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Assessment of regulatory quality in electronic communications in South Africa

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Assessment of Regulatory Quality in Electronic Communications in South Africa

Research Report Prepared by

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28 March 2013

Submitted in partial fulfillment of the requirements of the degree of Master of Management in the field of Information and Communications Technology Policy and Regulation at the Graduate School of Public Management and Development at the University of the Witwatersrand.

Abstract

After enactment of the Electronic Communication Act of 2005, there has been increased regulation in the electronic communications sector. The purpose of this study is to investigate how ICASA ensured regulatory quality when formulating regulations.

Regulatory quality is an effective way of ensuring that new or amended regulations achieve they intended objectives. Failure to address regulatory quality may result in ineffective and costly regulations that negatively impact the electronic communications sector.

This study revealed that there are regulatory quality gaps in the regulatory process followed by ICASA. The study established that there was lack of transparency and consistency in the process followed by ICASA when formulating regulations. The regulatory decisions made by ICASA were not evidence based as no ex-ante regulatory impact assessment was conducted. The regulatory environment within which ICASA operated was not conducive to enabling regulatory quality. The main factors contributing to an unsuitable regulatory environment were identified as prescriptive sector legislation, ineffective institutional arrangements, and ICASAs' lack of the capacity and resources.

Declaration

I declare that this report is my own, unaided work. It is submitted in partial fulfillment of the requirements of the degree of Masters of Management of Information and Communications Technology Policy and Regulation at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university.

_____

Goodman Silaule

31 October 2013

Acknowledgements

I would like to thank God for affording me the gift of life and the opportunity to conduct this research.

This research would not have been possible without the help of my supervisor, Simon White, who contributed immensely in successful completion of this research. I would like to thank Luci Abrahams for her continued support, even beyond the call of duty.

I thank all the respondents for affording me time in their busy schedules and for sharing their wealth of knowledge that profoundly contributed to this research.

To my dear fiancée, Edna Nelisiwe Mnisi, thank you for the invaluable support in creating a warm environment for me. I commend your empathetic support through the hard times even when I stole time from our relationship.

A word of thanks to my parents, Samson Shikhahla Silaule, and Busisiwe Anania Silaule for being a wonderful guidance and my pillar of strength. Thank you to all my siblings and friends for being considerate when I could not spend time with you.

Table of Contents

1 Chapter 1: Background on Regulatory Quality in Electronic Communications 1

1.1 Introduction 1

1.2 Electronic Communications Sector Reform in South Africa 2

1.3 Legal and Regulatory Framework for Electronic Communications 12

1.4 Regulatory Interventions in Electronic Communications in South Africa 17

1.5 Discussion of the Research Problem of Regulatory Quality 21

1.6 Structure and Organization of the Dissertation 22

2 Chapter 2: Literature Review Related to Regulatory Quality 24

2.1 Regulatory State and Role of Regulation 24

2.2 Regulatory Management Systems 27

2.3 Tools for Improving and Measuring Regulatory Quality 30

2.4 Conceptual Framework 39

3 Research Methodology Pertaining to Regulatory Quality 44

3.1 Problem Statement 44

3.2 Purpose Statement 45

3.3 Research Questions 46

3.4 Research Methodology 47

3.5 Research Design 48

3.5.1 Case Study Structure 49

3.6 Data Collection Methods 54

3.7 Data Analysis 56

3.8 Significance of the Study 57
3.9 Limitations of the study 58
4 Chapter 4: Research Findings of Regulatory Processes, Impact Assessment and Regulatory Environment 59
4.1 The Case of Call Termination Regulations 59
4.1.1 Demand and Justification for Call Termination Regulations 60
4.1.2 Process Followed in formulating Call Termination Rate Regulations 63
4.1.3 Impact Assessment 68
4.1.4 Challenges Experienced by Regulator 72
4.1.5 Summary of Call Termination Case Regulations 74
4.2 The Case of Carrier Pre-Selection Regulations 76
4.2.1 Demand and Justification for Carrier Pre-Selection Regulations ... 76
4.2.2 Process Followed in Enacting Carrier Pre-Selection Regulations . 77
4.2.3 Impact Assessment 82
4.2.4 Challenges Experienced by Regulator 83
4.2.5 Summary of Carrier Pre-Selection Regulations 84
4.3 The Case of Facilities Leasing Regulations 85
4.3.1 Demand and Justification for Facilities Leasing Regulations 86
4.3.2 Process Followed in Enacting Facilities Leasing Regulations 87
4.3.3 Impact Assessment 91
4.3.4 Challenges Experienced by Regulator 92
4.3.5 Summary of Facilities Leasing Regulations 95
5 Chapter 5: A Critique on Electronic Communications Regulatory Quality 97

5.1 Regulation Process 97
5.1.1 Demand for regulation 97
5.1.2 Consultation Process 98
5.1.3 Proposed Regulation 98
5.2 Impact assessment 99
5.3 Transparency and Consistency 104
5.4 Regulatory Environment of ICASA 105
5.4.1 Legislation 105
5.4.2 Institutional Arrangements 107
5.4.3 Capacity and Resources of the Regulator 108
6 Chapter 6: Conclusion on Regulatory Quality in Electronic Communications in South Africa 110
6.1 Processes Followed by ICASA when Formulating Regulations 110
6.2 Ex-ante Impact Assessment of Regulations 111
6.3 Regulatory Environment Enabling Regulatory Quality 112
6.4 Recommendations to Improve Regulatory Quality 113
6.5 Future Research Question 116
6.6 Conclusion of Regulatory Quality in Electronic Communications in South Africa 116
References 118
Appendices 135
Appendix 1: Interview Schedules 135
Appendix 2: Letter of Consent 140
Appendix 3: Details of Interview Respondents 141

Call Termination Regulations 141
Carrier Pre-Selection Regulations 141
Facilities Leasing Regulations 141
Appendix 4: ICASA's Consultation Process 142

List of Figures

Figure 1 Policy, Law and Regulation in South Africa 13
Figure 2 Government of Republic of South Africa ((Edmunson, 2010) 14
Figure 3 Institutional setting to promote regulatory policy in OECD source (Jacobzone, 2007, p.21). 29
Figure 4 Countries Adoption of RIA Source (OECD, 2012) 32
Figure 5 Call termination rates (Source: Growitsch, Marcus et al., 2010)) 60

List of Tables

Table	Description
Table 1	Telecommunications Specific Legislation and Regulations
Table 2	OECD Reference Checklist for Regulatory Decision Making
Table 3	Experts Interviewed to Recommend Three Regulations
Table 4	Recommended Regulations

Glossary of Terms

3G

It's a mobile technology standard developed by ITU's IMT-2000 for faster communications services, including voice, fax and Internet, anytime and anywhere with seamless global roaming. 3G has opened the way to enabling innovative applications and services (e.g. multimedia entertainment, infotainment and location-based services, among others) (ITU, 2011).

Asymmetry

"Asymmetrical regulation is where the bulk of regulatory burdens are imposed on operators with market power and not on others" (ITU, 2002).

Broadband

It describes Internet connections that range from 5 times to 2000 times faster than earlier Internet dial-up technologies. Is a transmission capacity that is faster than primary rate Integrated Services Digital Network (ISDN) at 1.5 or 2.0 Megabits per second (Mbits) (ITU, 2003)

Call Termination Rate

A wholesale charge levied by one operator (terminating a call) to another operator (that originated a call) for terminating a call on its network.

Calling Party Pay System

Is a wholesale charging method where an operator terminating a call on its network subscriber charges the originating operator a call termination or wholesale rate upon which the originating operator marks-up the call termination rate and thereby charges its subscriber a retail rate (Growitsch, Marcus et al., 2010)

Carrier pre-selection

"Carrier Pre-Selection (CPS) is a mechanism that allows end-users to select, in advance, alternative Communications Providers to carry their calls without having to dial a prefix or install any special equipment at their premises. The end-user subscribes to the services of one or more CPS operators (CPSOs) and chooses the type of calls (e.g. all national calls) to be carried by them. The end-user may have a direct retail relationship with the CPSO, or may purchase the service via a CPS Reseller. The end-user is billed for these calls by the CPSO or CPS Reseller" (Ofcom, nd, ¶1)

Carrier Selection

Similar to Carrier Pre-selection but subscribers are required to dial a short code or install adapter devices to select a desired operator on a call by call basis (Ofcom, 2002).

Case Study

Is used when a researcher explores in-depth a program, an event, an activity, a process, or one or more individuals over a confined period of time (Creswell, 2007, p.17; Neuman, 2011, p.40).

Consistency

It's a regulatory consideration that…."requires that regulators take account of related areas of regulation and ensure similar treatment. It also focuses on the avoidance of regulatory duplication and overlap" (World Bank, 2010a, p.4)

Constitution

Constitution of Republic of South Africa, 1996

Consumer

In respect of any particular goods or services, means- a person whom goods services are marketed to by suppliers of goods or services. A person who entered into or transaction or an agreement with a supplier for a supply of goods or services (Republic of South Africa, 2008)

Electronic Communications

means the emission, transmission or reception of information, including without limitation, voice, sound, data, text, video, animation, visual images, moving images and pictures, signals or a combination thereof by means of magnetism, radio or other electromagnetic waves, optical, electro-magnetic systems or any agency of a like nature, whether with or without the aid of tangible conduct, but does not include content service (Electronic Communications Act, 2005)

Electronic Communications Network Licence

In South Africa, it means a person to whom an electronic communications network service licence has been granted in terms of the Electronic Communications Act of 2005 (Electronic Communications Act, 2005)

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Facilities Leasing

Refers to a regulatory intervention enabling one service provider, typically new or small service provider to lease or gain access to facilities of another service provider, typically incumbent operators with significant market power for the provision of services to its end-users (Lawrence, 2006).

Glide Path

In South Africa, it's a three year period (from March 2011 – March 2013) set by ICASA, specified in the Call Termination Regulations, within which interconnect rates will be reduced annually.

GSM

Is a standard set developed by the European Telecommunications Standards Institute (ETSI) to describe protocols for second generation (2G) digital cellular networks used by mobile phones.

Information Communications Technology (ICT)

Means the convergence of Computing and Information Technology, Broadcasting, Telecommunications, and internet (Souter, 2009)

Institutional Arrangement

“Is policies, systems, and processes that organizations use to legislate, plan and manage their activities efficiently and to effectively coordinate with others in order to fulfil their mandate” (UNDP, nd).

Institutional Capacity

Is defined as adequate rights, responsibilities, and staff (both administrative and technical), accorded to regulatory institutions to regulate efficiently (Gillwald, 2005)

Interconnection

In telecommunications, interconnection is defined as the physical linking of a carrier's network equipment or facilities to other carrier networks creating calling capabilities for subscribers of one network to call subscribers of other networks thus creating a contiguous network (Melody, 1997).

Law

In this paper, law is defined as an instrument that provides the legal and institutional framework to further policies (Sarbanesoxleyfocus, 2008)

Legislation

In this study, it carries the same definition as legislation

Long Run Incremental Cost

It’s a costing methodology used by regulators to set interconnection cost pricing which are based on the costs which would be incurred if the network were built today, using the most efficient available technology.

Long Term Evolution (LTE)

Is a mobile technical standard developed International Mobile Telecommunications-Advanced (IMT-Advanced) with peak data rates to support

advanced services and applications (100 Mbit/s for high and 1 Gbit/s for low mobility. It's an evolution of 3G, sometimes referred to as 4G (ITU, 2013)

Number Portability

"means the ability of subscribers to an electronic communications service or persons providing a service pursuant to a licence exemption, to retain their existing numbers without impairment of quality, reliability, or convenience when switching from one electronic communications service licensee to another electronic communications service licensee" (Electronic Communications Act, 2005)

Regulation

Is a form of governance where a set of rules are used to govern businesses and social aspects through an administrative agency that monitors and enforces compliance (Jodana & Levi-Faur, 2004).

Regulatory Environment

Is this study, is defined as the environment within which the regulator operators which encompasses, laws or legislations, and relationship with government

Regulatory Governance

Is a systematic implementation of government-wide policies to promote a regulatory system that is effective, efficient, transparent, and accessible" (World Bank, 2010d).

Regulatory Impact Assessment

Is as an administrative procedure that is undertaken prior to enactment of legislation to ascertain the impact of a proposed legislation or existing legislation by measuring economic, social and environmental benefits and costs of such regulations (Kirkpatrick & Parker, 2004).

Regulatory Management System

It is all aspects adopted by a country to manage regulation

Regulatory Quality

It's all regulations that adheres to the principles of good regulation that is: proportionality, accountability, consistency, transparency, and targeting

Regulatory State

"Is a state that applies and extends rule-making, monitoring and enforcement via bureaucratic organs of the state" (Levi-Faur, 2011).

Targeting

"Means that the amount of resources devoted to conducting RIA on a policy proposal should be proportionate to the size of the expected impacts of the proposal" (World Bank, 2010, p.14)

Teledensity

Telephone lines per 100 inhabitants (ITU)

Transparency

"In regulation-making means that interested parties have the opportunity to provide their views to government via an open consultation process while the regulation is being developed. Transparency in regulatory implementation also means that people who must comply with regulation have access to the regulations and can readily understand their requirements" (World Bank, 2010, p.4)

Universal Service and Access Obligations

"In telecommunications typically require incumbent operators to provide, on demand, "basic" telephony services to any (sometimes residential) customer who requires it" (Cave et al, 1994)

Valued Added Network

A former licence category in South Africa offered to service providers to provide telecommunications services to the public. The licence prohibited licensees to build their own networks but lease infrastructure from operators licenced to build network.

1 Chapter 1: Background on Regulatory Quality in Electronic Communications

1.1 Introduction

This study assesses how regulatory quality is addressed in electronic communications regulation in South Africa. Regulatory quality is a broad concept with various definitions. In this study, regulatory quality is defined using principles of good regulation as suggested by the Better Regulation Task Force in the United Kingdom. It is defined as regulations that are efficient and effective, demonstrate accountability and transparency, consistent, and targeted at the problem at hand (as cited by Radaelli, 2004).

In South Africa, after the Electronic Communications Act of 2005 (ECA) repealed the Telecommunications Act of 1996; there has been a noticeable increase in electronic communications regulation. Ensuring regulatory quality is arguably an effective way of increasing the probability that introduced policies and regulations achieve their objectives (OECD, 1997; Radaelli, 2004; Kirkpatrick & Parker, 2007).This suggests that enabling regulatory quality could help regulators ensure introduced regulations achieve their objectives.

It has been widely argued that electronic communications policies and regulations in South Africa have been poor resulting in: ineffective market structures, lack of competition, suspicious collusive behavior, and high prices (Esselaar et al., 2006; Esselaar et al., 2010). Even though South Africa is the largest economy in Africa, countries with less favorable economies, such as Tunisia, have made progress compared to South Africa. This was evident from South Africa's International Telecommunications Union (ITU) Information Communications Technology (ICT) Development Index dropping by 10 places between 2002 to 2007, due to its slow progress in improving ICT access and usage (ITU, 2009).

As regulatory quality is an effective way of introducing good policies and regulations, this study explores the measures taken by ICASA to ensure regulatory quality when it

introduced a raft of sector regulations listed in Table 1. Most of these regulations were introduced after enactment of the Electronic Communications Act of 2005.

The study encourages better understanding of regulatory quality. It thereby affords ICASA and government an opportunity to identify potential areas to improve regulatory quality to ensure sector objectives are met.

This chapter presents the electronic communications sector reform in South Africa describing a brief history of the sector including its regulatory reform initiatives. The subsequent section discusses the legislative and regulatory framework applicable to the sector; describing the legal and regulatory environment underpinning the sector. It is followed by the regulatory interventions introduced by ICASA, then by the discussion of the problem associated with these interventions. Lastly, the organisation of this research paper including a brief purpose of each Chapter is presented.

1.2 Electronic Communications Sector Reform in South Africa

Before 1994, telecommunications services were only provided by a state monopoly, Telkom, while broadcasting services were provided by another state monopoly, South African Broadcasting Corporation (SABC). At the time, all communications networks were regulated by the Department of Posts and Telecommunication (Mongabay, nd). Access to telephony and basic internet services was only achieved through fixed line telecommunications services. Fixed line Infrastructure rollout and access was based on racial divide. South Africa's teledensity (the number of telephone connections per 100 people) was below 10. Infrastructure and services were mainly provisioned to whites, leading to infrastructure underdevelopment in disadvantaged racial groups. The teledensity in disadvantaged racial groups, primarily in black rural areas, was estimated at 1%. To the contrary, the teledensity in white dominated areas was in par with that of developed countries (Gillwald, 2005).

A regime change in the political landscape led to intensive negotiations between the incumbent and the upcoming government led by the African National Congress. This manifested in the formation of an interim Constitution in 1993 which included major shift

in broadcasting and telecommunications policy or electronic communications (Republic of South Africa, 2004; Horwitz & Currie, 2007). The policies were chiefly aimed at redressing inequalities of the past 40 years. In particular, access to telecommunications was seen as an essential social service to improve basic welfare and integrate all South Africans (including those that cannot afford services) to the information economy (Hodge et al., 2008).

In 1993, the first Global System for Mobile Communications (GSM) licence was awarded to Vodacom. This was a major shift as mobile telephone services would later revolutionize electronic communications in South Africa as was the case in other parts of the world. Later, in 1994, a second GSM licence was awarded to Mobile Telephone Networks (MTN).

Consistent with World Trade Organization's (WTO) General Agreement on Trade in Services (GATS), global trends and the local political landscape , South Africa's electronic Communications sector reform began in the late 1990s (Gillwald, 2005). In 1995, a telecommunications white paper (government policy document) led to the establishment of the Telecommunications Act of 1996 (Republic of South Africa, 1996a). This marked the beginning of telecommunications reform in South Africa.

The reform approach elected by South Africa was managed liberalization through partial privatization of state's telecommunications companies, introduction of competition, and independent regulation. While the objects of the Telecommunications Act included, amongst others: promotion of universal and affordable provision of telecommunication, encourage ownership and control of telecommunication services by persons from historically disadvantaged groups, promote the provision of a wide range of telecommunication services in the interest of economic growth and development of the Republic (Republic of South Africa, 1996a).

In 1996 incumbent monopoly fixed line telecommunications operator, Telkom, was partially privatized when government sold its 30 percent stake to Thintana Communications (which was in partnership with Southwestern Bell Corporation or SBC (Horwitz & Currie, 2007). The Telecommunications Act of 1996 granted Telkom a five

year exclusivity period to expand its network and prepare itself for eventual competition. Government set universal service access obligations (USO) on Telkom's licence conditions - to build fixed lines to underserviced areas and priority customers within the exclusivity period. However, it regarded mobile as a service for the elite that would not attract a substantial subscriber base, hence policies did not set stringent USOs on mobile licensees. Value Added Network Services (VANS) were licensed to provide value added services such data and internet by leasing Telkom's fixed line infrastructure. Data services or internet access was based on dial-up technology. Dial-up was metered similar to telephone call charges. The licensing framework during the Telecommunications Act of 1996 was based on the technology used to deliver services.

The Telecommunications Act of 1996 established South African Telecommunications Regulatory Authority (SATRA) to regulate telecommunications services and Universal Service Agency to promote government's universal access goals. The Universal Service Fund (a fund used to fund projects for infrastructure provision in underserviced areas), was later incorporated onto to the Telecommunications Act of 1996. The fund was derived from a levy imposed on all operators to contribute a percentage of their revenue. It was used to subsidize provisioning of telecommunications infrastructure and services to underserviced areas (Hodge et al., 2008). Later, Universal Service and Access Agency of South Africa (USAASA) was established to drive universal access. The Telecommunications Act of 1996 was amended to establish the Independent Communications Authority of South Africa (ICASA) which merged with SATRA and Broadcasting and Postal Services. The ICASA Act of 2000 was passed to effect establishment of ICASA, and was later amended in 2002 and 2006 (Republic of South Africa, 1996b).

The objects of the ICASA Act of 2000 mandates the authority to regulate electronic communications and postal services in the public interest consistent with the Constitution of the Republic of South Africa (ICASA, 2006). ICASA derived its legal mandate from the Telecommunications Act and thus required to ensure enacted regulations are consistent with it.

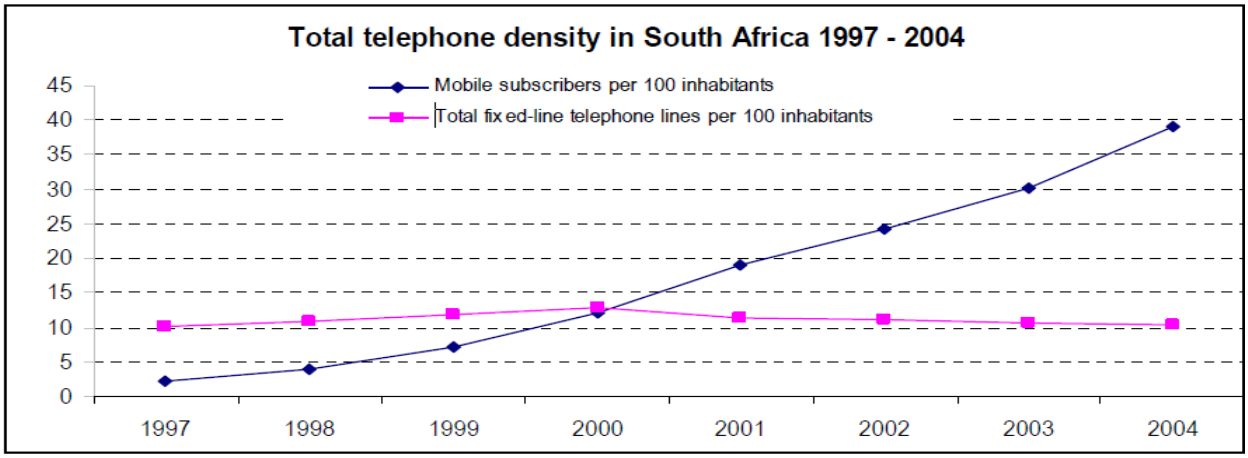
In 2001, the Telecommunications Amendment Act sought to introduce: a Second Network Operator (SNO), additional mobile licences, E-rate for Schools, Number Portability, and Carrier pre-selection regulations by 2005 (Republic of South Africa, 2001). In the same year, Interception and Monitoring Act was introduced (Republic of South Africa, 2004). Later in 2002, the Electronic Communication and Transactions Act were promulgated to facilitate e-transactions, e-government, cryptography and other services (Republic of South Africa, 2002).

Government elected to use state investment to achieve both broadband access and cost-competitiveness through a state owned enterprise (SOE), Sentech (Hodge et al., 2008). The SNO, Neotel, was eventually licensed in 2005 after a long process dating back to 2002 (Gillwald & Esselaar, 2004).

Although ICASA had attempted to issue more mobile licences to promote competition in the sector, the Minister only approved only one licence, stated Esselaar et al (2006, p10). In 2002, a third mobile licence was issued to Cell-C. At the time Cell C launched, there was suspected collusion in the market as mobile and fixed interconnect rates escalated extensively (Gillwald & Esselaar, 2004). In 2006, a Mobile Virtual Operator using Cell-C's network, Virgin Mobile, was introduced but its effect has been very negligible.

In the period between 1996 and 2006, spanning the Telecommunications Act of 1996, the reform of the telecommunications sector had not achieved much (Horwitz & Currie, 2007; Hodge et al., 2008). The number of fixed line subscribers increased from 3.919 million to just 4.708 million although Telkom had heavily invested in infrastructure. Improvement in connectivity was achieved through mobile services, solely driven by the market and not attributable to government policy (Msimang, 2006). In the same period, mobile subscribers increased from 1 million to 19 million. By 2000, mobile subscriber base surpassed fixed lines, as seen in Figure 1 below.

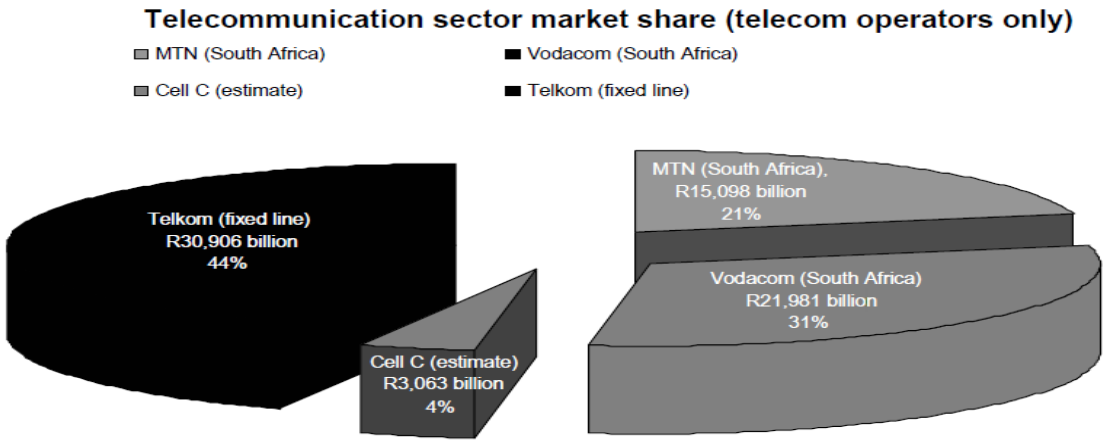
Figure 1 SA Teledensity 1997-2004



Source: Gillwald & Esselaar, 2004

Figure 2 indicates the market share of telecoms operators in 2004. A Herfindahl-Hirschman Index (HHI) is a common tool used to measure market concentration-where highly concentrated markets usually result in high prices (Melody, 1997). When compared to other countries measured by the OECD, South Africa's HHI is very high consistent with claims that telecom prices in South African are exorbitantly high (Esselaar et al, 2010).

Figure 2 SA Telecom Market Share in 2004



Source: Gillwald & Esselaar, 2004

The growth of mobile services continued to increase connectivity in South Africa. In 2007, South Africa had one of the highest 'mobile cellular telephone subscribers per hundred inhabitants in Africa, as seen in

Figure 3 (Chabossou, 2008). However telecoms prices were extremely high compared to similar developing countries (Horwitz & Currie, 2007; Chabossou, 2008).

Figure 3 Africa ICT Densities in 2007

	Internet users per 100 inhabitants	Main (fixed) telephone lines per 100 inhabitants	Mobile cellular telephone subscribers per 100 inhabitants
Sub-Saharan Africa	6.47	3.17	26.77
Low Income	6.04	5.87	24.06
Lower Middle Income	15.69	15.23	50.99
Upper Middle Income	31.48	21.01	86.18
High Income Countries	54.78	43.85	112.42
Benin	1.66	1.22	20.98
Botswana	4.25	7.28	75.84
Burkina Faso[2]	0.59	0.70	10.90
Cameroon[3]	2.23	0.79	24.45
Côte d'Ivoire[4]	1.63	1.41	36.60
Ethiopia	0.35	1.06	1.45
Ghana	2.77	1.60	32.39
Kenya	7.99	0.71	30.48
Mozambique[5]	0.93	0.33	15.42
Namibia	4.87	6.66	38.58
Nigeria	6.75	1.07	27.28
Rwanda[6]	1.08	0.24	6.53
Senegal	6.62	2.17	33.31
South Africa	8.16	9.56	87.08
Tanzania	0.99	0.58	20.40
Uganda	6.48	0.53	13.58
Zambia	4.19	0.77	22.14

Source: Chabossou et al., 2008, p.18

Figure 4 below shows that that the monthly average mobile expenditure was higher in South Africa than countries with less favorable economies, such as Benin.

