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# Consumer benefits squeezed out of limited sector reform: Namibia 1992-2019

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# CONSUMER BENEFITS SQUEEZED OUT OF LIMITED SECTOR REFORM: NAMIBIA 1992- 2019

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# ABSTRACT

Competition theory indicates that telecommunications markets can realise consumer benefits if they are competitive. Regulatory interventions are required to implement some of the elements of competition to realise such benefits for consumers. The analysis demonstrated that the Namibia telecommunications market went through numerous transitions in terms of market structure and ownership, and a few regulatory interventions were made. Identifying the phases of the transition, as well as which benefits were attained and the conditions under which such consumer benefits were realised, would offer great insight to guide future thinking on competition regulation. The regulator and the regulated entities need to understand the effects of market transitions arising from sector reform to plot future arrangements and interventions. The study uses a case study methodology. The research found that, with the changes of transfer of control of MTC to a private shareholder and the licensing of 100% privately owned Powercom (t/a Leo), the mobile sector in Namibia was sustainably competitive in Phase I. The consumer benefits claimed from the market were in the form of reduced prices.

In Phase II, consumers and operators suffered the adverse effects of anti-competitive pricing by MTC. The acquisition of Leo by Telecom Namibia resulted in the mobile market reversing to a public monopoly. The reversal was caused by a lack of timely regulatory interventions to address anti-competitive behaviour, interconnection pricing, and a price cap on leased lines. Phase II yielded limited consumer benefits under monopolistic conditions requiring regulatory intervention.

The market structure changed again in Phase III, with the sale of the MTC shares to NPTH, which amounted to de-privatisation of the mobile market and translated the market into a public monopoly. The research found that monopolies do produce consumer benefits, as was the case during Phases II and III, but competition and regulatory intervention produce more significant benefits. The fixed market was a monopoly throughout all three phases of sector reform. The growth of the mobile

market and the absence of a price cap on wholesale prices contributed to the lack of growth in the fixed sector.

## DECLARATION

I declare that this report is my own unaided work. It is submitted in fulfilment of the requirements of the Master of Arts in the field of ICT Policy and Regulation at the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other University.

_____

**EMILIA NDATEELELA NGHIKEMBUA**
**30 JUNE 2020**

## DEDICATION

To my greatest gift, Etuama!

## ACKNOWLEGEMENTS

To my God, you know my deeds and that I have little strength. Yet, you placed an open door before me, which no one can shut. Receive now all the Glory!

Dr. Lucienne Abrahams, I am grateful for your support, perseverance and guidance. Your passion for research is equal to none, I have ever seen. Thank you for literally walking this journey with me and for not giving up on me.

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# LIST OF ACRONYMS

| | |
|---|---|
| BON | Bank of Namibia |
| CDMA | Code Division Multiple Access |
| CRAN | Communications Regulatory Authority of Namibia |
| FTR | Fixed Termination Rate |
| GSM | Global System for Mobile |
| LTE | Long Term Evolution |
| MICT | Ministry of Information and Communication Technology |
| MTC | Mobile Telecommunications Limited |
| MTR | Mobile Termination Rates |
| NPTH | Namibia Post and Telecom Holding |
| RIA | Research ICTAfrica |
| WACS | West Africa Cable System |

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# Chapter 1: Tracking Telecommunications Reform in Namibia

## 1.1 Introduction

The Namibian telecommunications market moved through different phases of sector reform during the period from 1992 to 2019. This period has been divided into following phases of sector reform: Phase I, 1992-2008 (commercialisation, licensing and introduction of competition), Phase II, 2009-2014 (public monopoly) and Phase III, 2015- 2019 (market reversal and exclusive monopoly). The study generally looked at the outcome of competition in the market, by assessing whether consumers were able to reap the benefits from the market during the different phases of sector reform. Chapter 1 gives a brief overview of the Namibian telecommunications market during these three phases of sector reform.

## 1.2 Research Problem Statement

The description of the three phases of sector reform below, demonstrates that the Namibia telecommunications market went through numerous transitions in terms of market structure and ownership, and a few regulatory interventions were made. Each of these phases of sector reform may or may not have yielded certain benefits to consumers. Globally there has been a shift towards consumer (demand side) regulation, as competition developed and the number entrants in the market has increased.

The study aims to assess whether customer benefits were derived in a monopolistic market, or in a partially competitive market, as this has not yet been explicitly researched and documented. Therefore, the main problem the study focussed on was the nature of consumer benefits in each phase of sector reform. It would offer great insight to identify those phases in which benefits were attained and the conditions under which such consumer benefits were realised, in order to guide future thinking on competition regulation. It is important for the regulator and the regulated entities to understand the effects of market transitions arising from sector reform, in order to plot

future arrangements and interventions.

