrywide Financial by Bank of America, attributed to the global economic crisis in 2008, have prompted a challenge to neoliberal free market capitalism. According to an article by *The Economist* (2012), ‘The Visible Hand’, “the crisis of liberal capitalism has been rendered more serious by the rise of a potent alternative: state capitalism, which tries to meld the powers of the state with the powers of capitalism”.

The global mechanism for the expansion of Chinese state capitalism centres on the “Going Out” diplomatic and policy strategy of the Chinese state. The “Going Out” policy strategy was devised to reduce the exposure of the export-driven growth of the Chinese market economy to any sudden market shocks by encouraging the global expansion of Chinese-owned enterprises beyond the domestic market economy (Yelery, 2014). In response to the Asian financial crisis in 1997, the Chinese state introduced a Five-Year Policy Strategy aimed to address the challenge of over-production within the Chinese market economy in 2001. According to Gu, Zhang, Vaz, and Mukwereza (2016), the “Going Out” policy entails various support and sponsorship strategies (such as provision of credit and loan facilities, special tax incentives, and favourable import and export regime), designed to enable international market expansion for a number of selected state-owned and private enterprises.

In addition to these strategies to sponsor the international expansion of selected enterprises, the Chinese state also introduced a state-owned investment portfolio known as the "Sovereign Wealth Fund" (Xing & Shaw, 2013). As Braunstein (2009, p. iv) defines it, the Sovereign Wealth Fund comprises "state related pools of capital which derive most of their capital from external resources, and reinvest a large part of this capital internationally." As part of the long term strategic investment plan of the Chinese state, the sovereign wealth fund from its huge foreign reserve (Thomas & Chen, 2011) includes two investment portfolios: China Investment Corporation (CIC), and the State Administration of Foreign Exchange (Thomas & Chen, 2011) Investment Company (Friedrichs & Friedrichs) (Braunstein, 2009; Bu, 2010; Thomas & Chen, 2011; Wee, 2017; M. Zhang & He, 2009). Among other reasons for this strategic investment, the Chinese state considered that a sufficient foreign reserve would insulate the Chinese currency from global market disruption and also protect its capital markets from possible foreign invasion in the near future (Thomas & Chen, 2011).

However, the size of this strategic investment portfolio has stimulated concerns and is still a focus of ongoing political debates (Braunstein, 2009; Bu, 2010; Cai & Clacher, 2009; Dixon & Ashby, 2012; Friedrich Wu Arifin, 2008; Thomas & Chen, 2011; Wee, 2017; M. Zhang & He, 2009). Likewise, there have been concerns about the rising influence and implications of Chinese investment especially on the stability of the global financial and capital market (Braunstein, 2009; Wee, 2017). For instance, the large holdings of Chinese investments in the United States security market could be used as a concession in future political negotiations, or should the Chinese government decide to liquidate these investments, it could cause a severe fall of the US dollar (Friedrich Wu Arifin, 2008, pp. 38-39).

In response to these concerns, various countries have adopted a protectionist policy stance against Chinese investments. In an interview with CNBC, the President of the CIC, Tu Guangshao, stated that "as CIC and China make more foreign investments, we're seeing the rise of protectionism in some countries and regions, be it the U.S. or Europe. They're making some protectionist moves, some specifically targeting China" (Ming & Lo, 2018). For instance, in order to prevent Chinese investments and protect national interests, the French state made massive investments in some significant national corporations (Cai & Clacher, 2009). With the emergence of the Chinese sovereign wealth fund, a congressional report of the United States government suggested certain restrictions on the extent of possible Chinese investment and the need for regular auditing and financial transparency of this investment portfolio (Martin, 2010). Also, the International Monetary Fund (IMF) and the Organisation for Economic Co-operation and Development (OECD) have pressed for more transparency and a global governance regime for sovereign wealth funds (Cai & Clacher, 2009). As with most cases, the nature and scope of the rising influence of China and its investments on the African continent has attracted several scholarly debates (Chan, 2013; Cheru, Obi, & ebrary, 2010; Mohan, 2013; Rotberg, 2008; Tull, 2006). The volume and policy conditions of the various Chinese investment funds and credit facilities in the African economy has been concealed and the details of these investments have not been made available for public scrutiny (Samy, 2010).

6.1.1 Chinese Investments and the African Media Landscape

The dynamics of the digital television market of the SSA region, as understood more broadly, are largely subject to the complex intersection of regulatory framework, state interventions, and also the flow of Chinese capital investments, which is a by-product of the expanding Africa-China relationship. This flow of Chinese capital has been recently revealed in various bilateral partnerships and a concessional lending framework between China and several African states. The increased presence and influence of China in the political and economic landscape of the African continent arises from the third

Forum of China and Africa Cooperation (FOCAC) in November 2006. As (Ghiglieri & Waidner, 2016) frames it, "of key importance within FOCAC's institutional infrastructure is the China–Africa Development Fund (CAD Fund), set-up in 2007 to encourage and support Chinese corporate investment in Africa".

China's rising influence on the African media landscape has also been attributed to a shift in Beijing's foreign policies and global investment strategies (Tull, 2006). As L. Zhang (2010) notes, the overall perception of China's identity from western news media representation has been centred on economic, business, finance and trade issues. Apart from several challenges associated with this Chinese economic transformation and global influence, the global perception of its national identity has been characterized as a hard rise of cultural and economic influence (Chu, 2014, pp. 257-258; Kang, 2012; Wang, 2008). Understanding the crucial role of its national identity on the global stage, the Communist Party of China (CCP) developed a long-term strategic management plan that represents Chinese influence and public diplomacy as a peaceful process with genuine interests of investments in other countries, in a manner that would be globally acceptable (Barr, 2012; Courmont, 2013; Servaes, 2016). As noted in chapter five, in mediating its soft power, part of China's long-term strategy is the global expansion of its propaganda machinery into the African mediaspace (Bailard, 2016; Franks & Ribet, 2009; Leslie, 2016). The expansion strategy is also illustrated by the production of multilingual varieties of Chinese media content, and increasing media investments beyond China (Bailard, 2016; Franks & Ribet, 2009; Leslie, 2016). In Africa this includes the presence of prominent state-controlled media establishments such as Xinhua News Agency, China Radio International, Central China Television (CCTV) and China Daily (Zhang et al., 2016).

Chinese media investments in the SSA region have become more visible through the diplomatic agreement between the Chinese government and several national governments to support the DSO Programme in Africa. Among several strategic initiatives to establish Chinese presence in the region's digital television market is the participation of Chinese-owned multinational media company, Star

Communication Technology of China, operating under brand names either as StarSat or StarTimes. The StarTimes/StarSat broadcast operations in the region began in Rwanda and has expanded to more than thirty African countries. With its deepening penetration and the low-cost of its PayTV services, the Star television network has become a major competitive threat to the long-held market dominance of the South African-owned MultiChoice group across the SSA region. According to research by London-based firm Digital TV Research, the total subscription base of MultiChoice Africa had reached 11.61 million subscribers (from its satellite platform on DStv and DTT platform on GOtv) by the end of 2016 and was projected to reach about 17.66 million by 2022. In comparison, the Star television network subscription base was 4.18 million and projected to grow by 10.61 million by 2022. This projected growth of the two major television services reveals the close competition and control of the region's PayTV market.

Across the African television landscape, the expansion of Chinese state capitalism is also evident in ongoing partnerships between the Chinese state-sponsored television establishments and several African state-owned television enterprises. These investments have been justified under the guise of helping Africa implement the DSO process. Without stating the strategic significance of these investments in the African television landscape, the Chinese state has always maintained that the presence of dominant Chinese-owned television conglomerates is to help the DSO process in Africa.

Nonetheless, these television conglomerates and their huge investment portfolios, particularly the StarTimes are sponsored by the Chinese state. According to a statement by the Chairman of the China Africa Development Fund, Chi Jianxin (as reported on the website of the Ministry of Commerce of the People's Republic of China), "the China Development Bank has offered $400 million in loans for the project and another $400-million loan is expected to go to it in the near future. The project [Digitalization of TV in African countries] was begun by the private media group StarTimes, which has its headquarters in Beijing" (MOFCOM, 2012). This investment capital is accessible by StarTimes through the China Africa Development Fund and China Development Bank. In addition to this investment capital, the Chinese state is also expected to make some speculative direct investments, soft and commercial loans of US$1 trillion, in Africa before 2025 (Gu et al., 2016). Investment funds are also accessible to state-sponsored establishments, such as the StarTimes, through the Exim Bank of China and other state-owned banks. To a large extent, as previously noted, investment capital in the African mediaspace has been prompted through the action plan of the Forum on China-Africa Cooperation (FOCAC) and many African states have openly welcomed these investments in the DSO process (MFA, 2018).

Consequently, the expansion and participation of the state-sponsored StarTimes network in the SSA region has become a crucial force shaping the region's ongoing transition to digital television and a major disruption to balanced market competition in the region's PayTV market. Participation of Chinese-owned businesses, such as StarTimes, is evident in a series of substantial investment initiatives, either as an independent licensed broadcaster of digital television services or in a joint ownership arrangement with state-owned broadcast services (Gagliardone & Geall, 2014).

6.2 The State of Nigerian Television prior to the Digital Switchover Process

Prior to the transition to digital television in Nigeria in 2008, the digital television environment operated as a pseudo-free market system. Initially, the direction of Nigerian digital television was shaped by the market monopoly of South African-owned MultiChoice Nigeria, owners of Digital Satellite Television (DStv). In 1994, DStv, operating as a joint venture between MultiChoice Nigeria and MultiChoice South Africa, became the first foreign-owned broadcaster and PayTV service provider to be issued an operational licence in Nigeria. The critical and strategic investment of MultiChoice Africa was made possible by Apartheid capitalism but its expansion beyond South Africa was advanced by the neoliberal free market orthodoxy. As a result of its enormous financial investment in, and influence on, the culture and economy of many countries in sub-Saharan Africa, South African-owned MultiChoice Africa was the primary determinant factor in the direction of the Nigerian digital television market. As Taylor (2010, p. 73) puts it, “there is little doubt that the decisions made in South Africa will have strong implications” on the digital television environment of many African countries.

However, this market monopoly in Nigerian digital television does not appear to have been readily welcomed by the Nigerian populace and the national government. On the side of the populace, there have been complaints about the costly subscription fees that limit access to digital television service to the elites. This concern was echoed in a statement by a former Minister of Communications, Mr. Frank Nweke (Jnr) who described the market monopoly of MultiChoice Africa as “ridiculous, exploitative and unacceptable” and claimed the national government was prepared to demonstrate its commitment and support to indigenous broadcasters who are prepared to challenge this market dominance (Adekunle, 2007). In spite of the complaints about the high subscription rates of digital television services by the Nigerian consumers, the regulator of Nigerian television was legally restrained from responding due to the National Broadcasting Commission Act that pledges to ensure openness and competition in the Nigerian broadcast industry.

The indigenous-owned HiTV was the first major competitor in the Nigerian Pay TV market. This was enabled by acquiring the broadcast rights to the English Premier League (EPL), previously held by DStv. However, as detailed in chapter five, HiTV’s competitive advantage in the Nigerian PayTV market only lasted a short time due to its financial inability to meet the payment schedule to the EPL.

6.1.1 The Participation of StarTimes in the Nigerian Digital Television Market

The StarTimes television network commenced its Nigerian digital television operation in July 2010, during the formative years of the Nigerian DSO process. During this time, there was no clear direction or implementation plan from the regulatory authority. StarTimes was licensed to operate a subscription-based digital terrestrial television service, in a joint-ownership venture with the state-controlled national television service, the Nigerian Television Authority (NTA).

As a result of the entry and enormous capital investment of the StarTimes, there was a shift in the competition of the Nigerian PayTV market. Against the established market leadership of DStv, the StarTimes network was soon able to break even and it became one of the dominant broadcasters in Nigerian digital terrestrial television within a very short time. According to the Chief Operations Officer of StarTimes Nigeria, Tunde Aina, the success of the StarTimes television network in the Nigerian PayTV market can be attributed to the affordability of its services and the introduction of content in various indigenous languages that cut across the main ethnic concentration. While the MultiChoice-owned DStv enjoyed market leadership of the Nigerian digital television market through its subscription-based satellite television network, the digital terrestrial television network in Nigeria was a monopoly exclusively controlled by the StarTimes-NTA venture.

A prominent effect of Chinese capital investment in the Nigerian digital television market was the advent of intensive market competition between Chinese-owned StarTimes and South African-owned MultiChoice Nigeria. For the first time, the long-held market leadership of DStv in the Nigerian digital television market was under significant threat and the trend of market competition became defined by these two dominant broadcast services. This stiff market competition between StarTimes and DStv in the Nigerian PayTV market also reflects the nature of the PayTV market across the SSA region.

The control and market leadership of the Nigerian digital television market is crucial in the SSA region for several reasons. On the cultural side, being the most populous country in Africa, Nigerian cultural richness has remained at the centre of cultural ingenuity in the SSA region. The Nigerian film industry, Nollywood, is the largest in Africa and second largest in the World. On the economic side, the Nigerian economy is the largest economy in Africa, exceeding the South African economy, and its population is about a quarter of the sub-Saharan population (Adebajo & Landsberg, 2003; Hayes, 2013; Soludo, 2004; Zafar, 2007). For MultiChoice Africa, the Nigerian PayTV market is its largest market outside South Africa. Literally, this means the enormous market size of Nigerian PayTV is a bargaining power and the hub of market competition for the entire SSA region (Johnstone, 2015).

In response to the stiff market competition with the StarTimes broadcast operation, MultiChoice Africa introduced its own brand of digital terrestrial television service, the GOtv platform, in September 2011. Similar to StarTimes, GOtv is a low-cost brand launched on the advanced DVB-T2 broadcast standard that is aimed at targeting the long-ignored mass market.

6.3 Analysis of the Digital Switchover Process in Nigeria

Prior to the decision of the national government to embark on the DSO process, the Nigerian digital television environment can be described as primarily driven by market imperatives with minimal involvement by the state, as illustrated by the proliferation of foreign and domestic private investment. The DSO process offered a renewed opportunity for the national government to review its role in the Nigerian television environment. It appears the national government wanted a stronger role in charting the direction of the Nigerian digital television beyond the market imperatives and deep economic interests of the private digital television services.

In response to the global agreement taken by the International Telecommunications Union World Radiocommunication Conference in 2007, the Federal Government commenced the DSO process in 2008 following approval by then President, Umaru Musa Yar'Adua. Based on the advice of the National Broadcasting Commission (NBC), as noted by a director of the NBC, the regulator of the Nigerian broadcast industry, a Presidential Advisory Committee (Zamblé et al.) was set up in October, 2008 and assigned the responsibility of designing and recommending an implementation framework for the DSO process in Nigeria (Friday Ukwela, personal communication, November 29, 2017). According to Endong (2015, p. 23), the responsibilities of the PAC include:

i. designing a policy on transition using best practices,

ii. recommending appropriate legislation, regulatory and licensing framework for digital broadcasting,
iii. recommending government input and subsidy,
iv. recommending what happens to the freed spectrum, discarded analogue equipment and television boxes,
v. discussing the environmental impact of such discard and
vi. considering consumer education.

The composition of the PAC predominantly comprised representatives of the major state-controlled institutions participating in the Nigerian broadcast industry, such as the National Broadcasting Corporation, National Television Authority (NTA), Federal Radio Corporation of Nigeria (FRCN), National Film and Video Census Board, Ministry of Science and Technology, Ministry of Environment and the Consumer Protection Council. Prior to the commencement of the DSO process, most of the state-controlled broadcast services operated on the analogue spectrum and their operations were largely structured on the PSB model. Due to the heavy financial investment required for digital broadcast operations and a digital television terrain that is primarily driven by market imperatives, the transition of state-owned broadcast services could not have been possible without the involvement of the national government.

Unlike the inclusive approach to the DSO process by successful countries, such as New Zealand, the United States and China, that has involved coordinated responses of the market, state and the society at large, this thesis finds that the Nigerian approach to DSO appears to be predominantly driven by the Federal Government. Despite their dominance and capital investments, the established media conglomerates in Nigerian digital terrestrial television (DTT) were excluded from the formative stage of the Nigerian DSO process. The national interest seems to have been framed by the projected benefits of the DSO process to the Nigerian economy. Through its regulatory authority, the National Broadcasting Commission (NBC), the Nigerian government benefitted enormously from the DSO process through revenue collection from new operational licences for signal distributors, sale of the previous analogue spectrum, job creation and streams of income through the collection of entertainment tax. According to a speech by the Director General of the NBC, Mallam Kawu (2018), the Nigerian DSO process benefitted the Federal Government in the following areas:

i. Lease of Spectrum: N35 Billion

ii. Signal Distributor License Fee: N650million * 2 = N 1.3billion

iii. STB Manufacturers Authorization Fee: N50Million* 7 = N 350Million

iv. Content Aggregator License Fee: N150 Million

v. Total expected revenue from TV License Fee: N39 Billion per annum increasing to N333Billion per annum by 2030

These figures suggest that the national priorities were financial rather than growing a market or intervening in the existing complexities between the established media conglomerates shaping the trend of the Nigerian digital television market.

The report of the PAC, which was expected to make recommendations on the regulatory framework, broadcasting standards and the modus operandi of the DSO programme in Nigeria, was submitted to the Federal Government in June 2009. The report remains unavailable for public scrutiny, but according to the media policy briefing by the Nigeria Community Radio Coalition (NCRC, n.d), the PAC recommended;

i. a new model of broadcasting that separates the function of the Broadcast Signal Distributor and the Broadcast Content Provider,

ii. an ownership structure for the Broadcast Signal Distribution service based on factors that include national security, heavy financial requirements, service efficiency and the need to achieve the DSO process within the scheduled time,

iii. to restructure the licensing framework into two categories of licenses: a Broadcasting Content License and a Broadcast Distribution License,

iv. to redefine the position of the public broadcaster, as a social institution in the face of market imperatives.