Figure 4 Mobile Penetration in Africa - 2007

	Monthly average mobile expenditure, in US$	Current market in US$ million	16+ with mobile phone or active SIM		16+ with more than one SIM card	number of duplicated SIM cards	Total number of active SIM cards	Share of Prepaid users
Benin	8.33	11.38	1 365 851	30.2%	496 917	1 173 454	2 047 486	95.96%
Botswana	10.18	6.67	654 737	59.5%	61 670	129 323	722 390	99.28%
Burkina Faso	5.84	10.77	1 844 701	27.2%	380 945	943 819	2 408 616	96.69%
Cameroon	7.14	21.29	2 979 597	36.5%	240 473	600 756	3 440 472	88.04%
Côte d'Ivoire	12.52	63.13	5 042 524	41.8%	762 295	1 741 585	6 037 870	91.77%
Ethiopia	3.81	5.29	1 387 910	3.2%	8 379	17 282	1 410 159	88.31%
Ghana	10.44	78.23	7 491 378	59.8%	832 341	1 969 676	8 691 409	99.83%
Kenya	10.41	112.11	10 772 696	52.0%	2 796 971	5 932 015	13 984 190	98.89%
Mozambique	6.26	30.47	4 865 758	25.7%	143 404	286 808	5 012 287	98.89%
Namibia	11.41	7.14	625 707	49.3%	39 090	83 807	670 424	89.95%
Nigeria*	10.88	686.54	63 101 014	77.3%	12 265 752	26 381 512	77 954 949	99.33%
Rwanda	6.02	3.13	520 259	9.9%	16 170	32 340	536 429	94.77%
Senegal	11.00	27.54	2 502 300	39.8%	125 251	291 243	2 705 744	99.70%
South Africa	15.88	320.49	20 185 135	62.1%	2 200 647	4 845 907	22 938 052	78.64%
Tanzania	7.44	30.79	4 138 338	21.5%	602 730	1 301 997	5 070 790	96.95%
Uganda	5.75	16.81	2 924 095	20.7%	526 378	1 097 654	3 505 813	97.84%
Zambia*	10.55	25.96	2 459 961	45.5%	110 683	253 279	2 605 368	99.7%

Source: Chabossou et al., 2008, p.34

On the other hand, high leased line prices made it difficult for VANS to compete. Since legislation forced VANS to lease infrastructure from Telkom, South Africa‘s internet usage worsened - falling from 14th to 36th in world rankings, explained Horwitz and Currie (2007). This was exacerbated by ICASA’s failure to regulate the unreasonable prices charged by Telkom, as evident in Telkom’s successful litigation against ICASA when it attempted price regulation. Some of the challenges leading to lack of gains in the sector reform were attributed to the dual jurisdictions of the Minister in policy and ICASA’s functioning, ICASA’s lack independence, and lack of institutional capacity in ICASA (Gillwald, 2005; Horwitz & Currie, 2007).

With regards to infrastructure, South African had access to broadband internet services. These services were offered though dial-up services and Asymmetrical Digital Subscriber Line (ADSL) offered by Telkom, wireless broadband through Sentech, and low-speed mobile data using Graphic Packet Radio System (GPRS) and EDGE provided by mobile operators. Mobile data and wireless broadband technologies were still at their infancy, while ADSL had the potential to grow broadband access in South Africa. However, South Africa only connected 25 000 customers on ADSL compared to other middle income countries which were averaging at 3 million lines (Gillwald & Esselaar, 2004, p.32). South Africa was connected to the globe using a high speed fiber submarine cable, SAT-3 and satellite infrastructure, predominantly operated by Telkom. Telecommunications services that were predominantly provided to both the public and businesses were basic voice, internet, data, and electronic commerce services.

In essence, although government introduced various interventions, policies and institutions in its telecommunications reform to promote universal access and reduce telecommunications prices, both objectives were not met (Esselaar et al., 2006; Msimang, 2006; Hodge & Currie, 2008).

A major shift occurred when the ECA of 2005 repealed the Telecommunications Act of 1996. This Act aimed to introduce full liberalization of the sector, including the promotion of convergence, and technology neutral licensing (Republic of South Africa, 2006). The ECA is discussed later in the Chapter.

The ECA of 2005 introduced a technology neutral licensing framework. It included two types of licences, Electronic Communications Network Service (ECNS), and Electronic Communications Service (ECS) licences. The former enables a licensee to self-provision infrastructure, while the later only allows licensees to provide services through leasing of infrastructure from ECNS licensees (Republic of South Africa, 2006).

ICASA converted former Telecommunications Act of 1996 licences to conform to the ECA of 2005 new licensing scheme i.e. ECNS and ECS. In the conversion process, ICASA issued ECNS licences to selected operators that self-provided infrastructure during the Telecommunications of Act of 1996, in conformance to Ministerial policy.

The Minister's decision was challenged in court by one of the VANS, Altech. The courts found in favor of Altech that prohibiting VANS to self-provision infrastructure was in conflict with the ECA, thus ordering ICASA to award ECNS licences to all VANS (Hodge & Currie, 2008). This resulted in more than 300 VANS licensed to build their own infrastructure to compete with dominant operators.

In 2009, the Minster issued a policy directive to invest in a state owned enterprise, Broadband Infraco, under the Ministry of Public Enterprises, for the provision of affordable broadband infrastructure and services (Republic of South Africa, 2009). Broadband Infraco was intended to improve market efficiency in the long distance connectivity market by increasing available long distance network infrastructure (Broadband Infraco, nd). In essence, government had now invested in two SOEs to drive broadband connectivity.

At the time, this saw ICASA introducing a raft of regulations in line with the objects of the ECA of 2005. A snapshot of these regulations is presented in Table 1.

The only major change in telecoms market share was as a result of fixed to mobile substitution which resulted in Telkom losing market share to mobile operators. In response, Telkom launched a mobile operator, 8ta, in 2010. Although there is a sign of price wars, the market concentration has not changed much suggesting prices could still be lower (see Figure 5), as it is the case in other comparable countries (Esselaar et al., 2010).

Figure 5 Telecoms Market Share - 2011



Source Businesstech, 2012

Due to delays by ICASA to regulate call termination rates, the Minister, in his bid to lower communications costs, called for operators and ICASA to reduce mobile termination rates (ITweb, 2009; Techcentral, 2009; Mail & Guardian, 2009). ICASA eventually passed call termination rates regulations in 2010. The regulation would result in reduction of termination rates by about 30 percent annually, from 2011 March to March 2013.

In 2012, broadband subscription increased to 8.2 million from a modest 3.8 million in 2010, representing a 128 percent growth (Goldstuck, 2012). Internet penetration increased to 15.8% (measured in number of subscribers on 3G and ADSL). Goldstuck further indicated that, while smart phones and use of social networks are the main drivers to this growth, the major driver was a manifestation of falling cost of data driven by the proliferation of submarine cables connecting sub-Saharan Africa to the globe (i.e. bandwidth was set to increase to 11.9 Terabits per second (Tbs) at the end of 2012, from 2, 69 Tbs in 2011).

Due to lower interconnect rates, currently set to R0.40; price wars have emerged in the mobile voice market which will ultimately benefit consumers through lower prices (ITWeb, 2013; News24, 2013). As a result of bad commercial decisions coupled with an unfavorable regulatory environment, Cell C is starting to complete aggressively with MTN and Vodacom, after 13 years in operation (McLeod, 2013a).

The cost of mobile termination continues to be high, above the cost of an efficient operator, and remains one of the most expensive in Africa (Research ICT Africa, 2012). Hence, the industry is calling for ICASA to intervene in reducing rates further to spur competition in the sector (McLeod, 2013b). ICASA is encouraged to regulate interconnect rates based on the cost of an efficient operator to increase competition in the sector, which is expected to result in lower prices for consumers (Research ICT Africa, 2012). Alan Knott-Craig, Chief Executive Officer of Cell C, one of the pioneers of the mobile industry in South Africa, claims there is an opportunity for ICASA to reduce call termination rates lower than R0.25 (TechCentral, 2012).

Lower prices, coupled with, higher penetration of smartphones and tablets, mobile broadband speed increases introduced by the evolution from 3G to Long Term Evolution (LTE); is expected to increase broadband uptake in South Africa. However, LTE still suffers from lack of spectrum which will only be available once South Africa migrate its television network from analog to digital. The regulator and government are thus central to ensuring spectrum is allocated efficiently to ensure universal access to broadband (Mybroadband, 2012). ECN licensees are also modernizing their networks to improve broadband access by building high capacity fiber networks.

South Africa has one of the most developed electronic communications networks and services in Africa encompassing: television, radio, media, postal, mobile and fixed networks, submarine cable capacity, and satellites access networks (South Africa, nd). The vast number of operators licensed in South Africa offers a wide range of ICT services such as, voice, internet, data, telephonic banking, mobile banking, and electronic commerce.

1.3 Legal and Regulatory Framework for Electronic Communications

South Africa became a democratic country in 1994. A Constitutional democracy system was adopted consisting of three tiers of governance, which is: national, provincial and local governments, and supported by an independent judiciary (SAinfo, nda). Each level has its own legislative and executive authority which the Constitution deems as distinctive, independent yet interrelated. Ultimate legislative authority is vested on Parliament which comprises two houses, National Assembly and National Chamber of Provinces (NCOP). National Assembly is composed of political party members on the basis of the common voters roll. The NCOP members represent their individual provinces. Both national Assembly and the NCOP participate in national and provincial legislative process and voting of bills into law. The national assembly elects the president who serves as the head of state, who in turn elects and heads the Cabinet. Cabinet consists of deputy president, ministers and their deputies. National assembly also establishes Portfolio Committees that advises Cabinet on sector specific legislation instigated by the Ministries of various sectors i.e. electronic communications policies.

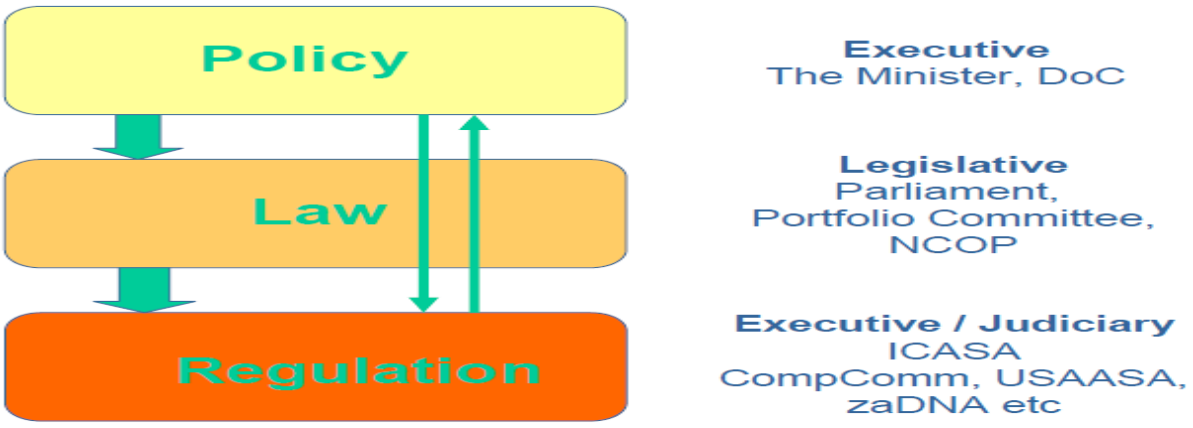
The Constitution is the supreme law of South Africa and widely regarded as the most progressive Constitution in the world (SAinfo, ndb). It enshrines democracy and open society in which government is based on the will of the people and every citizen is equally protected by law.

The Constitution establishes, among other things, Chapter 9 institutions supporting Constitutional democracy (Republic of South Africa, 1996). These institutions are established with governing principles to strengthen Constitutional democracy and are subject only to the Constitution of the Republic. The Independent Broadcasting Authority (IBA), which latter merged with ICASA was classified as a Chapter 9 institution.

Electronic communications policy is governed by Department of Communications (DOC), which reports to the Minister of Communications. DOC is accountable to Cabinet's Portfolio Committee on Communications (PCC). PCC provides oversight to electronic communications legislation and DOC (Republic of South Africa, nd).

Figure 6 indicates the interaction of legal instruments of governance i.e. legislation or law, policy and regulation with relevant institutions governing electronic communications.

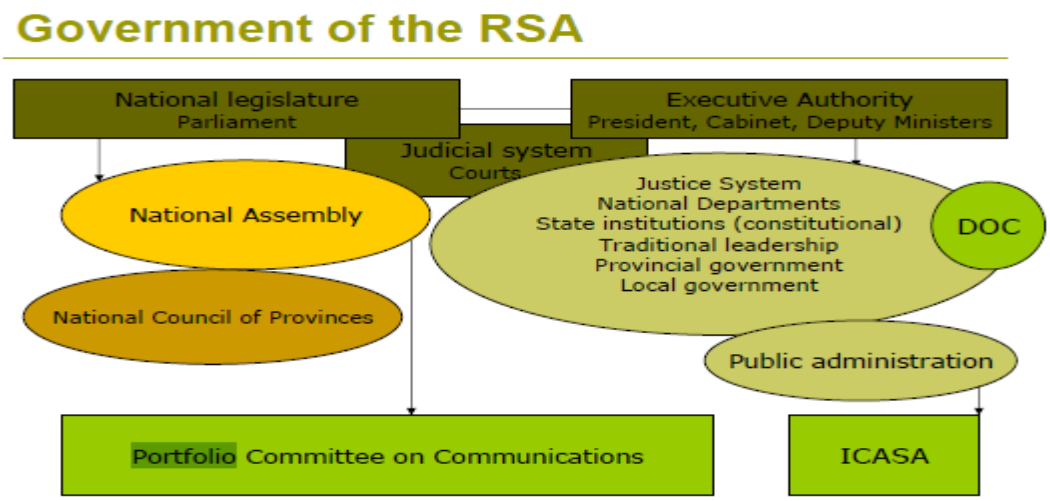
Figure 6 Policy, Law and Regulation in South Africa



Souce: Lewis,2010

Figure 7 indicates the relationship between institutions that govern electronic communications.

Figure 7 Government of Republic of South Africa



Source Edmunson, 2010

As discussed previously, the electronic communications sector is governed by the ECA of 2005 which repealed the Telecommunications Act of 1996. The Telecommunications Act of 1996 was intended to reform the sector through managed liberalization, while the ECA aimed to introduce full liberalization of the sector. To achieve full liberalization, the Act "aimed to promote convergence in the broadcasting, broadcasting signal distribution and telecommunications sectors and to provide the legal framework for convergence of these sectors; to make new provision for the regulation of electronic communications services, electronic communications network services and broadcasting services; to provide for the granting of new licences and new social obligations; to provide for the control of the radio frequency spectrum; to provide for the continued existence of the Universal Service Agency and the Universal Service Fund; and to provide for matters incidental thereto" (Republic of South Africa, 2006, p.3). Some of the objects of the former Telecommunications Act of 1996, such as promotion of Universal Access and regulatory remedies such as carrier pre-selection and facilities leasing, were carried over to the ECA of 2005. The primary objective of the Act was to promote the regulation

of electronic communications in South Africa to safeguard public interest. In summary, the ECA of 2005 intended to: promote universal provision of infrastructure and universal access to services, encourage investment in the sector, ensure efficient use of radio frequency spectrum, promote competition in the sector, empower previously disadvantaged groups, clarify the roles and assignments between policy formulation and regulation, enable provision of various quality services at reasonable prices, develop and promote small businesses (Republic of South Africa, 2006, p.20).

To achieve these objectives, the Act established institutions to implement these regulations and attempted to provide clarity of roles between these institutions. The institutions empowered by the legislation are: the Ministry of Communications, ICASA, and Universal Service and Access Agency of South Africa (USAASA). It provided that Minster is responsible for formulating national policy, within the confines of the law and the Act. Minister was thus mandated to make policy in relation to: radio frequency spectrum, universal service and access, South Africa's obligations and undertakings under bilateral and international treaties, technical standards, and frequency spectrum matters, new technologies, guidelines for licensing fees for providing service in underserviced areas under the determination of ICASA, promotion of universal service and electronic communications services in under-serviced areas (Republic of South Africa, 2006, p.23). The Act further provided that the Minister can issue policies for consideration by ICASA (save licensing matters) and specified the conditions for such directives.

ICASA is empowered to formulate any regulations, such as control of radio frequency spectrum and radio equipment, consistent with the ECA of 2005 and related legislation. The process in which ICASA formulates new or amends regulations is prescribed. ICASA is mandated to: publish draft regulation not less than 30 days before it regulates, invite interested parties to comment and make representations, and notify the Minister of its intention to regulate (Republic of South Africa, 2006).

The ECA of 2005 thus established the existence of ICASA which was governed by the ICASA Act of 2000. The ICASA Act of 2006 amended the ICASA Act of 2000. The new Act aimed "to amend the Independent Communications Authority of South Africa Act,

2000, so as to amend certain definitions and insert certain new definitions; to provide for the substitution of the Postal Regulator for the Authority; to determine in greater detail the functions of the Authority; to consolidate certain powers and duties of the Authority; to provide for inquiries by the Authority; to amend the procedure for the appointment and removal of councilors; to further regulate the financing of the Authority; to provide for the establishment of a Complaints and Compliance Committee (CCC); to provide for the appointment of inspectors; and to provide for the creation of new offences and penalties; and to provide for matters connected therewith" (ICASA, 2006). ICASA and its chairperson are mandated to exercise powers to regulate electronic communications subject to the Constitution, and other legal obligations of South Africa. The Act empowers ICASA to make recommendations to the Minister on policy matters and amendments to the Act and other provisions consistent with it including any provisions to promote development of the sector; monitor the sector to ensure compliance with the ICASA Act; grant and revoke licences; approve technical parameters used by operators and other matters related to regulation.

ICASA may conduct an inquiry into any matter relating to the objects of the ICASA Act of 2006 by giving a 60 days' notice for interested parties to submit written representations and indicate whether they would require oral submissions. Upon request and payment of applicable fees, ICASA is mandated to make copies of written submissions available to any person.

The ICASA Council consists of a chairperson and 8 councilors. Councilors are appointed by the Minister upon approval by Parliament, following an open and transparent public nomination process. Parliament submits the list of shortlist candidates to the Minister for approval. Technical experts can be called by Parliament to evaluate candidates. In consultation with Parliament, the Minister must establish a performance management framework to monitor the performance of the chairperson and councilors.

ICASA's funding is determined, in any manner, by an agreement between the Minister and the Minister of Finance and approved by Parliament. ICASA may appoint experts as when necessary to advance performance of its functions. The Act further elaborated

the establishment of the Complaints and Compliance Committee (CCC), its functions, and appointment of its staff.

In 2012, the Ministry issued a proposed ICASA amendment bill, 2012. The bill aims to: amongst other things; clarify duties and powers of ICASA; to replace the Complaints and Compliance Committee by establishing the Complaints and Compliance Commission; introduce electronic transactions regulation onto the Act; introduce mechanisms to ensure accountability of committees; ICASA and its councilors; and mandate ICASA to conduct ex-ante regulatory impact assessment. The bill was not finalized at the time of writing.

This section described the regulatory environment within which ICASA operates thereby informing this study of the laws or legislation governing electronic communications regulation.

1.4 Regulatory Interventions in Electronic Communications in South Africa

In an attempt to unlock economic and social benefits from electronic communications, consistent with global trends, the South African government's main policy objectives are centered on reducing costs and improving access to electronic communications (Hodge, J; 2008). South Africa's electronic communications sector reform resulted in a number of regulatory interventions. As discussed earlier, the beginning of sector reform saw partial privatization of Telkom. This policy approach was intended to attract investment that would be used for infrastructure development, particularly to promote access to electronic communications by previously disadvantaged racial groups (Gillwald, 2005). Telkom was awarded a five year exclusivity period in which it could operate as a monopoly without any competition. Universal service obligations (USO) were levied against Telkom, by then Minister of Communications. Telkom connected 2.8 million lines within five years- meeting its obligations to connect 2.69 million lines. However, due to high price increases, a sizeable customer base churned resulting in Telkom failing to meet its obligations (Melody, 2000). Thus, government failed to meet its sector reform objectives which were to increase access and reduce costs to communications.

ICASA was established in 2000 to regulate electronic communications under the legal merits of the Telecommunications Act of 1996. There was no competition in the sector as continually argued by stakeholders in the sector. Telkom was the only infrastructure provider in the sector. It charged exorbitant wholesale prices to its competitor's i.e. mobile operators and VANS, who relied on its infrastructure to provision services. In particular, most VANS were unable to complete which saw them requesting ICASA to intervene. ICASA's mandate was to facilitate cost based interconnection (between Telkom and other operators) and enforce price caps on Telkom's retail prices (Gillwald, 2005).

In 2000, ICASA recommended introduction of retail price-caps to regulate Telkom's retail rates to the Minister. The Minster stalled the process until 2002, which allowed Telkom to circumvent the regulator and increase prices in 2002. When the Minister eventually approved the price cap regulations, Telkom had filed with ICASA to increase prices in 2003. However, Telkom did not apply the price-cap model correctly, resulting in them requesting a 9.5 percent increase in prices (Melody, 2002). When applying the price cap model correctly, consistent with other jurisdictions, it was claimed that Telkom should have instead decreased prices in the order of 5 to 10 percent.

These events occurred at the time when government was issuing an Initial Public Offer (IPO) to privatize Telkom. This led to political pressure subjected on ICASA as government was trying to maximize the value of the IPO which was an injudicious compromise of the sector's development (Melody, 2002). ICASA succumbed to political pressure and eventually reached an agreement with Telkom to increase prices in 2003 in exchange of a lower price increase in 2004.

In the period, there were numerous cases of anti-competitive behavior by Telkom but ICASA was unable to remedy as Telkom had far more resources to litigate against ICASA (Horwitz & Currie, 2007). Telkom would also use its influence on the Ministry to abandon irksome regulations as in the case of ICASA's interconnection and facilities leasing regulations of 2000 (Horwitz & Currie, 2007). Proponents of the South African electronic communications sector continually protested that ICASA can only be

functional provided the conflict of interest with the Ministry in the sector is addressed (Gillwald & Esselaar, 2004).

In 2001, ICASA intervened by introducing interconnect and facilities regulations which set out that major operators with a market share in excess of 35 percent should set their interconnect rates at Long Run Incremental Cost or LRIC (a worldwide adopted wholesale costing methodology) but only Telkom qualified as a major operator (Hodge, Lipschitz et al, 2008). These regulations were not effective but ICASA elected not to remedy it until the new Act (ECA of 2005) came to effect; as it would introduce a new costing methodology framework for interconnection.

ICASA then issued a raft of regulations between 2005 and 2010. One of the regulations was Number Portability regulations which were issued in 2005. They were aimed at promoting the ability of subscribers to an electronic communications service to retain their existing numbers without impairment of quality, reliability, or convenience when switching from one electronic communications service licensee to another electronic communications service licensee (Electronic Communications Act, 2005). However, experts claim Number Portability was not an urgent and desirable intervention, particularly in the mobile market. The majority of South Africa's mobile users were on prepaid and traditionally owned multiple Subscriber Identification Module (SIM) cards from various operators to take advantage of on-net pricing specials to circumvent high communication costs (Esselaar, et al., 2010).

Numerous regulatory interventions were also introduced in the sector, such as; Carrier pre-selection regulations, Handset subsidy, Interconnect, Facilities Leasing Regulations. Table 1 indicates the list of legislations, related to electronic communications, passed since telecommunications reform in South Africa, and electronic communications specific regulations since the inception of the ECA of 2005.

Table 1 Telecommunications specific regulation

Year	Regulation	Instrument	Institution
2000	ICASA Act of 2000, 2002, 2006	Law	Parliament of the Republic of South Africa

2001	Interception and Monitoring Act	Law	Parliament of the Republic of South Africa
From 1996	Universal Access and Service Policy	Policy	Parliament of the Republic of South Africa
2002	Electronic Communications and Transactions Act	Law	Parliament of the Republic of South Africa
2006	Electronic Communications Act of 2005	Law	Parliament of the Republic of South Africa
2005	Number Portability Regulations	Regulation	ICASA
2008	Handset subsidy	Regulation	ICASA
2008	Regulations in Respect of 112 Emergency Centers	Regulation	ICASA
2009	Licence conversion	Regulation	ICASA
2009	End user service subscriber charter	Regulation	ICASA
2009	General Licence Fees Regulations	Regulation	ICASA
2009	Regulations in Respect of e-rate	Regulation	ICASA
2010	Standard Terms and Conditions for Individual Licensees	Regulation	ICASA
2010	Interconnection Regulations	Regulation	ICASA
2010	Call Termination Regulations	Regulation	ICASA
2010	Radio Frequency Spectrum Fees Regulations for Electronic Communication Network Services and Electronic Communication Services	Regulation	ICASA
2010	Carrier Pre-Selection (select) Regulations	Regulation	ICASA
2010	Electronic Communications Facilities Leasing Regulations	Regulation	ICASA
2010	Broadband Policy	Policy	DOC
2011	Radio Frequency Spectrum Regulations-	Regulation	ICASA
2009	Regulation of Interception of Communications Act and Provision of Communication-Related Information Act) RICA.	Law	Justice
2008, 2011	Regulations: Prescribed Annual Contributions of Licensees to the Universal Service and Access Fund,	Regulation	ICASA
2008,	Processes and procedures for application,	Regulation	ICASA

2010, 2011	amendment, renewal, transfer and surrender of an individual licence and matters pertaining thereto; and special temporary authorizations.		

Source**:** ICASA, nd; South African Government Online, nd.

However, even after these interventions, there has been limited improvement in the sector. South Africa still lags behind other comparable developing countries in terms of cost and access to electronic communications. In its recent National Development Plan (NDP), the South African government further stressed its concern about the high cost of broadband internet connectivity as it threatens its vision of ensuring every citizen is able to access and use knowledge effectively (Manuel, 2011). To redress this challenge, government plans to reduce regulatory burdens and improve the regulatory framework pertaining to the electronic communications sector. These efforts are expected to improve ICT infrastructure in South Africa thereby promoting economic growth and inclusion of all citizens to the information highway by 2020 (Manuel, 2011).

1.5 Discussion of the Research Problem of Regulatory Quality

Since there is a close relationship, at times an overlap and interchangeability of the terms policy, law, and regulations, these terms are defined and applied as follows. Policy is government's stated objectives or what government intends to do. Laws provide the legal and institutional framework to further policies. Regulations are basically the formal requirements that organizations must follow (Sarbanesoxleyfocus, 2008).

In practice, laws are primary instruments legislated by parliament while regulations are low level instruments issued by government departments or independent agencies. As regulations are not passed in parliament, this may lead to excessive, poor and unjust regulations being promulgated to the detriment of a country.

After enactment of the ECA, it has been observed that there has been a substantial increase in the number of regulations in the electronic communications sector. Nonetheless, the sector is still underperforming, even worse than developing countries with less favorable economics. It is unknown what measures were put in place to

safeguard quality in these regulatory proposals or interventions to ensure they meet their intended objectives.

The implications of lack of regulatory quality in electronic communications could thus have negative outcomes as low level instruments are not subjected to meticulous scrutiny to ensure quality, in contrast to other instruments such as legislation. Considering the imperative role played by broadband in economic and social development, lack of regulatory quality in electronic communications in South Africa could have detrimental ramifications to government's development objectives as envisioned by the NDPP.

1.6 Structure and Organization of the Dissertation

This Chapter presented the background of South Africa's electronic communications sector reform and structure, its legal and regulatory framework, regulatory interventions passed to date, and problems experienced in regulating the sector.

Chapter 2 presents the literature review related to regulatory quality by locating applicable concepts within a broader body of knowledge. It also discusses and reveals the conceptual framework which is used to synthesize findings thereby answer this study's research questions.

Chapter 3 presents the problem statement describing what informed the study. This is followed by the purpose statement which describes what the study intends to accomplish. Research questions are provided to help focus this study to the identified problem. This Chapter then discusses the methodologies that were used to collect data and analyze findings of this study. It concludes by discussing the significance of this study.

Using the methodologies described above, Chapter 4 outlines the findings by grouping key findings onto regulatory concepts or themes which help simplify the analysis of this study. Key findings are also summarized at the end of the Chapter.

Chapter 5 analyses the findings contained in Chapter 4 using this study's conceptual framework. The outcome of the analysis answers this study's secondary questions thereby revealing how ICASA addresses regulatory quality.