## 1.3 Research Purpose Statement

The purpose of the study is to understand how customers benefitted in a monopolistic and in a partially competitive market environment. In order to understand this, it is necessary to collect and analyse data on market structure and ownership, and on regulatory interventions, for each of the three phases of sector reform. It is also necessary to collect and analyse data on consumer prices and access for each of the three phases. Consumer prices and access were choosen because pricing and access are influenced by market structure and regulation. The data was analysed in terms of a theoretical and conceptual framework based on competition theory and regulatory theory.

## 1.4 Research Questions

### 1.4.1 Main Question

The main research question is: In which ways did consumers benefit (if any) during various periods of the communication sector reform in Namibia?

### 1.4.2 Sub-questions

The following research sub-questions were used to explore the main research question:

a. What were the particular changes that occurred in each of the three phases of sector reform?
b. What were the benefits attained by consumers in the different phases?
c. What market environment can these benefits (as identified in (b)) be attributed to?

## 1.5 Background to the study

The focus of the study was to describe the ways in which consumers were able to derive benefits from monopolistic and partially competitive markets in the Namibia telecommunications market during the period 1992 and 2019. In doing so, this research report analysed the nature of consumer benefits in each phase, as well as analysing the market environment from which the benefits derived, and the regulatory interventions that were introduced. The study primarily focused on the mobile market. The fixed market remained a public monopoly throughout the entire study period. The study also looked at how the continued fixed public monopoly impacted the outcome of competition.

Blackman and Srivastava (2011) examined the benefits of competition in a telecommunications market within the context of public-interest regulatory theory. For purposes of this study, regulatory theory refers to "welfare economics" or regulation in the "public interest". Shleifer (2005) indicates that the theory is based on the following two assumptions:

> First, unhindered markets often fail because of the problems of monopoly or externalities. Second, governments are benign and capable of correcting these market failures through regulation. This theory of regulation has been used both as a prescription of what governments should do, and as a description of what they actually do, at least in democratic countries. According to this theory, governments control prices so that natural monopolies do not overcharge, impose safety standards to prevent accidents such as fires or mass poisonings, regulate jobs to counter the employer's monopsony power over the employee, regulate security issuances so investors are not cheated, and so on. The public

> interest theory of regulation has become the cornerstone of modern public economics, as well as the bible of socialist and other left-leaning politicians.

Both competition and regulation are based on the principle that "public interest" or "social good" are best served when markets work efficiently" and that competitive markets distribute resources efficiently and fairly without any need for a single centralised controlling authority" (Blackman & Srivastava, 2011, p.26). Blackman and Srivastava (2011) argued that societal benefits are maximised by competition through the following ways:

- Ensuring that resources, products, and services are allocated to the person or persons who value them the most (allocative efficiency),
- Forcing market participants to use scarce resources as productively as possible (productive efficiency),
- Encouraging market participants to innovate, and to invest in new technologies at the best time (dynamic efficiency) (, p.27).

Blackman and Srivastava (2011, p.26) acknowledged that there are many different types of competition, which includes perfect competition, effective competition and sustainable competition. In this study, competition refers to sustainable competition. Sustainable competition provides that the importance of competition is linked to the benefits that it yields for the market and consumers (Blackman & Srivastava, 2011 p.28-29).

Consumers can benefit due to the pressure that competition places on markets to be efficient, innovative and customer-centric. The benefits include lower prices, higher productivity, more choice and improved connectivity (Blackman & Srivastava, 2011, p.29). According to Blackman and Srivastava (2011, p.29), the overall aim of sustainable competition is to achieve a "level playing field" and to ensure that consumers and operators do not suffer the negative effect of anti-competitive practices.

The role of regulation is to transition markets to sustainable competition. However, the role of regulation may be involved because most markets may have experienced changes that resulted in a decline in operator services and consumer choice (Blackman & Srivastava, 2011, p.29). According to Blackman and Srivastava (2011, p.29), regulators must create a balance between the need to attain sustainable competition, on the one hand, and conformance with the regulatory framework on the other hand.

For purposes of this study, competition refers to the ability of a market to yield benefits for the consumers. These benefits include lower prices, and more choice. Since the Namibian market has gone through many changes, the role of regulation was also studied. The assessment looked at the interventions implemented by the regulator in the different phases and how such interventions helped or did not help transition the market to become competitive.

In order to determine the impact of the regulatory interventions, one must look at the benefits that consumers enjoyed. If the consumer benefits have increased, then it may be argued that there has been a positive market development. Throughout the three phases, the Namibian telecommunications market was typically a public mobile monopoly, except during Phase II, where the mobile market became competitive. It was this monopolistic environment during Phases I and III that required the introduction of sector reform in order to transition to a competitive market. Regulation was required to help implement some of the elements of competition theory.