According to Friday Ukwela (personal communication, November 29, 2017), the Presidential Advisory Committee report recommended setting up a Digital Transition Implementation Team (DigiTeam, n.d) and a deadline of June 17, 2012 for a complete switch-off of all analogue television transmitters in the country. In an address delivered at the opening of the eighth International Conference of Africa Broadcasters (Africast) in 2010, the President declared the government's intention to issue a white paper, based on the recommendation of the PAC, on the path to the digital television transition in Nigeria (NCRC, n.d).

On the need to establish a legal framework for the DSO process in Nigeria, the President promised a bill that would address the issues and concerns on regulations and policies of the emerging digital television environment. Apart from addressing some of the issues raised by the PAC, the prospective bill was anticipated to serve as a replacement for the legal provisions on Broadcast regulations in Nigeria according to the NBC Decree No. 38 of 1992 (later amended by Decree No. 55 of 1999). However, the pledged legal framework for the Nigerian television environment in the wake of the digital transition is yet to be released. For instance, splitting digital television broadcasters into digital content producers and signal distributors, decoder specifications, licence duration in the digital era, the roles of all participating players, and the need to review the regulations on content quota are crucial issues that are not yet addressed by the regulations.

Due to the capital intensive nature of the DSO process, Nyiko Shiburi (personal communication, November, 25, 2017) argued that it is important that any proposed regulation be “pro-investment and progressive”. However, the position of the NBC on the possibility of a legal framework for the Nigerian digital television landscape suggests that the status-quo of regulation will be maintained, at least for now. On the need for a possible amendment of the present regulatory framework, the director of Engineering and Technology for the National Broadcasting Commission observes that:

> Good enough for the Act [Act of the National assembly 55 of 1999], it was technology neutral. There was no mention of analogue or digital in the Act, so what is there covers any form of broadcasting whether it is digital or analogue. […] So even if there is another technology tomorrow, the Act still covers it because it doesn’t talk about whether it is analogue or digital or terrestrial, it just says any form of broadcasting. Along the line, there were some things that need to be put into the Act because it didn’t talk about. For example, the splitting of the broadcast ecosystem into content providers and signal distributors was not envisaged in the Act. Considering the duration of the licences, there was a need to amend [the Act].
>
> (Friday Ukwela, personal communication, November 29, 2017)

In about 2012, three years after the submission of the Presidential Advisory Committee (Zamblé et al.) report there was no significant action recorded, or any established position taken on the implementation of the DSO process by the Federal government. In those three years, the NBC organized a series of seminars and workshops on the DSO process and also focussed its regulatory oversight on the private broadcasters that dominated the Nigerian digital television terrain. It became apparent to analysts and stakeholders of the Nigerian broadcast industry that the political will required to drive the Nigerian DSO process was lacking. As a result, Nigeria missed the June 17, 2012 deadline recommended by the Presidential Advisory Committee.

6.2.1 The White Paper and the Digital Implementation Committee

The Federal Government, through the Federal Executive Council (FEC), published a white paper based on the recommendations of the PAC in April, 2012 (Akintaro, n.d). The white paper is a regulatory document that provides the framework on the implementation and scope of the Nigerian DSO Programme (Friday Ukwela personal communication, November 29, 2017). Before the publication of the white paper, the NBC had licenced two DTT service providers, StarTimes, which pioneered DTT services in 2010, and GOtv, which commenced operations in October 2011. The arrival of the white paper, which appears to be the first intervention by the Federal Government, disrupted the organized pattern of the Nigerian digital television terrain. For instance, according to the provisions of the white paper, the licencing regime and distribution of functions of digital television broadcasting are divided between Content providers and Broadcast signal distributors, and no broadcaster is expected to be issued both types of license simultaneously. This distribution of functions is completely different from the terms of the operational licence issued to the StarTimes and MultiChoice.

However, the NBC maintained that there was no DTT services in Nigeria at the time the Presidential Advisory Committee was inaugurated and as a result, there was no need to specifically define the role of these established broadcasters of DTT services in Nigeria (Friday Ukwela, personal communication, November 29, 2017). Thus, it appears that there is no harmonized framework between the provisions of the white paper, as released by the Federal Government, and the previous decision of the NBC to issue operational licences to established broadcasters like StarTimes and GOtv with provisions to operate as both content providers and signal distributors simultaneously. According to the Chief Operations Officer of StarTimes Nigeria:

> Unfortunately, by the time the white paper was [published], it was already obsolete. By the time the white paper was approved in 2012, StarTimes had been launched and DStv also came up with their own DTT services which they called GOtv. The White paper was completely silent on the role of PayTV operators in the digital terrestrial television environment. As a result, there

has been so many distortions in the whole ecosystem because so many things that were not envisaged in the White Paper are now big issues today.

(Tunde Aina, personal communication, November 15, 2017).

Subsequently, the implementation team (DigiTeam, n.d), consisting of seventeen members, was inaugurated in December, 2012 and a transition completion deadline of June 17, 2015 was announced. Among the existing digital television broadcast services, the composition of the DigiTeam involves a representative of the NTA-StarTimes venture, but the terms of reference of the white paper (DigiTeam, n.d) ignored the role and participation of the established private broadcasters. However, the appointment of the DigiTeam was a renewed attempt to implement the DSO process in Nigeria. The DigiTeam, in March 2014, issued a public invitation for an Expression of Interest (EoI) to both local and international parties that may be interested in making infrastructural investment in the digital signal distribution service (NBC, n.d). Based on the terms of the white paper, the NBC was mandated to issue 'only' three Digital Signal Distribution (DSD) licences, which would include a licence exclusively reserved for the digital broadcast operations of the NTA, another licence reserved to encourage market competition to be issued through a public bidding process, and a third licence reserved for future market necessity (NBC, n.d). As part of its terms of reference, the DigiTeam Nigeria is also mandated to seek funds to finance the DSO Process in Nigeria, in addition to grants from the Federal Government.

Similarly, the DigiTeam was required to determine the necessary framework on the dual existence of the national broadcaster (NTA) as a signal distributor and digital content provider (DigiTeam, n.d). Due to this requirement, the Integrated Television Service (ITS) was "unbundled" out of the NTA in September, 2015 and licensed as a signal distributor (Maxwell Loko, personal communication, December 26, 2017). The ITS was registered with the Corporate Affairs Commission (CAC) as a state-owned enterprise and expected to operate as a commercial entity. Under this arrangement, the ITS became the national broadcast signal distributor and would run its operations on the existing broadcast infrastructures of the three main broadcast institutions of the Federal Government:

Voice of Nigeria (Auld et al., 2007), the Federal Radio Corporation of Nigeria (FRCN) and the Nigerian Television Authority (NTA). However, some of these existing broadcast infrastructures of the state-owned broadcast institutions, particularly the Nigerian Television Authority, were also deployed to serve as part of the broadcast infrastructure of StarTimes Nigeria across the country.

6.2.2 The Challenges of the DSO Process in Nigeria

The absence of clarity between the role of the newly licensed Digital Signal Distributors (DSD) and the existing infrastructure of broadcast and signal distribution by both StarTimes and GOtv resulted in a major setback for the DSO Process in Nigeria. Due to the large financial capital requirement and a business model that does not guarantee an immediate return on investment, the newly licenced national signal distribution service, ITS, was financially handicapped in the deployment of the necessary infrastructure across the country. Literally, the shortage of funds meant ITS was unable to meet its schedule for national coverage of its DSD operations. As a result, the role of ITS, as a state-owned digital signal distribution service, was outsourced to the StarTimes television network based on a partnership arrangement. Riding on the existing DSD infrastructure of the StarTimes, ITS was able to complete the first and third phase of the DSO process in Jos and Ilorin, two major cities in Nigeria. According to General Manager of the ITS, Engr. Rotimi Salami;

> Given the enormous financial cost in building the platform, which ought to come from the government, the partnership [with StarTimes] had afforded ITS the capability of developing the capacity in a PPP [Public Private Partnership] arrangement as encouraged by government
>
> (Salami, July, 2017).

However, the specification for the Set-Top Boxes (STB) of the Nigerian DSO process, as decided by the DigiTeam, was exclusively limited to the FreeTV channels and not compatible with the existing STB of other digital television services such as StarTimes and GOtv (Tunde Aina personal communication, November 15, 2017). The basis of this decision of the NBC to restrict cross-network accessibility of the specified STB is to encourage and protect the investments of the licenced STB manufacturers. According to the Director of Engineering and Technology of the NBC,

> "So it was in place, also to protect the investment of the STB manufacturers, Nigeria also got the services of another company […] to develop a software that would sit on the STB such that the STB being manufactured in Nigeria would only be authorized to search for signals that are coming from the shores of Nigeria"
>
> (Friday Ukwela, personal communication, November 29, 2017).

Apart from the freely-issued STB by the Federal Government during the pilot scheme of the DSO process in the city of Jos and those subsidized in the Federal Capital Territory, the cost of the specified STB for anyone who was unable to take up the free offer or in the other part of Nigeria is largely "unaffordable" (Maxwell Loko, personal communication, December 26, 2017). However, as Tunde Aina (personal communication, November 15, 2017) noted, public consumers must purchase these expensive STB in order to access the FreeTV channels.

Consequently, the rationale to restrict cross-network accessibility has two main effects, among others, on the Nigerian DSO process. First, there is little market demand for the specified STB due to the fact that the Nigerian digital TV market is already saturated with affordable STB from the two major DTT services. Due to this low market demand, as emphasized by Maxwell Loko (personal communication, December 26, 2017), the manufacturers of the specified STB are struggling and "have no incentives" to increase production since there is no market guarantee for profit. Secondly, with the control of the PayTV market by the established media conglomerates, the revenue flow of the transition does not guarantee a turnover that is proportionate to capital investments. On this, the General Manager of the NTA illustrates further;

"So, there is a stalemate here because the signal distributors are investing majority of the capital investment but the middleware and content aggregators [who accept television content from the transmitters of the analogue television broadcasters and either upload for digital transmission or store in a database for future broadcast] who are investing nothing or little to the value chain are taking the chunk of the revenue and the main corporates who are investing so much money are left hard and dried".

(Maxwell Loko, personal communication, December 26, 2017)

In comparison, the broadcast infrastructure of StarTimes and GOtv has proliferated across the entire country and their STB are readily available and affordable. StarTimes Nigeria extended an offer for the Nigerian Government to implement the DSO Programme using its existing broadcast infrastructures deployed to all states (Tunde Aina, personal communication, November 15, 2017). This claim was confirmed by a member of the DigiTeam Nigeria:

"StarTimes says they are willing to make their infrastructure be used. They are willing that the Conditional Access and Encryption is such that their STB that is already in the market can be used [and accessible] to FreeTV"

(Maxwell Loko, personal communication, December 26, 2017).

This arrangement would not limit the participation of the state in the Nigerian DSO Process in any way. Also, as argued by Tunde Aina (personal communication, November 15, 2017), the PayTV providers, with their relatively affordable Set-Top Boxes, should have been allowed to have access to the FreeTV channels and this approach could have saved the Federal Government huge financial capital, and the switchover process could have been implemented more smoothly and within the international deadline. On a similar note, as advised by Nyiko Shiburi (personal communication, November, 25, 2017), participation of the state should rather focus on bridging marginalized communities that may be outside the scope of market imperatives. However, this offer by StarTimes Nigeria appears to have been declined by the Federal Government due to what can be summarized as a conflict of interests. According to a member of the DigiTeam,

> "These two DTT outfits have rolled out and have covered almost 80% of the Nigerian TV landscape but when some of us advocated that why don't we just ride on the backbone and infrastructure of these ones that have spent so much money [...] As far back as last year [2016], we would have finished the DSO process in Nigeria but those who got the license of private signal distribution picked on some of us and said we were trying to edge them out of business".
>
> (Maxwell Loko, personal communication, December 26, 2017)

Nevertheless, about fifteen companies expressed interests for the second slot of the digital signal distribution licences. By July 2014, following a series of technical and financial evaluations, the DigiTeam announced Pinnacle Communication Limited (Klikauer, 2015), as the winner of the bidding process for the second licence of national digital signal distribution services (Elebeke, 2014). Pinnacle Communication Limited is a Nigerian-owned company working with two international partners based in the United States, GatesAir and Jampro. The company was able to finalize a technical plan for the deployment of its broadcast infrastructure within the scheduled deadline of the Nigerian DSO Programme. As a result of the financial and infrastructural investment of the national signal distribution services, Pinnacle Communication Limited became a crucial stakeholder in the Nigerian DSO Process.

Ordinarily, as Maxwell Loko (personal communication, December 26, 2017) noted, if ITS had been funded to take advantage of the existing broadcast infrastructure of the NTA, then there would be no need for the private-owned second signal distributor (Klikauer, 2015) but because of the "scepticism of getting being controlled by the government", private television broadcasters felt there was a need for a private-owned signal distributor. On the other hand, the white paper completely ignored the existing digital terrestrial television services (GOtv and StarTimes) with national coverage for digital signal distribution. The white paper did not state whether the three DSD licences would be inclusive or exclusive of the existing digital signal distribution infrastructures owned by the two digital terrestrial television services (StarTimes and GOtv).

The DSO process was further hindered due to a legal case filed against NBC by the newly licenced signal distributor, Pinnacle Communication Limited. Following the terms of reference, two of the licences for signal distribution services were awarded to state-owned signal distribution company, ITS and private-owned PCL. Also, a third licence appears to have been awarded to a new private entrant, MTS Communications Limited (BA, 2015). Consequently, there was an absence of clarity on the position and involvement of the three additional DSD licences (MTS, StarTimes and GOtv) as specified in the white paper. This prompted the PCL to file a law suit against the NBC. According to a report of the legal case published in the Newsletter of the Balancing Act (BA, 2015), PCL claimed the previous licences issued to the existing DTT service providers (StarTimes and GOtv) were contrary to the term of reference of the white paper which required that only three signal distribution licences be issued for the Nigerian DSO process. The terms of reference also specified that a company cannot be a content provider and digital signal distributor simultaneously. Arising from the financial constraints and conflicting positions between the policy framework of the Nigerian DSO process and regulatory decisions of the NBC, many unclarified questions are affecting a smooth transition within the scheduled time. Due to these complexities and the absence of clarity, Nigeria missed the ITU deadline of June 17, 2015. On this note, Nyiko Shiburi (personal communication, November, 25, 2017) advised on the need for a “clarity of purpose and political will” from the government.

Subsequently, the NBC announced June 17, 2017 as the new deadline for the completion of the Nigerian DSO process. To meet the financial schedule, the management of the NBC opted to sell part of the anticipated digital dividend of the ‘yet to be released’ 700MHz spectrum to South African-owned mobile telecommunication giant, MTN Group for about ₦34 billion naira. According to a statement made by the former Director General (Bringer et al.) of the NBC,

> "when it became obvious that government could not spare the money, and in order to avoid missing another deadline, we began to consider other options. [……]. We therefore proposed and got proper permission from government to license part of our [analogue] spectrum laying fallow and to use the proceeds to finance the DSO"
>
> Emeka Mba (Adaramola, September, 2015).

However, following a series of reports on the inflation of contract funds from the purchase of digital STB and unauthorised diversion of funds from the sale of the spectrum bandwidth, some former officials of the NBC, including the former DG (Emeka Mba) and director of Finance, were arrested and prosecuted on a 15-count charged of money laundering and procurement fraud (Obaze, 2017; Odunsi, 2017).

Due to the management inaccuracies and the financial constraints, the Nigerian DSO process was again delayed and seemed unlikely to meet the June 17, 2017 deadline. As a result, it became necessary for the Federal Government to intervene in the ongoing Nigerian DSO programme. As part of its direct intervention, a new NBC management team, led by Mallam Kawu Modibbo, was appointed on May, 2016 with a directive to make the ongoing DSO programme a priority. In addition, the Economic and Financial Crimes Commission (EFCC), a Nigerian Law enforcement agency, was able to recover part of the mismanaged funds from the previous management of the NBC. Upon assuming office, the new management of the NBC was faced with the legal dispute filed by PCL and a financial constraint affecting the Nigeria DSO process in the face of a June 17, 2017 deadline.

In another attempt to complete the DSO process within the scheduled time, the new management of the NBC came up with a plan in 2016 to carry out the DSO process in three phases which, if successful, would cover eighteen states of Nigeria. Each phase would involve installing all DSD networks and the completion of all transmission infrastructures in six states, one from each of the six geo-political regions. In a further step towards resolution of the process, the legal dispute between PCL and NBC was resolved out of court and after both parties concluded on an agreement which resulted in the case being withdrawn. The details of this agreement are not available for public scrutiny. Other participating stakeholders, including the signal distributors, STB manufacturers and call centre operators, also agreed on this new modus operandi of the NBC. Although the first phase is yet to be completed and there has not been any switch-off of analogue broadcast transmission with this intervention plan, it appears the new management of the NBC is displaying more commitment to the Nigerian DSO process. As at June 2018, installation of all necessary DSD networks and transmission equipment has been completed in four of the six states.

The involvement of Civil society organizations in the implementation of the DSO process in Nigeria has been minimal. According to Maxwell Loko (personal communication, December 26, 2017), the only representative of Civil society organizations on the DigiTeam Nigeria died in 2015. However, there have been recent concerns by some Civil Society Organizations (CSOs), voluntary entities and non-for-profits organizations, about growing allegations of misappropriation of funds meant for the DSO process in Nigeria. A statement by a coalition of Civil society groups revealed that the Nigerian DSO process was delayed due to "alleged misappropriation of funds and sharp practices within the industry geared at tilting signal distribution component of the process in favour of Integrated Television Service" (Ikpefan, 2017). The group indicated that the financial intervention of the Federal Government released to the state-owned Integrated Television Service (Lapavitsas) has been diverted into private pockets and only a "paltry sum" was committed to the purchase of "very obsolete and substandard" broadcast equipment (Olokor, 2017). On a similar note, the Human Rights Writers Association of Nigeria (HURIWA) has demanded that the Mallam Kawu Modibbo-led management of the NBC provide transparent information around the payment of N2.5 billion issued to the second national digital signal distributor (DSD), the Pinnacle Communication Limited (Onwubiko, 2018). The HURIWA indicated that the NBC had issued this payment in complete secrecy and also demanded that the NBC explain the "rationale behind the payment made from the public treasury to a private firm licenced by government to engage in the commercial enterprise of Digital Signal Distribution". In response to this allegation, the Federal Government, through the office of the Attorney General of the Federation, has filed a lawsuit against the Director General of the NBC, Mallam Modibbo Kawu on a charge of "money laundering and abuse of office" and the former Minister of Information and Culture, Lai Mohammed has also been summoned by the court on the same charges.