Lastly, Chapter 6 summarizes key regulatory quality issues revealed by this study. Conclusions are thus drawn indicating how ICASA ensures regulatory quality including recommendations for consideration by ICASA and government. Future research questions pertaining to regulatory quality in electronic communications in South Africa are discussed. This is followed by the conclusion section which summarizes key conclusions of this study.

2 Chapter 2: Literature Review Related to Regulatory Quality

This chapter reviews the literature upon which this study is based on. It locates the topic of this research within broader regulation theory thereby identifying applicable concepts. The regulatory state and role of regulation is discussed as it presents the origins and meanings of regulation, and the role of regulation in the state. This leads to a discussion of the relevance and importance of regulatory quality in regulation. Tools used to improve regulatory quality and how it is measured is discussed. In closing, the conceptual framework is presented and discussed. The conceptual framework discusses the concepts pertaining to regulatory quality used to analyze findings of this research study.

2.1 Regulatory State and Role of Regulation

Modern regulatory state is virtually rooted from the United States of America, in the 1960s (Moran, 2002). America pioneered the technique of administrative control of business through specialized legal agencies instead of public ownership prevalent at the time. Conversely, Majone arguable invented the notion of regulatory state in Europe as most scholarly research is attributed to him. Of late, regulatory state has become a "global brand" (Jayasuriya, 2001).

Modern states' political and economic theories of public intervention in the economy are classified as: income redistribution; macroeconomic stabilization; and market regulation (Majone, 1997, p.141). The applicability of each type of intervention varies from country to country and from one historical time to another, depending on economic dynamics at hand. Majone argued that the main purpose of the regulatory state is to correct market failure through regulation (Majone, 1997). Since the 1970s, European governments have been forced to change their traditional positive or interventionist mode of governance and increasingly adopted regulatory state as a form of governance (Levi-Faur, 2011).

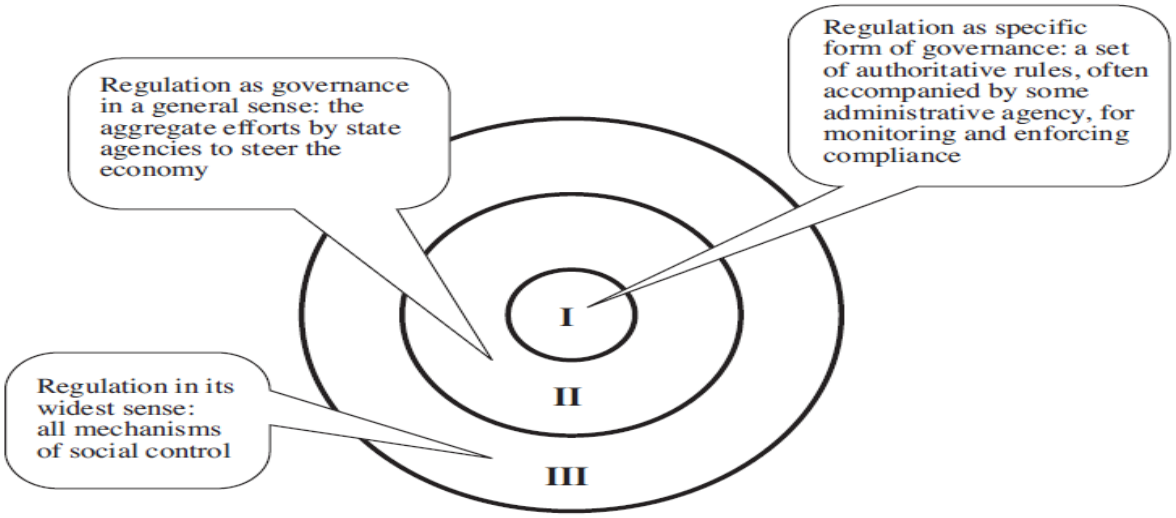
Most literature characterized and covered the emergence of the regulator state but has not widely defined it, until defined recently by Levi-Faur. Levi-Faur defines regulatory

state on the basis of its instruments of control. Levi-Faur defines regulatory state as “a state that applies and extends rule-making, monitoring and enforcement via bureaucratic organs of the state (2011, p.14). This definition of regulatory state identifies it with the expansion of regulation, in that, more emphasis is placed on use of authorities, rules, and standard setting, thereby partially doing away with emphasis on public ownership, public subsidies, and directly provided services (Levi-Faur, 2011, p.16). It echoes the increased adoption of regulatory state away from a positive or interventionist state approach.

Regulation is considered a mode of governance with the regulatory state being its most characteristic feature (Jordana & Levi-Faur, 2004). Regulation is a widely studied and popular subject of study that spans across many fields of study (Jordana & Levi-Faur, 2004). In its simplest and narrowest definition, regulation is a form of government intervention or any form of formal or informal bureaucratic legislation (Levi-Faur, 2011). The broadest and over encompassing definition of regulation is arguably that of Baldwin. Baldwin defines three meanings of regulation using three circles that expand from its narrowest to its broadest meanings as seen in Figure 8 below.

In its simplest meaning regulation is all mechanisms of social control similar to the narrow definition by Levi-Faur, while in general sense it’s all efforts taken by state’s regulatory institutions to control the economy. In its broadest sense, regulatory is a form of governance where a set of rules are used to govern businesses and social aspects through an administrative agency that monitors and enforces compliance (as cited in Jordana & Levi-Faur, 2004).

Figure 8 Three meanings of Regulation



Source: as cited in Jodana & Levi-Faur, 2004

In practice, regulation is used to achieve two primary objectives; promoting social welfare, environment and health protection; and safeguards legal certainty for consumers and companies (Allio, 2007, p. 72). Regulation is thus necessary to prevent or correct market failure, safeguard effective competition while preventing anti-competitive behavior by firms and ensuring consumer interests are protected (Infodev, 2006). Government thus play a balancing act to ensure effective functioning of markets by enabling businesses to operate and compete efficiently while safeguarding public interest and protecting consumers.

The relationship between regulation and competition is ever-changing (Jordana & Levi-Faur, 2004). For instance, after effective competition, there is generally limited requirement for regulation. Governments tend to introduce fewer laws only to protect consumers instead of heavily regulating firms through regulatory authorities (Infodev, 2006; Jordana & Levi-Faur, 2004).

In setting the agenda for control of the economy and society, governments incessantly adjust control of state resources by regulation or, at times deregulation, consistent with a nation's objectives. It was further purported that the political system, or government policy, is arguably analogous to a pendulum that moved from deregulation of markets,

to regulation of markets, to lessening of administrative burdens, and may be on course back to deregulation of markets (Dodds, 2006). This suggests that over time the state assesses functioning of markets and thereby decide whether regulation or deregulation is required depending on market dynamics.

2.2 Regulatory Management Systems

The previous section described the role of a regulatory state and regulation in governance. World Bank defines regulatory governance "…as the systematic implementation of government-wide policies to promote a regulatory system that is effective, efficient, transparent, and accessible" (World Bank, 2010d). Of late, regulatory quality is also regarded as the foundation for regulatory governance (Radaelli, 2004).

Most of the ideas of the concept of regulatory quality stems out of the OECD, argued Radaelli (2004, p.4). The ever-changing social, economic and technological aspects require continual evaluation of the impact of current and proposed regulations and thereby dynamically adjust policies and regulations to achieve intended objectives (OECD, 2005). It is therefore imperative that policy makers and regulators strive to improve regulatory quality.

The definition of Regulatory quality is multidimensional as different stakeholders (experts, bureaucrats, politicians, citizens, and corporate sector) define quality based on their presumed logic, criteria of quality and quality assurance mechanisms (Radaelli, 2004, p8).

The European Commission (EU) defines regulatory quality as regulations that are efficient, effective, coherent, and simple, while in the UK, the government's advisory body defines regulatory quality in principles of good regulation. The principles of good regulation included proportionality, accountability, consistency, transparency, and targeting (Radaelli, 2004, p4). The UK's definition of regulatory quality is thus adopted in this study as it encompasses all factors of modern regulatory quality attributes. Transparency affords interested parties to provide their views to regulations being formulated via an open consultation process; while accountability ensures regulators

are subject to public scrutiny for all their actions (World Banka, 2010c). Proportionality and targeting ensures that an appropriate level of regulation is chosen and targeted to the problem at hand; while consistency requires that regulators take account of related areas of regulation and ensure similar treatment (World Bank, 2010c, p.4).

The first international standard on regulatory quality emanates from the OECD, which began when the OECD Council adopted the OECD 1995 Recommendation on Improving the Quality of Government Regulation and OECD Reference Checklist for Regulatory Decision-making (Jacobzone et al., 2007). In the 1997, the OECD developed Policy Recommendations on Regulatory Reform aimed at providing countries, particularly OECD, recommendations to address regulatory reform. In 2005, consistent with the transition from regulatory reform to regulatory quality, the OECD developed a set of Guiding Principles for Regulatory Quality and Performance which intended to provide guidance to member countries to: improve regulatory policies and tools, strengthen market openness and competition, and reduce regulatory burdens' (OECD, 2007, p.1). The OECD guidelines were subsequently updated with greater focus on general regulatory management practices; that is, on how new rules are being prepared and how old rules are being reformed by focusing on regulatory policies, tools and institutions that make up the regulatory management system (OECD, 2008, p.2). These guidelines thus seek to highlight the process by which regulatory policies, tools and institutions are adopted in the 21st century as the move from regulatory reform to regulatory quality policies thickens.

OECD defines regulatory policy, in general terms, "as an explicit, dynamic, and consistent "whole-of-government" policy to pursue high-quality regulation" (OECD, 2011, p.2). It is an instrument that ensures regulations and regulatory frameworks are justified, of good quality, and fit for purpose thereby ensuring regulations meet public interest (OECD, 2010, p.1). Regulatory tools are described later in this paper.

To ensure delivery of good regulatory policy and quality regulation, suitable regulatory institutions are required (OECD, 2008). Regulatory quality institutional arrangement varies from country to country. In most OECD member countries, the institutional arrangement typically includes regulatory oversight bodies within government

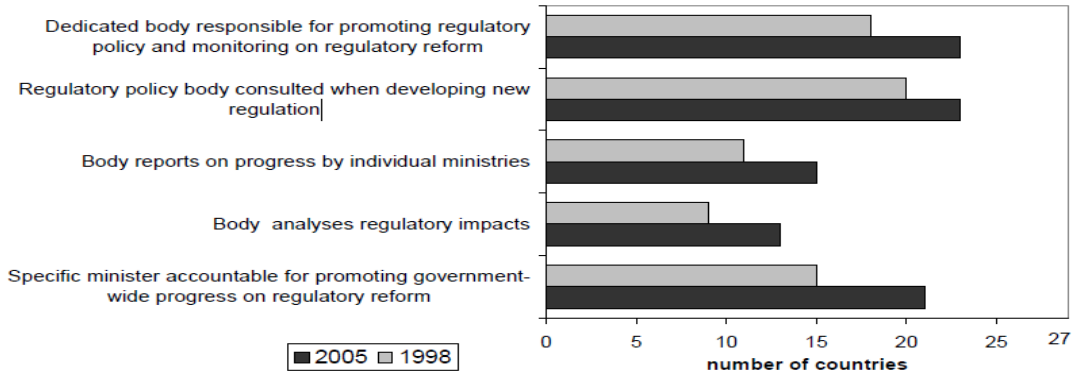
administration with a broad mandate to advocate regulatory quality. To promote regulatory quality, OECD member countries adopted various institutional arrangements as seen in

Figure 9 below (Jacobzone, 2007, p.21).

In the US, an independent regulatory body, Office of Management and Budget via the Office of Information and Regulatory Affairs (OIRA), is given powers to evaluate government-wide regulatory impact assessment and is only accountable to parliament (Radaelli, 2004). Levy and Spiller considers five aspects when appraising whether a country's regulatory framework provide for an effective institutional design. The aspects includes: the degree of independence of the judiciary, the long-term credibility of legislation, the ease with which primary laws can be enacted; the scope for flexibility without arbitrariness in the regulatory process; and the level of administrative competence (as cited in Stern & Holder, 1999, p.40).

However, most developing countries, such as South Africa, do not have a regulatory policy and thereby no regulatory oversight body (OECD, 2011). In fact, most developing countries' legal systems tend to have institutional and behavioral weakness that makes regulatory reform difficult to implement (Minoque & Cariño, 2008).

Figure 9 Institutional setting to promote regulatory policy in OECD



Source Jacobzone, 2007

The World Bank contends that regulatory problems in developing countries are similar to those of developed countries, suggesting regulatory reform tools used in developed countries can be used in developed countries (World Bank, 2010d). Although the success of regulatory governance largely depends of a country's institutional capacity, countries with no good practice could gain more from regulatory reform. However the World Bank does not recommend that OECD solutions be adopted wholesale by developed counties but encourages their regulatory policy to adopt only tools and solutions that can be adapted to local conditions.

2.3 Tools for Improving and Measuring Regulatory Quality

The previous section discussed the importance and considerations of regulatory governance or regulatory management systems to enable regulatory quality. This section discusses tools used to improve and measure regulatory quality.

A pragmatic and systematic approach to regulatory quality entails that; regulatory quality can be viewed in terms of dimensions and tools (Radaelli, 2004). Radaelli explains that dimensions cover the "design process, activities and output, and real-world impact" (2004, p.6). The design process deals with consultation, transparency and accountability. Activities and outcomes are central to the procedures followed in the process, while the 'real-world impact' aims to measure the ex-post impact of regulations.

Tools for improving regulatory quality include Regulatory Impact Assessment (RIA) and public consultation (Radaelli, 2004, p.4). Over and above the latter, the OECD provides that consideration of regulatory alternatives and compliance burden-reduction measures are other tools used to improve decision making (OECD, 2008).

Consultation with affected parties such businesses and the public is intrinsic to improving quality of regulations, particularly when built in the entire value chain of the regulation process (OECD, 2008). Public consultations may reduce the risk of regulatory failure as it is more likely to be effective and efficient. Consultation improves transparency which encourages trust and promotes compliance with regulation. Good

regulatory practices afford interested parties to make comments and presentations within a reasonable time frame to safeguard transparency of the regulation making process (Kirkpatrick & Parker, 2004; Radaelli, 2005; OECD, 2008). The OECD indicated that 30 days is the typical notice period allowed in most OECD jurisdictions (OECD, 2008).

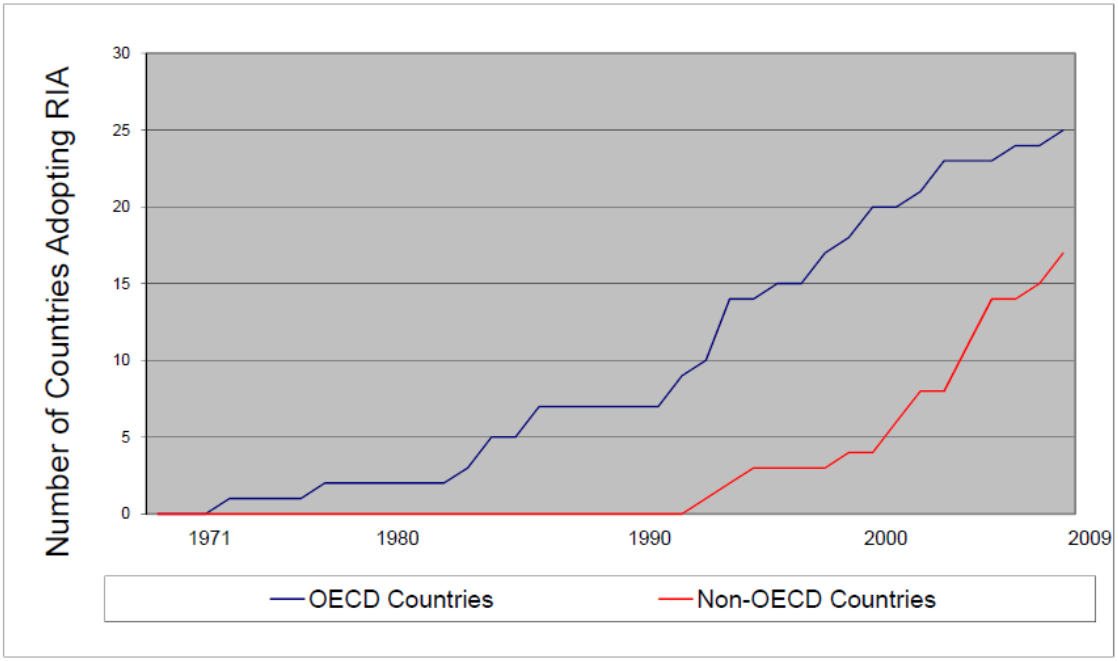
Consideration of alternatives as a tool to improve quality is actually one of the steps within the RIA process (RIA is discussed below), whereby regulators consider implications of all feasible alternatives (Radaelli & De Francesco, 2007). Consideration of alternatives to regulation helps governments consider other feasible and least cost approaches instead of implementing costly regulation (Whittington & Grubb, 1984; OECD, 2008).

Although there are various tools targeted at improving regulatory quality, RIA is the main tool adopted by most countries in improving regulatory quality, as described hereafter. Most commentators describe RIA as an administrative procedure that is undertaken prior to enactment of legislation to ascertain the impact of a proposed legislation or existing legislation by measuring economic, social and environmental benefits, and costs of such regulations (Kirkpatrick & Parker, 2004, p.334; Radaelli and De Francesco, nd, p.2; OECD, 2008).

Due to pressure for more effective and efficient governance in the 1980s, RIA became a tool to address challenges in governance (Jacobs, 2005). Jacobs argued that, in mid 1990s, this manifested in OECD, the WTO, and the European Commission calling for empirical methods to decision making or RIA.

To date, the adoption of RIA has been confined mainly to OECD countries with limited coverage or adoption by developing countries (Kirkpatrick & Parker, 2004, p.333). Figure 10 below indicates the adoption of RIA from the 1970s to 2009 by both OECD and non OECD countries. Most OECD members and other developed countries have implemented RIA in low level rule making while some of them evolved even to primary legislation.

Figure 10 Countries Adoption of RIA



Source: Jacobs, 2010, p.2

Since RIA is one of the tools aimed at achieving policy objectives, what purpose and benefits does RIA serve in government? Commentators suggest that RIA ensures that regulations are effective and efficient OECD (2008a, p.4). Furthermore, regulations are said to be effective if they achieve intended objectives (i.e. economic, social, and environmental objectives), and efficient if they achieve these goals at the least cost (Kirkpatrick & Parker, 2004). In this context, costs include government administration and intrinsic economical costs of complying with proposed regulations.

Thus it is argued that RIA can be used to improve the monitoring of existing regulatory policies (Kirkpatrick, 2004). As benefits and costs of existing regulations are known when using RIA, this has the potential to provide decision makers with evidence (costs and benefits) to help reduce, improve or remove certain regulations that pose more costs than benefit to society, economy or the environment.

It is suggested that the aim of RIA is to inculcate accountability and transparency in the regulatory process, as the process of RIA comprises a series of interrelated steps that guide the regulatory or decision making process through rigorous questions and answers (Radaelli, 2004). One of the earlier attempts to specify cost-benefit or RIA requirements for regulatory proposals emanates from the US. In 1981, Ronald Regan called for US federal agencies to prepare cost-benefit analyses for all major regulations by meeting the following requirements:

- *"Administrative decisions shall be based on adequate information on the need for and consequences of proposed government action.*
- *Regulatory action shall not be undertaken unless the potential benefits to society from the regulation outweigh the potential costs to society.*
- *Regulatory objectives shall be chosen to maximize the net benefits to society.*
- *Among the alternative approaches to any given regulatory objective, the alternative involving the least net cost to society shall be chosen.*
- *Agencies shall set regulatory priorities with the aim of maximizing the aggregate net benefits to society, taking into account the condition of the particular industries affected by regulations, and other regulatory actions contemplated for the future"* (as cited in Whittington & Grubb, 1984, p.64).

The OECD (2008) suggests that engaging in the process of RIA is more important than the actual outcome. Most countries that have engaged in regulatory governance reform seem to incorporate RIA as part of the process (Kirkpatrick and Parker, 2004). On the other hand, governments should be wary of adopting RIA as a stand-alone process as it may limit its impact in improving regulatory governance.

Since RIA requires intensive political support, changes in administrative culture and that policy-making process takes into account RIA proposals, adopting best practice RIA standards have been challenging for OECD countries (World Bank, 2010d). The challenge of adopting RIA standards from the OECD is even more amplified in developing countries due low capacities, and limited resources and skills (World Bank, 2010d; Kirkpatrick and Parker, 2004). However there is an opportunity for developing

countries to conceive a “light RIA” approach with less rigid rules and complexity to that of the OECD (World Bank, 2010d). To allow improvement of “Light RIA” from time to time, it can be built to existing mechanisms such as consultation process or legal quality controls thereby enabling developed countries to move from discretionary to evidence based decision making (World Bank, 2010d; Kirkpatrick and Parker, 2004). Light RIA differs from OECD stringent best practice in that it has reduced scope and limited methodological approach to impact analysis, by allowing limited data collection and encouraging pilot projects as a basis for further improvement and maturity of RIA (World Bank, 2010d). Although, it is still at an early stage of development, some low-income countries have already begun applying RIA (Kirkpatrick and Parker, 2004).

Regulatory quality can be assessed or measured by examining process for generating new regulations, managing enacted regulations, as well as the outcome of these regulations in terms of their impact on key economic and social clusters (Jacobzone, 2007, p.7). The measurement of regulatory quality is arguable achieved mainly through two approaches, indicators and tests (Radaelli, 2004). Although the author supports use of both indicators and tests, there is limited theory and practical experience in using tests compared to Indicators. Other organizations like Learning Initiatives on Reforms for Network Economies Asia (LIRNEasia) use perception surveys instead, to measure whether telecom policy reform and regulations achieved their objective-improved sector performance (Samarajiva et al., 2007). This section firstly discusses indicators, followed by tests and surveys last.

Moving to indicators, there is reasonable literature covering the use of indicators to examine ex ante and ex post regulatory quality (Ugur, 2009; De Francesco & Radaelli, 2007; OECD, 2008; Kaufmann et al, 2009; World Bank, 2010b, Radaelli, 2004). Most notably, it is argued that “indicators are a powerful means of communicating trends, achievements and gaps” (OECD, 2009c, p.7). However it should be noted that indicators do not provide information about effectiveness of individual regulations but can assess regulatory governance systems as a whole, thereby revealing key success factors and identifying gaps (OECD, 2008).

To describe indicators, the discussion of the concepts, simple and composite measures is required (De Francesco & Radaelli, 2007). Simple measures require a Yes or No answer to questionnaires while composite measures are based on statistical aggregation of individual variables. Composite Indicators are generally classified as subjective or objective. The subjectively or objectivity of indicators arguably depends on the source of primary data and the use of this data.

Indicators must be meticulously selected and tested for validity and reliability based on the phenomenon being assessed (Radaelli, 2004). An observation into studies of indicators reveals that governments, international organizations and academics have different approaches to indicators of regulatory quality. The latter tends to focus on composite indicators that attempt to capture real-world regulatory quality in terms of economic growth (World Bank, 2010b, p.30).

Knack and Kugler argues that different indicators of good governance are different for different purposes, and that the two dimensions that motivate different indicators are; the degree of aggregation and the degree of transparency, and extent to which indicators are replicable (as cited in World Bank, 2010b, p.29). Most international organizations like World Bank, EU and OECD developed indicators for various purposes. World Bank uses regulatory indicators, and other indicators, to inform decisions on providing aid to countries. The regulatory indicators are aimed at stimulating and accelerating regulatory reform processes by collecting reports and comparative statistics of different countries. World Bank uses subjective indicators aimed at measuring governance in six dimensions of governance, which includes regulatory quality (Kaufmann et al, 2009). These indicators provide cross-country comparison for each of the six dimensions. The regulatory quality dimension aims to indicate various aspects of regulatory quality of enacted policies and regulations i.e. perceptions of the burdens imposed by excessive regulations etc. (Kaufmann et al, 2009).

Whereas the European Commission and OECD designed indicators to measure regulatory quality, constructed around three dimensions; ‘design of the process’, ‘activities and output’ and ‘real-world outcomes’ (Radaelli, 2004, p.6). In the EU, the

use of indicators is mostly centered on implementation of impact assessment at the EU and member states, with limited consensus and adoption of regulatory quality indicators. Although there has been a lack of consensus on adoption of regulatory quality indicators in the EU (World Bank, 2010), Ugur, in his paper inquiring whether regulatory quality is related to network industry performance in the EU, used a set of ex-ante and ex-post regulatory quality indicators (Ugur, 2009). Ex-ante indicators seek to measure the characteristics of the EU regulatory regime through the following indicators; co-existence of EU and national regulatory bodies, regulatory competence and independence, and transparency. While ex-post indicators seek to measure the market outcomes associated with the effectiveness of regulation in EU network industries.

OECD asserts indicators inform governments of progress made in regulatory reform and assist governments to review their regulatory systems to make them more efficient and cost-effective (OECD, 2008, p.1). A range of these indicators are collected by member states using questionnaires that capture whether countries comply with the implementation of good practice as identified by the OECD principles of good governance (World Bank, 2010b, p.28). The OECD argues that the Guiding Principles for Regulatory Quality and Performance offers a wide framework to develop indicators to measure a country's regulatory quality. The current set of simple indicators developed by the OECD is centered on assessing regulatory policies, regulatory quality tools, and institutional arrangements, with limited coverage on ex-post evaluations or policy outcomes (OECD, 2009c). Lately, OECD developed a Regulatory Indicators Questionnaire in 2009 to measure regulatory quality management practices focusing on four regulatory quality areas, that is; content of regulatory policy, regulatory quality tools, institutional arrangements to promote regulatory quality, and dynamic aspects of regulatory quality (OECD, 2009c). The content of regulatory policy area covers a wide range of issues chiefly dealing with regulatory policy matters, the decision making process and transparency. The regulatory tools area seeks to evaluate implementation of generally accepted tools to improve regulatory quality, while the institutional arrangement is aimed at ascertaining how institutions function or are designed to promote regulatory quality. Lastly, to address the shortfall in ex-post indicators, OECD's

dynamic aspects of regulatory quality are purported to address ex-post review and evaluation of the regularity quality process.

Turning to checklists, the most recognized checklist was developed by the OECD, termed the OECD Reference Checklist for Regulatory Decision-Making. The OECD checklist is aimed at responding to the need to develop and implement better regulation (OECD, 1995). It comprises ten questions that can be applied at levels of policy and decision-making thereby helping OECD countries improve effectiveness and efficiency of government regulation, and making government action more transparent. However, the reference checklist must be applied within a broader context of regulatory management system i.e. collection and analysis, consultation process etc. (OECD, 1995). The OECD checklist is presented in Table 2 below. Surveys are discussed in the subsequent paragraph.