Telecommunications sector reform refers to changes in the sector aimed at attaining consumer benefits as described above. Sector reform focuses on market structure and the substantive framework and or rules within which such services are provided to consumers. Sector reform also focuses on the market structure, and nature of institutions tasked with overseeing the implementation of reform as well the elements used for implementation. The identified elements of sector reform for this study are

regulation and competition theory. The sub-elements under competition theory are liberalisation and privatisation, and the elements under regulation are the different regulatory interventions as introduced (Pisciotta, 1997).

## 1.6 Brief Historical Background on Telecommunications Reform in Namibia

Before independence, the provision of telecommunications services in Namibia was by the Department of Posts and Telecommunications, under the Ministry of Works, Transport and Communications. Reform commenced in 1992 with the dismantling of the Department of Posts and Telecommunications. The first wave of reform led to the commercialisation of Telecom Namibia and the establishment of a semi-autonomous regulator, the Namibia Communications Commission (NCC) (Dierks, 1992). This was necessary in order to decentralise the policy, regulatory and operational role of the Ministry.

The Government completed the commercialisation of the Department of Posts and Telecommunications via the incorporation of Telecom Namibia Limited in August 1992. This reform was necessary because at the time, the Ministry of Works, Transport and Communications was not only responsible for policy and regulatory affairs but was also significantly involved in the actual provision of telecommunications and postal services (Dierks 1992).

The Namibia Post and Telecom Holding (NPTH) was established in terms of the Post and Telecommunications Act, Act 19 of 1992. NPTH was the sole shareholder of Telecom Namibia, in turn directly owned by the Government. The main aim of the Post and Telecommunications Act was to regulate telecommunications services. Telecom Namibia was established to maintain telecommunications infrastructure and provide services. There was thus a need to create an autonomous institution, through either

incorporation or private investment, in order to separate operational and regulatory activities, from the Government's traditional role of policy formulation (Dierks, 1992).

The NCC was to issue telecommunications service licenses, manage the radio frequency spectrum, and enforce compliance to license conditions and reporting obligations (Dierks, 1992). The NCC however, did not implement any competition policy objectives. The separation of roles was necessary to ensure that consumers benefit from an improved market structure.

With the advent of mobile cellular communications, the NCC licensed Mobile Telecommunications Company Limited (MTC) in 1995, and Telecom Namibia continued providing fixed-line services (Sherbourne & Stork, 2010).The Government indirectly owned, both companies (Sherbourne & Stork, 2010).The indirect ownership was because the Government was the 100% shareholder of NPTH and NPTH held the shares in MTC and Telecom Namibia. Given the global trends in the growth of mobile communications, as competition and regulatory theory dictated at the time, a license was issued to Powercom (t/a Leo), a privately owned operator. Leo commenced operations in 2006 (Sherbourne & Stork, 2010,p.6) and started to compete against MTC. In 2012, Leo was acquired by Telecom Namibia (CRAN, 2012). In 2018, the Government also acquired 100% of the shares in MTC, via its holding company NPTH (CRAN,2019).

In 2009, the Communications Act (Republic of Namibia, 2009). was promulgated but only commenced in 2011, which also led to the establishment of an independent and converged regulator, the Communications Regulatory Authority of Namibia (CRAN). CRAN aimed to encourage affordable access to the latest technologies to all consumers and ensure competition in the telecommunications market. CRAN also introduced a service neutral licensing in 2011.

Throughout the different phases reviewed in this study, there was scope for continuing reform of the Namibia telecommunications policy framework and regulatory structures in order to accommodate the market structure as it evolved. The need for reform was to deal with the many regulatory problems, such as interconnection pricing, control over retail and wholesale pricing, removing barriers to market entry and address the impact of the continued fixed public monopoly. The overall aim for reform was consumer welfare, in the form of low prices.

### 1.6.1 The Three Phases of Telecommunications Reform

In light of this historical background, three phases of sector reform outlined in Figure 1 were formulated. The researcher created the sector reform phases because of the significant events that occurred during the period from 1992 to 2019. The sector review phases were formulated to help with the analysis of the information during the review period, which spans for 27 years.

Figure 1 illustrates the three phases over the period 1992-2019, by depicting the status of competition in the mobile and the fixed market for each phase, the level of State ownership in each operator and the level of private shareholding.