More recently, in a development in line with the policy framework of the ongoing Nigerian DSO Programme, the Director General of the NBC announced that GOtv and StarTimes Nigeria "would no longer be licensed to continue to operate in their dual nature as content providers and signal distributors" (Okonji, 2018). This directive by the NBC is expected to take effect from June 2019. As advised by the NBC, the two media conglomerates in the digital terrestrial television terrain must commence discussion with either of the two licensed signal distributors. Likewise, in what also appears to be an attempt to reestablish stability and clarity to the Nigerian DSO ecosystem, the NBC has "consciously delineated revenue streams" for all the participating players which include the broadcasters, middleware and content aggregator, STB manufacturers and signal distributors (Okonji, 2018).

Prior to this directive by the NBC, for the sake of greater clarity, it is important to note that the two DTT services have established coverage of their network infrastructure in nearly all parts of Nigeria However, this is not case for the two licensed signal distributors, PCL and ITS. PCL has deployed its network infrastructures and is presently transmitting digital television signal in 'only two states' of the Federation, namely the Federal Capital Territory and Kaduna, while attempting to install broadcast infrastructure in two other states, Delta and Gombe. The state-owned ITS has deployed infrastructure in only four states of the Federation: Plateau, Kwara, Osun and Enugu states. Equally, it is not clear whether NBC will determine the cost of carriage fees, as it is not specified in the white paper, or allow market forces to determine its cause. Presently, the Federal Government is responsible for the cost of signal distribution and it is uncertain whether the status-quo will remain after the proposed phase switch-off of all analogue broadcast transmissions or not. It is also uncertain whether the ongoing incentives from the Federal Government are enough for the two signal distributors to deploy broadcast infrastructure to other states of the country. However, it is certain that this directive to withdraw the signal distribution licenses will have an adverse effect on the Nigerian digital television market.

Despite the challenges associated with the ongoing transition to digital television, this directive of the NBC is likely to result in two possible implications for the Nigerian DSO ecosystem. First, the involvement of the Federal Government, as the major decision maker of the Nigerian digital television landscape, apparently threatens the market-oriented economy which typically attracts and drives the necessary capital investments. Secondly, this intervention by NBC is a distortion of the current market equilibrium of the Nigerian PayTV market. Before this directive was issued, there was an existing public-private partnership between the Star/NTA venture and the state-owned ITS. Inclusive of the benefits of this entangled relationship, the signal distribution facilities of the ITS, to a large extent, is driven on the backbone of the StarTimes Nigeria. The regulatory directive by the NBC is not likely to affect the StarTimes Nigeria. Also, this regulatory directive by the NBC appears to place the StarTimes Nigeria ahead of the market competition with the GOtv. At the time of writing, the extent by which GOtv broadcast operation will be affected by this regulatory directive is not clear but a statement by the Public Relations Officer of GOtv, as reported in the *This Day* Newspaper, indicates that "it is not clear how or why this license would not be renewed, and as such the company will investigate further in the best interests of the many customers it serves in the market" (Okonji, 2018).

6.4 Conclusion

The critique of the neoliberal orthodoxy and Chinese state capitalism helps to understand the entangled relationship of the complexities that exist in the political economy of the digital television environment and the influences on the policies and the approach to the implementation of the DSO process in Nigeria. As discussed in the analysis above, the implementation of the DSO process in Nigeria has not been completed, largely due to the financial and policy-burdened limitations. Chinese state capitalism has prompted a counterbalance to the long-held dominance of corporations and financial institutions backed by western liberal market capitalism. The broadcast operations of the StarTimes Networks across the African television landscape are sponsored by the Chinese state as part of the global expansion programme of Chinese state capitalism.

Consequently, the expansion and participation of the state-sponsored StarTimes network in the SSA region has become one of the crucial forces shaping the region's ongoing transition process to digital television and a major disruption to a balanced market competition of the region's PayTV market. The effect of the Chinese investments in the Nigerian DSO process is evident in the public private partnership between the StarTimes and the state-owned digital signal distribution service, Integrated Television Services (Lapavitsas). The study finds that this partnership, a formation that resonates the power of the Nigerian state and enormous Chinese capital investments, puts the StarTimes at a competitive advantage over the South-African-owned GOtv broadcast network. However, the directive by the regulator of the Nigerian broadcast environment, the Nigerian Broadcasting Commission (NBC) to withdraw licences previously issued to the GOtv and StarTimes Nigeria creates added confusion and uncertainties in the Nigerian digital television terrain. The study views this regulatory directive by the NBC as a 'strategic decision' that will further establish StarTimes Nigeria ahead of market competition with MultiChoice-owned GOtv in the Nigerian digital terrestrial television terrain.

The implementation of the DSO process in Nigeria follows an exclusive state approach that excludes coordinated participation by the digital television market. Government decisions have been identified here as crucial setbacks to the successful implementation of the DSO process in Nigeria. These include the decisions to restrict cross-network accessibility of the Set-Top Boxes, the absence of clarity on policy framework, and the decision to split the operational responsibilities of the content providers and Digital Signal Distribution. In addition, management inaccuracies and financial constraints, and the legal challenges and the various fraud allegations against the management of the

NBC have prevented a smooth implantation of DSO. As a result, in large part, of decisions by the government, the DSO process has been delayed and Nigeria was unable to meet the global deadline of June 17, 2015. This thesis argues that unless the Nigerian government, through the NBC, allows for a balanced competitive market and a market-centred approach to policy and governance of the Nigerian digital television environment, the successful implementation of the DSO process in Nigeria in the foreseeable future is unlikely to be realised.

The next chapter presents the approach to the implementation of the DSO process in New Zealand. It discusses the inclusive state-industry approach and other main attributes that necessitated a successful implementation and completion of the DSO process within scheduled deadline.

Chapter Seven

THE DIGITAL SWITCHOVER PROCESS IN NEW ZEALAND

The approach to the New Zealand transition process to digital television was completely different from the Nigerian government's exclusive implementation of the DSO process. From a broad overview, the implementation of the DSO in New Zealand was an inclusive process that involved the New Zealand government, coordinated by the Radio Spectrum Management group, as well as the television broadcasters.

The analysis of the implementation of the DSO process in New Zealand in this chapter is analysed from the perspective of a political economy of media (For example, See Golding & Murdock, 1997; Klaehn, 2010; Mansell, 2004; Meehan & Wasko, 2013; D. A. Schwartz, 2014; Wasko, 2014; Wittel, 2012), which presents the interplay of various interests shaping the shifting dynamics of the global media landscape. This is theoretically grounded in the Neoliberal free market system, and the implications of the political decisions and the economic conditions that define the shifting dynamics of the global media landscape, as outlined in chapter three. Freedman (2015, pp. 274 - 275) notes that the interplay of interests is reflected in the approach to policy and governance that defines the role of media institutions in the globalized mediaspace.

This chapter focuses on research questions 2 and 3, to ask how has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand? And how effectively was the global agreement on the DSO process implemented in New Zealand? This chapter discusses the inclusive implementation of the transition as evident in the coalition of major broadcasters and the state, which prompted the launch of the Freeview Television Network and the steering group of the DSO process in New Zealand. Based on this scrutiny of the public-private partnership, the chapter also addresses the interplay of interests between the television market and the priorities of the government as evident in the ideological approach to governance of the media environment by the two main political institutions involved in the transition to digital terrestrial television in New Zealand.

The chapter uses in-depth interviews to review the experience and participation of some broadcast services in the transition to DTT services in New Zealand. It also reviews the discussion paper and digital dividend scoping paper, two policy documents that present the approach to the implementation of the DSO process and framework for the auction process of the released spectrum in New Zealand respectively. The analysis begins by outlining the state of the New Zealand television environment prior to the commencement of the DSO process, then sets out the two approaches to the implementation of the transition to DTT services in New Zealand. The chapter explains the digital dividends from the implementation of the DSO process and the approach to the auctions process, finding that the financial benefits that accompany the transition from the sale of the released spectrum were a significant impetus for the intervention of the New Zealand government. Finally, the chapter presents the challenges of the DSO process in New Zealand.

7.1 The State of New Zealand Television prior to the DSO Process

Prior to the DSO process, the New Zealand television environment can be described as being largely driven on the neoliberal free market system (Curtis, 2015; Larner & Craig, 2005; Roberts, 2014; P. A. Thompson, 2011). Both analogue and digital television broadcast services operated on a commercial model of broadcasting that either generates revenue for the state (in the case of state-owned broadcast services) or shareholders (in the case of privately-owned broadcast services). Since 1989, the state-owned TVNZ had operated as a commercial entity with the majority of its operational budget funded by revenues generated from its operations and expectations of dividends paid to the state.

The pre-DSO digital television market in New Zealand was as a fragmented monopoly market with two PayTV broadcasters. Sky Television Network operated a Direct-to-Home (DTH) digital television service via Satellite, and TestraClear provided a digital television service via cable network. Sky Television Network had national network coverage with over 100 channels on its digital TV platform, while the TestraClear cable television service were mainly available in the Wellington and Canterbury regions. The TestraClear cable television network operated on a wholesale agreement with the Sky Television Network such that majority of its content, if it not all, was provided by the Sky Television Network (Keall, 2012b). As a result, the trajectory of the digital television market was completely determined by the decisions made by Sky Network Television Limited. At this time, all other New Zealand television channels, such as TVNZ 1, TVNZ 2, TVNZ 3, TVNZ 4, Prime TV, TAB Trackside, Sky UHF and regional broadcasters, operated on terrestrial analogue transmission.

The ownership structure of the different television services involved both national and foreign media corporations (Hope & Myllylahti, 2013). The analogue television services included both state-owned broadcast services and private participation. For example, the TV1 and TV2 channels were, and remain, owned by Television New Zealand, TV3 and later TV4 then Mediaworks were part, then majority-owned by Canadian media company CanWest Global Communication Corporation from 1991 until 2007, and Prime Television is a subsidiary of the Sky Television Network. As noted in Chapter Five, the Sky Television Network was largely owned by international media and financial corporations. According to Rosenberg (2002, p. 80), attempts by other PayTV operators, such as TelstraClear, to expand their digital television operations into New Zealand have been "difficult" due to the strategic market leadership enjoyed by the Sky Television Network. For instance, about 86 percent of broadcast frequencies were purchased by the Sky Television Network, although it required only about 40 percent of the frequencies for its broadcast services (Rosenberg, 2002). The ownership of these frequencies allocated for private commercial broadcasting suggest that it will be nearly impossible for future commercial broadcasters to participate in the New Zealand broadcast environment.

The market competition was primarily a battle for the control and distribution of quality content and the acquisition of broadcast rights of major events in demand by the New Zealand populace. For the New Zealand television market, the ownership of premium content is crucial for market acceptance. On this basis, the success of Sky Television in New Zealand can be largely attributed to the exclusive broadcast rights it holds for major domestic sport events such as New Zealand Rugby League, major international events such as the FIFA World Cup, the Olympics and other varieties of content that are not accessible on the analogue platform. As a result of these exclusive rights to premium content, Sky Television had about forty percent market penetration of the total television market in New Zealand (García Leiva & Starks, 2009). In addition, the "exclusivity clause" in the wholesale agreement with Sky Television Network prevented TestraClear cable television service from charging for other content that were sourced outside of this agreement with Sky Television (Keall, 2012b), and prevented TestraClear from competing with Sky Television Network in the New Zealand digital PayTV market.

Regulation of the television environment has been minimal since the deregulation of the New Zealand broadcasting in 1989. Since then, the direction of the New Zealand Television environment has been primarily shaped by the market. In most cases, state intervention in the New Zealand broadcast environment has occurred only in special circumstances. On this note, the Policy Manager of Radio Spectrum Management described the regulatory and governance regime of the New Zealand broadcast environment as "very light-handed" (Len Starling, personal communication, November 10, 2017). The Ministry of Culture and Heritage is responsible for developing policies on content regulation and acts in an advisory role to the Minister of Broadcasting. The Ministry of Economic Development (now Ministry of Business, Innovation and Employment) is responsible for matters such as licencing, spectrum allocation, technical planning and policy development of the New Zealand broadcast environment.

7.2 The Digital Switchover Process in New Zealand

7.2.1 The first approach to the Transition to Digital Terrestrial Television in New Zealand

From a broad overview, technological advancements are usually accompanied by "underlying economic forces" (G. S. Miller & Skinner, 2015, p. 222) and the emergence of digital television has created a shift in the competitive nature of the digital television landscape. In recognition of this, Weeds (2012) noted that the development of technology, such as the transition to digital television, has altered the "demand and sale" of media commodities. Due to the dominance and control of the digital television market by the Sky Television network, there was a limit to the participation and growth of other broadcasters in the New Zealand television market.

As a result, the first approach of the transition process to digital television was prompted as a competitive response to the fragmented monopoly and market leadership of the Sky Television Network in New Zealand. The shift from this fragmented monopoly and market leadership of the Sky Television Network to a balanced competitive market was enabled in the state-sponsored and coordinated transition of major national analogue television broadcasters to the Freeview (digital) Television Network. The intervention of the New Zealand government suggests an expectation that the transition to digital television could not be left completely for the market to decide. Hence, due to the unbalanced market competition, it would have been extremely difficult for the state-owned broadcast services and other private-owned broadcasters to adapt to this technological change without the intervention or assistance of the New Zealand government.

In response to the dominance of Sky Television in the New Zealand television market, the Freeview digital television platform was launched by a government-backed consolidated alliance of major analogue broadcasters which included TVNZ, CanWest (Burr, 2011), Maori Television, Radio New Zealand and transmission company, Kordia (García Leiva & Starks, 2009). It was established following an agreement between the Crown and the consortium of broadcasters in 2006, and broadcast licenses were issued to all participating broadcast services for simulcast analogue transmission. The Freeview digital television platform was launched in 2007 and commenced broadcast operations with over twenty channels initially via DTH network and subsequently on DTT platform. According to the former General Manager of Freeview New Zealand;

> The fact that there was a large and dominant PayTV broadcaster had an impact on the level of investment that Free-To-Air broadcasters were able to make in both local content and also technology
>
> (Sam Irvine, personal communication, October 26, 2017).

As described by Drinnan (2007), this market alliance was a “war footing” attempt to overthrow Sky Television Network from its long-held market leadership and control of the New Zealand digital television market. It was nearly impossible for other broadcasters to challenge the market dominance of the Sky Television Network without the state-backed market alliance.

The analogue licenses for Freeview broadcasters were expected to expire by 2010, and if required would only be renewed on short term basis until the switch-off of analogue transmission. Apart from the commitment to the Freeview platform, the 2006 agreement also designated Kordia as the major Digital Signal Distributor for free-to-air (FTA) digital television services in New Zealand (TDB, 2013). There were also provisions in the agreement for Freeview and other broadcast services to use Kordia’s unused frequency to carry the analogue signals of the regional broadcasters. However, according to TDB (2013) report, the “must carry” conditions were restricted to one regional broadcaster in each of the regions. As a result, a large number of the regional television broadcasters were effectively excluded from the Freeview digital television platform, because the non-commercial model and low advertising revenue of most regional television broadcasters meant they were unable to afford the financial expectations of the Freeview networks.

The success of the Freeview network can be attributed to the quality of the content which was largely supported and funded by New Zealand on Air (MCH, 2009). In addition, in September 2007, the government also granted TVNZ specific funding to launch two advertising-free public service channels, TVNZ 6 and 7, on the Freeview digital television platform (MCH, 2009). Prior to the commencement of the DSO Process, Freeview held a thirty percent share of the New Zealand digital television market (Wakefield, 2010). While the Freeview initiative was welcomed by the analogue broadcasters, the two digital television broadcasters, Sky Television Network and TelstraClear, opposed this government-backed market alliance (Cleave, 2003). In response to the Freeview initiative, Sky Television Network commenced an “aggressive discount” of its subscription rates in a strategy to retain its customers (Wakefield, 2010). As explained below, other market response by the Sky Television to retain its dominance included introducing the Igloo Television Network, a cable digital television company.

7.2.2 The Introduction of the Igloo Television Network

In an attempt to retain the market dominance of the Sky TV network, the Igloo PayTV Network was introduced in 2012 as a joint venture between Sky Television Network and state-owned Television New Zealand (Pullar-Strecker, 2012). The ownership of Igloo positioned the Sky Television Network and Television New Zealand Limited at a 51% and 49% stake respectively (Drinnan, 2011). The Igloo decoder, which was described as being "affordable and flexible" (Pullar-Strecker, 2012) and a "mid-play" Television Network (Beecroft, 2011) between PayTV and FTA services provided free access to FreeviewHD channels but required a subscription fee to access some Sky Television channels. The Igloo PayTV network was intended to be an affordable means to access Sky Television and Freeview channels.