Table 2 OECD Reference Checklist for Regulatory Decision Making

Question no	Question	Description
1	Is the problem correctly defined?	The problem a regulation is addressing must be clearly stated, providing evidence of its nature, magnitude, and explain why it occurred. If correctly defined, the problem will itself suggest other alternatives. Since not all problems can be addressed through government intervention, problem definition can also highlight whether government has capacity to address the problem.
2	Is government action justified?	Government intervention should be based on clear evidence that a problem exists and that government action is justified considering; what value will be derived from regulation and its impact on current policies, potential benefit and cost of regulation, other alternatives to regulation. Markets should at all times be considered as an alternative to government action, and the capacity of the private sector and Individuals to deal with the problem should be assessed. Governments should re-assess the need for intervention as conditions may have changed since regulations were adopted. Governments are encouraged to develop processes to periodically review regulations to ensure they are relevant and consistent with current trends. This encourages governments to ensure their actions are empirical and transparent
3	Is regulation the best form of government	Regulatory officials should be encouraged to carry out, early in the regulatory process, an informed consideration of regulatory and non-

	action?	regulatory instruments. Consideration of alternatives to regulations may reduce costs and increase the effectiveness of government
4	Is there a legal basis for regulation?	Regulations must be consistent with in country laws and legislations, and international trends and agreements. The regulatory authority issuing regulations must be empowered by country's laws legislations.
5	What is the appropriate level (or levels) of government to take action?	Regulators should choose the most appropriate level of government to take action, or, if multiple levels are involved, should design effective systems of coordination between levels of government.
6	Do the benefits of regulation justify the costs?	Regulators should estimate the total expected costs and benefits of each regulatory proposal and of feasible alternatives, and should make the estimates available in accessible format to decision-makers. The costs of government action should be justified by its benefits before action is taken.
7	Is the distribution of effects across society transparent?	Regulatory costs and benefits should be equally distributed across society.
8	Is the regulation clear, consistent, comprehensible, and accessible to users?	Regulators should assess whether rules will be understood by likely users, and to that end should take steps to ensure that the text and structure of rules are as clear as possible
9	Have all interested parties had the opportunity to present their views?	Regulations should be developed in an open and transparent fashion, with appropriate procedures for effective and timely input from interested parties such as affected businesses and trade unions, other interest groups, or other levels of government.
10	How will compliance be achieved?	Regulators should assess the incentives and institutions through which the regulation will take effect, and Should design responsive implementation strategies that make the best use of them.

Source: OECD, 1995, p.9

In Asia, LIRNEasia developed Telecom Regulatory Environment (TRE) perception survey which attempts to measure, ex-post, the efficacy of countries' telecoms policies and regulations by capturing perceptions of key industry stakeholders. The TRE survey is based on seven telecom specific parameters i.e. market entry; access to scarce resources; interconnection; tariff regulation; regulation of anti-competitive practices; universal service obligations; and quality of service (Knight-John, 2008, p.3). However, this survey suffers the same criticism as other subjective measures of regulatory quality.

2.4 Conceptual Framework

The literature review uncovered aspects prevalent to regulatory quality. Literature suggests regulatory quality theory emanates from the emergence of the regulatory state, the theory of regulation and regulatory governance or regulatory management systems. The South African mode of governance is consistent with the characteristics of a modern regulatory state and the theory of regulation. South Africa uses administrative organs of state or independent authorities to control businesses and society through regulation (Levi-Faur, 2011). To ensure successful government administration or control through regulation, regulatory governance plays a pivotal role in government as it ensures that the regulatory system is effective, efficient, transparent and accessible to all (World Bank, 2010d). The foundation for regulatory governance is arguable centered on regulatory quality (Radaelli, 2004).

Defining regulatory quality based on principles of good regulation revealed that; proportionality, accountability, consistency, transparency, and targeting are central to regulatory quality. However to safeguard regulatory quality, Levy and Spiller suggests that country's regulatory framework should provide an effective institutional design which exhibits the degree of independence of the judiciary; the long-term credibility of legislation and the ease with which primary laws can be enacted; the scope for flexibility without arbitrariness in the regulatory process; and the level of administrative competence (as cited in Stern & Holder, 1999, p.40). The OECD also argued that delivery of good regulatory policy and quality regulation requires suitable regulatory institutions (OECD, 2008). To assess regulatory quality in electronic communications in South Africa, it is thus intrinsic to consider whether regulatory environment within which ICASA operates enabled regulatory quality consistent with the aspects suggested by Levy and Spiller and the OECD. In particular, applicable legislation-the ECA, ICASA's institutional arrangement with government i.e. ICASA's independence and relationship with the state, and institutional capacity or resources are all elements incorporated onto the regulatory environment.

It should however be noted that standards of regulatory quality were pioneered by developed countries and generally considered difficult to implement in developing countries such as South Africa. However, World Bank contends that regulatory problems in developing are similar to those of developed countries, suggesting regulatory reform tools used in developed countries can be used in developed countries (World Bank, 2010d). The theory does suggest that Levy and Spiller's institutional design aspects and OECD's guidelines can be used to assess whether the regulatory environment within which ICASA operates supported regulatory quality, thus forming part of this study's conceptual framework.

Literature contends that government decisions shall be based on adequate information on the need for regulation (Whittington & Grubb, 1984). It is thus suggested that assessing whether there is adequate evidence to suggest demand for regulation can be incorporated to the conceptual framework for assessing regulatory quality.

Regulatory quality can be assessed or measured by the examining process for generating new regulations (Jacobzone, 2007, p.7). This study thus incorporates the process followed by ICASA when introducing regulatory proposals onto the conceptual framework to assessing how regulatory quality was enabled. Studies argue that the regulation process can be improved using various tools such as consultation, consideration of alternatives and RIA (Radaelli, 2004; OECD, 2008). Therefore, in assessing the process for generating new regulations, consultation process, consideration of alternatives and RIA are incorporated onto the process followed by ICASA to generate new regulation.

On the other hand, measurement of regulatory quality is achieved using indicators and tests. Indicators are not relevant to this study as they are normally developed with specific focus to problems being measured while tests are useful to this study as they offer generic aspects to be considered in the regulation process, particularly when the study is exploratory in nature. The OECD reference checklist provided in the literature review offers general aspects that are relevant in the assessment of regulatory processes and are incorporated in the assessment of the consultation process, consideration of alternatives and RIA.

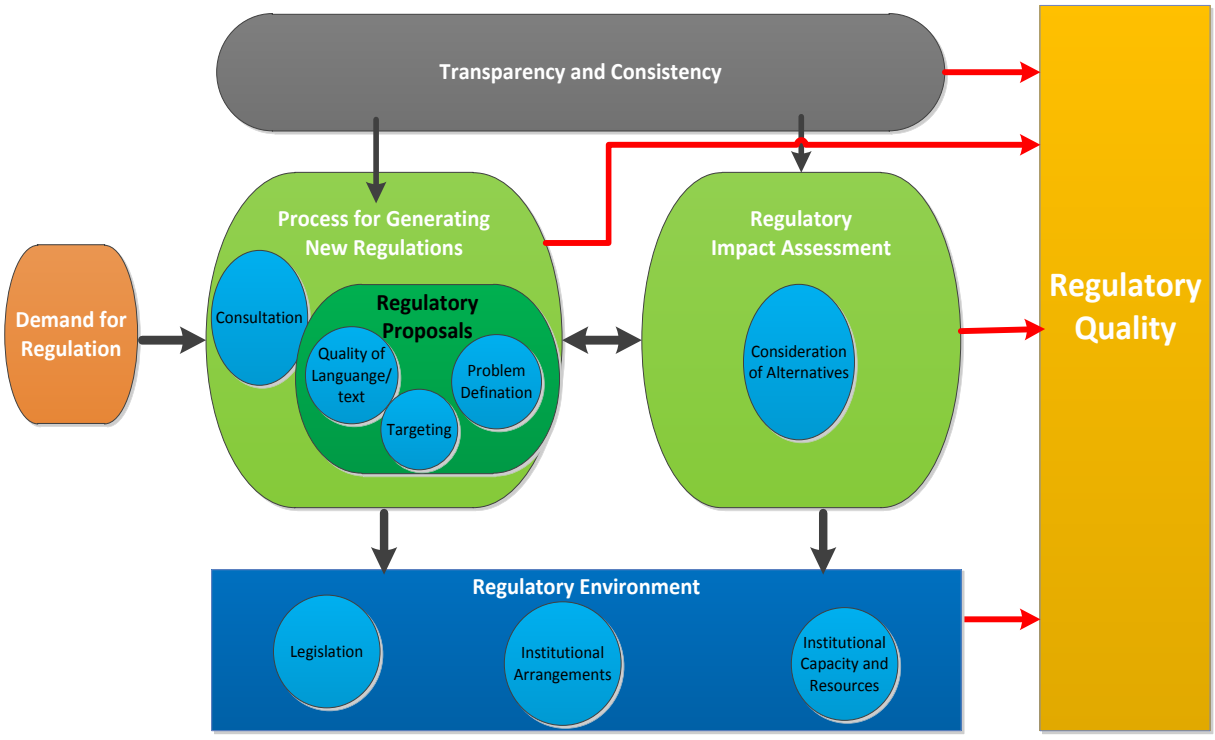
OECD provided that to safeguard regulatory quality, consultation with parties affected should be built onto entire regulation process (OECD, 2008). Affording interested parties reasonable time to make comments and presentations safeguards transparency in the regulation process and thereby regulatory quality (Kirkpatrick & Parker, 2004; Radaelli, 2005; OECD, 2008). Consideration of alternatives is imperative in assessment of regulatory quality as it affords regulators an opportunity to consider other feasible and least cost options to regulation (Whittington & Grubb, 1984; OECD, 2008). The last aspect considered to assess in the regulation process is RIA. RIA is relevant in this study as it helps ascertain whether regulatory decisions were evidence based (World Bank, 2010d; Kirkpatrick and Parker, 2004). Conducting RIA in the regulation process reveals costs and benefits of regulation enabling regulators to make informed decisions, and thereby avoid to regulate when costs of regulation outweighs the benefits to society, and help regulators consider other feasible and least cost option to regulation (Kirkpatrick & Parker, 2004, p.334; Radaelli and De Francesco, nd, p.2; OECD, 2008). Literature exposed that although RIA is difficult to implement in developing countries due to high level of skills and capacity required, there is an opportunity for developing countries to implement light RIA with less stringent rules (World Bank, 2010d; Kirkpatrick and Parker, 2004). RIA is thus applicable to South Africa's regulatory management system.

The themes and concepts above reveal how regulatory quality was addressed in the regulation process. However, the quality of the actual regulatory proposal may not be captured by mere assessment of the regulation making process. Therefore, to assess the quality of the actual regulation, considerations contained in the OECD reference checklist are applicable. To ensure quality regulation, OECD encourages regulators to warrant that; draft proposals are written in a clear language and accessible to users, the problem regulations are addressing is clearly stated and that the regulation is targeted at the problem at hand (OECD, 1995). Related to the consultation described process above, easily accessible proposals and related documentation enables interested parties to provide comments more easily. A clear definition of the problem a regulation is aiming to remedy enables interested parties to suggest other possible alternative to the proposal. Regulators should also ensure the proposed remedy is targeted or

proportional to the problem at hand thereby demonstrating transparency (Radaelli, 2004, p4).

Good regulatory practices encourages that regulators should safeguard consistency in rule making (Radaelli, 2004, p4; World Bank, 2010a). It allows regulated entities and society at large to know what to expect and that regulators afford similar treatment consistently. This study therefore incorporates assessment of consistently on both the process for generating new regulations and measuring regulatory impact assessment. Consistency is expected to reveal whether regulators are improving or getting worse in enabling regulatory quality. Figure 11 below depicts the logical diagram of the conceptual framework of this study.

Figure 11 Conceptual Framework for Assessing Regulatory Quality



The conceptual framework of this study includes the following themes; demand for regulation, process for generating new regulations and quality of regulatory proposals, regulatory impact assessment, transparency and consistency of the regulator, and the regulatory environment.

The process theme further encompasses the following aspects related to the regulation processes; consultation, and quality of regulatory proposals which in turn comprises quality of the language and text, definition of the problem and targeting. As advocated by literature, RIA encompasses consideration of alternatives. These concepts are expected to reveal how regulatory quality was addressed in electronic communications regulation in South Africa.

3 Research Methodology Pertaining to Regulatory Quality

This chapter presents the problem statement which informed this research including its purpose. This study's primary and secondary research questions are presented. Research questions help confine this research to the stated problem. The methodology adopted for this study is described, including the rationale for choosing it. The research design and its structure are provided, including the instruments that were used to collect data. Lastly, a synopsis of the data analysis approach is presented, while a detailed discussion is undertaken in Chapter 5.

3.1 Problem Statement

In 2005, the ECA was promulgated with the aim of: promoting competition in the sector, advancement of universal provision of infrastructure and services, and lower communication prices (Republic of South Africa, 2006). As required by the ECA, ICASA introduced a raft of regulations in effort to address sector challenges. Some of the regulations were relatively complex and the time interval between regulations has been short.

However, studies and electronic communications industry experts argued that South African policies and regulations have been poor manifesting in ineffective market structures, lack of competition, suspicious collusive behavior, and high prices (Esselaar et al., 2006; Calandro et al., 2010). Bearing in mind that South Africa is probably the largest economy in Africa, it should have reformed its electronic communications sector better than most African countries. To the contrary, countries with less favorable economies have made reasonable progress in improving their electronic communications sectors better than South Africa (ITU, 2009). The ITU publishes "Measuring the Information Society" annual report, covering various countries. The aim of the report is provide policy makers with a useful tool to: benchmark, assess their information society developments, and to monitor progress that has been made globally (ITU, 2009). This enables policy makers to formulate better policies. The report ranks covered countries' performance based on their ICT Development Index (which ranks

countries' performance with regard to their ICT infrastructure and uptake), and the ICT Price Basket (which tracks and compares the cost and affordability of ICT services). In both indices, South Africa was ranked worse than countries with less favorable economies, such as Tunisia. South Africa has actually dropped by 10 places from 2002 to 2007 due to its slow progress in improving ICT access and usage.

In that regard, arguments that South Africa's electronic communications sector performs poorly and that regulations introduced by ICASA were infective, coupled with increased sector regulations after the ECA of 2005, it raises questions how ICASA ensured regulatory quality.

Since regulations are low-level instruments that do not typically get ratified by Parliament, an increase in regulation without increased regulatory quality could be detrimental to the sector. This is due to the fact that regulations are not generally scrutinized in comparison to traditional legal instruments, such as legislation.

Literature suggests that ensuring regulatory quality is an effective way to improve the probability that policies and regulations achieve their intended objectives (OECD, 1997; Radaelli, 2004; Kirkpatrick & Parker, 2007). This suggests that enabling regulatory quality in electronic communications regulation in South Africa may have resulted in better outcomes.

In that regard, this paper aims to investigate the efforts taken by ICASA to enable regulatory quality when issuing regulatory proposals.

3.2 Purpose Statement

The purpose of this study is to investigate the ways in which regulatory quality measures have or have not been applied in formulation and implementation of new electronic communications regulations in South Africa. This study investigates regulatory quality of sector regulations promulgated after inception of the ECA.

This study intends to research efforts taken by ICASA to ensure regulatory quality when formulating new regulations. This investigation will afford better understanding of regulatory quality in electronic communications regulation in South Africa.

This study further identifies opportunities for government to improve the regulatory environment to enable ICASA to improve regulatory quality. Increased regulatory quality is expected to increase compliance to regulations by sector actors, and ensure government achieves its economic and social development objectives.

3.3 Research Questions

In light of increased regulation in the electronic communications sector in South Africa, the primary question of this study is: How has the regulator addressed regulatory quality when formulating new regulations in the sector?

In answering the primary question, this study investigates the following secondary questions:

- What processes did the regulator follow when enacting regulations?
- What approaches have been taken by regulator to assess the impact of regulations?
- Was the regulatory environment favorable for ICASA to enable regulatory quality?

3.4 Research Methodology

The commonly used methodologies in research studies are quantitative, qualitative, and mixed methods (Creswell, 2009). Qualitative studies places emphasis on the qualities of entities and on processes that are not experimentally examined or measured in terms of quantity, amount, intensity or frequency while quantitative studies accentuates measurement and analysis of causal relationships between variables instead of processes (Denzin & Lincoln, 2000, p.10). A mixed methods methodology employs a combination of qualitative and qualitative studies. In qualitative studies, researchers study things in their natural settings attempting to make sense of or interpret a phenomenon in terms of the meanings people bring to them (Creswell, 2009; Babbie & Mouton, 2001; Denzin & Lincoln, 2000, p.3).

As this study intends to investigate regulatory quality in its natural setting, being the regulatory environment, and analyze the perceptions of its actors, being ICASA and Industry stakeholders, a qualitative study is thus suitable for this study. Furthermore, a qualitative study is characterized by the collection and analysis of words and images from documents, observations, interviews, transcripts etc. (Creswell, 2009; Neuman, 2011, p.157). These are all suitable ways of collecting, making sense, and interpreting views which would have been challenging to execute using quantitative studies. The latter further supplements the rationale for choosing a qualitative study as researching ways or processes of a less known phenomenon requires interpretation of words from documents and people's perspectives.

As the intention of this study is to investigate a little understood phenomenon or an unstudied area, an exploratory design is be adopted (Babbie and Mouton, 2001; Neuman, 2011). Babbie and Mouton argued that the primary goal for exploratory studies is to describe and understand rather explaining human behavior (2001, p.270). This can also be applied in studying institutional behavior. An exploratory design is thus relevant as the study intends to investigate an area which has not been studied in-depth.

3.5 Research Design

Leedy and Omrod (2004) describe a range of research designs: case study, ethnography, phenomenological study, grounded theory study, and content analysis. It is essential that the correct research design is chosen to ensure it answers the research problem or question at hand (Babbie & Mouton, 2001). This research uses a case study method as described below.

A case study is used when a researcher explores in-depth a program, an event, an activity, a process, or one or more individuals over a confined period of time (Creswell, 2007, p.17; Neuman, 2011, p.40). In case studies, a researcher thoroughly examines many features of few cases over of time. Cases could include individuals, groups, organizations, events, movements, or geographic units (Neuman, 2011, p.40).

One of the characteristics of qualitative studies is the emphasis on interpretation of results (Stake, 1995). In case studies interpretation, we seek to understand how the actors or people being studied perceive the subject under study, while the case study researcher attempts to preserve the multiple views of people being studied (Stake, 1995). In this study, actors primarily involve the regulator and industry stakeholders. Their multiple or different views are preserved which helps identify issues at hand from different perspectives thereby enabling an informed and representative findings.

A case study is thus suitable as the purpose of this study is to investigate process related activities i.e. regulatory quality processes over a period of time i.e. after enactment of the ECA. The case study design allows this study to explore regulatory quality themes in detail over a given period of time, which would be difficult using other research designs. When applying the properties or characteristics of a case study design, cases investigated in this study are the selected electronic communications regulations whereas features examined in depth are regulatory quality themes.

An Interview schedule will be the primary instrument used to collect data. The rationale to espouse semi-structured interviews will be discussed in later sections.

3.5.1 Case Study Structure

A researcher can opt to investigate one of more cases or compare a set of limited cases focusing on several factors (Nueman, 2011, p.40). To answer the research question of this study, three regulations issued after enactment of the ECA of 2005 are used as cases. The three regulation case studies have provided for consistent assessment of regulatory quality issues, as different regulations might have been crafted by various field experts i.e. economic, telecommunications experts or departments or sections within ICASA. Furthermore, due to varied industry or government pressure, the urgency of regulations might have resulted in different processes being followed. These three regulation case studies are thus expected to normalize the assessment of regulatory quality issues which could have been tedious and misleading if a single regulation was used. While on the extreme, if all regulations issued after the ECA of 2005 were to be investigated, it may have resulted in repetition of findings. Moreover, a general open ended assessment of regulatory quality issues without basing it on a particular regulation could have led to intricacies of generalization. Three regulations are thus seen as representative enough to identify key issues.

The criteria used to select the three regulations was based on regulations that had an impact on meeting government's objectives of reducing costs and improving access to electronic communications, and were enacted on or after 2010. Focusing on regulations related to government's sector objectives arguable draws more interest from perspective respondents as it captures regulations that are widely debated in the industry. Limiting the period of regulations to 2010 is intended to increase the probability that stakeholders that participated in each regulation are still in their positions of employment or at least in the electronic communications industry when regulations were enacted. This allows participants to recall from memory in case some of the aspects were not adequately documented.

Industry experts were interviewed to ascertain the three regulations that were aimed at advancing governments objectives. The criteria used to determine which experts to

interview were based on their renowned experience in the sector or seniority in their organizations. Moreover, the choice of respondents was representative of the sector.

Interviews were then conduced with experts listed in Table 3. The interview schedule requested experts to recommend three regulations based on the criteria described above. The interview schedule is attached in Appendix 1.

Table 3 Experts Interviewed to Recommend Three Regulations

Experts	Organization
Expert A	ICASA
Expert B	Neotel
Expert C	MTN
Expert D	ISPA

Furthermore, experts were requested to help in arranging introductory meetings or provide contact details of their co-workers technically involved in each regulation they recommended, if applicable. This approach provided leads to potential interview respondents for the ensuing in-depth regulation case studies' research interviews.

The first interview was conducted with Expert A from ICASA, at ICASA offices in Sandton, Gauteng. After the research topic was explained to Expert A, he did not seem to agree with the focus of this topic. Expert A argued that the study on regulatory quality should rather be conducted on the entire regulatory management system.

Expert A contended that the regulatory system is not isolated to the regulator only i.e. ICASA but to a set of interrelated institutions and disciplines, including; government-the policy maker, Promotion of Administrative Justice, Courts etc. (Expert A, interview, 2012). In furtherance, to better research how regulatory quality was addressed when promulgating regulations, it will thus be prudent to investigate the entire regulatory management system. He further argued, isolating one institution, instead of the entire regulatory system might be difficult to justify this research's approach and may possibly lead to an incorrect conclusion as crucial issues may be missed. Expert A thus encouraged consideration of the entire regulatory systems to better research regulatory

quality. With that approach, regulatory quality may then be investigated using one or two regulations focusing on the entire regulatory system.

After the purpose of this study was argued and reiterated, Expert A recommended the following regulations; call termination regulations, universal service and access obligations, and licence conversion. However, being cognizant of the criteria designed to select regulations, it was argued that licence conversion and universal service and access obligations regulations were enacted or concluded before 2010. Moreover universal service and access obligations regulations were in the process of being reviewed making it difficult to investigate how regulatory quality issues have been addressed as the regulation processes were incomplete.

Expert A then recommended two more regulations; facilities leasing regulations and spectrum regulations which matched the regulations selection criteria.

In summary, Expert A recommended call termination regulations, facilities leasing regulations and spectrum regulations.

The second expert to be interviewed was Expert B from Neotel. The interview was conducted telephonically. Expert B warned the process followed when enacting the three regulations is quite similar making it cumbersome to execute this research as the case studies' findings might be similar. However, it was elaborated that regulatory quality also encompasses an element of consistently- measuring the consistency with which the regulation process is followed. Furthermore, the different regulations may have been enacted with varied industry, government or public pressure on the regulator or different stakeholders involved resulting in different processes followed.

Reverting to the three regulations, Expert B then recommended call termination, universal service and access obligations and carrier pre-selection regulations. It was suggested to Expert B that universal service and access obligations be abandoned for the same rationale provided in the interview with Expert A i.e. that they do not meet the selection criteria. However, Expert B could not think of any regulation at the time and recommended the aforementioned regulations. In summary Expert B recommended call

termination and carrier pre-selection regulations. Expert B offered to participate in the subsequent case studies interviews.

The third interview was conducted face-to-face with Expert C. Expert C elected to provide more than three regulations as he believed they were all essential to reducing costs and improving access to electronic communications. Expert C recommended mobile number portability, call termination, carrier pre-selection, end-user subscriber service charter, universal service and access obligations, Facilities leasing and local loop unbundling, and licence conversion regulations. Applying the regulation selection criteria, end-user subscriber service charter, universal service and access obligations, and licence conversion regulations were discarded. End-user subscriber service charter regulations were abandoned as the final regulations were not completed while both licence conversion and universal service and access obligations regulations were abandoned for the same rationale as in the other interviews above.

In summary the final regulations recommended by Expert C-based on the selection criteria were mobile number portability, call termination rates, carrier pre-selection, and facilities leasing regulations.

Regarding the research topic in general, Expert C contended that the Electronic Communications Act of 2005 poses significant challenges to the regulation process in that regulatory remedies become a principle in the Act. This results in ICASA issuing regulations extraneous to problems at hand, but merely for compliance with the ECA. Expert C then assisted with contact details of his coworkers that could be potentially interviewed in the regulations case studies.

The last interview was conducted face-to-face with Expert D. His recommended regulations were as follows; call termination, consumer protection regulations – code of conduct and end-user subscriber service charter regulations, Facilities leasing, interconnect regulations, carrier pre-selection, and control and ownership. However, code of conduct, user subscriber service charter, and control and ownership regulations were discarded for the following reasons. The rationale for omitting end-user subscriber service charter is the same as previously explained. The code of conduct regulations

were omitted as they were finalized in 2009, outside the window period prescribed in the selection criteria. Ownership and control was also enacted in 2003. The final regulations recommended by Expert D were thus; call termination, facilities leasing, Interconnect regulations, and carrier pre-selection regulations.

The final process involved counting the number of times each regulation has been recommended by the four experts interviewed as seen in the Table 4 below. Three Regulations with the most hits were then selected to form three individual case studies. Regulations that were recommended but did not meet the selection criteria were omitted altogether and do not form part of the table below or this research.

Table 4 Recommended Regulations

Regulation	Recommended by	No of times regulation was recommended
Call Termination	All four Participants	4
Carrier Pre-Selection	Expert B Expert B, Expert C, Expert D	3
Facilities Leasing	Will, Expert D, Expert C	3
Interconnect	Expert D	1
Spectrum regulations	Will	1
Mobile Number Portability	Expert C	1

As seen on Table 4 above, the regulations with the most hits are call termination, carrier pre-selection and facilities leasing.

In conclusion, these three regulations form the three individual regulation case studies, as follows;

- The Case of Call Termination Regulations
- The Case of Carrier Pre-Selection Regulations, and
- The Case of Facilities Regulations

Consistent regulatory quality themes are thus investigated on each case study thereby drawing general conclusions on regulatory quality based on findings of these cases.

3.6 Data Collection Methods

Data was collected using desktop research as the source for secondary data, while primary data was collected using interviews. The rationale of choosing interviews for primary data collection is discussed below.

The majority of documents used in this study include: the Telecommunications Act No. 103 of 1996, Electronic Communications Act No. 36 of 2005, call termination regulations, carrier pre-selection regulations, and facilities leasing regulations. Moreover, in each of these regulations, ICASA draft regulations documents, submission documents to draft regulations-by operators, industry representatives and experts, and ICASA's explanatory notes documents were used.

To collect primary data, this paper adopts semi-structured interviews as a technique for data collection. An interview is defined as a structured social interaction between two parties whereby the interviewer or researcher's purpose is to obtain information from the interviewee using predefined questions (Neuman, 2011, p. 305).

In particular, Semi-structured interviews are defined as;

> *Semi-structured interviews are conducted on the basis of a loose structure consisting of open ended questions that define the area to be explored, at least initially, and from which the interviewer or interviewee may diverge in order to pursue an idea in more detail (Britten, 1995)*

Semi-structured interviews thus provide the flexibility of adapting the research design to ground observations consistent with the fluid nature of a case study approach. This approach thus allows respondents to bring out other related facets not initially anticipated in this research.

In an interview, information can be gathered using questionnaires, interview schedules and analysis of text (Creswell, 2009). As the nature of the study requires flexibility in questions asked to respondents, the research instrument adopted is an interview schedule. Interview schedule is defined as a data collection technique in which an interviewer physically meets the respondent, asks the same set of prearranged

questions in an orderly fashion, and records responses to each question (Saunders et al., 2009). Since this study is exploratory in nature, an interview schedule is thus suited for this study to allow respondents freedom to discuss issues in-depth.

The interview schedule was designed consistent with this study's research questions. As the perspective of each interview participant was based on their primary job function in their respective organizations, the interview schedule was designed to capture that. It was also designed such that it only solicits field data that could not be attained using desktop studies. This approach also helped to limit the number of questions on each interview schedule, thereby shortening time spent on interviews.

There were two sets of interview schedules per case study, one that is intended to solicit the regulator's perspective, while the other was directed to capture industry stakeholders' perspectives. This allowed the regulator to respond to questions based on their role as a regulator and industry stakeholders on their role as the 'regulated players', commentators, representative groups or experts in the electronic communications industry. This approach thus helped to capture both sides of the coin, as it embraces a representative view of facts. However, since this study is exploratory, other aspects relating to regulatory quality that are relevant but do not adhere to the preordained structure above, were considered.

In each interview schedule, a space was left open between questions to simply recording of responses against each question of the interview schedule-for better management and organization of collected data (Creswell, 2009).