However, Igloo did not last for long for various reasons. First, at the formative stage, other parties in the Freeview alliance, were not approached or even informed before Igloo was established (Keall, 2012a). MediaWorks, which supplies two channels to the Freeview Television Network (TV3 and TV4), objected to their content and channels being included on the Igloo Television Network because the network was excluded from the sharing arrangement for the advertising revenue and monthly subscription fees (Beecroft, 2011; Keall, 2012a). Likewise, TelstraClear protested the introduction of Igloo because of its existing "restrictive" deal with the Sky Television Network, and maintained that such a market initiative further unbalanced the market (Drinnan, 2012). In addition, about three months after the launch of Igloo Television Network, the Commerce Commission commenced an investigation (Keall, 2012a) based on a complaint from an unnamed source that the Igloo Television Network may have breached Section 47 of the Commerce Act which states that;

> A person must not acquire assets of a business or shares if the acquisition would have, or would be likely to have, the effect of substantially lessening competition in a market.
>
> (Keall, 2012a)

Access to the premium content owned by the Sky Television network and public-funded content on the Igloo Television Network lessened market competition with other broadcasters. On the side of the government, the introduction of Igloo appeared to have been welcomed as the then Communication Minister, Amy Adams, insisted that there was no need to impose any regulation on the PayTV market (Drinnan, 2012). In a media release, the Commerce Commission (CC, 2012), reported that the investigation found "the payTV market will not be less competitive as a result of the [Igloo] venture". However, the Igloo Television Network was withdrawn from the market after four years because it had become unsustainable following the "popularity" of subscription Streaming Video On Demand services such as Netflix, Lightbox and Neon (NZHearald, 2016).

7.2.3 The Second Approach of the New Zealand Transition to Digital Television

The second approach of the transition to digital television in New Zealand was initiated in response to the ITU conference in Geneva that produced the agreement on the global DSO process in 2006. A discussion paper (MCH, 2009) on the DSO was published by the Ministry of Culture and Heritage and the Ministry of Economic Development in August 2009. The discussion paper was a result of various submissions received after a comprehensive consultation process with the stakeholders of the New Zealand broadcast industry. This discussion paper set the framework and modus operandi of the DSO process in New Zealand. Inclusive of other duties, the discussion paper presented a roadmap and discussed key issues on how the DSO process was implemented in New Zealand. According to the discussion paper (MCH, 2009), the main objectives of the DSO process in New Zealand was outlined as follows;

- To facilitate conversion of present commercial television services to digital technology using a technically efficient band plan;
- To plan and allocate the spectrum released for a variety of new services to maximize the benefit to New Zealand; and

- To ensure the spectrum released by the DSO is allocated as soon as possible to maximize the benefits of the digital dividend to industry and consumers alike.

The document, among other implementation strategies, suggested that suitable spectrum allocation for simulcasting, either through the allocation of new licenses or a modification of existing analogue licences, be made available in order for the existing analogue broadcasters to participate in the transition. The discussion document also emphasized that the DSO process should make allowances for the regional analogue television broadcasters who were unable to access the Freeview or Sky Television digital platforms. The discussion paper proposed an extension of the current DTT network to these regional broadcasters and a STH network for the regional broadcasters who are outside the coverage of the DTT network. As some of the regional broadcasters had previously gone off air, the unaffordable cost of digital transmission by these regional broadcasters suggest that an intervention of the state was necessary.

The inclusive approach between the broadcast industry and the government was a key distinctive factor with the DSO process in New Zealand. Around the time the discussion paper was released, the New Zealand Government published a media release about the steering group of the *Going Digital* campaign in August 2009. The steering group was a joint industry-government participation which comprised the government-owned national broadcaster, TVNZ, and Transmission Company, Kordia, and privately-owned Sky Television Network. As described by the representative of the national broadcaster;

> Going Digital [the Steering Group] as a government organization convened various working groups that included all the companies, both private and state-owned in various sectors. The working group comprised of the broadcast industry which include broadcasters and transmission operators and property managers due to the need to take account of buildings with television systems.
>
> (Wayne Huggard, personal communication, December 5, 2017).

The steering group also comprised the three main government ministries that provided regulatory oversight of DSO process; the Ministry of Culture and Heritage, Ministry of Consumer Affairs and the Ministry of Economic Development (now the Ministry of Business, Innovation and Employment). According to the press release (S Joyce, 2009), the steering group implemented the following responsibilities:

i. Managing and advising on the transition from analogue to digital television transmission,
ii. monitoring the take-up of digital television throughout the country and ensuring technical coordination,
iii. monitoring the progress of DSO processes in other countries and recommending a date for switchover,
iv. Being responsible for a comprehensive public information programme and ensuring that the New Zealand public is fully aware of the DSO programme.

At the time the steering group was inaugurated, "approximately" sixty percent of households in New Zealand were already on the digital Sky and Freeview platform (MCH, 2009). The steering group was also given responsibility for advising the New Zealand government on the possible switch-off date, with expectation that it would occur by 2015.

The main priority of the New Zealand government in the DSO process was to ensure that the economic benefits of the digital dividend from the released spectrum were delivered within the scheduled time. The absence of support for regional television broadcasters that were unable to operate and compete under the framework of the digital television market suggests that this underlying economic benefit was more important than enabling existing broadcasters to shift to digital transmission. From the sale of the released spectrum and other revenues from mobile telephony, the total economic benefit of the DSO programme in New Zealand was estimated to be between $1.1 billion and $2.4 billion over twenty years (Joyce & Coleman, 2010). This is supported by the representative of TVNZ in the DSO steering group:

> It is also necessary to note that the whole industry went together and that was the government's driver because the essential motivation for the government was not to have digital television as such but to achieve, in a coordinated manner, the digital dividend in terms of frequency clearance which were later sold in an Auction process for cellular telephony.
>
> (Wayne Huggard, personal communication, December 5, 2017).

In achieving these priorities, the core strategy of the New Zealand DSO programme was to capitalise on the growth of the existing Freeview digital platforms (DTH and DTT) and ensure complete and coordinated industry participation. According to a media statement by the then Minister of Information and Communication Technology, Hon. Steven Joyce, this approach was necessary to ensure completion of the DSO programme within the schedule time (as advised by the Steering Group) and without conceding the primary objectives of the DSO programme (S Joyce, 2009).

In terms of the regulatory framework for the DSO Programme, there were few changes to the status-quo of regulations of the New Zealand television environment (Len Starling, personal communication, November 10, 2017). An attempt by the previous Labour Government to review the regulatory framework of the New Zealand broadcast environment was suspended by the National Government upon gaining office in 2009 on the basis that there was "no strong case" for new regulations (Coleman & Joyce, 2009). Among other issues, the proposed review was to address the competitive nature of the television environment especially with respect to the monopoly over premium content and issue a "must carry obligation" to the Sky Television Network as the previous competitive environment was conceived to be incompatible with the Freeview initiative (Wigley & Co, 2007, pp. 2-5). The incoming National Government of 2008 noted that it intended to "maintain a competitive and diversified broadcasting market" (Coleman & Joyce, 2009), however some policy decisions (Coleman & Joyce, 2009; RSM, 2014) were taken in relation to the pre-election commitments of the National Government and at different stages (2008, 2009, 2011) of the DSO programme, relating to:

i. policies for converting analogue licenses to digital licenses,

ii. support for regional broadcasters,

iii. a targeted assistance programme for viewers, and

iv. a series of stages to implement the DSO process (for example, to switch off analogue transmission).

In terms of the Licensing framework of the DSO programme, the discussion paper (MCH, 2009) further specified plans for allocating broadcast licenses prior to the switch-off, simulcast and switch-on stages. The analogue television licenses that had been issued in the VHF (44 – 51 MHz, 54 – 68 MHz and 174 – 230 MHz) and UHF (518 – 806 MHz) bands expired or were cancelled prior to the Switch-off date. For the analogue licenses that expired on or before September 2009, the government put in place a renewal contract for UHF analogue licence holders which could only be extended on a yearly basis until the DSO date, and without the possibility of a future transfer to digital services. This licencing policy also applied to regional analogue television licenses in the frequency range of 614 – 646 MHz. During the digital transition programme, three categories of licenses were allocated to existing analogue broadcasters, which covered about seventy five percent of the population. The first category of license was allocated at the simulcast stage of the transition process. The second was allocated to enable geographic expansion of the DTT coverage area. Lastly, the third category of broadcast license was allocated to expand the capacity of digital programmes.

Subsequently, after the steering group achieved about seventy percent coverage of digital television transmission in 2010, the New Zealand Government announced a commencement date for switching off the analogue broadcast transmission, of September 2012 with completion by end of 2013 (Steven Joyce & Coleman, 2010). The switch-off was phased across the regions (Steven Joyce & Coleman, 2010);

i. Hawke's Bay and the West Coast in September 2012,

ii. the South Island in April 2013,

iii. Lower North Island, Taranaki and Gisborne in September 2013,

iv. The rest of the North Island in November 2013.

As part of the intervention by the New Zealand Government, there were support schemes put in place to assist the regional broadcasters and lower-income households. An assistance package supported some households in the acquisition of digital, Freeview, decoders. According to the former Minister of Broadcasting, Craig Foss (2012), the support package was for technical and financial help and only directed to people who were genuinely struggling to participate in the DSO Process and met the following criteria:

i. Aged 75 or over with a community services card; or
ii. Recipients of an Invalid's Benefit or a Veteran's Pension; or
iii. Former recipients of an Invalid's Benefit or Veteran's Pension who have converted to New Zealand Superannuation.

The assistance package supported about 60,000 households and was estimated to cost the government about $18 million (RNZ, 2012). On the side of the broadcasters, the assistance was in form of a concession on licence fees during the simulcast phase of the DSO Process (Len Starling, personal communication, November 10, 2017). There was also a transmission subsidy of about twenty five million dollars and another twenty million dollars in content subsidy to support broadcasters (Sam Irvine, personal communication, October 26, 2017). In addition, the cost of running the *Going Digital* campaign was covered by the New Zealand Government.

The specifications of the Set-Top Boxes and other digital receivers such as digital-enabled television sets for the DSO programme were the same as the existing specifications of the Freeview digital television platform. In the Nigerian process, by contrast, as illustrated in chapter six of this thesis, the Set-Top Boxes specifications for the DSO process was not compatible with the Set-Top Boxes of the existing digital television services. In New Zealand, the DSO Set-Top Boxes implemented the ETSI TS 102 796 v1.2.1 specification for Hybrid Broadcast Broadband Television (Ghiglieri & Waidner, 2016) standard technology, which uses an open standard and unencrypted digital terrestrial receiver that is compatible with High Definition (HD) Video (Freeview, 2014). The HbbTV standard technology provides an enhanced video services such as the overlay of Web content on regular TV programs (Ghiglieri & Waidner, 2016), enables bi-directional accessibility of broadcast and internet-supported communication applications (Freeview, 2014). It also provides a common user interface for viewers with a consolidated Electronic Programme Guide (EPG). With approval from Freeview Limited, the technical specifications for the STBs were manufactured with the Freeview Logo and made available only at authorized retailers across New Zealand (Sam Irvine, personal communication, October 26, 2017).

In summary, as well as promoting policy and regulation to ensure completion of the DSO process within scheduled time, there was financial investment by the various participating government agencies. According to the Radio Spectrum Management Group, the government made a total financial investment of NZD 150 million to ensure a complete DSO process in New Zealand (Len Starling, personal communication, November 10, 2017). This includes the various intervention programmes such as setting up Freeview Limited, investing in the *Going Digital* campaign, and the financial support package for the Set-Top Boxes. Due to the established presence of the Freeview and Sky Television Networks in the New Zealand digital television environment, the DSO process was cost-effective. As discussed in the next section, the revenue from the auction of the released spectrum was about NZD 270 million, so the New Zealand Government was able to recover the initial financial investment into the DSO process (Len Starling, personal communication, November 10, 2017).

7.3 Digital Dividends of the DSO Process in New Zealand

Due to the increasing demand and insufficient spectrum for wireless networks (Zamblé et al., 2016), the released spectrum from the DSO process was mostly allocated for use in mobile and wireless communication networks. The propagation characteristics of the spectrum in the Ultra High Frequency (UHF) band used for analogue television meets the specifications of and rising demand for mobile and wireless communication (Ribadeneira-Ramirez et al., 2016). The UHF band is considered of enormous benefit for wireless communication and internet broadband due to the suitability of the frequencies for carrying mobile signals in urban areas, and the low cost of network design compared with other frequency bands (Doesburg, 2010).

Although the objectives and priorities of different national governments involved in the DSO process are quite different, the benefits of the digital dividend are essentially the same. For many governments, the revenue from auctioning the released spectrum has been of enormous benefit especially from the expansion of wireless telecommunication corporations in a highly competitive market (Daglish et al., 2017).

In New Zealand, the approach to the digital dividend was largely driven by the need to maximize revenue for the government, as evident in the objectives of the DSO process. Similar to the path taken with the DSO process, a discussion document on the New Zealand approach to the allocation of the released frequency in the 700MHz range was prepared by the Ministry of Economic Development. The former Communication Minister, Steven Joyce, announced that the digital dividend would be useful to improve mobile telecommunication and connectivity, and the government intended to maximize the "highest possible economic and productivity benefits" (S Joyce, 2011). The announcement of the discussion document was preceded by a public consultation process which also welcomed industry participation.

Prior to the completion of the DSO process, the Ministry of Economic Development published a Digital Dividend Scoping Paper, which set the framework for the auction process of the released spectrum. The scoping paper (RSM, 2009) presented an overview of frequency planning after the analogue broadcast transmission Switch-off. The scoping paper (RSM, 2009) presented two main objectives for the use of the digital dividend:

i. to facilitate conversion of present commercial television services to digital technology using a technically efficient band plan (including determination of appropriate policies relating to regional broadcasting in the digital environment); and

ii. to plan and allocate the spectrum released from adoption of digital television technology for a variety of new services to maximize the benefit to New Zealand.

According to the scoping paper, the UHF spectrum was expected to be sold to private interests following a consultation process and a final decision by the Crown (RSM, 2009).

The Ministry of Economic Development published a consultation document on the allocation of the UHF Spectrum in 2011. The emphasis of the document centred on the division of the UHF band into different spectrum blocks to be prepared for allocation (MED, 2011). Based on a market analysis prepared by Venture Consulting, the New Zealand Government was convinced that the best way to maximize the economic benefit of the released spectrum was to allocate it for use in wireless communication and broadband internet, with estimated revenue earnings of about NZD 2.4 billion for period of 20 years (MED, 2011).

The auction process was scheduled into three different phases that reflected the bidding process of the different allocation categories of the spectrum band plans (RSM, 2016). The result of the auction process, as highlighted in the Table 7.1 below, shows that the 700MHz spectrum was won and re-allocated to the three dominant players in the wireless and mobile telecommunication market: Telecom, Vodafone and 2degrees.

Table 7. 1   700 MHz Auction: Notice of Provisional Results.

Table 1: Results of the 700 MHz auction				
Bidder	**Phase 1 results (price)**	**Phase 2 results (price)**	**Phase 3 results (price)**	**Total lots won (Daglish et al., 2017)**
2degrees	2 lots 2x10 MHz ($44,000,000)	–	738-748 MHz 793-803 MHz ($0.00)	2 lots 2x10 MHz $44,000,000 +GST
Telecom	3 lots 2x15 MHz ($66,000,000)	1 lot 2x5 MHz ($83,000,000)	703-723 MHz 758-778 MHz ($9,100,000)	4 lots 2x20 MHz $158,100,000 +GST
Vodafone	3 lots 2x15 MHz ($66,000,000)	–	723-738 MHz 778-793 MHz ($2,000,174)	3 lots 2x15 MHz $68,000,174 +GST
TOTALS	8 lots 2x40 MHz ($176,000,000)	1 lot 2x5 MHz ($83,000,000)	$11,100,174	$270,100,174 +GST

Note. Retrieved from the webpage of the Radio Spectrum Management, Ministry of Business, Innovation and Environment.

The struggle for market leadership (Theunissen, 2017) suggest that the acquisition of the 700MHz spectrum by these three main competitors may have been driven by the competitive nature of the mobile telephony market. The mobile and wireless communication market has a similar background to the digital television market and driven by the same neoliberal policy framework, (Johnson, 2013; Larner, 1998; Mitchell, 2009; Roberts, 2014; Shore, 2017), but is less regulated.

7.4 Challenges of the DSO Process in New Zealand

Due to the capital-intensive nature of the transition, the primary challenge in most countries is the heavy financial cost. In New Zealand, as previously noted, the participation of the government in the DSO process was motivated by the financial revenues that were expected to accompany the sale of the released frequency spectrum. However, the state and many of the broadcasters experienced financial challenges in the acquisition of broadcast infrastructure, though these were mitigated by in different ways. For TVNZ, a way of mitigating this huge financial cost of digital transmission was by eliminating analogue transmission sites, and during the dual transmission phase of the DSO process a long term contract was negotiated with the digital signal distributor (Wayne Huggard, personal communication, December 5, 2017). With this long term negotiation, TVNZ payed a lower transmission cost during the dual transmission phase and the cost differential was transferred to the single phase of full digital broadcast (Wayne Huggard, personal communication, December 5, 2017).

Moreover, intervention by the New Zealand government assisted, for a time, the regional broadcasters who were marginalized due to their inability to afford the transmission cost of the digital transition process. As previously noted, the nature of the New Zealand television market is such that it was difficult for the regional broadcasters to compete for limited advertisement revenues. For most of the regional broadcasters, survival in the midst of a highly competitive market was a major challenge, and some of the regional television broadcasters such as those in Waikato, Invercargill, Hawkes Bay, Rotorua and the Bay of Plenty, shut down their broadcast operations as they were unable to survive the market competition (MediaWatch, 2016). Although government intervention was meant to assist the regional broadcasters, the closure of these regional broadcast services suggests that this goal was not achieved. Also, regional broadcasters such as Canterbury Television had to collaborate with the Star Media, a local print publishing company, for news coverage of some parts of the Canterbury region (MediaWatch, 2016).

Based on these aforementioned challenges, the intervention by the New Zealand Government in the DSO process was necessary for successful implementation within scheduled time. Based on the findings from this analysis, two main factors can be attributed to the successful implementation of the DSO process in New Zealand. The first factor is due to the inclusive state-market participation in the planning and implementation stages, as evident in the discussion paper on the digital transition and the digital dividend scoping paper. In support of this state-market approach, J. Duncan (2017, p. 615) noted that it is important that the policy framework of the transition process captures "marginalized" broadcasters instead of embarking on a policy framework that further establishes market imperatives. Secondly, the few regional television broadcasters with analogue operations and households that were yet to access digital television meant that the operational cost for the transition was minimal and the project was completed within scheduled time.

Furthermore, there were few challenges, mostly associated with the simulcast phase of the digital transition process in New Zealand. These were largely technical:

> During the transition [simulcast] phase, there were lots of technical barriers while operating digital and analogue services at the same time. It was a complex process especially with the allocation of frequencies which requires technical coordination.
>
> (Len Starling, personal communication, November 10, 2017).

As previously noted, most of the challenges were mitigated by different strategies that ensured the transition would not be delayed ahead of the planned scheduled time. This mitigating strategy is evident in the intervention schemes, which included widespread community support and outreach campaigns, which provided information and support services to the populace.

7.5 Conclusion

The analysis of the implementation of the transition to digital television reveals a coordinated effort between the state and the market of the New Zealand television environment. The impetus of this implementation, as driven by market imperatives aligns, to a certain extent, with the central agenda of the neoliberal free market system as illustrated in chapter three. As conceived from the lens of Neo-Marxist argument of “capital accumulation", P. A. Thompson (S Joyce, 2011) noted that this neoliberal approach to the transition to digital television in New Zealand was prompted by the existing cohesion between the ideological approach to governance of the mainstream political institutions and the digital television market. Drawing on the analysis above, inclusive of other factors, the transition process to digital television in New Zealand was successfully implemented and completed as a result of this market-centred approach to policy and governance of the New Zealand media environment.

Finally, the analysis of the transition in New Zealand highlighted the inclusive approach and other main attributes that necessitated a successful implementation and completion of the DSO process within the scheduled deadline. This inclusive state-market approach to the implementation of the DSO process in New Zealand, was evident in the composition of the steering group. The analysis also finds that the participation of the New Zealand government was mainly driven by the financial benefits from the sale of the released spectrum and less on the need to support the regional broadcasters. These regional broadcasters were sidelined from the Freeview network due to their low advertisement revenues and inability to survive market competition as a result of their less-commercial approach to broadcasting. These attributes of the regional broadcasters reflect the ‘survive or sink’ ideology that drives the neoliberal free market system. Consequently, as previously noted, the majority of the regional broadcasters shut down broadcast operations in the New Zealand television environment.

Chapter Eight

CONCLUSION

8.1 Introduction

The thesis analyses the Digital Switchover (DSO) process in New Zealand and Nigeria. The critique of the neoliberal free market system identifies the entangled relationship between the state and the corporate media broadcasters. The thesis offers an analysis of the DSO process in Nigeria and New Zealand as a case study of the differing approaches of nation states to the policy and governance of the media environment. It also details the existing interplay of forces shaping the neoliberal policy framework of digitized mediaspace.

The two qualitative research methods used in this study, communication policy analysis and semi-structured interviews, worked together to examine the power relations shaping the direction of global media policies and governance. In the analysis of the transition to digital television, communication policy analysis enables investigation of the existing power relations between nation states and some international institutions of governance, such as the International Monetary Fund, the World Bank and World Trade Organization. Analysing the various policies helps to understand the influence of these institutions on the direction of policies and approach to governance that necessitated the implementation of the DSO process in Nigeria and New Zealand. Similarly, the semi-structured interviews reveal some important details on the various approaches to the implementation of the DSO process in New Zealand and Nigeria based on the participation and experience of informants.

The critique of the neoliberal free market system helps to conceptualize the push for market deregulation of the media environment, as the neoliberal approach to the global mediaspace was instituted by the transnational actors of global capital and trade. The theoretical framework summarizes the effect of the various multilateral trade agreements of the World Trade Organization (WTO) and the policy-centred lending framework of the Bretton Woods Institutions (IMF and World Bank) on the market economy in New Zealand and Nigeria respectively. This neoliberal free market system was advanced in the global mediaspace by the push to withdraw protectionist policies, usually demanded as a condition for financial intervention by the IMF and World Bank, as in the case of the sub-Saharan African countries, or as terms of agreement of multilateral trade participation required by the WTO. The inflow of investment from global capital institutions and expansion of the foreign-owned media conglomerates were outcomes of this neoliberal free market system, as evident in the market-oriented framework to governance and direction of policies in the two countries.

This chapter summarizes the study and presents the major findings in relation to the three main research questions. More importantly, it outlines the various factors and constraints that have limited or advanced the implementation of the DSO process in New Zealand and Nigeria. Finally, the chapter presents possible direction and recommendations for future studies.

8.2 The Major Findings of the Thesis

The major findings from the analysis of the transition to digital television in New Zealand and Nigeria are presented here in three main themes. These themes, which refer to the primary questions of the thesis, document the actions and influence of international organizations of global capital and trade shaping the direction of policies and governance of the media environment, the interplay of interests between nation states and corporate media corporations and finally, the approach to the implementation of the DSO process in New Zealand and Nigeria.

8.2.1 *RQ1: How has the relationship between nation states and international institutions (particularly the ITU, WTO and the Bretton Woods Institutions) shaped the approach to policy and governance of the digital television market in New Zealand and Nigeria?*

In the case of the International Telecommunications Union (ITU), the analysis outlines the shift from its fundamental role as an institution of governance of the global communication space with an inclusive international participation, to a form of 'corporate-orientated' co-regulation with multinational corporations categorized as sector members. The thesis argues that the corporate-orientated structure of the ITU promotes the neoliberal free market system in the global mediaspace. This is evident in the difference between the priorities and participation of developing countries and their counterparts from the developed world. Some developing countries sit outside this divide, especially African states, whose participation in the ITU is primarily defined on the need to bridge the inequity of technological development with their developed counterparts. In contrast, the developed countries prioritize the interests of the established multinational media and telecommunication corporations (Puppis, 2008; Schuster, 2014). The critique of the neoliberal market system also describes the symbiotic relationship between various political institutions and the primary interest of capital accumulation by the establishment multinational corporations. From this viewpoint, the difference in the priorities and participation of member nations has resulted in an unchallenged dominance of developed countries and corporate entities as sector members in the primary agenda-setting of the ITU.

Furthermore, from the analysis of the international structure of global capital and trade, the thesis identifies the role of the World Trade Organization in the transition process to digital television. The WTO promotes bi- or multilateral trade relationships and pushes for the withdrawal of trade barriers and protectionist policies from participating nation states involved in the DSO process. From the historical context of this analysis, participation in global trade is influenced by issues including the imbalance of power relations in the settlement of trade disputes between developed countries and their developed counterparts, fear of reciprocation in the form of trade sanctions, and the imperialistic undertones by which trade rules are conscripted as an apparatus of the neoliberal free market system. The critique of the neoliberal free market system reveals the attempt to "entrench power relations" through the introduction of the "rule-based system", an approach that has been criticized for its weak compliance and enforcement framework on developed countries (Davey, 2014; Pfumorodze, 2011, p. 83).

The effect of these international organizations of global capital and trade, particularly the World Trade Organization, on the New Zealand television environment is evident in the deregulation process and the shift to a market-centred approach to policy and governance framework of the media environment. In this deregulation process, the state-owned national broadcaster, Television New Zealand (TVNZ) was transformed from a public broadcaster into a state-owned commercial entity, for a further brief time in the 2000s partially funded by the state but with expectations for returns on investment. Lifting the restriction on foreign participation and ownership of television companies in 1991 allowed the market entry of media conglomerate Sky Television Network and Canadian-owned CanWest Global Communication Corporation which acquired the ownership of TV3.

In sub-Saharan Africa, the thesis identifies the effect of the international institutions of the neoliberal free market system on the policies and approach to governance of the domestic markets. For instance, deregulation of the media environment and introduction of a market-centred approach to policy and governance of the media environment were imposed on countries such as Nigeria as a condition of the lending frameworks under the strict policies of the Structural Adjustment Programme (SAP) of the IMF and World Bank. Most developing countries were pressured to accept strict trade rules and unbalanced terms of participation of the WTO by these aforementioned institutions. The interdependent relationship between WTO and IMF is apparent in the dispute settlement system of global trade activities which is partly dependent on the fiscal instruments and legal documentations of the IMF (Mosoti, 2006).

The effect of this institutionalized mechanism of control on the television environment of the SSA region is evident in the intense proliferation of foreign capital investment, and dominance of the region's digital television market by three main media conglomerates including the South African-owned MultiChoice Group, French-owned Canal+, and Chinese-owned Star Communication Network. In the Nigerian digital market, the study argues that attempts by domestic-owned media companies, such as HiTV, to challenge the market dominance of these foreign-owned media corporation have been frustrated by the lending framework of the domestic financial institutions. These conditions for loans demanded by domestic financial institutions are instituted because of the fiscal mechanisms of the SAP policies.

The fiscal policies of the capital economy have weakened domestic participation and created an imbalance of competition in the PayTV market economy of the SSA region. The foreign-owned media conglomerates are better capitalized than the domestic competitors and without a review of the present fiscal mechanism and attempts to address this market imbalance, it would be nearly impossible for domestic digital television services to favourably compete with their foreign counterparts. Consequently, the ongoing transition process to digital television in the SSA region has been primarily determined by the participation of these media conglomerates.

8.2.2 *How has the interplay of interests between corporate and political actors shaped the approach and the direction of the DSO Process in New Zealand and Nigeria?*

The thesis argues that the approach to the DSO process in New Zealand was shaped by the neoliberal free market system that defines the participation of the state and market in the New Zealand digital television market. The thesis argues that the first approach to the transition process was primarily prompted by the perceived need to create a balanced competitive market instead of the fragmented monopoly market controlled by the Sky Television Network. The shift from this fragmented monopoly and market leadership of the Sky Television Network to a balanced competitive market was enabled by the state-sponsored and coordinated transition of major national analogue television broadcasters to the Freeview (digital) Television Network. The nature of market competition in the New Zealand digital television market suggests that a technological shift to digital television services by this market coalition created a renewed platform for market competition. Based on this, the study argues that without a balanced competitive market, it would be difficult for the state-owned broadcast services and other private-owned broadcasters to implement the transition process to digital television.

Apart from this coordinated market coalition, another approach to the implementation of the transition to digital television in New Zealand was presented in the state-industry coordinated response to the ITU global agreement in 2006. The participation of the New Zealand government was prompted by the prospect of financial gain from the digital dividend earned by re-selling the released television spectrum to mobile phone companies, and the necessity to support regional television broadcasters that still operated on the analogue platform. However, these regional television services were completely excluded from the Freeview digital television platform because the limited-commercial model of most regional television broadcasters could not be supported by the market-centred framework of the Freeview digital platform; they could not afford to participate. The study argues that the successful completion of the DSO process in New Zealand within the scheduled time can largely be attributed to the market-centred approach to governance of the television environment and the coordinated participation of the state and industry.

In contrast, the approach of the Nigerian government to the ongoing DSO process is completely different from the market-oriented and inclusive approach adopted in New Zealand. The thesis argues that the ongoing DSO process in Nigeria has been compromised by the complex intersection between the state and the two major components of the contemporary digital television market – MultiChoice and StarTimes Nigeria. On the side of the state, the DSO process presented an opportunity for the Nigerian government to participate directly in a digital television market, the trajectory of which had otherwise been determined by the necessities of the television market shaped by the central agenda of the neoliberal free market system.

Furthermore, the effect of the Chinese investments in the Nigerian DSO process is evident in the partnership between the StarTimes and state-owned broadcast institutions such as Integrated Television Services (ITS) and the Nigerian Television Authority (NTA). The study finds that this partnership, a formation that reflects the power of the Nigerian state and enormous Chinese capital investment, puts the StarTimes at a competitive advantage over the MultiChoice broadcast network. However, the regulatory directive by the regulator of the Nigerian broadcast environment, the Nigerian Broadcasting Commission (NBC) to withdraw licences previously issued to GOtv and StarTimes Nigeria creates further confusion and uncertainties for the Nigerian digital television terrain. The study views this regulatory directive by the NBC to split the roles of digital signal distributors and digital content providers as a 'strategic decision' that will further establish StarTimes Nigeria ahead of market competition with MultiChoice-owned GOtv in the Nigerian digital terrestrial television terrain. The implementation of the DSO process in Nigeria has in large part been delayed due to the exclusive approach to implementation, financial limitations and policy-burdened intervention of the Nigerian Broadcast Commission.

The thesis argues that the Nigerian DSO process suffered from the absence of a harmonized framework in the provisions of the white paper, which completely ignored the existing role of StarTimes and MultiChoice in digital television provision. There is an absence of clarity in the previous decision of the regulatory authority to issue operational licences for these foreign-owned media conglomerates to operate as both content providers and signal distributors. Consequently, the complex intersection between the state and the market has limited the DSO process in Nigeria and the future of the digital television in Nigeria remains uncertain.

8.2.3 *How effectively was the global agreement on the DSO process implemented in Nigeria and New Zealand?*

In the analysis of the transition in New Zealand, chapter seven details the primary intervention initiatives of the state, which reflect the need for a consolidated and balanced market competition in digital television. The state-market alliance enabled the establishment of a consolidated digital television platform, Freeview New Zealand. The analysis finds that the state-market inclusive approach to the DSO process is apparent in the comprehensive consultation with the broadcast industry on the framework for the digital transition process, the composition of the implementation group and collective decision on the switch-off date of analogue transmitters in New Zealand.

In addition to these intervention initiatives, the New Zealand Government also put in place various support schemes that assisted participating broadcasters in the form of a transmission subsidy of about twenty-five million dollars during the simulcast phase of transmission (Len Starling, personal communication, November 10, 2017). The state also provided another twenty million dollars in content subsidy, accessible through New Zealand on Air, to support participating television broadcasters on the Freeview network. Finally, the New Zealand government also provided a financial package of about eighteen million dollars to assist about six thousand under-privileged households to acquire digital decoders. Overall, the New Zealand government made a financial investment of about one hundred and fifty million dollars to ensure the completion of the DSO process within the scheduled time and, in return, the Crown received about two hundred and seventy million dollars from the auction of the released spectrum.

The intervention of the Nigerian state took a different direction from the state-market inclusive approach in New Zealand. As revealed in chapter six, the intervention of the Federal Government has been overshadowed by various limiting factors including a complex state-market relationship, financial constraints on the implementation of the terms of the white paper and the absence of a harmonized framework for the ongoing Nigerian DSO process. The nation-state approach prioritized the primary interests of the Federal Government as evident in the terms of the white paper and the composition of the DigiTeam Nigeria.

Apart from introducing the framework for the DSO process and providing limited financial support to the implementation team, the Nigerian Federal Government has been responsible for meeting the cost of digital signal distribution of state-owned television services. This financial intervention has been clouded by allegations of purchasing obsolete broadcast equipment, fraud, and abuse of office by the management of the Nigerian Broadcasting Commission (NBC). As in New Zealand, the Federal Government also subsidized the cost of Set-Top-Boxes during the Switch-On of digital television transmission in the city of Jos and the Federal Capital Territory. Nevertheless, the intervention of the Federal Government has been limited because it was unable to pay for the cost of deploying infrastructure needed for the DSO process across the country.

8.3 Conclusion

From the analysis of the international institutions, the thesis argues that DSO process is a new strategy to enact the neoliberal free market system on the global mediaspace and redefine the role of global media and communications institutions in the era of digital convergence. The analysis in the study presents evidence of this argument in the attributes of the neoliberal free market system, such as the influence of international organizations over national market economies, and the expansion of international satellite broadcasters into national media space, which define the global media landscape. However, in New Zealand, the intervention of the state in the digital television market has created a favourable market competition and reduced the influence and dominance of media conglomerate, Sky Network Television.

The analysis of the two digitized television environments suggests that the DSO process mostly serves the interest of the state and the telecommunication market. This is evident in the transfer of the previous frequency spectrum of analogue television services to established telecommunication corporations in Nigeria and New Zealand. In New Zealand, the three main telecommunications companies, Vodafone, Spark and Two degrees purchased the released spectrum for about $270 million while in Nigeria, the MTN paid about ₦34 billion naira (approximately $145 million) to the Nigerian government. Specifically, from the analysis of the DSO process across two different media environments, the thesis argues that the participation of these states has been primarily driven by the financial benefits, both in the short and long term, that accompany the digital transition process, and not necessarily the interest of public audience. The expectations by some African states that participation in the global DSO process will create massive employment and bridge the existing digital divide between the urban and rural area have not necessarily eventuated. The analysis in this thesis also finds that the successful completion of the DSO process in New Zealand and other countries such as Australia, United States and Canada, is largely dependent on the clarity of the implementation plan, harmonized state-market partnership in the implementation of the DSO process and a market-oriented approach to the digital television environment. In Nigeria, the absence of these determining factors has contributed to the complexities and delay to the successful completion of the DSO process.

Finally, the analysis of the DSO process across these media environments suggests the successful completion of the transition process within the ITU scheduled date is primarily dependent on an inclusive state-market participation. For the most part, based on the analysis of the market-driven approach of the DSO process in New Zealand, it is evident that without the participation of the state, television broadcasters that operate outside the market framework may become marginalized and possibly shutdown as was in fact the case for some regional television services in New Zealand. In relation to the Nigerian television environment, it is clear from this analysis that without a harmonized state-market approach and serious commitment from the Nigerian government, the future of the numerous state-owned television services in the digital television market remains uncertain.

8.4 Limitation of the Study

In spite of the analysis and the broad conception of the DSO process in line with the research questions, the analysis is limited by the following factors:

i. The methodological framework which focused only on the policy approach and experience of the participants of the interviews. The methodological framework was unable to consider other crucial themes such as the experience of the public audience with the technological transition, the implications of technological convergence, and a cost-benefit analysis of the DSO process.
ii. Limited participation in the interview process, which involved just seven participants, represents a limited response rate from government officials and broadcast organizations. Approaching possible participants or schedule a convenient time for interviews involves complex bureaucratic negotiations.
iii. The scope of the research was limited to just New Zealand and Nigerian, for financial and logistical reasons.