Permission to interview stakeholders was requested either by first contacting stakeholders by telephone followed by an email or just an email. The email comprised a letter attachment addressed to relevant stakeholders and standard Wits-PADM Research Information Sheet and Consent Form attachments. These documents were intended to put stakeholders at ease to assist in providing data for academic purposes by safeguarding data confidentiality and ethicality of the study.

Stakeholders responded via email or telephone call confirmation either face-to-face or telephone interview, date and time of interviews. Most of the interviews were conducted

face to face whilst few of them were over the telephone. Participants' responses were either noted on paper or both noted on paper and recorded on an electronic recorder. Recording of interview sessions on an electronic recorder was only carried out on consent by the participants.

In each interview, there were formal introductions between the researcher and each interview participant. The research topic and purpose of the study was explained in detail to each participant to ensure common understanding of the research topic and its purpose before proceeding with the interview. The date, time, name, organization of each participant, and duration of the interview were recorded on the interview schedule script.

The physical location of this study was predominantly in Gauteng. Interviews were generally held in respondents' offices and telephonically. Both sets of interview schedules are attached in Appendix 1. The interview respondents' details of each regulation case study are presented in Appendix 3.

3.7 Data Analysis

As this study has adopted a qualitative research approach, the research findings data are in the form of text, written words, phrases or symbols describing or representation people, actions, and events in social life (Neuman, 2011, p.457). Data analysis is therefore described as the process of making sense of or interpreting the text and data collected in research (Denzin & Lincoln, 2000; Creswell, 2009). Data collected through desktop research and interviews was synthesized using the conceptual framework adopted for this study. Creswell further provided a six step process of data analysis beginning with preparing data for analysis all the way to making an interpretation or meaning of the data.

To analyze the data, the researcher groups or organizes data into categories on the basis of themes, concepts, or similar features (Neuman, 2011). Organizing collected data into categories or themes, termed codification, is one of the critical steps in the data analysis process (Neuman, 2011; Creswell, 2009; Rossman & Rallis, 1998, p.171).

Codification is defined as the process of organizing the data into chunks before bringing meaning to those chunks (Creswell, 2009). The coding process is used to generate description of the setting or people as well as categories or themes for analysis; useful in designing detailed descriptions for case studies, ethnographies, and narrative research projects (Creswell, 2009, p.22). Themes could also be used in research findings as major headings to capture multiple perspectives of individuals (Creswell, 2009).

In this paper, the categories and themes described above are used as headings in each case study findings. The final step of qualitative data analysis entails construction of interpretations of the data (Denzin & Lincoln, 2000; Creswell, 2009). Interpretation of findings on these categories and themes are drawn using this study's conceptual framework and regulatory quality literature. The data analysis of this study is presented in Chapter 5.

3.8 Significance of the Study

Stemming from a plethora of electronic communications regulations introduced particularly after inception of the ECA Act of 2005, the argument that overregulation might be detrimental and that the South African communications sector's performance is still poor-even worse than developing countries with less favorable economies, it is thus of significance to investigate how the regulator enabled regulatory quality when formulating regulations.

Proponents of regulatory quality claim that promoting regulatory quality is vital in safeguarding that proposed regulations meet their intended objectives by following a process that yields effective and efficient regulations (Radaelli, 2004, p8; OECD, 2005; World Bank, 2010a, p.4). This study is thus of significant in that it can also encourage ICASA and government to better understand the implications of lack of regulatory quality and identify areas for improvement.

3.9 Limitations of the study

The three regulations selected in this paper does not necessarily represent how ICASA introduced all sector regulations but seeks to identify general processes followed to provide us with insights how regulatory quality issues are addressed. Also, the selection of the three regulations used for the case studies was not a general representation of the industry as a whole but of selected experts.

This study enables us to understand how ICASA addresses regulatory quality when formulating regulations. It does not study regulatory quality of the entire regulatory management system which general includes, over and above ICASA, the legal institutions, parliament, and government including the Ministry of Communications.

4 Chapter 4: Research Findings of Regulatory Processes, Impact Assessment and Regulatory Environment

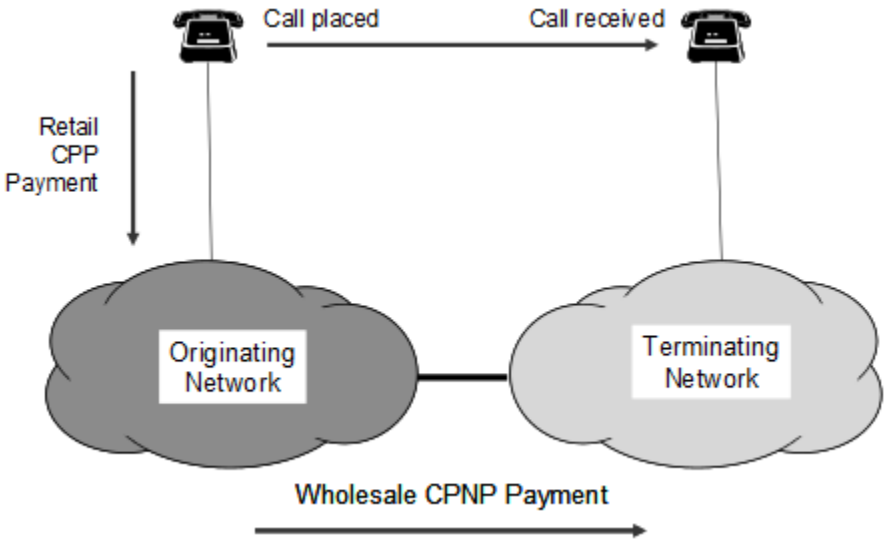
This chapter discusses the findings of the three regulations case studies. The findings of each regulation case study are organized in the following manner: demand for regulation, processes followed, impact assessment, and challenges experienced by the regulator when formulating regulations. The demand for regulation reveals where calls for regulation emanated leading to ICASA instituting a regulatory intervention. The process followed covers regulation process related aspects which includes the consultation process and the quality of the regulatory proposal. Impact assessment explores the attempts made by ICASA to determine ex-ante impact of regulations including consideration of alternatives. The challenges experienced by ICASA when formulating regulations is discussed. The findings of each regulation case are then summarized.

4.1 The Case of Call Termination Regulations

In telecommunications, interconnection is defined as the physical linking of a carrier's network equipment or facilities to other carrier networks creating calling capabilities for subscribers of one network to call subscribers of other networks thus creating a contiguous network (Melody, 1997). The figure below depicts the basic principle of interconnection. This capability generates additional revenues in excess of the additional costs of establishing and maintaining the interconnection (Melody, 1997). In practice, there are different charging methodologies between operators on, interconnection or wholesale markets, such as Calling Party's Network Pays (CPNP) and Bill and Keep (BAK). On retail markets applicable charging methodologies include Calling Party Pays (CPP), Receiving Party Pays (RPP) and flat rates-with or without minute caps (Growitsch et al., 2010). Different jurisdictions implement different charging methodologies with South Africa adopting a CPP retail costing methodology, where calling parties or users pay for call charges. In CPP, the wholesale costing methodology is CPNP, where the operator terminating a call on its network subscriber charges the originating operator a call termination or wholesale rate upon which the originating

operator marks-up the call termination rate and thereby charges its subscriber a retail rate. A key regulatory challenge is to protect new entrants from being charged excessive wholesale rates by monopoly or dominant operators, which typically leads to an uncompetitive market as high call termination costs possesses a huge barrier for new entrants (Growitsch et al., 2010).

Figure 12 Call termination rates



Source: Growitsch et al., 2010

4.1.1 Demand and Justification for Call Termination Regulations

Due to high cost and lack of competition in the provision of voice services, stakeholders have demanded regulation of call termination rates in South Africa (Gillwald & Kane, 2003; ITU, 2003; South African Foundation, 2005; Econex, 2006; Monson, 2006; World Wide Worx, 2009; Esselaar et al., 2010).

In the early 1990s when sector reform began, government policy was focused on regulating the monopoly fixed line voice services, with limited regulatory focus on mobile services. This was a result of government policy oversight that declared mobile services an elite service that would not attract a substantial subscriber base (Gillwald, 2005). In the early 2000s, mobile services began to outstrip fixed line services in subscriber numbers, particularly after the introduction of mobile prepaid systems albeit the higher

cost of services. In 2003, South Africa's mobile call termination rates were 519 percent that of fixed call termination which saw the initial calls by incumbent fixed line operator, Telkom, to lower mobile call termination rates (Gillwald & Kane, 2003). Telkom argued that mobile call termination rates far exceed the costs of termination. At the time, mobile call termination rates were set by an agreement between mobile operators with annual increases linked to rate of inflation.

Oftel (now Ofcom), the United Kingdom regulator, ruled that mobile call termination rates are 30 percent to 40 percent above costs in United Kingdom. Ofcom introduced an intervention to reduce mobile call termination rates by 15 percent. It introduced retail price cap to incentivize mobile operators to reduce network costs (Gillwald, Kane, 2003). South Africa's call termination rates were in fact within the same range as that of the United Kingdom (Gillwald & Kane, 2003, p.32). International evidence and experience also suggests that mobile interconnect rates in South Africa were relatively high by global standards (BMIT, nd). It thus seems that Telkom's demand to lower mobile call termination rates may have been justified.

One surprising commercial decision was that of Cell C when it launched in 2001; the new entrant did not dispute mobile call termination rates albeit Vodacom and MTN increasing mobile termination rates from R0.20 to R1.25 - a 500 percent increase while fixed termination rates remained at R0.27 (Hodge et al, 2008; Esselaar et al, 2010, p.17). Therefore, at the inception of Cell C, there was no pressure for ICASA to intervene in regulating mobile call termination rates as evident from its failure to prevent increases.

However, ICASA attempted to intervene by introducing interconnect regulations in 2001 which set out that major operators with market share in excess of 35 percent should set their interconnect rates at Long Run Incremental Cost (LRIC) but only Telkom qualified as a major operator (Hodge et al, 2008). In 2003 Cell C applied to ICASA arguing that MTN and Vodacom should be included as major operators and thus set their interconnect rates at LRIC (Hodge, 2003). Cell C's application was in vain as ICASA did not seem to have power to regulate operators. This was more apparent when Telkom continued to increase call termination rates not in conformance to LRIC by exploiting

loopholes in the interconnect regulations (Hodge et al, 2008). ICASA then elected to wait for enactment of a new legislation, ECA of 2005, which ought to set out new costing methodology for interconnection. However ICASA could have introduced suitable call termination rates regulations which would be transferred to the new legislation (Hodge et al, 2008).

In 2006, after promulgation of the ECA of 2005, ICASA sought to regulate mobile interconnect rates which had then risen to 500 percent in a space of five years. ICASA began a public inquiry into mobile termination rates through a discussion paper on mobile termination rates. However, the ECA of 2005 provided, in Chapter 10, that in order to implement competition regulation, ICASA must first define a market and test for significant market power (SMP) prior regulation. In the ensuing hearings, operators argued that ICASA did not follow Chapter 10 provisions of the ECA, to which ICASA conceded. ICASA then published a findings document in 2007; in that it first needs to follow the provisions of Chapter 10 prior setting mobile interconnect rates (Esselaar et al, 2010).

After the courts ruled in favor of Altech against the Minister in 2009, which ruled that VANS can be we awarded both ECNS and ECS licensing-meaning they can self-provide network infrastructure and services, hordes of VANS called for fair interconnection and reduction of mobile terminates rates. The pressure was now enormous on ICASA as both interconnection and mobile interconnect rates presented a significant barrier of entry for these new licensees (Esselaar et al, 2010).

In 2009, a new government administration of the African National Congress came to power including a new Minister of Communications. The new administration negotiated with ICASA and operators in Parliament to reduce mobile interconnect call rates. This culminated in the Portfolio Committee on Communications (PCC) aggressively lobbying with mobile operators to reduce interconnect rates (Esselaar et al, 2010). A long deliberation ensued with government issuing directives to ICASA to reduce rates while operators were volunteering to cut rates on a condition ICASA will not regulate rates further. The regulator turned down the offer adamant that it needs to conduct a market review to regulate rates as provided by the ECA of 2005. However in 2010, ICASA and

the operators finally agreed on a rate reduction from R1.25 to R0.89 with effect from March 2010, without the condition prohibiting ICASA to regulate call termination rates at a later stage.

ICASA then concluded its market review as provided in the ECA and finally promulgated mobile interconnect rates regulations in 2010. Call termination rates would be reduced (starting at the agreed rate of R0.89 in March 2011) on a glide path by 30 percent per year for a duration of three years. The regulations provided that CASA will review call termination rates after the three year glide path, which ends in March 2013.

In conclusion, the demand for mobile interconnect rate regulation in South Africa seems to have emanated from least dominant operators, such as Cell C and Telkom, ECS licensees, industry stakeholders, government, and international bodies.

4.1.2 Process Followed in formulating Call Termination Rate Regulations

This section presents findings regarding processes followed in formulation of call termination rates (CTR) regulations. As it was established, CTR regulations took almost 10 years to finalize whereby most of the processes were never completed. The first section, History of CTR Regulations, presents findings surrounding incomplete processes. Subsequent sections discuss the complete regulatory process leading to final regulation, revealing how the consultation process was conducted and the quality of the proposed regulations.

History of Call Termination Rates Regulations

As provided in the previous section, least dominant and newly licensed operators called for CTR regulations. The demand for CTR regulations was over a 10 year period - between 2001 and 2011. CTR regulations were finally promulgated in 2010 after a series of fruitless processes and events. This includes ICASA's failed attempts to introduce LRIC in 2001 and to regulate mobile interconnect rates in 2007 where it only concluded with a findings document specifying that it needs to first define a market before it can regulate (ICASA, 2007a; ICASA 2007b). This led to a political intervention

by government resulting in lengthy negotiations between government, ICASA and the dominant mobile operators.

It was thus interesting to establish the basis surrounding the delays encountered in finalizing CTR regulations. Most experts including ICASA argued that; political lobbying, litigation threats by operators, challenges introduced by the ECA were some of factors that contributed to these delays (Respondent D, interview, 2012; Expert E, interview, 2013; Expert D, interview, 2013; Respondent C, interview, 2013). It was provided that ECA was drafted almost as a panacea to all policy and regulation challenges in South Africa hence it became too prescriptive, particularly on the regulator (Expert E, interview, 2013). Moreover the following factors compounded the problem as: more responsibilities were introduced on ICASA straining its already inadequate resources, there was a regulatory gap as ICASA had not completed its mandate from the previous legislation-Telecommunications Act of 1996, it had just emerged from a restructuring process, regulation of Postal services was now included in its mandate (Expert E, interview, 2013; Expert D, interview, 2013). One industry stakeholder vied that it may have been far more desirable for the ECA to have afforded ICASA a grace period of at least a year to complete all regulatory processes under the Telecommunications Act of 2006, thereby enabling the regulator to re-structure itself in preparation for the objects of the ECA of 2005 (Expert D, interview, 2013).

Consultation Process

On 08 March 2010, as mandated by chapter 10 provisions of the ECA, ICASA published a Guideline for Conducting Market Reviews to operators and relevant stakeholders (ICASA, 2010a). The guidelines set out the process ICASA will follow to introduce call termination regulations as stipulated in the ECA. The document indicated the milestones and their pertinent consultation process with the operators and stakeholders, and requested operators for their co-operation in providing information within 30 days from date of request. The document also stated ICASA's information collection method in that it will first request information from operators by letter and subsequently meetings or forums as when deemed necessary. The process prescribed by the regulator was applauded by ISPA (an industry body representing a number of ECNS and ECS

operators) for its correctness and practicability. The document specified; the purpose of the regulation-which was to implement competition enhancing regulation consistent with electronic communication legislative framework, public consultation process, end to end process to be followed, and applicable time frames (ISPA, 2010).

After collection of the necessary information to use for market reviews, on the 16th of April 2010, ICASA published draft CTR regulations pursuant to the process stipulated on the Guideline for Conducting Market Reviews described above (ICASA, 2010b). The regulator called for comments by interested parties by 02 June 2010, a 6 weeks' notice period. The methods and applicable details for submitting comments were specified as post, hand delivery, fax, and email. ICASA provided that public consultations will be convened between 09 and 11 June 2010 and that it is committed to finalize regulations by 30 June 2010. The draft regulations enunciated the purpose of the regulations and more importantly, included an explanatory note specifying the rationale behind ICASA's decisions pursuant to the Guidelines for Conducting Market Reviews document.

Before the deadline for comments submissions, Cell C requested ICASA for an extension for submission of comments. Cell C argued ICASA has not given sufficient time for comments, citing ICASA contravened

> *"Section 3(1) of the Promotion of Administrative Justice Act 3 of 2000 ("PAJA") requires that administrative action which materially and adversely affects the rights of any person must be procedurally fair. Section 6 (2) (c) of PAJA confirms that the fact that administrative action is procedurally unfair is a ground of review and may lead to the relevant decision being set aside"* (Cell C, 2010, p.1).

Furthermore, Cell C argued that ICASA's regulation process was not consistent with other regulations i.e. Interconnection regulations which were developed over a period of three years with three draft revisions before final regulations. Cell C cited global trends indicating that regulators in other jurisdictions allowed sufficient time, about 3 months, for comments and consultations. The regulator granted about two weeks extension from the initial deadline of 02 June 2010 to 18 June 2010. Public hearings were held between 28 and 30 June 2010. Consequently operators and electronic communications industry

bodies submitted comments to ICASA by the 18th July 2010. The final CTR were published on the 29th of October 2010 (ICASA, 2010c).

All Industry stakeholders interviewed regarding the consultation process on CTR regulations concur that the consultation time was sufficient, particularly since the industry anticipated the regulation. They further, quite overwhelmingly, added that the period for comments was legislated in the ECA of 2005 i.e. 30 days and was followed by the regulator (Expert B, interview, 2012; Expert E, interview, 2012; Respondent E, interview, 2012; Respondent B, interview, 2012; Respondent A, interview, 2012). The time afforded for comments could be challenging to meet by smaller operators with limited in-house regulatory skills as they may require external legal and regulatory consultancy which could be time consuming (Expert E, interview, 2013).

Meanwhile ICASA provided that

> *"minimal ECA legislated time frames were adhered to. ICASA has submitted a proposal to parliament to shorten the minimum period required for comments to expedite regulations as the industry is typically aware in advance of eminent regulations. ICASA provided current process with stipulated legislated timeframes and resources requirements to regulate a market"* (Respondent E, interview, 2012)

Some stakeholders argued that there was transparency in the CTR regulations process, while others argue that not all aspects of the process were transparent (Respondent A, interview, 2012; Respondent B, interview, 2012; Respondent C, interview, 2013; Expert D, interview, 2013). For instance, Respondent B contended the position adopted by ICASA to qualify Cell-C for call rate asymmetry suggested political interference in that; the criteria used to define asymmetry were not transparent as it qualified Cell-C yet it was deemed to have market power on CTR. She added that some of the pro-competitive remedies imposed on the sector had no linkages with the outcome of the market review process. In essence the pronunciation of asymmetry was inconsistent with the definition of the market review process (Respondent B, interview, 2012). Expert D also argued that the dispute lodged by MTN and Cell-C with ICASA regarding its

decision to qualify 8ta for asymmetry could have been debated transparently in public hearings within the regulation process instead of ICASA's Complaints and Compliance Committee (CCC) (Expert D, interview, 2013). When recalling the substantial delays by ICASA in regulating call termination rates while economic evidence was in favor of regulation, Respondent C condemned ICASA that it did not demonstrate transparency as it failed to inform the public the rationale for its decision to stall the process at the time (Respondent C, interview, 2013). In furtherance, it was unclear how ICASA decided on the percentage and period of the glide path, but it is highly suspected that the regulator may have been succumbing to pressure to appease dominant operators.

Amidst the process of CTR regulations and consideration that operators were not the only stakeholders, it is unclear what efforts were put in place by ICASA to involve and inform the public (Respondent C, interview, 2013). ICASA indicated they generally issue; a public discussion document which is published in a government gazette, a media statement to all major news outlets while a similar statement is posted on the ICASA website informing the public of the impending stakeholder participation process (Respondent E, interview, 2012). However it was established that there was no involvement by the public or consumer representatives or civil society groups in the consultation process.

Although they seemed to provide a very general view, few experts responded that the process was transparent as the draft regulations did specify the end to end process ICASA will follow in passing CTR regulations (Expert E, interview, 2012; Expert B, interview, 2012). Actually, some experts considered the process followed in CTR regulations as probably the most meticulous of any regulation of the time (Expert D, interview, 2013; Expert B, interview, 2012).

ICASA also shared an electronic copy of the consultation process, which is attached in Appendix 4, suggesting it follows a formal and documented consultation process for all regulations

Proposed Regulation

As described above, this section studies the quality of the actual regulation proposal. To establish that, these findings presents whether language used in the proposal was clear, whether the problem being addressed was clearly stated, and whether the regulation was targeted at the problem at hand.

Most experts concurred the language used in the proposal was unambiguous and that the problem was correctly defined (Expert B, interview, 2012; Respondent C, interview, 2013; Expert D, interview, 2013; Expert E, interview, 2013). Respondents further elaborated that ICASA correctly and clearly defined the intervention in that it seeks to set out pro-competitive measures to address relevant call termination markets found to create ineffective competition. Some experts supplemented that regulating call termination was in line with international best practice and economic theory (Expert B, interview, 2012; Respondent C, interview, 2013). Contrastingly, few felt the problem was not entirely well defined, in that, the definition of the mobile termination markets was unclear which manifested in other non-mobile ECS licences claiming their networks met the criteria for mobile termination and demanded ICASA to allow them to charge mobile termination rates (Respondent A, interview, 2012; Respondent B, interview, 2012).

After learning that the problem was well defined by ICASA, it was then explored whether the regulation was targeted at the problem at hand, to which they all responded affirmatively in that CTR was high in South Africa compared to other similar jurisdictions. This limited competition in the sector leading to high retail rates being charged to consumers (Expert B, interview, 2012 Expert D, interview, 2013; Respondent C, interview, 2013, Expert E, interview, 2013).

4.1.3 Impact Assessment

The intention and demand for regulating CTR was over a 10 years period. This section attempts to uncover how the regulator conducted impact assessment of CTR. Historical CTR regulation attempts that were aborted by ICASA, as aforementioned, are omitted

as the processes were not completed making it difficult to collect meaningful data. Therefore, this investigation focuses on the completed CTR regulation process which began when ICASA issued the Guidelines for Conducting Market Reviews in March 2010 up to ratification of final regulations.

The draft regulations did not have a section detailing ex ante regulatory impact assessment of CTR regulations nor a reference to separate document detailing impact assessment of regulations. Telkom's submission to draft CTR regulations argued that the authority needs to conduct impact assessment before introducing regulations to ensure the chosen intervention is: the least distortionary, proportional to the problem being remedied, meets intended objectives, and safeguards consumer welfare (Telkom, 2010, p.52). Telkom further exclaimed that in economic terms, the authority failed to analyze the cost and benefit of CTR regulations prior regulation.

In the draft regulations, ICASA proposed a benchmarking approach to lower CTR over a period of time, termed a glide path. This was to result in CTR reduction of 30 percent, then 50 percent, and lastly 15 percent in a space of few months. This was contended by the mobile operators as they claimed the glide path rate reduction was too sudden to adjust business models in response to reduced interconnect revenues (MTN, 2010; Vodacom, 2010; Cell C, 2010). Moreover, since interconnect revenue in the SA mobile market constituted 30 percent of operator's revenue which is used to provide subscriber subsidies and network rollouts, loss of this revenue could lead to negative sector outcomes (Respondent B, interview, 2012). Industry stakeholders further expounded that the proposed glide path could lead to: business shock pushing operators to major cost cutting exercises that may result in job losses, negative impact on competition, reduced consumer welfare, thereby negatively impacting the entire mobile ecosystem (MTN, 2010; Econex, 2010). The proposed removal of the traditional peak and off-peak pricing structure was also unanimously opposed as mobile operators followed this business structure for over 15 years protesting that this sudden change would further dampen their businesses. In its submission Cell C further denounced ICASA's benchmarking approach as it was based on annual financial accounting data including annual regulatory statements that are lodged only by MTN and Vodacom with ICASA,

without similar regulatory statements from Cell C-since ICASA did not require it to submit as it is not a dominate operator (Cell C, 2010).

When asked how the regulator decided on the glide path and removal of peak and off-peak considering operators claim that its decision was not evidence based; ICASA indicated that after one on one consultation with operators, the glide path was relaxed and the peak and off-peak structure was maintained in the final regulation (Respondent D, interview, 2012)

Cell C further condemned the regulator for its failure to approve CTR asymmetry in its favor since it is not a dominant operator. Cell C argued that subjecting it to the same pro-competitive remedies imposed on dominant operators cites disproportionality by ICASA (Econex, 2010; Cell C, 2010). In response to this argument, in the final regulation, ICASA approved asymmetry for Cell C and least dominant ECS licensees. However, granting asymmetry to Cell C was claimed to indicate interference with the regulator and lack of transparency (Respondent B, interview, 2012).

Most industry stakeholders and ICASA indicated that it was not necessary to conduct impact assessment as there was sufficient evidence from international best practice and economic theory to justify the regulation (Expert B, interview, 2012; Respondent D, interview, 2012; Expert E, interview, 2013; Expert D, interview, 2013, Respondent C, interview, 2013). ICASA added that although impact assessment is a good regulatory practice, it was not entirely necessary when enacting call termination regulations as,

> *"call termination regulation is a global regulatory intervention to promote competition by regulating wholesale call termination rates. Its application is almost similar in most jurisdictions. ICASA adopted an international best practice approach in benchmarking wholesale prices, and did not necessary require impact assessment as the impact for such intervention was well known globally"* (Respondent D, interview, 2012)

However, ICASA's argument was opposed as impact assessment would have revealed that ICASA's decision was unjustifiable as,

"the argument leading to the perception that SA mobile termination rates were too high may been misleading as countries used to benchmark SA had different mobile markets in terms of sector investments and services offered (i.e. some of the countries benchmarked against had not invested in 3G), and the actual benchmarked retail prices seemed to only account for headline tariffs instead of effective retail rates" (Respondent B, 2012)

Alternatives to the Regulations

Alternatives to the proposed CTR regulations were submitted by industry stakeholders to ICASA in response to draft regulations. This included a strong argument that, although defining narrow markets of an ecosystem, test for dominance and thereby apply pro-competition interventions to correct market failure is welcomed in economic theory, the structure of the entire market is much more prevalent (Econex, 2010; Telkom, 2010). It was thus argued that economic literature increasingly suggests that the communications market is a two-sided market, where one market exists because of another market e.g. call termination-wholesale exist because of call origination market-retail (Econex, 2010, p.3; Telkom, 2010; Theron & Van Eeden, 2010). Therefore a strong caution was put forward to ICASA that failure to consider the retail market when regulating wholesale rates will potentially not result in enhanced consumer welfare and competition, as intended by the regulations (Econex, 2010; Telkom, 2010; Cell C, 2010).

The latter was further substantiated by one of the experts interviewed, stating,

"Setting call termination rates at cost based pricing was an attainable alternative. This would have required ICASA to conduct a market review to provide a costing framework based on international best practice for wholesale costing methodologies. This alternative was much more recommended instead of benchmarked prices as it would have based call termination rates on actual cost – as recommended by economic studies. However this proved challenging and time consuming as was in other jurisdictions (Respondent B, interview, 2012).

To the contrary, most experts indicated that no other alternatives were feasible (Expert B, interview, 2012; Expert E, interview, 2013; Expert D, interview, 2013; Respondent C, interview, 2013). ICASA echoed most experts in that no other suitable alternative was feasible and that ICASA made a good decision to espouse international trialed and tested benchmarking approach (Respondent D, interview, 2012).

4.1.4 Challenges Experienced by Regulator

This section presents findings to challenges experienced by the regulator when introducing CTR regulations.