8.5 Contribution to the Field of Television Studies

Prior to this study, very little has been published on the state of the digital television market in New Zealand or across the SSA region, particularly Nigeria. As a result, the thesis contributes to the scholarship and information on the DSO process in the two countries studied. The analysis of the DSO process of the broadcast landscape outlines the effect of the neoliberal free market system on the digital television market in the context of the transition to digital television services. The analysis also sets out the implementation of the DSO processes in New Zealand and Nigeria. The analysis of Nigerian digital television presents a case study on the influence of South African and Chinese-owned media conglomerates investments in the sub-Saharan African (SSA) digital television market. This thesis is likely the first comparative study between the New Zealand and Nigeria digital television markets.

The thesis is a basis for further studies on various themes in the study of the digital television that investigate the effect of this technological transition on the promotion of cultural content in the era of digital television. The market-centred approach to the digital television environment suggests that television content that is capable of attracting advertising revenue and meeting other attributes of market imperatives is more likely to be distributed. This effect of digital television has prompted various nation states and international organizations such as UNESCO to campaign against the commodification of cultural values and promote the distribution of cultural content on the digital television platform. Finally, further studies could focus on the central technological issues for digital television such as interoperability and the cross-accessibility of this broadcast technology across various digital television broadcast services. Also, the analysis of the two television landscapes considered in this study is a possible contribution to further studies that focus on the future of the digital television in the era of technological convergence.

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APPENDICES

Appendix One.

Information Sheet

UNIVERSITY OF CANTERBURY
Te Whare Wānanga o Waitaha
CHRISTCHURCH NEW ZEALAND

Media and Communications
Telephone:
Email: femi.abikanlu@gmail.com
21/11/2017.

A comparative study of the Switchover to Digital Television in New Zealand and sub-Saharan Africa.

My name is Femi Abikanlu and I am a Ph.D Research Candidate with the Media and Communication Department. My research is based on a comparative study of the Switchover Process to Digital Television in New Zealand and the sub-Saharan Africa. The study explores the global governance of the digital television environment and its effect on the digital transition process in New Zealand and the sub-Sahara Africa.

As a result, I am contacting you for an interview process that will investigate the role of your organization in the DSO Process.

If you choose to take part in this study, your participation in this project will involve a semi-structured interview process that would be recorded and estimated to last between 20 minutes.

As a follow-up to this research, you will be requested to verify the transcript of the interview for factual errors. I can send you a summary of the findings upon request.

Please note that participation in this interview process is voluntary and you have the right to withdraw at any stage without penalty. You may ask for your raw data to be returned to you or destroyed at any point. If you withdraw, I will remove information relating to you. However, after analysis of the interview starts on 31st December, 2017, it will become increasingly difficult to remove the influence of your data on the results.

As the results of the project may be published, I am also requesting to seek your consent for your names, official title and organization to be mentioned in the data gathered in this investigation. The data would be kept safely in a storage device for a period of ten years after the completion of my thesis and would be destroyed thereafter. A thesis is a public document and will be available through the UC Library. Please indicate to the researcher on the consent form if you would like to receive a copy of the summary of results of the project.

The project is being carried out *as a requirement for Ph.D degree in Media and Communication* by Abikanlu, Olorunfemi Eni under the senior supervision of Dr. Zita Joyce who can be contacted at zita.joyce@canterbury.ac.nz. She will be pleased to discuss any possible concerns.

This project has been reviewed and approved by the University of Canterbury Human Ethics Committee, and participants should address any complaints to The Chair, Human Ethics Committee, University of Canterbury, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz).

Femi Abikanlu,
University of Canterbury.

Appendix Two.

Consent Form

Media and Communications
Telephone:
Email:olorunfemi.abikanlu@pg.canterbury.ac
.nz

A comparative study of the Switchover to Digital Television in New Zealand and sub-Saharan Africa.

- ☐ I have been given a full explanation of this project and have had the opportunity to ask questions.
- ☐ I understand what is required of me if I agree to take part in the research.
- ☐ I understand that participation is voluntary and I may withdraw at any time without penalty. Withdrawal of participation will also include the withdrawal of any information I have provided should this remain practically achievable.
- ☐ I understand that a thesis is a public document and will be available through the UC Library.
- ☐ I understand that all data collected for the study will be kept in locked and secure facilities and/or in password protected electronic form and will be destroyed after *ten* years.
- ☐ I consent to my name and that of my organisation being stated in the thesis.
- ☐ I do not consent to my name and that of my organisation being stated in the thesis.
- ☐ I understand the risks associated with taking part and how they will be managed.
- ☐ I understand that I can contact the researcher [Femi Abikanlu and femiabikanlu@gmail.com] or senior supervisor [Dr. Zita Joyce *and* zita.joyce@canterbury.ac.nz] for further information. If I have any complaints, I can contact the Chair of the University of Canterbury Human Ethics Committee, Private Bag 4800, Christchurch (human-ethics@canterbury.ac.nz)
- ☐ I would like a summary of the results of the project.
- ☐ By signing below, I agree to participate in this research project.

Name:______________________________Signed:_____________________________Date:________________

Email address *(for report of findings, if applicable)*:____

Please return consent form to olorunfemi.abikanlu@pg.canterbury.ac.nz or femiabikanlu@gmail.com

Femi Abikanlu.

Appendix Three.

Transcript of the Interview with the Chief Operations Officer, MultiChoice Africa

Interview Date – November 25, 2017.

From your role at DSTV, how would you describe the present nature of the DSO process in the sub-Saharan African (SSA)?

It's a bit of a mixed bag because there some countries that have migrated and there are some that hasn't. For example, Tanzania has migrated and South African hasn't migrated yet. I was actually reading from a place this morning where they said that there were four countries in total that have truly migrated in Africa.

Before the DSO process, DStv has a base across Africa. In the DSO era, how did the DStv participated with the DSO Process in the sub-Saharan Africa?

So you have to separate the DStv and GOtv. For DTT, we have a business call GOtv which is a part of MultiChoice Africa and it's purely a digital terrestrial television service. DStv has been there for many years and to an extent some people didn't realize that DStv has been digital for a very long time. But the issue is that it hasn't been taken up by a lot of subscribers. So if you look at our subscription and the customers that we have, it's nowhere near the overall television population in the continent. As a result, we targeted a different segment with our DTT product and so participated in ASO or DSO but we maintained that the DSO process is a government initiative and not a private initiative.

What's your view on the participation of national government in the DSO process. Do you think the DSO process should have been driven completely by private participation as some private broadcasters have insinuated?

I have a different view and for one simple reason which is that communication has got some universal access obligation for the government and its state-owned national services such as the NTA in Nigeria. So, for a private broadcaster, there are certain areas that would never be profitable to have digital television network coverage. For example, in South Africa, we conducted an exercise and we realized that it is not possible to have a network coverage for 100% of the population but we discovered that the network coverage for about 60% of the population required less than 40% of total network investment. The network investment required to cover the rest of the population is more than the initial investment. So for a private operator, the chances of embarking on a national coverage are very limited. There are some places that are not just profitable for digital television services to and so we have always been of the view that DTT is a government initiative. If it is left to private initiative alone, network coverage will be driven by profit motives. That is our view and the easiest way to understand this is to compare the network coverage of radio stations with government-owned radio networks and it is easy to realize that private radio stations are mostly located in places where there are potential for advertising revenues.

What are the challenges faced by the DStv in its participation with the DSO process across the SSA region?

My working relationship with the DStv commenced with the roll-out of DTT services, the GOtv into African countries which is my project. I think the first challenge was to explain what the new digital technology was about and also get local buy in of the services that we were trying to offer. We were also faced with the challenge of trying to explain the differences between analogue and digital television services and as you know, these are different technologies completely. So apart from these challenges, other challenges are the usual struggle that any multinational trying to move into a new country faces; language barrier, cultural differences and differences in the way business are done. The main challenge in exporting our services into other country and realizing that there are no wrong or right way of doing things and there are certain things that are appropriate for each country.

How was the GOtv able to break into the DTT market inspite of direct participation of the government-ownwed DTT broadcast service and other newly licenced DTT service broadcasters?

There are number of factors responsible. The first factor is obviously our content and we really believe that we have got the best content but that alone is not enough. Even though DTT services is based on a standard, the second factor is due to our superior implementation and application of the DTT standard. We believe that this implementation of DTT standard is superior when compared to others due to our experience of operating in multichannel environment. Thirdly is our obsession of customer experience. I think these are the three main ingredients that worked for us and enabled us to take a lot of market share from the existing players but the main being our customer service.

Inspite of several postponements, how would you advice various national governments in Africa on achieving a successful DSO process in due time?

The first thing is the misconception about the switch-off date. The ITU switch-off date is actually a function of when analogue services stop being protected. What happens in the past before the ITU Switch-off, for instance in South Africa, was that analogue services enjoyed protection over digital services, but the DSO process is the other way around. There wasn't a real penalty for not meeting the deadline and a lot of countries came to realize that even with reaching the deadline, nothing happens and all that it meant is that the analogue services do not enjoy protection anymore. To answer your question basically out of the lesson learnt from the Ofcom report on the DSO process in the U.K. First, they tried to privatize digital services through encrypted boxes and they realize that it didn't work for the government. Then they made it an open network for public broadcasting and the main thing is to realize that once you go digital, at some point in time, digital services will just become the new norm. So if African countries want to move forward with the DSO Process, then they have to be clear on the end game that they want to achieve. The second thing, which is perhaps the most difficult part of the project, is to educate the public consumers. So, you have to educate and spend a lot of time and investment educating the populace about what the DTT is about. In summary, there has to be a political will on the side of the government, clarity of purpose on what you want to achieve and communicate and stick to what you say you want to do.

Do you think regulatory involvement of various national governments in Africa has been a setback or progressive for the DSO process in anyway and what regulations should be in place to drive the DSO process*?*

It's a bit of a mixed bag. The ultima regulation is being pro-investment and progressive and I will argue that progressive is a very subjective word which depends on which angle they are viewed from. However, there are also some regulation that are unclear and confusing and sometimes conceived in a way that the consequences of such regulations are not well understood. A good example is certain instances where regulations requires a quota for local content. So, in a single channel or analogue environment, that is fine and easy but in a multichannel environment where analogue services are replaced by 30 digital channels that percentage would put so much on the broadcasters that it would be almost impossible to do. You find out that the way the regulation is written is not conducive for the digital environment. As a result, you find out that there are situations where the regulation of an analogue environment is found in the digital environment without the understanding of the consequences of these regulations. However, there are also some incidences where the regulations are very good. For instances, there are environment where the regulations allow for self-probitening and other instances you find out that the regulations insist on using a particular local signal distributor and that distributor is technologically advanced to the desired level. I think it's a bit of both, you will find the good and the bad. I guess the best regulation would always be the regulation that allows for government to have obligations and equally allows the private and foreign investment to take part without prejudicing one or the other. I think for me that is the best regulation you could ever find, if you could get to that point.

Many of your competitors across the SSA region have critiqued your dominance due to the exclusivity of the premium contents and are advocating for a sharing arrangement that would be backed up by market regulations. What's your take on this?

If you look anywhere in the world, internationally as well, what you will really find in any market, you will find out that in pay TV there is a significantly one or two players that are big and a couple of small players, but the exclusivity of content is what thrive the success of the pay TV operator and your ability to negotiate. However, we are also quite aware of the perception as a result of this exclusivity of the premium content as it tends to drive monopolistic behavior.

Interviewed conducted by;
Femi Abikanlu,
Postgraduate Researcher, University of Canterbury,
Canterbury, New Zealand.

Appendix Four.

Transcript of Interview with the Planning and Policy Manager, Radio Spectrum Management. Interview Date – November 10, 2017.

How are you involved in the DSO process in New Zealand?

I am the manager of policy and planning team in the Radio Spectrum Group at the Ministry of Business, Innovation and Employment, formally the Ministry for Economic Development (MED). We were responsible for planning and initiating the DSO Process project in many senses because we were the ones who wanted to free up the Radio Spectrum, so we could use it for mobile telephony. We saw the value in the DSO process and took the initial push to keep it going. We were also involved in planning for the new television in terms of the digital planning for channel allocation and the allocation of the 700MHz spectrum for mobile telephony.

Based on this information, is it right to say that the radio spectrum management (RSM) was the main regulator of the New Zealand broadcast environment involved in the New Zealand digital transition process?

So, we are responsible for the allocation of channels and the allocation of frequencies that broadcasts could use and we did the licensing for that. You will know that New Zealand has a very light-handed regulating regime for broadcasting. There is not much of regulations. In terms of content, the ministry for cultural and heritage does have a role but in terms of Channel allocation and planning for broadcasting, the Radio Spectrum Management is the main player.

What other countries digital switchover Programme did you observed during the New Zealand transition process?

My understanding was that we did look lessons from the DSO Process in Europe. We were making the changes and planning about the same time as Australia and slightly Netherlands. So we were talking to colleagues in Australia, Canada and the USA. We were largely doing things about same time as some of those other countries, so we were moving very easily. So, we didn't have a template from any another country that we were looking to copy. We were designing the process by ourselves to a large extent.

Was there any response or feedback from the major digital TV provider during the New Zealand DSO Programme?

I can't talk for Sky Television but for the government, the driver for the DSO Process was more of having better quality of Television reception that would benefit the viewers and wider economic benefit for the government. So those were the drives from the government side. The New Zealand DSO Process wasn't driven by any concern or in any relation to Sky Television.

As a regulatory agency of the New Zealand broadcast environment, what specific regulatory changes were made to the digital television environment for a successful transition process?

There weren't very much regulatory changes. The New Zealand DSO process was organized and coordinated with the broadcasters and new frequencies were made available for the broadcasters. The government put some money to help with the transition costs and a plan was developed to help everybody move. So, it didn't require anything very much in terms of change in regulation because it wasn't a regulated environment. There was some raw talent in terms of agreeing what in terms of the technical specifications of the broadcast standards but that was a little bit of decision making so we can get fragmentation of different broadcast standards but they were no changes to regulation to make this happen.

During the commencement of the DSO process in New Zealand, what were the specific state intervention initiatives or Programme that initiated this successful transition?

The Government did spend quite a lot of money in investment in encouraging people to switch to digital television and then helping those in need to switch but I don't have the total number that was spent but it was over NZD 150 million. The component of the investment involved setting up of two digital-only Channels (TV6 and TV7) owned by TVNZ, money for the Freeview New Zealand which is a consortium of FTA TV broadcasters to help them organize and set up the Programme Guide for the new digital television environment, investment into the Going Digital Organization. The Government also put a subsidy scheme in place for the elderly poor people and those on some government benefits.

Were these government direct financial assistant for just state-owned broadcasters copy and how were other run state-owned broadcasters supported?

All of the broadcasters received assistance by way of some concessions in terms of their License fees and paying for additional licenses for digital transmission during transition period when they were transmitting their services on both analogue and digital.

In the wake of the DSO process, how does the RSM regulate the involvement of private digital broadcasters in the New Zealand digital TV environment?

The regulation of private broadcasters is not different from the public broadcasters.

What were the challenges of the DSO process in New Zealand?

There were challenges along the way but overall, the New Zealand DSO process was a success. The government invested NZD 150 million dollars to make the changes happen and in return, it made about NZD 270 million from the freed spectrum. The government was able to recover its initial investment. During the transition phase, there were lots of technical barriers while operating digital and analogue services at the same time. It was a complex process especially with the allocation of frequencies which requires technical coordination.

It appears as television becomes digitized, so does its environment become more and more driven on commercial imperative with less state regulations. Do you think the good old days of PSB model is possible with in digital television era?

I am public official and not allowed to speak in terms of government policies. So, I need to be a little bit careful in expressing my views on public broadcasting. I would question whether the good days were really good old days or not, but a few different options people have now seemed to be more preferable to having a great restricted number of options in the past. Another thing I would say in terms of government policies is that government in New Zealand has continued to fund New Zealand content through the funding of Radio New Zealand and New Zealand on Air. I don’t think that the idea of a TV Channel that everybody watches is long gone and I think that there is a TV mainstream view in New Zealand that there is plenty of public broadcasting in various forms.

Appendix Five.

Transcript of Interview with the Former CEO, Freeview New Zealand.

Interview Date – October 26, 2017.

From your previous role at Freeview, how would you describe the nature of the New Zealand digital Television market?

Yeah, I don't work in the industry anymore but certainly in my time working with the Freeview television and because we were a small country, the fact that there was a large and dominant PayTV broadcaster had an impact on the level of investment that Free-To-Air broadcasters were able to make in both local content and also technology. So, I guess that had an impact when you compare us to say the ABC in Australia and the BBC in the U.K. So that was kind of the key different and biggest challenge for us.

Are you saying the whole transition process in New Zealand was really about creating a new digital TV platform in form of Free to Air (FTA) Television which serves as an alternative to the subscription-based TV services?

Yes Femi. The best place to describe what happened in the New Zealand and the reason why it was successful, by successful I mean happened in a very short period of time. So, in five years we were able to transit the whole country from analogue to digital without a significant investment from the government. All they did was thy made available spectrum and perhaps about 25 million New Zealand dollars in transmission subsidies and about another 15-20 million New Zealand Dollars in content subsidies to make the digital platform attractive initially. But the key to the success was getting all Freeview broadcasters on board to help make the transition as well. So, while it was driven by the main broadcasters, TVNZ, Mediaworks, Maori Television and Radio New Zealand were all shareholders and they were open to all other Free-To-Air broadcasters joining the platform. This may be slightly different from the way it's done particularly in African states thinking about approaching digital switch over. It's a very network driven rather than been a whole industry getting together.

What were the short term dividends of the DSO Process in New Zealand?