Political Interference

The Minister of Communications, in his bid to lower communications costs for pre-paid users which is dominated by poor citizens of South Africa, called for operators and ICASA to reduce mobile termination rates (ITweb, 2009; Techcentral, 2009; Mail & Guardian, 2009). The call was received with mixed reactions from the industry, constellated in two divergent views (Mail & Guardian, 2010). One group argued the Minster rightfully intervened by using powers vested in him by the ECA of 2005, culminating in ICASA expediting completion of the CTR regulations. However, the other group contends the Minister interfered in a regulatory matter outside his mandate which could have erroneously enabled operators to successfully lobby a rate reduction in their favor, particularly if ICASA approved the operators' rate reduction proposal emanating from the Minister's intervention.

In interviews with industry stakeholders, general sentiments were that government intervention was justified as ICASA stalled the market review process which was a predecessor to regulating CTR (Expert B, interview, 2012; Respondent B, interview, 2012; Respondent A, interview, 2012; Expert E, interview, 2013; Respondent C, interview, 2013; Expert D, interview, 2013). Government did not interfere with the market review process but intervened in political processes to lobby operators to lower CTR as ICASA failed to timeously complete the market review process. In fact, some Industry stakeholders concur government should have intervened earlier considering it

had overwhelming evidence that CTR were exorbitantly high compared to similar jurisdictions, as well as witnessing the astronomical increase in CTR by more than 500 percent when Cell C launched (Expert D, interview, 2013; Respondent C, interview, 2013).

One Industry stakeholder extended that political interference is not good precedent in the regulation process but was justified as there was an apparent regulatory failure by ICASA (Expert D, interview, 2013). On the other hand, one can only imagine what ICASA can achieve if there is political will to address its shortcomings as evident from government's intervention in CTR regulations (Expert D, interview 2013).

Resources and Capacity of the Regulator

Studies dating back to early 2000s in the South African electronic communications sector, suggested paucity of skills in the South African regulatory structure (Kane & Gillwald, 2003; Gillwald, 2005). After negotiations between ICASA and operators on CTR regulations, there was an assertion that developing countries, like South Africa, are still facing challenges of emulating regulations employed in developed economies with well-resourced regulators in contrast to their under-resourced regulators (UCT, nd). Industry stakeholders affirmed that the regulator is incapacitated as apparent from delays encountered in the CTR regulation process (Expert B, interview, 2012; Respondent B, interview, 2012; Respondent A, interview, 2012; Expert E, interview, 2013; Expert D, interview, 2013; Respondent C, interview, 2013). One industry stakeholder further expressed that ICASA's staff has low morale due to the consistent ridicules levied to it by the industry (Expert D, interview, 2013).

They recommended that Treasury provides adequate funding to ICASA from the funds it collects in licence and spectrum fees. As an example, since ICASA does not possess staff complement to deal with economic regulation, additional funding could help hire external consultants to help the regulator, and more importantly, help transfer skills and knowledge to internal staff to avoid exorbitant consulting fees in future regulation (Expert B, interview, 2012; Respondent B, interview, 2012; Respondent A, interview, 2012; Respondent C, interview, 2013)

ICASA also concurred it had faced resource constraints. The regulator supplemented that promulgation of the ECA of 2005 resulted in additional provisions, such as Chapter 10, mandating ICASA to perform additional functions that the regulator did not have capacity and competency to discharge. Chapter 10 provisions required ICASA to increase its economic regulation skillsets. However these skills were never introduced at ICASA which resulted in delays in finalizing regulations with economic aspects, such as CTR regulations (Respondent D, interview, 2012). ICASA substantiated the former through an example stating that it should not have made regulations pertaining to the market review framework as the ECA' section 67 already prescribed these regulations. It was thus alleged that lack of skills to deal with such economic aspects was one of the reasons CTR regulations were delayed. This was manifested by ICASA succumbing to pressure from operators who successfully pushed it to prescribe these regulations thereby stalling being regulated (Respondent D, interview, 2012).

ICASA provided that it is inadequately funded and incapacitated, predominantly on technical and economic skills, to regulate efficiently (Respondent D, interview, 2012).

4.1.5 Summary of Call Termination Case Regulations

The demand for call termination regulations seemed to have emanated from operators least dominant on mobile termination, government, industry stakeholders, and international bodies. In that regard, it seemed there was demand to regulate call termination rates.

Most industry stakeholders indicated ICASA's consultation process was in accordance with the objects of legislation, the ECA of 2005, save Cell C arguing that more time could have been afforded for comments as was with other regulations. However, in the draft regulation, ICASA did specify the end to end process to be followed for CTR regulations and also shared the consultation process used for all regulations.

Most industry stakeholders were of the view that, in general terms, the consultation process was transparent. Others argued that some aspects of the process was not transparent as: ICASA failed to inform stakeholders why the process was halted around

2006, opted to discuss CTR asymmetry outside the regulation process, and failed to clarify how it decided on the glide path percentages and its duration.

Some industry stakeholders provided that the problem CTR regulations were meant to address was correctly defined. While some industry stakeholders did not concur providing reasons and examples of their claims. However they all concurred that the regulation was targeted at the problem at hand.

ICASA did not conduct ex-ante impact assessment of CTR regulations. Most industry stakeholders including ICASA argued there was sufficient evidence from international best practices and economic studies to justify CTR regulations in South Africa. However some industry stakeholders were of the view that impact assessment should have been conducted to determine the level and duration of CTR reduction as it may harm mobile operators' businesses leading to undesired sector outcomes. In general terms, both industry stakeholders and ICASA believe there are merits in conducting impact assessment while other industry stakeholders warned that impact assessment is more effective in well-resourced and competent regulators, and that care should be exercised not to copy and paste such tools to incapacitated regulators like ICASA as it may create an opportunity for regulated players to delay and deter regulations.

There was a general assertion that ICASA followed international best practice by deciding on call termination rates benchmarking. However, some industry stakeholders argued there were other alternatives ignored by regulator but may have been justified considering the heightened level of skills required to consider such alternatives.

The lack of economic related skills led to delays in finalizing call termination rates regulations as seen by government losing faith in the capacity of the regulator to discharge its mandate. ICASA argued that after the ECA of 2005 came into law; its new provisions required the regulator to perform new functions. The new functions required economic and technical skills which the regulator was never equipped with, hence the challenges it faced when regulating CTR.

4.2 The Case of Carrier Pre-Selection Regulations

Carrier pre-selection (CPS) is a regulatory intervention to promote competition in telecommunications by ensuring customers benefit from the lowest call rates offered in the market (Interchange Group, 2005). It is a process whereby a telephone subscriber whose telephone line is maintained by one company, usually a former monopoly provider, can choose to have some of their calls automatically routed across a different telephone company's network without needing to enter a special code or special equipment (Ofcom, 2002).

Another closely related regulatory intervention to CPS is Carrier Selection which offers the same benefits but differs with CPS in that end user subscribers are required to dial a short code or install adapter devices to select a desired operator on a call by call basis (Ofcom, 2002). Both interventions are generally used as a remedy to fixed line competition (Ofcom, 2002).

4.2.1 Demand and Justification for Carrier Pre-Selection Regulations

Due to high cost and lack of competition in the provision of voice services government demanded CPS regulation in South Africa (Gillwald & Kane, 2003; South African Foundation, 2005; ICASA, 2008). In an effort to promote competition in telecommunications, the Minister issued a policy directive in 2001 mandating ICASA to introduce CPS by 2005 , pursuant to the Telecommunications Act of 2000 (Government of South Africa, 2001).

Some commentators welcomed this policy directive, in that, with the introduction of a second network operator, CPS would promote competition in the fixed line market, while number portability will enable consumers, in the mobile industry, to switch to any of the three mobile operators thus avoiding the inconvenience of changing numbers and the associated high costs of switching operators (Gillwald & Kane, 2003; South African Foundation, 2005).

Introduction of these regulations was expected to alleviate these challenges and increase competitiveness of the sector. CPS regulations were enacted in June 2005

(ICASA, 2005a). However, these regulations were never implemented in practice and were subsequently repealed in 2010 by new regulations, CPS of 2010.

The regulator contends the failure to implement CPS of 2005 was due to limited number of operators that would have taken advantage of these regulations. However, after the ECA of 2005 came to effect, it mandated ICASA to implement CPS, which was an evolutionary path from the Telecommunications Act of 2000. Seeing that numerous ECNS licensees were awarded to former VANS for provision of electronic communications services, ICASA issued a draft CPS regulation. The draft regulation indicated that since the market structure has since changed there was a need to introduce new regulations, CPS of 2010 (ICASA, 2010).

However, in interviews, respondents (Industry stakeholders including ICASA) condemned the draft regulations as they argued that there was no market demand for CPS but ICASA was mandated by legislation, the ECA of 2005, to issue this regulation (Expert B, interview, 2012; Respondent G, interview, 2012; Respondent D, interview, 2012; Respondent E, interview, 2012; Respondent F, interview, 2012; Expert D, interview, 2013; Respondent H, interview, 2013). Over and above the provisions of the ECA of 2005, Industry stakeholders disputed inclusion of mobile calls in CPS regulations in that in their knowledge and that of other jurisdictions, this regulation has never been applied on mobile but on the fixed line market (Respondent G, interview, 2012; Expert D, interview, 2013; Respondent H, interview, 2013).

4.2.2 Process Followed in Enacting Carrier Pre-Selection Regulations

History of Carrier Pre-Selection Regulations

The initial CPS regulations were enacted on 24 June 2005 under the auspices of the then Telecommunications Act, 1996 (Act 103 of 2006) (ICASA, 2005a). After the Telecommunications Act of 2006 was repealed by the ECA of 2005; in 2008, ICASA issued a notice indicating that it intends to regulate CPS. The new regulations would repeal CPS regulations of 2005. This case study focuses on the latest regulatory intervention that began in August 2008, when CPS draft regulations were issued.

Consultation Process

In November 2008, ICASA issued draft CPS regulations, the regulator invited interested parties to submit written comments no later than 16h30 on 09 January 2009 by post, hand delivery or fax. Oral submissions or consultations were set aside for two days (from 21 to 22 January 2009). Regulations were issued with explanatory notes enunciating the regulator's rationale for choosing specific regulations, to safeguard transparency.

However, a month later, in December 2008, an erratum to the draft regulations was published to amend and add few sub-regulations (ICASA, 2008b). After that, public hearings were held on 18 and 19 February 2009 where most interested parties unanimously expressed their disagreements with the draft regulations, which consequently lead ICASA to convene a workshop on 25 February 2009 to further debate the draft regulations (ICASA, 2010). The main contention point for most interested parties was the inclusion of mobile services to CPS. Final regulations were issued in August 2010.

However, in 2010, similar to the draft regulations, the final regulations issued in August 2010 were also revoked due to errors (ICASA, 2010). The final regulations were eventually enacted on the 27th of September 2010 giving effect to CPS phase 1- where subscribers can benefit from CPS on a call by call basis. Full and automatic CPS, which will be phase 2, was to be considered in future, if applicable, due to its inherent complexities and exorbitant costs involved (ICASA, 2010). In essence, the objects of this regulation were to provide a framework with which CPS phase 1 will be implemented (ICASA, 2010, Mybroadband, 2011).

In 2011, ICASA engaged with the Industry to develop an industry led code of conduct to safeguard implementation of CPS phase 1 (Mybroadband, 2011). In 22 August 2011, a notice was issued by ICASA granting the industry an extension to 30 November 2011 to implement CPS phase 1 and simultaneously requested interested parties to submit written comments to the draft code of conduct before 23 September 2011 (ICASA,

2011). The code of conduct of CPS phase 1 was later issued on 24 April 2012, marking the latest developments in CPS regulations.

To ascertain whether the consultation process was satisfactory, industry stakeholders denoted that the consultation process was done correctly by the regulator as it followed the time period prescribed in the ECA of 2005 (Expert B, 2012; Respondent G, 2012; Expert D, 2013; Respondent H, 2013). One expert protested that, although the process was followed, finalization of regulations was very slow as was evident at the day before MTN launched its systems in compliance to the regulation, ICASA issued a note notifying operators to delay implementation as it was to introduce a code of conduct prior the regulation (Respondent H, 2013). This was not welcomed by MTN and probably other operators as it would have resulted in further investments to comply with new provisions or envisaged code of conduct of this regulation.

An industry stakeholder rather recommends that ICASA instigates informal engagements with operators to discuss regulations prior issuing draft regulations to solicit unbiased views from operators (Respondent G, interview, 2012). This would enable ICASA to gather enough information of a pertinent regulation to better equip itself (Respondent G, interview, 2012).

Regarding the rationale for incomplete processes surrounding this regulation, most industry stakeholders suspected ICASA was still considering other aspects regarding this regulation-citing the regulator did not have sufficient information or skills to conclude this regulation (Respondent G, 2012; Expert D, 2013; Respondent H, 2013).

As discussed earlier, since CPS regulations had numerous errors, including grammatical errors, ICASA was requested to elaborate. ICASA indicated that there is an internal quality assurance process to ensure drafts and regulations are checked before publication but could not explain why the errors on CPS were not detected (Respondent E & Respondent F, 2012).

Although ICASA generally publishes submissions by interested parties to draft regulations on its website, submissions to draft CPS regulations could not be found on the website. In an interview response, ICASA did not answer but pointed out these

submissions are available on the regulator's library and provided the contact details of the library (Respondent E, interview, 2012). Electronic copies of the submissions were requested from the library to which ICASA advised only physical copies are available and can accessed by visiting their library in Sandton, Johannesburg. The library was visited but these documents could not be found. The Librarian suspects the personnel dealing with the regulation probably did not submit the documents to the library.

There were mixed reactions from interviewed industry stakeholders regarding transparency of the regulation process. Some experts perceived the regulation process as transparent (Expert B, interview, 2012, Expert D, interview, 2013) while others claimed there was lack of transparency due to the unexpected inclusion of mobile calls on CPS without consultation with mobile operators (Respondent G, interview, 2012; Respondent H, interview, 2013).

Proposed Regulation

In the proposed regulations, CPS phase 1, the definition of CPS was arguably incorrect as it was confused with Carrier Selection (ISPA, 2010). CPS deals with automatic selection of an alternative service provider without the need enter a special code or equipment, while Carrier Selection enables a subscriber to select their preferred service provider on a call by call basis by entering a special code or using special equipment. In essence, ICASA erroneously defined the regulation as Carrier Pre-Selection instead of Carrier Selection.

The regulator was thus requested to elaborate reasons that could have led to the suspected incorrect definition of the regulation. ICASA conceded that the incorrect definition may have been due to public pressure and lack of technical skills that led the regulator to issue regulations in haste compromising its quality (Respondent E, interview, 2012; Respondent D, interview, 2012).

The purpose of the regulation was however enunciated as seeking to establish a framework for CPS to allow subscribers of any given network provider to access services of another network provider. In the reasons document ICASA further

elaborated that the purpose of the regulation was to enable increased consumer choice which is expected to manifest in lower prices for consumers (ICASA, 2010).

Although the purpose of the regulation was explained by the regulator, it was not clear whether these regulations were still relevant and justified, particularly due to lack of industry demands for it. Industry stakeholders claimed the regulation was irrelevant and unjustified for various reasons (Expert B, interview, 2012; Respondent G, interview, 2012; Expert D, interview, 2013; Respondent H, interview, 2013). Some industry stakeholders, Respondent G and Respondent H, denounced the regulator's decision to include mobile calls in CPS regulations, as CPS is a pro-competitive remedy typically used to promote competition in the fixed line market for the provision of international calls instead (Respondent G, 2012; Respondent H, 2012). It is normally a pre-cursor to local loop unbundling – as seen in Britain (Respondent H, Interview, 2012). Moreover there were limited case studies in other jurisdictions for using CPS as a remedy for mobile calls, save Mauritius and Mata who adopted CPS in the mobile market (Respondent G, interview, 2012; Respondent H, interview, 2012).

It was also declared irrelevant in addressing the stated problem as; mobile number portability already allowed customers to switch operators, call termination rates were still high suggesting this regulation will not be as effective. Most of South African consumers were on pre-paid where they typically owned multiple SIMs from all mobile operators, termed, "polygamist consumers", thus enabling them to use a SIM belonging to a said operator when initiating mobile calls destined for the same operator to benefit from cheaper on-net calls (Expert B, interview, 2012; Respondent G, interview, 2012; Respondent H, interview, 2013).

Moreover, CPS was declared unjustified as consumers would still have to enter into two separate relationships with a CPS operator and a traditional mobile operator which is the same as having multiple relationships when using multiple SIMs from different mobile operators (Respondent G, interview, 2012).

The regulator also shared the same argument in that these regulations were irrelevant and unjustified as without regulation of call origination rates, dominant operators could

charge requesting CPS operators high call originating rates nullifying the potential business benefits and thereby these regulations.

4.2.3 Impact Assessment

The reasons documents described the benefits of this regulation as increased consumer choice which is expected to improve competition and drive lower prices for consumers (ICASA, 2010). Although not quantified, the regulation itemized and described the expected costs of the regulations including methods operators can employ to recover their costs. However there was no evidence that the benefits of the regulation will outweigh the expected costs to justify the regulation.

Some industry stakeholders argued that lack of impact assessment is to the detriment of the sector as uprooting regulations that were designed for other jurisdictions may be irrelevant as the environments and contexts of jurisdictions are different (Respondent G, interview, 2012; Expert B, interview, 2012; Expert D, interview, 2013). One industry stakeholder argued that impact assessment should have been conducted to determine if this regulation was implementable for mobile calls as it could have indicated that this regulation is irrational in the mobile market. This would have obviated operators from regulatory incurring costs while consumers and the industry would not benefit from the regulation (Respondent H, interview, 2013).

ICASA provided that impact assessment was not really necessary since it was mandated by the ECA to promulgate this regulation (Respondent D, interview, 2012).

Alternatives to the Regulations

Most industry stakeholders could not establish other potential alternatives to carrier pre-selection (Expert B, interview, 2012; Respondent G, interview, 2012; Respondent D, interview, 2012). This is particularly due to the fact that it was not clear why these regulations were introduced in the first place (Respondent G, interview, 2012). However some industry stakeholders consider Mobile Virtual Network Operators (MVNO) and mobile number portability as possible alternatives the regulator should have considered stead CPS (Expert D, interview, 2013).

While most industry stakeholders and ICASA indicated that CPS was a legislative prescription, ICASA should have made recommendations to the Minister to amend applicable policies and legislations to avoid implementation of undesired regulations, since the ICASA Act of 2000 empowers ICASA to do so (Expert E, interview, 2013). This would allow the Minister to amend policies and legislations thereby enabling ICASA to evade implementation of undesirable regulations, such as CPS.

Furthermore, it was elaborated that regulators are generally mandated to implement policy directives; hence alternatives that deviate from policy might be difficult to consider as ICASA is required, by law, to implement policy directives (Expert E, interview, 2013).

4.2.4 Challenges Experienced by Regulator

This section presents challenges experienced by the regulator when introducing CPS regulations.

Resources and Capacity of the Regulator

ICASA indicated it did not have the technical skills to efficiently promulgate CPS regulations as evident from the number of errors encountered in the regulation (Respondent D, interview, 2012). One industry stakeholder indicated that ICASA collects about R60m in spectrum fees from MTN alone. When adding up all spectrum and licence fees ICASA collects from all operators in South Africa, the resultant revenue is significant. ICASA should thus, with approval from Treasury, use this revenue for its funding (Respondent H, interview, 2013).

As provided that introduction of the ECA of 2005 was problematic in the manner it was introduced, ICASA argued that the introduction of the ECA of 2005 had placed an enormous pressure on the regulator. For instance, the ECA of 2005 introduced Chapter 10 provisions that required it to bolster its economic and technical regulation staff which did not happen due funding constraints (Respondent D, 2012). However, in a recent development, government issued an amendment bill to the ICASA Act, which amongst other things, seeks to add more responsibilities to ICASA, particularly regulation of

Electronic Transactions and introduction of regulatory impact assessment (ICASA, 2012).

Legislation

As ICASA passed CPS without demand for it but to comply with the ECA of 2005, ICASA was requested to share its perspective. ICASA enunciated that legislation that is too prescriptive on regulations may result in regulations that are irrelevant as legislation is generally not forward looking. Most industry stakeholders supplemented that markets are generally too progressive than legislation hence they believe legislation should not prescribe regulations (Respondent G, interview, 2012; Expert D, interview, 2013; Respondent H, interview, 2013). However, prescribing regulations might be advantageous to leapfrog to suitable international tried and tested interventions (Respondent D, interview, 2012).

It was further substantiated that, instead of prescribing remedies in legislation, the Minister could intervene through policy measures. The Minister could thus mandate ICASA to regulate where deemed necessary (Respondent G, interview, 2013).

ICASA further argued that, there is a legislative flaw in the ECA of 2005, as CPS provisions are not contained on pro-competitive remedies of the ECA but on Interconnection provisions section instead (Respondent D, interview, 2012). This could pose challenges for the regulator as the industry could legally challenge it on matters related to CPS.

4.2.5 Summary of Carrier Pre-Selection Regulations

There was no industry demand for this regulation. It was established that ICASA promulgated CPS regulations to comply with legislation. The consultation processes prescribed in the ECA were followed. However CPS submissions for comments documents were not available on the regulator's website, while they are generally available in most regulations. There had been numerous errors in the draft regulations citing the regulator was not well prepared to issue draft regulations. Although there was a general perception that the CPS consultation process was transparent to some extent,

some industry stakeholders' protested that some aspects of the processes were not transparent particularly the inclusion of mobile calls in carrier pre-selection without extensive consultation with mobile operators.

The definition of the regulation, carrier pre-selection, was incorrect in the final regulation. The regulator cited public pressure to issue the regulation and lack of technical skills as the main reasons. Both industry stakeholders and ICASA assented CPS regulations were not justified and irrelevant at the time they were issued.

No ex-ante impact assessment was conducted. ICASA and some industry stakeholders argued it was not necessary to conduct impact assessment as the regulation was a legislative prescription while some industry stakeholders argued the merits for impact assessment in this regulation.

Conversely, it has been argued that ICASA failed to make recommendations to Minister to amend policies and legislation to enable it to evade regulations prescribed in the ECA -that are not implementable or unnecessary, such as CPS regulations.

ICASA and some industry stakeholders argued that there were no other alternatives as the regulation was a legislative prescription. One of the experts contended that the rationale for introducing CPS was vague hence it is difficult to determine whether there were other alternatives. However another expert indicated MVNO and mobile number portability were suitable alternatives.

Lack of technical skills and legislation that prescribed regulations was cited as the main challenges to ICASA when issuing this regulation.

4.3 The Case of Facilities Leasing Regulations

In Electronic communication, facilities leasing refers to a regulatory intervention enabling one service provider, typically new or small service providers to lease or gain access to facilities of another service provider (typically dominant incumbent operators) for the provision of services to their end-users (Lawrence, 2006). Regulators use this intervention to reduce uneconomical duplication of resources in the market, and to lower

the barrier of entry for new entrants. Without this intervention, new entrants or small operators would instead require huge capital investments to establish their facilities to be able to complete with incumbents. Conventional electronic communications facilities include: wire, cable (including undersea and land-based fiber optic cables), antenna, mast, satellite transponder, circuit, cable landing station, international gateway, earth station, and radio apparatus or other things that can be used for or in connection with, electronic communications, including; collocation space, monitoring equipment, space on or within poles, ducts, cable trays, manholes, hand holds and conduits; and associated support (Republic of South Africa, 2006, p.12). Another related term is essential facility which is defined as an electronic communications facility or combination of electronic communications or other facilities that is exclusively or predominantly provided by a single or limited number of licensees and cannot feasibly, whether economically, environmentally or technically, be substituted or duplicated (Republic of South Africa, 2006, p.13). It is also defined as a doctrine that requires a monopolist or a dominant firm to provide access to a facility that the monopoly controls and is deemed necessary for effective competition (Massadeh, 2011). In general, once an electronic communications facility is declared as an essential facility, incumbent or dominant operators are regulated to lease such facilities to new or smaller operators.

4.3.1 Demand and Justification for Facilities Leasing Regulations

ECA of 2005 mandates ICASA to prescribe a list of essential facilities which includes, but not limited to, electronic communications facilities, local loops, sub-loops etc., to pave way for regulation of electronic communications facilities.

During the telecommunications sector reform in South Africa, incumbent operator-Telkom was a vertically integrated state monopoly controlling majority of essential facilities which all other operators required to be able to provision services to their customers and still compete with the incumbent. In 2003, it was claimed that most value added services like internet attributed 70 percent of their cost to Telkom's facilities (Gillwald & Kane, 2003, Gillwald 2005). This market structure lead to uncompetitive

behavior by Telkom as did not reasonably lease facilities to other operators and charged high prices, constraining competition in the sector.

South African VANS Association (SAVA) and Internet Service Provider Association (ISPA) –representing VANS, lodged a case against Telkom with the Competition Commission for uncompetitive behavior, accusing Telkom of imposing unreasonable conditions for leasing facilities (Gillwald, Esselaar, 2004).

The alleged uncompetitive behavior by Telkom, apparent failure to regulate dominant operators, coupled with high cost of facilities resulted in VANS and other industry stakeholders calling for the regulation of facilities leasing in South Africa (Gillwald & Kane, 2003; Gillwald, 2005; Respondent C, 2003; Thornton, Carrim et al, 2006; Respondent C, Hodge et al., 2008; Dominic, 2009; Esselaar et al., 2010). The latest facilities leasing regulations were enacted in 31 May 2010.

4.3.2 Process Followed in Enacting Facilities Leasing Regulations

History of Facilities Leasing Regulations

Although only the latest regulatory process for facilities leasing (FL) is studied, it is prudent to highlight the history of this regulation to provide insights leading to the latest FL process. FL regulations were first promulgated by the Minister of Communications in 2000, pursuant to section 96(6) of the Telecommunications Act, 1996 (Act No. 103 of 1996) (Department of Communications, 2000). In 2002, ICASA issued a notice to the public to submit comments to draft FL regulations to supplement regulations issued by the minister in 2000, pursuant to section 96 and 44 of the Telecommunications Act of 1996 (ICASA, 2002). Further guidelines and supplements to FL (and interconnection) regulations were issued in 2004 (ICASA, 2004). However, the 2002 FL regulations were repealed in 2005 when ICASA issued new draft regulations (ICASA, 2005).

In 2006, the Telecommunications Act was repealed by the ECA of 2005. Although not provided in the ICASA website, there were further draft regulations issued on 24 July and 24 December 2007, pursuant to new ECA of 2005. The latest draft regulations were

issued on 04 December 2009 to repeal the 2002 regulations-including its associate guidelines and supplements (ICASA, 2009).

Finally, FL regulations, termed, Electronic Communications Facilities Leasing regulations were promulgated on 31 May 2010 after a plethora of drafts since 2005 (ICASA, 2010).

Consultation Process

As indicated above, this paper only investigates processes that commenced in 2009 when draft regulations were issued leading to enactment of final regulations in 2010. To commence the investigation, the regulator was requested state the rationale for its failure to complete FL regulations in time. ICASA indicated that it cannot comment as the staff involved at the time had left the regulator (Respondent E, interview, 2012; Respondent F, interview, 2012).

Comments to a regulation's consultation process are generally contained in stakeholders' submissions in response to draft regulations. However, submissions to the 2009 draft electronic facilities leasing regulations could not be located on the ICASA website, inconsistent with other draft regulations. ICASA did not know the reasons submissions were not in their website but indicated that these documents are available from the ICASA library and provided the contact details thereof (Respondent E, interview, 2012; Respondent F, interview, 2012). Electronic copies of the submissions were requested from ICASA's library to which ICASA advised only physical copies are available and can accessed by visiting their library in Sandton, Johannesburg. However, the physical copies could not be found in the library either. The ICASA librarian suspects the personnel dealing with the regulation probably did not submit the documents to the library.