Yes, I think there are two ways you can answer that. One is from the national perspective; the government were able to realize the significant amount of revenue benefit from being able to sell-off some of the analogue spectrums to telecoms. They realized dollars back to the New Zealand government and taxpayers. So financially, it has been a very good solution. That's the same for any country where they are able to re-use the spectrum for 4G and 5G services. So the old analogue TV took up a lot of bandwidth that you can re-allocate. For the consumers it enabled a much better quality of products, HD Television, more Channels, Stereo sounds, on-screen programme guides. For the broadcasters, there was a reduction in transmission cost and also the ability to be able to quite easily move towards better technologies like high definition and on-screen graphics and other vehicles to improve the user experience. So those are the three areas in answering that question.

Considering the heavy financial investment required for the DSO process by public Television broadcasters, how was the DSO process funded by these broadcasters

Yes, it's a very good question. The broadcasters needed to invest in the new digital technology for broadcast and that wasn't any direct investment from the government to make that happen. So they needed to do that themselves but they didn't get to pay to simulcast analogue and digital transmission. So that was a saving to them. They invested in the digital switch over because of the significant savings when they move from analogue to digital transmission. They were probably saving half of their transmission cost. So, the pay off in the technical development for digital TV was a very quick one.

What platform was the Freeview broadcast operating upon?

It definitely wasn't subscription, but Free-To-Air funded by advertisement revenue. The difference probably from a number of other countries would be it was provided on two platforms, satellite and terrestrial. The reason for that is satellite is the most economical way to cover 100% of the New Zealand homes and the digital terrestrial is more efficient and cost effective in providing high definition services to the majority of the population say 75%. It is also a national-owned network, but the satellite network is probably owned by a private corporation that is not New-Zealand-based. These were the two reasons for the dual transmission network.

On what cost was this for the public consumers?

So, what we did then with satellite was that we worked with manufacturers to develop a specification they adopted and then they were given approval to be sold and authorized retailers using our logo, so it was Freeview approved. Then we did the same to TV manufacturers, T.V. manufacturers only wanted terrestrial channels so and all the TV manufacturers came on board quite quickly with our specifications.

Were the public consumers having to purchase their own decoders or funded by the government?

On the hardware side there was no support from the government for consumer hardware. They were all at consumer cost. However, the government provided funding for a group of New Zealanders who had been unable to buy them through some sort of benefit package for the low-income family or the elderly. This was about 20,000 homes and they were provided with Satellite or terrestrial receiver for free.

Did the New Zealand made any investment in digital contents for the Freeview digital TV Services?

They invested in some content, they paid for contents for two digitally-only channels within a period of 3 years.

In the event that there is a dominant player in the New Zealand digital or subscription-based TV market (Sky TV), for reasons that can be largely attributed to its monopoly of the premium contents that drives the market, how was Freeview able to match-up with this market competition?

So, what we focused on was that it was subscription-free so, and that the majority of New-Zealand favourite shows were still on Freeview television. So what Sky T.V. dominated were Sport contents and wider offering of movies but the majority of what New Zealand watched was available on Freeview.

Inspite of the heavy market for premium contents which determines do you think this was a challenge for Freeview?

Sky television only had half of the homes and that slipped slightly since the arrival of Netflix and Lightbox. It’s probably about 45% and that’s pretty big for a single PayTV. provider but on a global context, PayTV in New Zealand has been dominant but has never been a majority provider of content to high users of TV and Sport fans of TV had Sky TV but the rest of the population where quite happy with Freeview TV.

Was your take on the merger of a major Telecommunication company and the dominant digital TV provider, is it best for the market?

No, any merger of two major telecommunication and a dominant broadcaster is not good for a market. It just creates a large dominant player across multiple platforms. I don’t think it’s a good idea at all.

[Cuts in] with the market realities of the sub-Saharan Africa market of such possible merger of the dominant players?

But I think it can work as long as it is regulated, there is some control over what they can provide and what competitors can also offer. So, in terms of pricing, there needs to be an oversight.

Are there market regulations on possible content sharing arrangement or one that limit the acquisition of the broadcast rights of these premium contents?

It's the other way around. Freeview didn't buy content, it's the broadcasters that on its platform that did, and they were prevented from accessing premium content by a lack of regulation. Sky could have been regulated to a rather wholesale market and much the same as telecommunication companies as the services they provided in terms of broadband and as it is done by Ofcom, ABC and other regulators. So, there were regulators in other jurisdiction that ensured that premium contents are not used by a dominant player to protect subscription revenues.

In case of investment in digital content by the New Zealand state through NZonAir for the creation of entertainment and commercial-viable contents, how has this direct participation of the New Zealand state in the digital television affected market competition between Freeview Channels and the dominant Sky Television Network?

I think the NZOA policy is actually been of a benefit to TVNZ because of the commercial imperative it is driven on. It enables the largest broadcaster to have the largest share of the funding rather than for a small local or regional broadcaster who wanted some funding for a local regional news channel. They were unable to get in quickly because they didn't meet the commercial criteria. So, I think there may be a change in that with the upcoming government, and you may see a non-commercial flavour in some of the new decisions about how funding is allocated in the future.

Appendix Six.

Interview with the Chief Operations Officer of StarTimes TV Network, Nigeria.

Interview Date - November 15, 2017.

From your role at Startimes Television Network, how would you describe the present nature of the Nigerian digital transition to digital Television environment and how was the Startimes Television Network anyway involved in the DTT process in Nigeria?

Digital television has been in Nigerian for more than fifteen (15) years. Of course, it started with digital satellite television on the DStv network because digital satellite was sort of elitist and so people didn't notice that there was already digital television in Nigeria. However, StarTimes launched digital terrestrial television in 2009 in the middle of the digital switchover (DSO) and as a result, it was now more in the consciousness of Nigerians that we now have digital television. StarTimes was a pioneer digital terrestrial television provider in Nigeria and we commenced DTT services in 2010. We commenced operations in Lagos, Abuja, and Kano before we spread throughout the country. Right now, StarTimes is available in 34 states of the Federation. We are launching in Maiduguri by next week [November 2017]. Presently, our subscriber base is over 4 million. In the early days of our broadcast operations in 2010, most of the Channels were foreign but in the last 6 years, we have had a lot of new and upcoming local channels. Presently, we have all sorts of content ranging from indigenous contents, sport contents which include the German league, the Italian league and the French league and lots of NTA channels and also lots of Chinese channels.

Inspite of the MultiChoice dominance in the Nigerian digital TV market and the involvement of the Nigerian national government in the digital television Environment, how was Startimes Television Network able to achieve its present network base in Nigeria?

The market is a very big market and all it takes is to identity on the underserved areas. DStv is relatively expensive and like an elite network and not everyone could afford it. One of the strongest selling point for StarTimes when we launched was the price, the price of the decoder and the subscription rate was much cheaper when compared to the DStv network. You mentioned the issue of the government DSO Programme. There was the Presidential Advisory Committee which was supposed to draw up the road map for the digital transmission from analogue to digital, but the report of that committee although it was done in 2008, the government didn't do anything about it until 2012, when the government decided to set up another committee to come up with a white paper based on the recommendation. Unfortunately, by the White paper was approved, it was already obsolete. By the time the white paper was approved in

2012, StarTimes had been launched and DSTV also came up with their own DTT services which they called GOtv. The White paper was completely silent on the role of PayTV operators in the digital terrestrial television environment. As a result, there has been so many distortions in the whole ecosystem because so many things that were not envisaged in the White Paper are now big issues today.

As matter of priority, what do you think should be the necessary intervention strategy by the national government to achieve a successful DSO process in Nigeria?

Most of the problem of the Nigerian DSO process is that the government is trying to do everything that the private sector can do better. The Nigerian government is involved in issues such as subsidizing decoder, the middleware system that is supposed to run in those decoders. Government all over the World participating in the DSO process are trying to make it easier for people to acquire the digital devices at minimal cost but for the Nigerian DSO process we had a solution that would have cost the government nothing especially at a time of economic recession but rather, the government decided to embark on an expensive path to the DSO Process. For you to achieve the transition process, at least 90 percent of homes in Nigeria should have the decoder but because the DSO process was late, most people are already enjoying digital terrestrial television from the two PayTV providers, StarTimes and GOtv. So this PayTV providers have covered most of the country and people have acquired the Set-up boxes at subsidized rates. With the DSO Programme, people are not likely to buy these new decoders because they already have decoders in their houses. It's a big issue and I just wonder how we can get around it but it would have been a lot easier if the private sector was allowed to midwife the DSO process. For example, what is the difference between PayTV and the government Free TV? Technology-wise, it is the same either it is encrypted or not encrypted. My personal opinion is that government could have the PayTV providers to carry the FreeTV channels based on some sort of arrangements between the Carriers and the broadcasters, I think it could have been a much easier solution for everybody. With that arrangement, if you have any decoder at home, you can have access to the Free channels of the so-called DSO process and if you are not satisfied with these FreeTV channels, then you can now subscribe to the PayTV channels with the same decoder. The decoder specification of the DSO process is not compatible with either StarTimes or GOTV which means if you want to receive Free channels then you must buy the FreeTV decoder. Also, the signal distributors are also struggling because of the way the whole process has been handled. Until you switch-off completely, you cannot convince any broadcaster to pay any carrier for carrying their analogue signals. I don't see any Switch-off happening anytime soon. Will the Signal distributors continue to operate without payment from anybody especially when the public consumers are not paying subscription fees because they believe it is supposed to be FreeTV and the broadcasters are not ready to pay carriage fees as well? In fact, the carriage fees have not even been determined and if there are any, I don't see any broadcaster wanting to pay now.

Quite a number of digital TV provider have advocated for market regulations that will enable possible content sharing arrangement of broadcast rights of some premium contents that largely determine consumer demands. What's your position on this?

The premium content is what differentiates one platform from the other, if you have different platforms what determines reasons why people subscribe to one platform or the other is because they are probably providing something different or something special. So content sharing is a good idea but I wonder if it is practicable and there are complicated issues for the consumer to be at an advantage.

What's your relationship with the Nigerian Television Authourity?

Of course, the StarTimes operation in Nigeria is called NTA Star TV Network Limited but Star of China has majority of the shares and that is about 70%. It is a joint venture company between NTA and the Star of China. NTA provides landed infrastructure and the towers while StarTimes bring all equipment and StarTimes is also the operator of the joint venture. The company was registered as a separate company.

Finally, what do you think are the key reasons for the success of StarTimes Television Network in Nigeria?

One of the main attractions for StarTimes is that it is much more affordable in terms of the cost of acquiring the decoder and subscription rate. There is also a very aggressive marketing and then we had some of our contents in indigenous languages and these contents are doing excellently well among our subscribers' base on our AR system.

What position, in terms of subscription-base would you classify Startimes Television Network in the Nigeria?

I think in terms of subscription base, StarTimes is No 1, but I don't know about the other factors, because for StarTimes, the primary model is much more of affordability.

Interviewed conducted by;

Femi Abikanlu,
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Canterbury, New Zealand.

Appendix Seven.

Transcript of Interview with TVNZ Transmission Services Manager.

Interview Date – December 5, 2017.

How would you describe the present nature of the digital television environment in New Zealand?

New Zealand is dominated by the main FTA broadcasters together as Freeview, a PayTV operator, and some digital cable and IPTV OTT offerings. Freeview provides a common user interface for viewers, with consolidated EPG and VOD (video on demand) offerings. There are two main FTA operators (TVNZ and Mediaworks) with three channels each [as of June 2018 Mediaworks now has four FTA channels], two second-tier operators with two channels each and several minor Channels including general, religious, regional, ethnic and shopping channels. The PayTV operator (SKY) also has a FTA Channel. In total, there are about thirty FTA Channels in all including three HD [four HD channels since early 2018] channels.

The FTA Channels are both DTT terrestrial covering 87% of the population and DTH satellite covering the whole country. Pay TV is on satellite only. There is also cable TV that is available in some areas only. As a foot note, the old analogue TV system had 99% terrestrial coverage. There are two transmission providers (DTT) who operate the transmitters in different areas.

You mentioned that the PayTV operators also operated on the Freeview platform, how was this made possible?

It depends what you mean by Freeview:
If you mean free-to-air, the Pay TV operator also has a FTA channel that is on Freeview.
If you mean DTT:
The PayTV is only on Satellite DTH now. There was a minor pay TV operation with a reduced subset of channels on DTT platform, but that has now closed down as it wasn't commercially successful.

How were you involved in the New Zealand digital switchover (DSO) process?

Personally, I was the technical lead for TVNZ, which was the main broadcaster involved in the process. I was involved in the regional DSO process, and so mapped the [region] boundaries. I was a member of various working groups and committees: including a broadcasters and transmission operators group and a property management group. I was involved in liaison meetings with the Digital Switch over organisation and I also organised the on-air captions for TVNZ.

[I was a member of the various committees and working groups:

- liaison meetings with 'Going Digital' (Government appointed coordination and publicity organisation)
- Broadcasters and Transmission operators working group to plan the practical switch off.
- Property management group (for buildings with TV systems e.g. Apartment buildings, prisons, hotels, etc.)

I developed the maps to delineate the areas that would be switched off together.
I organised the on-screen captions advising viewers that switch of their local analogue service was imminent.]

How was the TVNZ involved in the DSO Process?

TVNZ was the lead broadcaster championing this process and took a central role on behalf of the industry in moving it forward. Alongside TVNZ's role, the DSO organisation, 'Going Digital', was set up specifically for this process.

What was the composition of the Going Digital Organization?

It was a very small organisation set up by the government of the day. It was designed to operate for a limited time frame and to deliver a specific objective. In composition, the organisation was quite small and had only a handful of staff. It outsourced key roles such as publicity and marketing to agencies that assisted on the project. The 'Going Digital' organisation could by and large be considered a directing body to coordinate the effort to switch analogue over to digital.

What was the approach of the Going Digital Organization to the DSO Process in New Zealand?

It was recognised the industry as a whole had to go through the process at the same time. 'Going Digital' convened various working groups that included a range of companies, both private and state-owned in a number of sectors. The working group included broadcasters and transmission operators and property managers, due to the need to take account of buildings with television systems.

The essential motivation for the government was not to just to have digital television, but to achieve it a coordinated manner resulting in a 'digital dividend'. What this means is that the government, through this process, cleared a number of frequencies that could then be repurposed, or used by other organisations such as telecommunications companies.

How was TVNZ able to overcome the financial requirement of DSO process especially involving the transmission cost of digital television signal?

There are two explanations for this.

Firstly, the cost of digital transmission is less than analogue. In our case, we achieved a significant cost reduction by eliminating some of the analogue transmission sites and replacing them with a smaller number of digital sites. Even if the same number of sites been required, the cost of digital transmission itself is less than analogue transmission. We can transmit multiple channels on one digital transmitter and the power requirement is less.

However, there was an increase in cost throughout the simulcast process (when both analogue and digital were running), this is because we had to pay two transmission costs across the early years of the DSO Process. One way that we mitigated this additional cost was to negotiate a long-term contract with the transmission provider with a stepped fee. In the years we were simulcasting, we paid a lower cost and then once analogue was switched off, the cost of the digital transmission went higher. So effectively, we spread the cost across a number of years. This was purely a financial arrangement we had with the transmission providers.

As a state-owned Television company, who is funding this financial arrangement?

We funded the cost of our digital transmission. As mentioned, we paid a higher cost when we were simulcasting, but not as high as it could have been because we negotiated a lower cost for the digital while we were simulcasting.

What do you think are the key successful factors for the success of TVNZ in New Zealand DSO process?

One of the factors that made it successful was our use of onscreen captioning. The captioning sent the message to the analogue viewers that the analogue service was ending on a particular date.

We considered regions in the DSO process also. Firstly, we chose a number of test regions to roll our publicity and advertising materials out to. From this, we found out the best way to communicate the messages needed for viewers to make the switch. Generally regions were chosen where there was a very clear switched-off date. We also considered factors such as the geography and not just the transmission sites.

Another key factor was getting the whole broadcast industry involved. This included the broadcasters themselves, transmission providers, the retailers, the manufacturers of digital television equipment and property managers who often have fixed system in those apartment and buildings.

[A key success factor that I was not personally involved in was the creation of new desirable digital-only channels. To get these new channels, viewers had to 'go digital'. This served to 'pull' viewers in to the switch over and it was incentivising.]

Would you say the whole transition process was a worthwhile effort?

Yes, it was a worthwhile process. We have a better offering for viewers now – a full digital offering with EPG programme guides and digital recorders. We have added the hybrid broadcast broadband (Hbb) component as well. It was necessary to move broadcast television into the digital age too because we are now competing with the online TV services.

Appendix Eight.

Interview with Engr. Friday Ojone Ukwela on the DSO Process in Nigeria.

Interview Date: November 29, 2017.

How would you describe the present state of the DSO Process in Nigeria?

Thank you very much. As you know, the NBC is the broadcast regulator in Nigeria saddled with the responsibilities of managing the DSO process. What that means is that in times of setting the agenda, formulating the policies that should guide the process, the NBC is saddled with these responsibilities. The NBC as the regulator midwifed a Presidency Advisory Committee which was to set-up the policy and guidelines for the process of alternating from analogue to digital broadcasting will be carried out. That was then, way back in 2009, the presidency had the Presidency Advisory Committee set up by the

Federal Government following the advice of the NBC. That particular committee set out the various means of identifying the stakeholders that should be part of the DSO process and that document was given to the government. Government, through that document, established a White Paper on digitization and as well as setting up a DigiTeam Nigeria, a digital implementation committee for Nigeria. As well as doing this, NBC also identified some keys stakeholders like looking at the population of Nigeria. It was agreed that there is the need to have a Set-Top Box manufacturing in Nigerian with the view that we can't throw away the analogue TV that are currently in Nigeria. In use for Set-Top Boxes, looking at the population of Nigeria, there is need to authorize Set-Top Box manufactures. Thirteen companies have so far been authorized to manufacture Set-Top Boxes in Nigeria. In order to maximize the use of spectrum, there is a need to separate the TV broadcast ecosystem into two, there should be Signal Distributors and the Content Providers. Two companies have been licensed to be Signal Distributors. Going forward, there was also the need to brand the digital landscape, so a company was also contracted by NBC to aggregate content and brand it for the Freeview which we could call the Freeview Preposition. So it was in place, also to protect the investment of the Set-Top Box manufacturers, Nigeria also got the services of another company […] to develop a software that would sit on the Set-Top Boxes such that the Set-Top Boxes being manufactured in Nigeria would only be authorized to search for signals that are coming from the shores of Nigeria. […]. Also, the NBC, as the regulator commission, has also seek the services of a satellite operator, SAS, so as to aggregate or overhaul regional and national signals. Our preposition is that we have 3 levels of coverage, the national coverage, regional coverage and local coverage. So, for the regional and the national signal, they are being overhauled through the Satellites to the Signal Distributor for evacuation. As of today, we have done the piloting in Plateau State and almost 80% of the Plateau states is on digital platform now even though we have not Switched-Off Analogue yet, it is still Simulcast that is still going on there. We have been to the Federal Capital Territory and then they have also Switched-On digital signal. We are still operating dual elimination in Abuja. Six states each from the six geopolitical zones in Nigeria have been chosen, two of them are ready in total, we have Kwara state and Kaduna State are ready as we speak to go on digital platform. The remaining four are almost ready like Delta, Osun state is almost ready and Gombe is not yet ready. The Set-Top Boxes manufacturing plant, about four of them are rolling out as I speak, even though at this level, it's just assembling that we are doing. One of them has even got to the point of even manufacturing chips, chips are rolling out on that particular one.