In the 2009 draft regulation's explanatory notes, ICASA pronounced that written submissions were received from interested parties and oral submissions were held in October 2007 (ICASA, 2009). ICASA denoted that interested parties' comments were incorporated on the draft regulations issued in December 2007. Comments to the December regulations were received in February 2008, followed by public workshop

consultations in April 2008, which lead to the December 2009 draft regulations. ICASA could not provide any explanations for the delays, citing that staff members involved in the earlier incomplete process had left the regulator and the current staff does not have the historic information surrounding this regulation (Respondent E, interview, 2012; Respondent F, interview, 2012).

The final regulations were only enacted in May 2010 without explanatory notes that generally accompanied most regulations issued around the same period. ICASA was also requested to provide reasons for the removal of explanatory notes in the final regulations, to which they responded that an executive decision was given to remove explanatory notes from the final regulations for reasons unknown to them (Respondent E, interview, 2012; Respondent F, interview, 2012).

In general, Industry stakeholders as well as ICASA have indicated the consultation process provided in the ECA was followed and was transparent to the industry, save ICASA's failure to make certain documents available (Expert B, 2012; Respondent E, 2012; Respondent F; Respondent A, 2012; Expert D, 2013).

Proposed Regulation

The purpose of the regulations and the problem it was addressing was provided; the language used was clear-including what the regulation will not address i.e. regulations was not intended to regulate operator's commercial agreements (ICASA, 2010). The final regulations set out the purpose of the intervention as: a FL framework agreement which the industry must comply with, provisions for compliance, and dispute resolution processes.

However the final regulations did not include the contentions FL price regulation which ICASA ought to follow a Chapter 10 process of the ECA of 2005 before it introduces price regulation (Thornton, 2009; Expert D, 2009). Industry stakeholders and ICASA were requested to provide their views whether the regulations were justified and relevant to the problem at hand. One of the industry respondents argued regulations were not entirely justified in that, although the regulations specified minimal guidelines that ought to be incorporated in commercial agreements between facilities requestor

and provider, the guidelines did not prescribe financial matters relating to technical feasibility which is imperative for the success of these regulations (Respondent A, interview, 2012). Respondent A provided that the regulations were irrelevant since FL is a commercial matter between operators and there was no need for regulatory intervention particularly since no costing and pricing framework was even prescribed by the regulator in the final regulation.

Other industry stakeholders argued the regulations were justified and relevant to guard against unfair discrimination between operators (Expert B, interview, 2012; Expert D, interview, 2013). They concurred with the regulator's decision to exclude pricing principles as that was a commercial matter between operators and ICASA should only intervene on costing and pricing when there is a market failure.

The regulator's response to omission of pricing principles echoed these views. ICASA and one of the industry stakeholders further provided that pricing principles were to follow later as the regulator was required to follow ECA of 2005, section 47 and Chapter 10's provisions for market reviews (Respondent E, interview; Respondent F, interview, 2012; Expert D, interview, 2013).

One intrinsic test of regulatory quality was to ascertain whether these regulations were targeted at the problem at hand. Industry stakeholders protested that, considering the industry protested that dominant operators were charging unreasonable prices for leasing facilities, lack of pricing principles in the final regulations did not address the problem at hand (Respondent A, interview, 2012). Respondent A attributed ICASA's failure to incorporate pricing principles in the final regulations to ICASA's failure to conduct a market review as prescribed in the ECA.

Regarding quality of the regulation, most industry stakeholders assented that: the language used in the regulation was clear, the problem was clearly defined, and it was targeted at the problem at hand, (Expert B, interview, 2012; Expert D, interview, 2013).

4.3.3 Impact Assessment

The final regulation did not indicate as assessment of potential impact of the regulation, nor did it provide an explanatory note for the regulator's rationale for choosing specific regulations. This is inconsistent with other regulations issued during the same period.

ICASA provided that ex-ante impact assessment of FL regulations was not conducted since ICASA had to promulgate FL regulations to comply with ECA regardless of the impact of the regulations (Respondent F, interview, 2012).

It was argued that over and above traditional ex-ante impact assessment, ICASA should conduct internal impact assessment to ascertain whether cost of regulating is within its allocated budget as it was suspected that ICASA's cost of regulating, particularly after the ECA of 2005, increased significantly due to high volumes of regulations issued at the time. The increase in the number of regulations was probably without a corresponding increase in its budget allocation leading to poor regulatory quality (Expert B, interview, 2012). Also, conducting impact assessment may help ICASA determine prioritization of regulations (Expert D, interview, 2013).

However an industry stakeholder protested that although impact assessment introduces transparency and helps the regulator to apply its mind when regulating, care should be exercised to avoid cut and paste of processes or tools used in other regimes with well-resourced and competent regulators (Expert E, Interview, 2013). Thus, imposition of Impact assessment on ICASA could be counterproductive- consequently leading to negative and unintended outcomes, as impact assessment tools like RIA might afford a window of opportunity for affected stakeholders to challenge or litigate against ICASA to delay or deter regulations. Interestingly, in a recent development, government's amendment bill to the ICASA Act, has called for ICASA to perform regulatory impact assessment in its regulatory process (ICASA, 2012).

Alternatives to Regulation

Most industry stakeholders including ICASA contended there was no other alternative to this regulation (Expert B, interview, 2012; Respondent E, interview, 2012; Respondent

F, interview, 2012; Expert D, interview, 2013). However, Respondent A disputed that ICASA could have conducted market reviews of specific facilities deemed to be provided unreasonably by dominant operators, test for significant market power as required by the ECA, and thereby impose pro-competitive remedies on each specific facility instead of blanket approach to facilities leasing.

4.3.4 Challenges Experienced by Regulator

Resources and Capacity of the Regulator

When asked about challenges facing the regulator, ICASA indicated that lack of skilled personnel was hampering the regulator's ability to discharge its mandate (Respondent E, interview, 2012; Respondent F, interview, 2012). ICASA further argued they are inadequately funded albeit submitting their budget requirements to National Treasury every year.

Responding to government's intention to add electronic transactions regulation under ICASA's mandate- coupled with new provisions mandating ICASA to perform RIA in its regulatory processes, Expert E lambasted these developments in that ICASA has been performing poorly for many years while government continually introduce additional industries under ICASA's helm (i.e. postal services) without any effort to strengthen its capacity. Adding new industries and processes on ICASA could put more strain to its resources and worsen its performance (Expert E, interview, 2013). Expert E argued that, it seems the poorer ICASA performs, the more responsibilities government assigns to it.

Legislation

Both ICASA and Industry stakeholders maintain that prescriptions of remedies in legislation may be problematic as testament in the regulation of FL where ICASA issued regulations merely to comply with the ECA (Respondent F, interview, 2012, Expert D, interview, 2013).

Institutional Arrangement, Market Structure, and Policy Environment

Expert E contended there are two factors that hugely contribute to negative policy outcomes in South Africa, that is, institutional arrangements and the market structure. The later factor will be discussed in the subsequent subsection.

Most industry stakeholders assented that institutional arrangements had a negative impact in the way ICASA discharges its mandate (Expert E, interview, 2013; Expert D, interview, 2013). The Institutional arrangement challenges involved, includes; the functions and roles of ICASA, its relationship with government and the Ministry, and how ICASA's executive is appointed (Expert E, interview, 2013).

Since ICASA's effectiveness is a general concern in the industry, government is encouraged to address the causes of ICASA's ineffectiveness. Government is encouraged to seek answers to potential causes of ICASA's ineffectiveness by addressing potential causes such, industry capture, the appointment process, cadre deployment, and skills of the regulator. In that regard, government could find solutions to address the root cause of challenges affecting ICASA's effectiveness instead of addressing its symptoms (Expert E, interview, 2013).

Institutional Arrangement

Regulatory autonomy is not just a nice to have or delegate power but a requirement to balance interests in the sector especially when the state still operates in the sector (Expert E, interview, 2013). There is an apparent structural conflict of interest by government in electronic communications as it is a policy maker, has investments and interests in the sector (i.e. government has shareholding in Telkom, owns Broadband Infraco and Sentech), and has direct determination of ICASA's council (i.e. ICASA's council is appointed by Minister through parliament) (Expert E, interview, 2013; Expert D, interview, 2013). This is demonstrated by government's lack of political will to address ICASA's challenges in comparison to the attention it affords other institutions it has political interests in, such as SABC and the Post Office (Expert D, interview, 2013). Government continually treats ICASA with suspicion citing lack of political will to address its shortcomings (Expert D, interview, 2013).

The structural conflict is more pronounced when focusing on appointments of ICASA's executive as there are claims that government deploys its cadres at ICASA to safeguard its interest thereby compromising sector development. Cadre deployment exacerbates the challenge as they tend to lack political gravitas to counter political interference (Expert E, interview, 2013; Expert D, interview, 2013). However, political appointments are not unique to South Africa but their lack of sector skills aggravates the challenge. (Expert E, interview, 2013). The South African government is encouraged to analyze its political economy to understand why things are not working (Expert E, interview, 2013).

In essence, ICASA's independence is questionable particularly in appointment of councilors and ICASA's source of funding (Respondent H, interview, 2013). ICASA's executive is nominated by the industry and parliament, and ratified by the Minister. By looking deeply into the political structure; the Minster is appointed by the President, the President is appointed by the ruling party while ICASA is funded by National Treasury. It is thus conceivable that ICASA is accountable to government thereby compromising its independence (Expert D, interview, 2013).

Market Structure

Despite claims that SA possesses a horizontal licensing structure suggesting South Africa is a far more competitive and possesses a converged environment; the market structure has not really changed since Telecoms Act of 1996 (Expert E, interview, 2013). The market structure continues to be structured around dominant vertically integrated operators with multiple horizontal licensees. Their anti-competitive behavior has not changed and thus requires a dynamic and active regulator that is well-resourced. The law enables ICASA to redress these challenges but it does not have enough resources to attempt such initiatives (Expert E, interview 2013).

The ECA of 2005 needs to evolve to conform to the current electronic communications market structure while ICASA should review its structure to ensure it adapts to the current electronic communications market (Expert B, interview, 2012).

Policy Environment

Industry stakeholders further provided that the policy environment is also not conducive for the regulator as the Department of Communications also has skills challenges and a high staff turnover resulting in ineffective policies that negatively impacts the regulator (Expert D, 2013, interview, Expert E, interview, 2013).

4.3.5 Summary of Facilities Leasing Regulations

The calls for FL regulations emanated from former VANS operator or smaller operators and industry stakeholders. In essence, ICASA's intention to regulate was in response to industry demands.

Consultation process prescribed in the ECA of 2005 was followed. However submission documents that are generally on the regulator's website were not available. Even after an interview with the regulator, it remains unclear why explanatory notes to FL regulations were never provided in the final regulation, inconsistent with other regulations issued at the time. However, in general terms, the consultation process prescribed in the ECA was followed and deemed transparent by industry stakeholders.

The purpose of the regulation was clearly stated. However there are mixed conceptions regarding justification and relevance of the regulation. Most industry stakeholders believed the regulations were justified and relevant while others indicated their concerns with practicability of the regulations thus invalidating their relevance and justification.

No ex-ante impact assessment was conducted. ICASA argued it was not necessary to conduct impact assessment as the regulation was a legislative prescription.

Most industry stakeholders provided there were no other alternatives to this regulation, meanwhile one stakeholder argued to the contrary and indicated an alternative that could have been considered to address the problem at hand.

Challenges were cited with the institutional arrangements which manifest itself in ICASA's independence being compromised including government's conflict of interest in the sector. The Ministry has limited skills and high staff turnover leading to poor policies

which indirectly affects ICASA. The prescription of regulatory remedies in legislation led to promulgation of poor regulations. The market structure is also infective for competition regulation. Other challenges were lack of skills and insufficient funding of the regulator.

5 Chapter 5: A Critique on Electronic Communications Regulatory Quality

This chapter analyzes the three cases presented in Chapter 4 in order to understand how features of regulatory quality were addressed by ICASA. The conceptual framework used to analyze findings was discussed in Chapter 2. As discussed in the methodology of this study, the approach espoused to analyze this study's findings is in the form regulatory quality themes as contained in the conceptual framework. The themes elected to simply categorization of applicable regulatory quality aspects are: regulation process, impact assessment, transparency and consistently of the regulation process, and the regulatory environment. This makes up the organization of this Chapter. Themes related to regulatory quality are used to analyze regulatory quality issues pertaining to each category listed above.

5.1 Regulation Process

This section analyzes the process ICASA followed when issuing regulations with reference to good regulation approaches. The following themes are used to analyze the regulation process in conformance to the conceptual framework of this study: demand to regulate, consultation process, and the quality of regulatory proposals.

5.1.1 Demand for regulation

There seem to have been demand and justification to issue CTR and FL regulations, whilst no demand for CPS was established in this research. Studies argue government should only regulate or intervene when there is demand for it (Whittington & Grubb, 1984; OECD, 1995). It has been established that ICASA issued CPS merely to comply with legislation without justified demand for it in the sector. Introducing regulations without evidence for its need in the market may impact regulatory quality. This may result in poor regulations which do not benefit society and introduce unnecessary regulatory costs.

5.1.2 Consultation Process

Regulators are encouraged to afford the public and affected parties sufficient time to make comments, submissions and representations on draft regulations, and to make copies of written comments available at all times to safeguard transparency (OECD, 2008; Infodev, 2012). There is no single time limit encouraged by studies to make submissions or comments to regulations, but 30 days seems to be usually acceptable in most jurisdictions (OECD, 2008). As provided in the ECA of 2005, ICASA followed acceptable practices as it generally afforded 30 days for interested parties to make submissions consistent with other jurisdictions.

Interested parties were able to make submissions and representations. However, one interesting observation was the lack of submissions or comments to regulations from consumer or public interest groups. This could be detrimental as studies advocate the public, consumers, consumer groups or civil society to participate in the regulation process to ensure all stakeholder interests are balanced by regulators (OECD, 2008).

When assessing the time taken from first draft to final regulation, of most regulations, there were overwhelming delays in finalizing regulations. Some of the delays extended to more than four years, suggesting lack of follow through by ICASA to complete regulation processes in time compared to similar jurisdictions (Calandro et al., 2010).

However, the process followed for call termination regulation was probably the most plausible, as commended by most industry stakeholders (Expert B, 2012; Respondent B, 2012; Expert D, 2013), in that, ICASA attached a complete step by step process to be followed in the draft regulations including explanatory notes –elaborating and substantiating the rationale for most of its decisions which demonstrated transparency in contrast to other regulations investigated.

5.1.3 Proposed Regulation

This section analyzes whether ICASA clearly defined the problem regulations were addressing, how it assessed the impact of regulations, and whether it considered other

alternatives. The analysis will reveal how ICASA determined regulations were justified, relevant and targeted to the problem as hand.

OECD reference checklists suggests that regulators should ensure the problem specific regulations are addressing should be clearly stated indicating its size and nature, and describe the dynamics that led to the problem including how affected parties will benefit from the regulation (OECD, 1995). In that regard, findings of this study indicate that, in most regulations, the problem was well understood as the industry was anticipating most of the regulations as they were already implemented in other jurisdictions. The problem was thus, in most cases, correctly defined and the suggested regulation was also clearly stated. However, in the CPS regulations, it has been established that the problem being addressed was not correctly defined. In particular, the regulator's intention to use an intervention that, according to international best practice and trends, was not suitable to address the problem at hand i.e. CPS intervention is generally applied to promote competition in international call origination in the fixed line market, instead of national mobile call origination market (Respondent G, interview, 2012; Expert D, interview, 2013; Respondent H, interview, 2013).

However, in general, ICASA clearly defined; the problem regulations were addressing, and why the problem existed-including expected benefits of affected parties, consistent with the OECD reference checklist, except in CPS regulations.

5.2 Impact assessment

As it was generally known that ICASA or the South African government as a whole, does not conduct formal impact assessment, this study intended to establish how the regulator determined; whether regulation was the best form of government action, what is the appropriate level of government to take action, whether the benefits of regulation outweigh the costs, as suggested by literature (Whittington & Grubb, 1984; OECD, 1995). Answers to these aspects will indicate whether regulations were justified.

It has been confirmed that no formal or in-depth impact assessment, was conducted for regulations. In the CTR regulations, both industry stakeholders and ICASA affirmed that

no detailed impact assessment was conducted. However, both industry stakeholders and ICASA argued that economic theory and case studies from comparable developing countries, including evidence from South African operators' financial statements had provided sufficient evidence that ICASA could introduce CTR regulations using a benchmarking methodology (i.e. glide path) without negatively impacting the sector (Expert B, interview, 2012; Respondent C, interview, 2013; Expert E, interview, 2013; Expert D, interview, 2013). One industry stakeholder provided that a robust impact assessment was not warranted since there were no grey areas surrounding this regulation (Respondent C, interview, 2013). In essence, it does seem there was an attempt by ICASA to analyze the ex-ante impact of call termination rate regulations.

To the contrary, operators whose revenue was compromised by this regulation, had called for ex-ante impact assessment as they claimed the proposed CTR reduction-glide path would negatively impact investments and threaten consumer subsidies they currently offer in the sector. Operators claimed this would result on a lack of pass through to consumers, as was expected by the regulation (Respondent B, interview, 2012). Furthermore, it was contended that the countries South Africa was benchmarked against were not in similar positions, as for instance, South African operators heavily invested their revenue in network infrastructure expansion and services, such as 3G, compared to those countries. Lastly, the actual benchmarked retail prices was misleading as it only accounted for headline tariffs instead of effective retail rates. From these arguments it does prove that regulatory impact assessment could have been ideal as it would have revealed the cost and benefit of the regulation.

Conversely, on some regulations, ICASA had not attempted impact assessment as established in the CPS and FL regulations case studies. The rationale provided by ICASA for not attempting impact assessment was attributed to electronic communications legislation, ECA (Respondent D, interview, 2012; Respondent E, interview, 2012; Respondent F, interview, 2012). CPS and FL regulations were prescribed in the ECA of 2005 mandating ICASA to issue these regulations within a predefined time period. In essence ICASA claims it issued these regulations merely to comply with legislation without considering or attempting impact assessment,

inconsistent with the attempt it made in CTR regulations. Mobile operators strongly argued that ICASA should have conducted ex-ante impact assessment when introducing CPS on origination of national mobile calls. It would have been clear that this intervention was generally used to regulate competition on origination of international calls from fixed lines, and was not implementable for mobile calls (Respondent G, interview, 2012; Expert D, interview, 2012). Operators also claimed they would incur regulatory compliance costs for a regulation that would not even benefit the sector and consumers (Respondent H, interview, 2013). This regulatory intervention was thus considered unjustified, not targeted at the problem at hand, and irrelevant at the time (Expert B, interview, 2012; Respondent G, interview, 2012; Expert D, interview, 2013)

Although, ICASA may have had evidence how some regulations such as CTR (based on international benchmarking evidence) would impact the sector, it remains unclear how ICASA adapted the benchmarking approach to the South African market. In that regard, it is thus concluded ICASA had no knowledge how regulatory proposals would impact the sector, in divergence to regulatory quality theory. As a result, most industry stakeholders have unanimously called for introduction of RIA in ICASA's regulatory process.

Consideration of other alternatives or options to regulations is tightly integrated to RIA or cost benefit analysis. Essentially, one of the purposes of cost benefit analysis is to force regulators or decision-makers to consider other clear alternatives that could aid regulators achieve their intended objectives by selecting the least cost alternative (Whittington & Grubb, 1984; OECD, 2008; Radaelli & De Francesco, 2007). In the CTR regulations, it has been established that ICASA followed international best practice by deciding on call termination rates benchmarking. However, it was argued that there were other alternatives ignored by ICASA, such as cost-based CTR regulation (Respondent B, interview, 2012). This alternative was refuted by some industry stakeholders as they claim; international best practice and economic studies suggested benchmarking was the most desirable option instead, due to high level of economic and technical skills needed to implement cost based CTR regulations (Expert B, 2012;

Respondent C, 2013). ICASA demonstrated consideration of other alternatives as it indicated, in the draft regulations, that it considered alternatives such as cost based methodology including the rationale for not choosing it. It also reviewed its initial decision to not provide asymmetry to least dominant operators. In consideration of good regulatory practices suggested by OECD reference checklist, it does seem ICASA may have made the correct decision by opting for benchmarking instead of cost-based call termination rate regulation due to the inherent high levels of skills required to implement it.

Regarding CPS, it had been suggested that number portability, enabling more mobile MVNOs, and lower CTR were predecessors and thereby an alternative to CPS regulations. However ICASA indicated they were bound by the legislation to institute CPS regulations but indicated that regulation of origination call rates was a suitable alternative although it was rather complex to implement (Respondent D, interview, 2012).

One operator suggested that an alternative to FL was for ICASA to prescribe a list of facilities that it intends to regulate and thereby complete a market review on each facility (Respondent A, interview, 2012; Respondent B, interview, 2012). However, most industry stakeholders suggested there was no suitable alternative to facilities leasing regulations.

Therefore, it seems ICASA did consider alternatives but not necessary capable of implementing them particularly where heightened economic and technical skills were required. Moreover, since some regulations such as CPS and FL were prescribed by the ECA, ICASA's hands might have been tied to consider other alternatives that deviate from the ECA (Expert E, interview, 2013). However, as consideration of other alternatives requires assessment of cost and benefit of each alternative, ICASA's failure to conduct ex-ante impact assessment has a direct impact to the failure to consider other alternatives, contrary to studies by Whittington and Grubb, OECD, and Radaelli and De Francesco.

Therefore, since no impact assessment was conducted when promulgating regulations, it made it difficult for ICASA to consider other alternatives resorting to merely implementing legislative mandates or following international practices which could be detrimental to the sector. Studies have indicated that failure to conduct impact assessment may arguably lead to ineffectual and costly regulations to the detriment of society and the sector.

In recent developments, government issued a draft amendment of the ICASA Act mandating it to conduct RIA prior regulation (ICASA, 2012) but it is unknown whether ICASA will be equipped with additional capacity to conduct RIA. Moreover, RIA is only effective if adopted systematically across government instead of being partially implemented by a single institution within government (Kirkpatrick & Parker, 2004; OECD, 2008; World Bank, 2012). The latter speaks against recent government's attempt to introduce RIA in ICASA processes while government and related institutions such as DOC do not perform RIA.

However implementation of RIA should be cognizant of regulator's resources (Kirkpatrick & Parker, 2004; World Bank, 2010). It is contested that uprooting regulatory practices used in developed countries to developing countries' jurisdictions with different environments and resources, could be counterproductive (Kirkpatrick & Parker, 2004; World Bank, 2010). The argument is that effecting tools such as RIA require well-resourced regulators, failure which, may result in an even worse regulator performance. This may open a window of opportunity of regulated players to delay or evade regulation through litigation and other delay tactics due to complexity of RIA processes (ISPA, 2012; Gillwald, 2013).

On the other hand there exists an opportunity for "light RIA" or a "RIA implementation framework" which includes less rigid processes that could be adopted by developing countries with less capacity such as South Africa-to improve evidence based decision making (Kirkpatrick & Parker, 2004; World Bank, 2012).

5.3 Transparency and Consistency

The OECD Principles for Regulatory Quality and Performance encourages a transparent, non-discriminatory and efficient regulatory process (Jacobzone, 2007, p.24).Transparency includes: standardized processes for making and updating regulations, consultations with interested parties, clear language for drafting and communicating regulations, and controls on administrative discretion and effective implementation and appeals processes.

As revealed in the findings, ICASA did ensure most of these aspects are addressed on draft regulations in line with acceptable regulatory practices suggested by literature. However there were cases where industry stakeholders argued to the contrary i.e. in CTR regulations, there were arguments that ICASA was not transparent in determining the level of glide path, the period of the glide path, and the manner ICASA dealt with call asymmetry (Respondent B, interview, 2012; Respondent C, interview, 2013; Expert D, interview, 2013). Although some of arguments were merited, the pattern of industry stakeholders' arguments, particularly from operators, seems to be polarized around objects that were not in their favor, suggesting a defense tactic against those objects. Meanwhile, some industry stakeholders have rejected the claims above as they argue ICASA, for instance, further reduced the level of glide path after consultation with operators (Expert B, interview, 2013; Expert D, interview, 2013). But some were dissatisfied with the manner ICASA dealt with call asymmetry as it should have opened it for debate within the regulatory process instead of putting the matter before the Complaints and Compliance Committee (Expert D, interview, 2013).

In some regulations such as CPS regulations, there were numerous grammatical errors and incorrect technical definitions, stakeholders submissions were not made available on ICASA's website, explanatory notes were not attached in the final regulation, citing ICASA's internal quality assurance processes and procedures were not strengthened enough to circumvent poor regulations.

Failure to make relevant documents available on some of the regulations indicates lack of consistency by the regulator. Regulators are encouraged to ensure consistency in the

regulation process at it enables regulated entities and society at large to know what to expect and that regulators afford the same or consistently treatment to regulations (Radaelli, 2004, p4; World Bank, 2010a).

This study established that ICASA executive staff requested removal of explanatory notes from the final regulations without providing any reasons. ICASA's decision to unceremoniously omit explanatory notes indicates lack of transparency in the regulation process inconsistent with good regulatory practices.

5.4 Regulatory Environment of ICASA

Studies encourage government to ensure that institutional frameworks and resources are sufficient, and ensure systems to manage regulatory resources are deployed (Radaelli, 2004; OECD, 2005; Jacobzone, 2007). OECD further provides that government should bolster quality regulation by staffing and training regulators adequately. This fundamentally determines whether institutions tasked with implementation of regulations are empowered by government policy, legislations, and have sufficient resources to discharge their mandate and thereby ensure regulatory quality.

A survey conducted by the OECD on South Africa's government wide regulatory governance, using regulatory quality indicators suggested, South Africa's government-wide regulatory governance was not satisfactory-when benchmarked against OECD countries (OECD, 2011). This suggests the environment within which ICASA operates might be challenging to ensure regulatory quality as revealed in this section. This study identified legislation, institutional arrangements, and lack of adequate resources or capacity at ICASA as the prevalent challenges in the regulatory environment.

5.4.1 Legislation

The findings of this research have indicated that ICASA had numerous policy and legislative challenges when implementing regulations under study. Enactment of the ECA of 2005, repealing the Telecommunications Act of 1996, placed ICASA's recourses

under enormous pressure as it had not completed its obligations to implement certain regulations under the previous Act, Telecommunications Act, resulting in a regulatory gap (Expert B, interview, 2012; Expert D, interview, 2013). The new Act also introduced an additional industry, Postal Services, under ICASA's mandate. This was further exacerbated by the fact that ICASA just came out of an internal restructuring process (Expert E, interview, 2013). Moreover, the ECA brought with it, new provisions such as Chapter 10 that required the regulator to have heightened economic and technical skills (Respondent D, interview, 2012). However, even after repeated request to National Treasury to bolster its resources, government failed to allocate more resources to ICASA. It is also apparent that no impact assessment was conducted by government to determine the impact ECA will have on ICASA.

As provided earlier, a good regulation practice encourages governments to strengthen quality regulation by providing adequate resources, staffing and training to regulatory institutions. Based on evidence it thus seem introduction of new legislation, ECA of 2005, did not result in strengthening of ICASA's resources accordingly. This could also be attributed to government's failure to assess the impact ECA of 2005 introduced on ICASA, inconsistent with good regulatory quality practices.

Although the ECA, in itself, is a good legislation, it was copied from EU regimes with far more complex and competitive markets, thus succumbing to being a panacea to all challenges experienced in the South African sector. This brought about other intricacies uncovered in this study such as prescription of regulations or remedies in the Act. CPS is an example of a regulation promulgated merely to comply with the ECA although there was no demand from consumers or industry. This resulted in ICASA failing to apply its mind as evident from promulgation of a regulatory intervention that most respondents, including ICASA, deemed inappropriate.

Studies suggest that building regulations into legislation might become a hindrance in future due to rapid changes in the market and technological innovation; while a flexible regulatory framework is rather desirable to enable regulators to regulate based on market and technological developments and trends (Melody, 1997). However, ICASA failed to engage government by making recommendations to the Minister, as

empowered by the ICASA Act. This would enable government to amend policies and legislation thereby allowing ICASA to avoid passing regulations that were undesirable.

This study thus contends that prescriptions of regulatory remedies in legislation mandating ICASA to promulgate certain regulations-within a predefined period led ICASA to introduce undesired regulations that were irrelevant. Consequently ICASA failed to apply its mind in determining the impact of regulations but merely passed regulations to comply with legislation.

Although prescription of remedies in legislation might be advantageous to leapfrog to pertinent international tried and tested regulations, government is discouraged from doing so. Notwithstanding the latter, evidence suggests the ECA of 2005 was not entirely conducive for ICASA to discharge its mandate.

5.4.2 Institutional Arrangements

Institutional arrangements are defined as “policies, systems, and processes that organizations use to legislate, plan and manage their activities efficiently and to effectively coordinate with others in order to fulfill their mandate” (UNDP, nd). As provided above, studies provide that government should safeguard a sound institutional framework to ensure regulatory quality.

There are claims suggesting ICASA is not independent of government as the appointment of ICASA’s executive is very politicized compounded by lack of financial independence from Treasury (Gillwald, 2004, Horwitz & Currie, 2007). Studies have shown that regulatory institutions should function independent of government and that the degree of independence increases perceived neutrality by markets, and protection from political interference, especially when government is an active shareholder in the sector (Intven, 2000, p.6). Literature further suggests that the probability of regulatory failure can be reduced by ensuring an institutional design exhibiting regulatory independence (Ugur, 2009). To the contrary, as indicated by critics of the South African regulatory environment above and established in this study, ICASA’s independence remains a challenge.

Furthermore, government has an apparent structural conflict of interest as; it has ownership in the sector, sets policy, and indirectly appoints the regulator's executive while it deliberates on its funding through Treasury (Horwitz & Currie, 2007). The conflict of interest manifests itself in government's lack of political will to address ICASA's challenges in comparison to the attention it affords other institutions it has political interests in, such as SABC and Post Office, including the way it incessantly treats ICASA with suspicion (Expert D, interview, 2013). The appointment of ICASA's executive, CEO and Councilors, poises further challenges to ICASA's independence as government tend to deploy cadres with limited skills and thereby lack of political gravitas to counter political interference (Expert E, interview, 2013, Expert D, interview, 2013).

There are further claims that the policy environment is also not favorable for ICASA as the Department of Communications also has a skills shortage challenge evident from its high staff turnover. This potentially results in ineffective policies that negatively impacts the regulator

The institutional framework afforded to ICASA is thus not adequate to discharge its mandate and ensure regulatory quality.

5.4.3 Capacity and Resources of the Regulator

As discussed above that the provisions of ECA and regulation of the new industry, postal services, put further strain on ICASA's resources while government did not seem to attempt strengthening ICASA's resources. ICASA still remains scantily funded even after repeated requests to National Treasury for more funding. Studies conducted between 2005 and 2011, in the South African electronic communications sector, indicated ICASA has been under resourced and incapacitated for a long period of time (Gillwald, 2005; Hodge, 2008, Esselaar et al., 2011).

ICASA collects a sizeable amount of revenue for licence and spectrum fees from operators which it transfers to National Treasury i.e. ICASA collects about R60m annually from one operator alone-in a market with about five sizeable operators, excluding annual licence fees. Thus, when estimating the total amount ICASA collects

in licence and spectrum fees from all operators, the resultant revenue is sizeable (Respondent H, interview, 2013). It is thus surprising why ICASA remains inadequately funded considering the amount of revenue it collects annually.

In a recent development government issued a draft legislation to amend the ICASA Act, where it proposes to introduce yet another industry to be regulated by ICASA, Electronic Transactions, while it also mandates ICASA to perform RIA on regulations henceforth (DOC, 2012). It however remains unclear whether the regulator will be allocated additional resources seeing that its mandate has now increased (ISPA, 2012).

Industry has recently noticed that, provided there's political will, government could help improve ICASA's performance as seen in government's intervention in CTR which lead to successful and expedited finalisation of the regulations (Expert D, 2012). Considering the arguments above, it does seem that ICASA is under-resourced leading to poor regulatory quality as seen from apparent gaps in regulations under study, contrary to studies which encourage governments to allocate adequate resources to regulators to ensure regulatory quality (OECD, 2005)

6 Chapter 6: Conclusion on Regulatory Quality in Electronic Communications in South Africa

This chapter summarizes the discussions of the previous chapter focusing on key categories and themes of regulatory quality. The purpose of this study is to understand how regulatory quality was addressed by ICASA when formulating regulations. In order to understand this, the study investigated; the processes followed by ICASA when formulating new regulations, how it conducted ex-ate impact assessment, and the regulatory environment within which ICASA operated when formulating new regulations. The critique pertaining to the three regulatory quality aspects are thus summarized and concluded in this chapter.

Understanding of the three aspects of regulatory quality helps draw conclusions how ICASA addressed regulatory quality thereby answering the primary research question. The conclusions thus indicate whether ICASA addresses regulatory quality.

This study encourages government to better understand the impact of lack of regulatory quality, and thereby provide recommendations for consideration by ICASA and government to enable regulatory quality. The limitations of this study and possible future research questions are discussed. Lastly, this study is concluded discussing how ICASA addressed regulatory quality, thereby answering the primary research question.

6.1 Processes Followed by ICASA when Formulating Regulations

This study sought to understand the process the regulator followed when introducing regulations. The processes followed were found to be satisfactory while some aspects of regulatory quality were not addressed. ICASA generally offered affected parties about 30 days to make submissions as provided in the ECA. This was also in-line with general good regulatory practices to afford interested parties to make comments and presentations within a reasonable time frame to safeguard transparency of the regulation making process. Part of the consultation process requires regulators to make copies of written comments or submissions by interested parties available at all times to safeguard transparency. To the contrary, ICASA was inconsistent in making some

copies of written comments available. Failure to make written comments available coupled with ICASA's decision to unceremoniously omit explanatory notes in one of the regulations indicates lack of transparency and consistency in the regulation process followed by ICASA.

Most jurisdictions have consumer or public interest groups that participate in the regulation making process thus ensuring society's views are represented and protected in the regulation process to improve the quality of regulations. To the contrary, this study established that there was lack of participation by consumer groups or civil society while there was a strong contingent of operators in the regulation processes. As one of the attributes of effective regulation is protection of consumer interests while balancing the needs of all stakeholders i.e. operators, government, civil society, the ramifications of lack of consumer representation in the regulation process may have led to formulation of regulations biased towards regulated players thus compromising the needs and benefits to consumers.

The content of regulatory proposals were generally written clearly with the problem they were addressing well-articulated, except in the CPS regulations. In this regulatory proposal, there were multitudes of technical and grammatical errors which were inconsistent with other regulatory proposals issued during the same period, suggesting poor quality control measures on the part of the regulator.

There is a sign of improvement in the regulation process as witnessed in the meticulous process prescribed and followed by ICASA when promulgating CTR regulations which was commended by most stakeholders. However, due to lack of consistently and transparency, it is concluded that the processes followed by ICASA did not adequately address regulatory quality.

6.2 Ex-ante Impact Assessment of Regulations

There is no central regulatory oversight authority in South Africa mandated to ensure evidence based decision-making using ex-ante tools such as RIA, and thereby lack of consideration of alternatives to regulations. Unsurprisingly it has been established that

ICASA did not attempt ex-ante impact of assessment of regulations as the South African government generally does not apply RIA in its regulatory processes. This is inconsistent with good regulatory practices which encourages that RIA is undertaken to evaluate the impact of proposed regulation by measuring economic, social and environmental benefits and costs of such regulations. The implications of lack of RIA in the regulation process were apparent when ICASA passed regulations that were undesired and irrelevant.

ICASA introduced certain regulations merely to comply with legislation. There were opportunities where ICASA could have avoided regulation if it conducted RIA as suggested by available evidence. ICASA failed to exercise its powers vested in it by the ICASA Act of 2000 to make recommendations to the Minister to amend policy and legislation thus circumventing promulgation of undesired regulations.

However, some of the regulations were justified and targeted at the problem at hand although conducting RIA might have revealed other alternatives or different levels of regulation. Essentially, one of the purposes of cost benefit analysis is to force regulators or decision-makers to consider other alternatives which regulators can implement to achieve their regulatory goals at the least cost. It is thus concluded that since no impact assessment was conducted when promulgating regulations, it made it difficult for ICASA to consider other alternatives resorting to merely implementing legislative directives or following international practices which could be to the demise to the sector.

6.3 Regulatory Environment Enabling Regulatory Quality

Parliaments, as institutions that approve legislation, can play an imperative role to strengthen regulatory quality by exercising oversight and control over implementation of better regulatory principles. Evidence in this research suggests that the manner in which the ECA of 2005 was introduced had a negative impact on the regulator's capacity. It introduced additional industries under ICASA's mandate including complex provisions that required heightened economic and technical skills.

Other studies conducted between 2005 and 2011 in the South African electronic communications sector suggests ICASA has been under resourced and incapacitated for some time. The manifestation of lack of appropriate resources and capacity included major delays in finalizing key sector regulation, and inadequate technical skills to implement regulations.

Prescribing regulations in legislation might become a hindrance in future due to rapid changes in the market and technological innovation; while a flexible regulatory framework is rather desirable to enable regulators to regulate efficiently by adapting to market and technological changes. This study thus contends that prescriptions of regulatory remedies in legislation mandating ICASA to promulgate certain regulations, led ICASA to introduce undesired regulations.

This study revealed that ICASA is not independent of government which could significantly affect regulatory quality. Furthermore, government has an apparent structural conflict of interest as it has ownership in the sector, sets policy, indirectly appoints the regulator's executive, and determines ICASA's funding. It is thus not unimaginative that the conflict of interest inherently resulted in government's lack interest to strengthen ICASA's capacity and resources. This may have been a deliberate attempt to ensure ICASA does not pose a regulatory threat to its interests in the sector. The challenges discussed above thus reveal that the regulatory environment within which ICASA functions may have been not conducive to ensure regulatory quality.

6.4 Recommendations to Improve Regulatory Quality

This section presents recommendations for consideration by ICASA and government to ensure regulatory quality. Government is encouraged to consider these recommendations as this study has indicated that failure to improve regulatory quality increases the likelihood of regulations failing to achieve their objectives, consequently resulting in government failing to meet its sector objectives. Government cannot afford to ignore regulatory quality in electronic communications due to imperative role

broadband and internet play on social and economic aspects of South Africa, as identified in the National Development Plan (NDP).

Regulatory Process

Although ICASA is improving in the way it manages the regulatory processes, it needs to ensure transparency and consistency in rule making. This could be related to lack of suitable skills or processes within ICASA to safeguard transparency and consistency. ICASA is encouraged to hold informal workshops with the industry, prior to issuance of regulatory proposals, to help it gather information (i.e. economic or technical) related to envisaged regulation. This may help the regulator circumvent issuing substandard draft regulatory proposals.

The South African public is encouraged to participate in the regulation process. Lack of participation by the public may result in regulations that do not address or consider societal needs i.e. consumers being charged high prices or offered poor quality of services.

Measuring of Impact Assessment

South Africa is encouraged to introduce RIA in the entire regulatory management system of the country. However, due to heighten level of capacity and resources required to successfully implement RIA in all government regulation, South Africa could introduce less stringent and less complex form of RIA, generally known as “light RIA”. Light RIA could help government or ICASA apply their minds better in the regulation process thereby basing their decisions on evidence instead of the current discretionary approach. In that regard, government is discouraged from introducing RIA- isolated to ICASA only, as currently proposed in the ICASA amendment Act, as RIA is only effective if adopted by whole of government. Moreover, introducing RIA as a mere best practice could be counter-productive as traditional RIA requires well-resourced regulators which may constrain ICASA and result in operators exploiting the RIA process to delay regulation.

Regulatory Environment

There are increasing arguments by ICASA, industry experts, academics, and the public that ICASA is not independent of government as seen in the appointment processes of its senior staff and its funding. The appointment of senior staff is heavily politicized leading to appointment of an executive with no will to counter political interference, and inadequate skills, at times. Its funding is also determined by Treasury. There have been various claims by stakeholders that ICASA is underfunded although it collects substantial revenue from licensing and spectrum fees from operators. ICASA should be allowed to better leverage the revenue it collects from operators to fund its operations.

Regulation theory suggests that regulators should be independent of government to ensure it balances all stakeholder's interest i.e. operators, consumers, and government without undue political interference. Government is thus is encouraged to safeguard the independence of the regulator by limiting political interference in the regulator's appointment process.

Other claims suggest ICASA is under-resourced and incapacitated. Manifestation of this challenge was evident in the way introduced some regulations. While government is aware of these challenges, surprisingly, it continually introduces new industries under ICASA's regulatory mandate. This was further compounded by government introducing a new legislation, ECA of 2005, without examining its impact of the regulator's resources.

In line with the recommendation for government to introduce "light RIA", government is encouraged to first conduct an impact assessment before passing new or amending legislation or introducing new industries under ICASA to determine the level of capacity required by ICASA to ensure it discharges its mandate successfully.

As this study established, ICASA introduced undesirable regulations merely to comply with the ECA. Government is thus encouraged to refrain from prescribing regulatory remedies in the legislation as one cannot imagine legislation to be that forward looking, considering the rapid evolution of technology and markets. It is thus recommended that

government ensures that legislation only affords ICASA with a sound legal framework to enable it to regulate based on pertinent sector dynamics and requirements.

6.5 Future Research Question

Although this study revealed regulatory quality gaps in the current regulatory system in the South African electronic communications sector, this study was only limited to understanding how regulatory quality was addressed by ICASA when introducing regulations. A potential future research question could investigate effectiveness of the entire regulatory management system which includes parliament, policy maker, and ICASA as this could reveal a more pragmatic outcome of the impact of lack of regulatory quality in the electronic communications sector in South Africa.

6.6 Conclusion of Regulatory Quality in Electronic Communications in South Africa

This paper revealed ICASA did not adequately address regulatory quality on regulations issued after enactment of the ECA. It failed to ensure transparency and consistency in the regulation process, and assess ex-ante impact of regulations - which ultimately led to failure to consider other alternatives. This resulted in undesired regulations being passed. The quality of regulatory proposals was satisfactory but instances such as; repetitive errors on regulatory proposals, incorrect interpretation of regulatory interventions, and delays in finalizing regulations, suggests lack of skills in the regulator.

There was no active participation by consumer or civil society groups in the regulation processes which arguably affect regulatory quality as there may have been lack of consideration of consumer interests in regulatory proposals. However, ICASA is showing sign of improvement in ensuring regulatory quality as observed in CTR regulation processes.

This paper revealed that the regulatory environment was not suitable to enable regulatory quality. The ECA of 2005 introduced major challenges to the regulator as it demanded more resources from an already under-resourced regulator. It was too

prescriptive on regulatory remedies that ICASA should promulgate leading to ICASA passing unsavory regulations, instead of creating a flexible legislative framework for the regulator to execute its mandate. On the other hand, ICASA could have circumvented passing unsavory regulations - prescribed in ECA of 2005 by making recommendations to the Minister to amend policy and legislation to avoid such regulations.

Government failed to provide adequate resources to the regulator. It also fell short in safeguarding ICASA's independence which arguably contributed to poor regulatory quality.

It is therefore concluded that ICASA did not adequately address regulatory quality when formulating regulations in the electronic communications sector, while the South African government failed to create a suitable regulatory environment to ensure regulatory quality, which answers the primary research question.

This investigation has afforded better understanding of regulatory quality in electronic communications in South Africa. Through implications of lack of regulatory quality, this study has further identified opportunities for ICASA and government to improve regulatory quality when formulating and implementing new regulations. Understanding regulatory quality is expected to improve compliance to regulations by the industry and society, and ensure government achieves its social and economic objectives.

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Appendices

Appendix 1: Interview Schedules

The Case of Call Termination Regulations

The Case of Call Termination Regulations: Interview Schedule (Industry Stakeholders)

Process and consultation

1. Please provide your comments to the process followed when enacting Call Termination regulations?
    a. Was consultation time sufficient to provide market information and comments to draft call termination regulations?
    b. Was the process transparent?
2. Was government intervention justified?
3. Please provide your recommendation how ICASA should improve the regulatory process in future.

Regulation

1. Was the problem correctly defined?
2. Was the regulation targeted to problem at hand

Impact Assessment

1. Was the impact of the regulation clear?
2. Was the regulation justified?
3. Please provide your recommendation how ICASA should address impact assessment in future?

Alternatives

1. Were there other clear alternatives to this regulation?
2. Were alternatives and comments considered in the final regulation

Call Termination Regulations: Interview schedule (ICASA)

Process and consultation

1. What was the rationale for the time period chosen to provide comments to draft call termination regulations, cognizant that the period was later extended?

Impact Assessment

1. Was impact assessment of the regulations conducted?
2. If so,
    a. Was the cost and benefit of the regulation, particularly the glide path, quantified? Please elaborate
    b. Did the benefit outweigh the cost to justify regulation? Please elaborate
3. If not, how did ICASA determine call termination regulation (wholesale), particularly the glide path, was a justified intervention?

Consideration of Alternatives

1. What was the rationale regarding ICASA's decision not to consider retail market issues (alternative) considering that the communications market is a two-sided market, and the lack of direct linkage between wholesale and retail rates as submitted by stakeholders?

Challenges Experienced

1. What challenges were experienced by ICASA from when drafting and the final regulations?

The Case of Carrier Pre-Selection Regulations

Carrier Pre-Selection: Interview schedule (Stakeholders)

Process and consultation

1. Please provide your comments to the process followed when enacting Carrier Pre-Selection regulations (if different from CTR)?
    a. Was the industry offered enough notice to comment?
    b. What the process transparent?
2. Please provide your recommendation how ICASA should improve the regulatory process in future.

Regulation

1. Was CPS still relevant and justifiable?
2. Was there sufficient demand for Carrier Pre-Select?

Impact Assessment

1. How should ICASA have conducted regulatory impact Assessment?
2. Please provide your recommendation how ICASA should address impact assessment in future?

Alternatives

1. Were there other clear alternatives to this regulation?
2. Were alternatives and comments considered in the final regulation?

The Case of Carrier Pre-Selection Case Study (ICASA)

Process

1. What was the process followed when drafting the proposed regulation (from 2008) until enactment of Carrier Pre-Select regulations?
2. How does the regulator decide on notice periods for comments?
3. How does the regulator verify the quality of work to rectify errors before publication of proposals and regulations?
4. Why were submissions for comments to Carrier Pre-Select not available of the regulator's website?

Regulation

1. Where did the demands for CPS emanate?
2. Was CPS still relevant and justified considering that the draft regulations did not include mobile services even though it has surpassed fixed-lines in subscriber numbers?
3. Why was the definition of Carrier-Preselect (phase 1) inconsistent with globally accepted definitions?

Impact Assessment

1. Was impact assessment of the regulations conducted?
2. If so,
    a. Was the cost and benefit of the regulation, quantified? Please elaborate
    b. Did the benefit outweigh the cost to justify regulation? Please elaborate
3. If not, how did ICASA determine Carrier Pre-Select was a justified intervention?

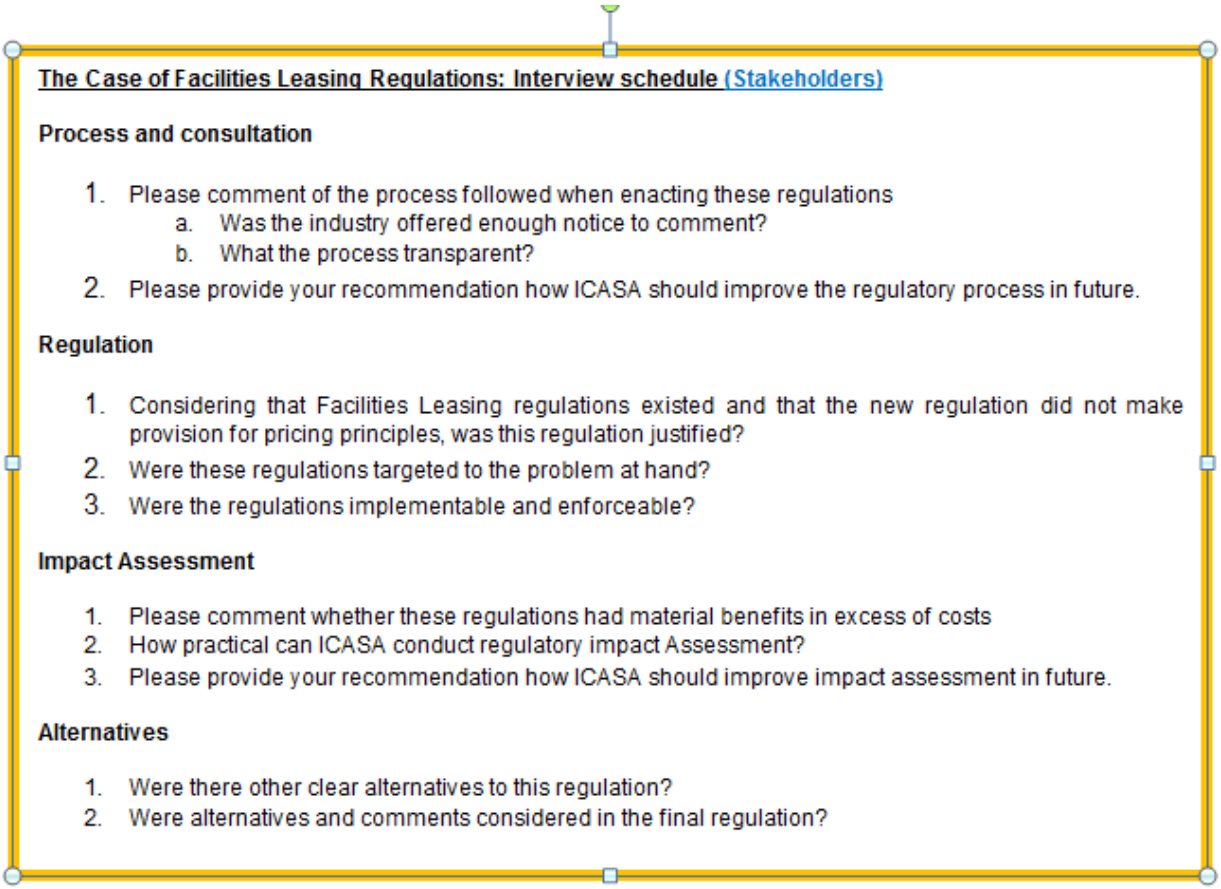
Consideration of Alternatives

1. What was the rationale regarding ICASA's decision not to consider retail market issues (alternative) considering that the communications market is a two-sided market, and the lack of direct linkage between wholesale and retail rates as submitted by stakeholders?

Challenges Experienced

1. What challenges were experienced by ICASA from drafting to promulgating Carrier Pre-Select regulations?
2. Please comment how ICASA deals with legislation provisions that mandate the regulator to enact specific regulatory interventions.

The Case of Facilities Leasing Regulations



The Case of Facilities Leasing Regulations: Interview schedule (Stakeholders)

Process and consultation

1. Please comment of the process followed when enacting these regulations
    a. Was the industry offered enough notice to comment?
    b. What the process transparent?
2. Please provide your recommendation how ICASA should improve the regulatory process in future.

Regulation

1. Considering that Facilities Leasing regulations existed and that the new regulation did not make provision for pricing principles, was this regulation justified?
2. Were these regulations targeted to the problem at hand?
3. Were the regulations implementable and enforceable?

Impact Assessment

1. Please comment whether these regulations had material benefits in excess of costs
2. How practical can ICASA conduct regulatory impact Assessment?
3. Please provide your recommendation how ICASA should improve impact assessment in future.

Alternatives

1. Were there other clear alternatives to this regulation?
2. Were alternatives and comments considered in the final regulation?

The Case of Facilities Leasing Regulations: Interview schedule (ICASA)

Process

1. Why the regulation process for facilities leasing was not completed for more than 5 years?
2. Please describe the process followed when drafting the proposed regulation in 2009 until the final regulation in 2010?
3. Why were submissions for comments to Facilities Leasing not available of the regulator's website?

Regulation

1. Was Facilities Leasing regulation relevant without pricing regulation?
2. Why were Explanatory notes not included in the final regulation?

Impact Assessment

1. Was impact assessment of the regulations conducted?
2. If so,
    a. Was the cost and benefit of the regulation, quantified? Please elaborate
    b. Did the benefit outweigh the cost to justify regulation? Please elaborate
3. If not, how did ICASA determine Facilities Leasing was a justified intervention?

Consideration of Alternatives

1. What was the rationale regarding ICASA's decision not to consider pricing principles as submitted by stakeholders?

Challenges Experienced

1. What challenges were experienced by ICASA from drafting to promulgating Facilities Leasing regulations?
2. Please comment how ICASA deals with legislation provisions that mandate the regulator to enact specific regulatory interventions.

Appendix 2: Letter of Consent

Goodman Silaule
Student
LINK Centre
University of the Witwatersrand
Johannesburg, South Africa
Email: gsilaule@hotmail.com

Name
Date

Dear Sir/Madam

Masters Research Report: Masters of Management of ICT Policy and Regulation

I am currently registered for a Masters of Management in ICT Policy and Regulation at the Graduate School of Public and Development Management at the University of the Witwatersrand. Part of fulfilment of my studies is to complete a research report.

My approved research topic is; Assessment of regulatory quality in electronic communications in South Africa. This research aims to assess how the South African electronic communications regulatory authority, ICASA, addresses regulatory quality issues.

I thereby request your permission to arrange an interview with you in relation to my research study.

If you approve permission to participate in an interview for this research, an information sheet and consent form are attached herein for your completion. The estimated duration of the interview will be less than an hour. Please communicate your response including your date and time availability for the interview to: gsilaule@hotmail.com

Your invaluable support will be highly appreciated.

Regards,

Goodman Silaule	26 November 2012	_____
Name of Researcher	**Date**	**Signature**

Appendix 3: Details of Interview Respondents

Call Termination Regulations

Name of Respondent	Name of Company/Institution	Type of Interview	Date
Respondent A	MTN SA	Face to Face	12 Nov 2012
Respondent B	MTN SA	Face to Face	12 Nov 2012
Expert E	Research ICT Africa	Telephonic	15 Jan 2013
Expert B	Neotel	Telephonic	14 Nov 2012
Expert D	ISPA and Ellipsis Regulatory Solutions	Face to Face	22 Jan 2013
Respondent C	Genesis Analytics	Face to Face	18 Jan 2013
Respondent D	ICASA	Face to Face	03 Dec 2012
Respondent E	ICASA	Face to Face	03 Dec 2012
Respondent F	ICASA	Face to Face	03 Dec 2012

Carrier Pre-Selection Regulations

Name of Respondent	Name of Company/Institution	Type of Interview	Date
Respondent G	Vodacom	Face to Face	12 Dec 2012
Expert E	Research ICT Africa	Telephonic	15 Jan 2013
Expert B	Neotel	Telephonic	14 Nov 2012
Expert D	ISPA and Ellipsis Regulatory Solutions	Face to Face	22 Jan 2013
Respondent H	MTN	Face to Face	31 Jan 2013
Respondent D	ICASA	Face to Face	03 Dec 2012
Respondent E	ICASA	Face to Face	03 Dec 2012
Respondent F	ICASA	Face to Face	03 Dec 2012

Facilities Leasing Regulations

Name of Respondent	Name of Company/Institution	Type of Interview	Date
Respondent A	MTN	Face to Face	12 Nov 2012
Expert E	Research ICT Africa	Telephonic	15 Jan 2013
Expert B	Neotel	Telephonic	14 Nov 2012
Expert D	ISPA and Ellipsis Regulatory Solutions	Face to Face	22 Jan 2013
Respondent E	ICASA	Face to Face	03 Dec 2012
Respondent F	ICASA	Face to Face	03 Dec 2012

Appendix 4: ICASA's Consultation Process