What are the composition of the Presidential Advisory Committee and the DigiTeam Nigeria driving the DSO process in Nigeria?

In a nutshell, there are two committees now. The first committee was the Presidential Advisory Committee. It was an industry-based committee and we have representatives of government, private sector, broadcasters, lawyers, immigration, customs as part of that committee. The committee put together what we call a Presidency Advisory Committee Report [PAC], they did their work and handed it to the government. That committee is no longer in place; they worked till 2009 and submitted their work to the Federal Government. Out of that PAC report, there was a recommendation to build a digital transition committee which we called the DigiTeam Nigeria. It is also an industry-based committee, there are people from all works of life, Judiciary, Customs, Trade and industry, the NBC, private sectors, broadcasters. etc. The committee would be on until the transmission is over.

What of the idea that the main private broadcasters were absent from participating in the DigiTeam composition?

That may not be totally correct, because the DigiTeam is a 14-man committee even though one member is late now and so we only have 13 members left. From the broadcasters, we had a person representing the broadcasters. Apart from that, a member of the DigiTeam is a director of NTA StarTimes venture, so if you say that there is no representation that would not be correct. Maxwell Loko, who is a member of that committee is a director of the NTA StarTimes PayTV. So, it's not correct.

What about the participation of private broadcasters, GoTV and StarTimes, before the decision of the government to go digital television process*?*

That's not correct, let me correct that. They were not on DTT platform before the committee was established and submitted its report. These licenses came after that report. The Presidential Advisory Committee report, like I told you, came on 2009, GOtv was licensed in 2014, StarTimes was around 2010, and so none of them were on ground before the Presidential Advisory platform submitted its report.

Does the PAC recommendations advised on the participation of private broadcasters in the DT environment in anyway?

Not only what government was going to do, like I told you. For the Signal Distributor, there was room for private and then government. In fact, government was one and the total number of distributor that was recommended was 3, and the government was one which was the one coming from the national broadcaster which was NTA. The other two was to be private owned. So, the content provider was not only government, all the TV stations whether private or public, they are also formed part of the content provider that were going to ride on that platform. Then of course, for the Set-Top boxes, we had private operators were to come on board as Set-Top box manufacturers. Okay, the middleware system was not part of the recommendation because it was not foreseeable at that time but the splitting into Content Providers and Signal Distributor was part of the recommendation and both private and public sectors area to be part of that exercise.

As the regulator of the Nigerian Broadcast Industry, what specific regulatory policy changes were reviewed to give way for the DSO process in Nigeria*?*

Good enough for the Act, it was technology neutral. There was no mention of analogue or digital in the Act, so what is there covers any form of broadcasting whether it is digital or analogue. […] So even if there is another technology tomorrow, the Act still covers it because it doesn't talk about whether it is analogue or digital or terrestrial, it just says any form of broadcasting. Along the line, there were some things that need to be put into the Act because it didn't talk about. For example, the splitting of the broadcast ecosystem into content providers and signal distributors was not envisaged in the Act. Considering the duration of the licences, there was a need to amend [the Act]. For example, the Act gives 5 years for licence but we discovered that we cannot give 5 years license for Signal Distributors because they needed more years in other to deploy infrastructures and get some profits. So, we later agreed that signal distributors should at least be given a license of at least 15 years. So, some of those things need to be amended in the Act. As to whether we have the legal backing to undergo digital broadcasting? Yes, the Act covers it.

With the involvement of private participation in the Nigerian DSO process, which of course, still guarantees a Free TV platform, how is this process being financed both on the long and short term and how do you make this process commercial viable for the private participation?

Like you rightly mentioned, the transition is more of Free TV but along the line, on the part of the Signal distributors, there are some business models that have been put in place. The Signal Distributor is not going to carry only Free TV but also Pay Subscription TV. So, there are levels of payments that could be made. The Broadcasters are expected to pay money to the signal distributors which would be based on an agreed fee whether it is local, regional or national, there are fees to be paid which would be agreed on by all parties that are involved. So, you mentioned who is going to finance the process? The finance is coming from the broadcasters, let me put it that way because they are the major ones who are going to pay now. The broadcasters would pay licence fees, fees for carriage to the signal distributor. It is not the government that is funding the project as such but in terms of maybe the viewers now, the government is expected to subsidize the cost for viewers. Along this line, this is what we have done so far. For example, when we did the pilot [Plateau], government gave out about 200, 000 Set-Top Boxes free of charge to viewers. In Abuja, government subsidized the Set-Top Boxes to about N1, 500 for viewers. Of course, that is part of the delay that we are facing currently because the manufacturers are saying that viewers can't afford to pay so much for the Set-Top Boxes. So, the arrangements are going on, for the local and state government to subsidize the Set-Top Boxes to the level that the people would be able to afford. So, government would play its part and then the individuals are going to play a part also in financing the process.

How do you convince state-owned TV broadcasters to pay these signal distributors when their consumers can have access to analogue platform?

What we have done so far, like I told you, Plateau came on Air April 30th last year [2016], Abuja came on air December 22nd last year [2016]. During the simulcast period, what we have seen is that government has to take responsibility in paying the Signal Distributors for carriage but once they Switch-Off, then the Signal Distributor will now be able to collect money from the broadcasters. That is the scenario that has worked so far. The people who are on that platform are not paying any service fee for now until the Switch-Off has taken place.

On the consumer side, do the public consumers accept the state intervention initiatives into the digital Television market inspite of the heavy presence of private DT broadcasters?

Like I mentioned before, this are two business models. One is Free TV and the other is PayTV. If you want to enjoy the PayTV, you have to be paying monthly subscription. The Free TV one is a free service. The only thing I think that is different is the programming, the television programmes that people are mostly interested in watching is not on the FreeTV platform especially the football games, you would not get that on the Free platforms and if there is any lover of football, you would still have to pay for the monthly subscription to watch that. These are the two different models.

What are the present challenges of the DSO Process in Nigeria?

The challenge that we are mostly facing is Funding. Like I told you, there are even delay now because of issues around the Set-Top boxes. The manufacturers are saying they can manufacture but will people be able to pay at this amount of money and we are saying government what do we do? The Federal government is not ready to do more than it had already done in Plateau when they gave out 200, 000 Set-Top boxes and in Abuja, the Set-Top Boxes are subsidized to about N1, 500 [….] but going forward now, I don't see government ready to do so. […] It is the Finance that is the biggest challenge of the DSO process in Nigeria. If the money was there the government would have been able to implement it. The plan is a perfect plan, let me put it that way, it is the funding that is a challenge.

Appendix Nine.

Interview with the Mr. Maxwell Loko, Director of the Nigerian Television Authourity.
Interview Date; December 26, 2017.

From your experience in the Nigerian Broadcast Environment, what is the current state of the DSO Process in Nigeria?

Let me just take it from an historic perspective, for us in Nigeria, just like any other country in the region 1, as defined by the ITU, the journey to our transition actually commenced in 2006, with the regional Radio Conference that was held in Geneva. This was where the frequencies were planned, particularly the 177-230 MHz and the 470-860 MHz, and deadlines were fixed for each country. The Presidential Advisory Committee was set up to chart the road map for the transition. They submitted their report in 2008, the DigiTeam was set up by the federal government and I am a member of the DigiTeam. So, the DigiTeam which was inaugurated in November 2012 actually had the mandate to have the country switch off by June 2012. To cut the long story short, we have missed several of these switch-off dates (June 2012, June 2014 e.t.c). We experimented with Jos, where it seemed, at least, we have kick-started the DSO process. As you know digital switch over all of the world is really an extreme logistic nightmare with so many people involve in so many cases, especially our own environment where there are so many challenges of development. So, we felt that we should start with Jos for several reasons. Apart from being the first city to have colour television, it also has the topography that will offer us the challenges to overcome so we can relocate to other cities. So, that was how we experimented with Jos two years ago. We Switch-On the digital but we did not switched-off the analogue and there comes the first major problem, because for a successful DSO process to be complete, there must be simultaneous Switch-Off of Analogue and the Switch-On to Digital. To me it was a set back because there wasn't any incentive or motivation for people to migrate to digital platform if they could still be enjoying the analogue signals. Until you are able to compel them by the analogue Switch-Off, there will be no motivation for using the Set-Top Boxes. The typical average man who is struggling would find it difficult to find the money and he will ask you why I have to move when I can watch it terrestrially. Even when the government gave the notice of one month for preparation to move to digital platform, they don't seem to be any commitment for ensuring that one month was complied with and ensure that the analogue was Switched-Off. So, for me, the Jos case study is a good case study of why DSO is still not working, we must get it right, you come you provide the digital platform, you protect peoples mind by whatever means of communication and enlightenment, in one month you will be switched off. So, you give them enough time to acquire the Set- Top Boxes, so nobody is taken unawares and you Switch-Off. So, any person having problem with Set-Top Boxes will not be compelled to get his own. Don't forget in the value chain, you have the Set-Top Box manufacturers who have invested money, who expect return on investment because of the patronage that people will come to buy. If you install so much money, import, manufacture or assemble Set-Top Boxes and you are not able to sell because there is no demand for it, it will be at a disadvantage. After that experiment, Abuja was equally switched-On and you will think that we would have learnt from the Jos experience, but the same thing was replicated. Abuja was switched on eventually exactly one year ago [2016] and people kept on watching analogue terrestrially. Only last week, two cities were again Switch-On, Ilorin and Kaduna and it's the same story. Now the question is, at what point in time do we get people to embrace the digital system and then completely shutting them from the analogue? The human nature is that if you don't compel them, they will continue to patronize what they are used to doing over the years. So, to me in my own opinion, that is one huge challenge or set back that has to be confronted firstly because you have a situation where people will not take the situation seriously. Secondly, Nigeria has a very large land mass, for the DSO to be assumed to be complete, you should have covered a minimum of 80% of the TV landscape of the country, before we can say at least to some extent we are successful. Now to cover 80% landscape in Nigeria, we are talking of an average of 70 major cities. Now this is the challenge we have, two signals distributors that are supposed to roll out their digital platform all across the country and we are now having complains from the two signals distributors that it is capital intensive. One of the two signals distributors was unbundled out of the NTA. As you may have been aware, the digital ecosystem is such that you have a content provider and the signal distributors, and no broadcaster is expected to be both content provider and signal distributor at the same time. This is the distribution of functions. [….] So, you can have a government own signal distributor that will take advantage of the NTA infrastructure and facilities scattered across the country to make for quick and easy development of the DSO in all these cities, which are 102 cities, which is more than the 70% we are talking about. Now assuming the government-owned signal distributor takes advantage of this infrastructure and rolls-out in these cities, that means that there will be a quick roll out, less deployment of finances, you wouldn't need to build new antennas, mast, buildings e.t.c. but due to politics or other reasons, we have a second distributor which is privately licensed because of the skepticism of getting being controlled by the government, private broadcasters felt that when the chips are down, government can just remove the plugs and they will be off but I think that is a very wrong assumption but you cannot blame them. So that gave birth to the second Signal Distributor. Now we have two signal distributors that was supposed to cover the whole country. The government-owned [Signal Distributor] is supposed to be given fund because of its capital-intensive nature of it, it is not just driving the NTA infrastructure because you need to build in equipment that are digitally compliant, these funds were not forthcoming. Private distributors are also delaying deployment because according to them the business model doesn't guarantee return on investment, they need approximately over N300,000,000 to build-up on site and in every state of the Federation, you need a minimum of 3 sites and an average of 4 to 5 but minimum of three sites in a state. […] This is about 1.5 billion Naira for you to say you are a Signal Distributor and covering an entire state and because they are not charitable organizations, they must be guaranteed a return of their investment. So, the question from the signal distributors is that why do they need to invest so much money and roll-out when return on investment is not guaranteed? For the signal distributors, the revenue streams include transmission fees from the content providers and there are other values added like the Electronic Programme Guide [EPG] which comes with Advertisement. Also, there is a long-term revenue stream like telephony e.t.c. Now if you look at it, it is not enough for the signal distributors to feel that they are effective to roll out. As bad as this is, the National Broadcasting Commission went ahead and licensed what we call the middleware providers and the content aggregators who are now taking the chunk of the revenue in the value chain which ordinarily should accrue to the signal distributors […]. So, there is a stalemate here because the signal distributors are investing majority of the capital investment but the middleware and content aggregators who are investing nothing or little to the value chain are taking the chunk of the revenue and the main corporates who are investing so much money are left hard and dried. So, this factor has also stalled the process because there are no incentives to roll-out. […] Even for the Integrated Television Service (ITS), which is the government-owned signal distributor that should roll-out is also handicapped because it needs money to roll out. So, these are some of the factors that stalled the DSO process in Nigeria. Also, the Set-Top Box manufacturers have no incentive to flood the market with Set-Top Boxes, so even if the signal distributors roll out now, there will be no set up boxes. […] After government's subsidy on Set-Top Boxes in Jos and Abuja to not more than N1,500. Now after the withdrawal of government subsidy and allow market forces dictate, the average man already believes that it should not be more than N1,500. So how do you now get them to buy it for N10,000, which is the market price and how do you also convince the Set-Top Box manufacturers that the Set-Top Boxes will be bought? […] Now there is nowhere in the world, that I am aware of, that government did not intervene in the DSO process. In Nigeria, I think government is just paying lips service. Apart from setting up the DigiTeam and mandating NBC to go ahead with the DSO Process, there is no commitment from the government in terms of funding. […] So, in my view I think the government has some responsibilities to offer some kind of responsible rebates or incentives to vast majority of Nigerians who may not be able to afford the cost of the Digital Switchover especially the vulnerable people living in rural areas and challenged environment […] so as not to widen the digital divide.

What is the composition of the DigiTeam Nigeria and were the private-owned Digital Television Service providers involved in the DigiTeam Nigeria?

The members of the DigiTeam Nigeria are thirteen (13) in number and we lost one person who died about two years ago who represents the civil society because he is a legal practitioner in Lagos. Now to say that private participations were not included in the DigiTeam, I don't think that is right. We have a member that is into Broadband, Telephoning and Internet Protocol Services represents that aspect. We have someone [Guy Murray Bruce, CEO of SilverBird Television] that represents the members of the Broadcasting Organization of Nigeria e.t.c. We also have representatives of the Defence represented by a captain that represented the military. We had someone that represented the Ministry of Justice, we had someone that represented the Nigerian Customs, and we had people that represented the NBC, the Ministry of Information, the Nigeria Communication Commission, and Ministry of Communications. I, for instance, represents the public broadcasting like the NTA in the team. I am also a Director in StarTimes. So, technically, I also represent the Pay digital terrestrial television, and whatever policy that affects Startimes affects DSTV and GOtv. So, you cannot say GOtv/DSTV must be there to represent the Pay digital TV subsector, I am already there […]. So that is what is called representation and there is no conflict of interest. Whatever we discuss is for the interest, for the good and generality of the stakeholders involved. So, when people complain of the DigiTeam not being all-inclusive, I think it is laughable. […] You are correct when you talked about two digital Terrestrial PayTV [GOtv and StarTimes] that were already in existence [when the digit team took off]. […] Another simple way was to have co-opted these two organizations and repurpose them to offer the services. It could have saved the whole country a whole lot of financial nightmare, intrigues and logistics nightmare. These two DTT outfits have rolled out and have covered almost 80% of the Nigerian TV landscape but when some of us advocated that why don't we just ride on the backbone and infrastructure of these ones that have spent so much money […] and as far back as last year we would have finished the DSO process in Nigeria but those who got the license of private signal distributor picked on some of us and said we were trying to edge them out of business and so many other things came up.

[cuts in] Do you think there is a clash of interest between state priorities and the priorities of the private broadcasters in the journey to a successful DSO Process in Nigeria?

I think you are not very far from the truth but it is just matter of striking a balance. The DigiTeam, don't forget, is just a committee set up to midwife the process, adhering strictly to the provisions of the white paper. The government white paper is the template of the DSO process. The DigiTeam cannot act beyond the mandates of the white paper. So whatever recommendation the DigiTeam is given must be in compliance with the white paper. The white paper for instance advocated for initially one single government signal distributor using government infrastructure that is spread across the country. Then, three (3) years down the line as market depict a second or third report that another signal distributor may be licensed, but what happen, sentiment set in. They didn’t allow the government signal distributor to even survive one year before the second [Signal Distributor] was licensed. That was not the DigiTeam’s making but the NBC. […] Now what we advocated and why there seems to be this clash now is that, luckily enough, […] if StarTimes had been asked to use its infrastructure to roll out, there wouldn’t have been conflict of interest because StarTimes says they are willing to make their infrastructure be used, they are willing that the Conditional Access and Encryption in such that their Set-Top Boxes that is already in the market can be used for Free TV.

Many Thanks…