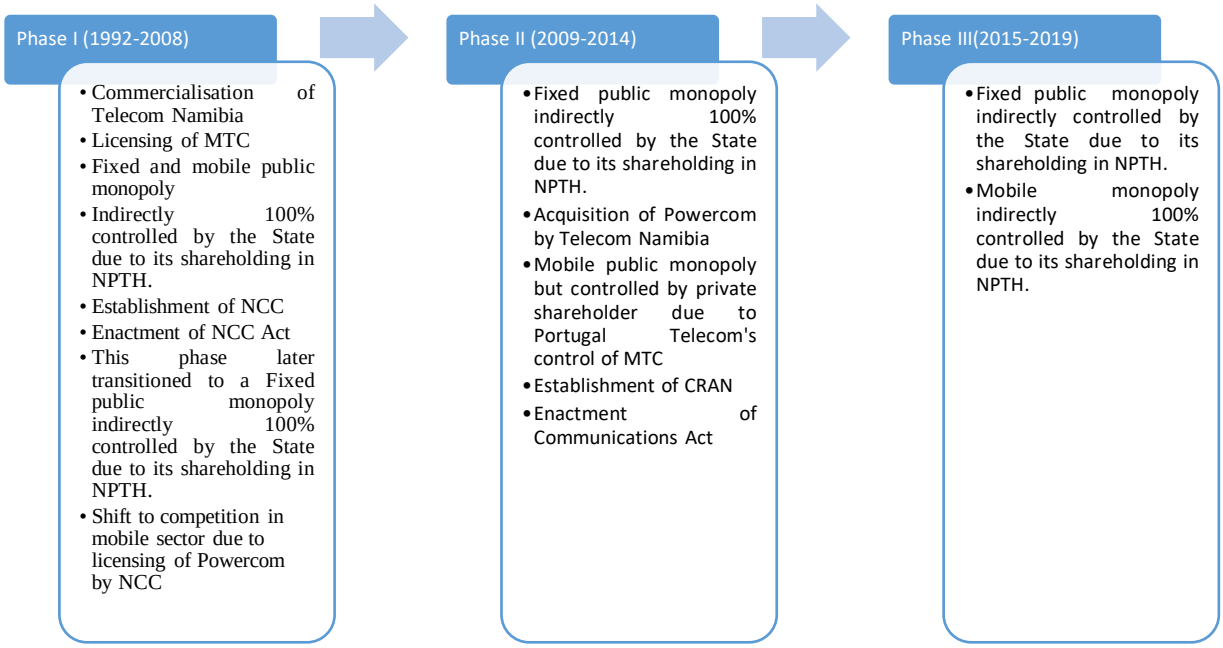



*Figure 1 1Illustration of the 3 Phases of sector reform 1992-2019(Source, Authors Compilation)*

### 1.6.1.1 Phase I - Commercialisation, Licensing and Transition to Partial Competition 1992-2008

Phase I occurred between 1992 and 2008. In Phase I the following events occurred; the enactment of the NCC Act, the Post and Telecommunications Act, Act 19 of 1992 the commercialisation of Telecom Namibia and the licensing of MTC. Phase I was made up of a public monopoly in the fixed and mobile market, with the Government of the Republic of Namibia (the government) (*via* its shareholding in Namibia Post and Telecommunications Holdings (NPTH)) owning 66% of the shares in Mobile Telecommunications Limited (MTC) and 100% of the shares in Telecom Namibia Limited (SOURCE).

The core elements of sector reform in this Phase was the introduction of competition to address the negative impact of the public monopoly in both the fixed and mobile

market. The regulatory intervention introduced in the market was the enactment of the NCC Act and the establishment of the semi-autonomous regulator, the NCC. In addition, the telecommunications policy was approved, which primarily envisaged liberalising the market and introducing a second mobile cellular operator by 2003.

The major event in Phase I was the licensing of Leo in 2006, which commenced providing services in 2007, which led to the introduction of competition in the mobile services sector. Phase I is thus also referred to as the transitory phase, which moved from a monopoly to a competitive mobile market. Telecom Namibia had also rolled out the CDMA service during Phase I but was limited in roaming scope due to the Cabinet restriction pertaining to its geographic coverage (Sherbourne & Stork, 2010). The identified element of sector reform in this Phase was competition. This was necessary to give effect to the policy directives issued in 1999 on market liberalisation and expansion of the market by issuing a second cellular license. The policy interventions introduced in the market during this Phase were the amendment to the NCC Act to extend the jurisdiction of the NCC to competition issues. This resulted in the regulatory intervention of the issuance of a telecommunications service license to Powercom (t/a Leo), which transformed the mobile sector from a monopoly to one with multiple players.

#### 1.6.1.2 Phase II - Transition to Public Monopoly with Limited International Ownership 2009-2014

Phase II occurred between 2009 and 2014. The major event in this Phase was the commencement of the Communications Act of 2009 in 2011, the establishment of a converged regulator in 2011 and the acquisition of Leo by Telecom Namibia in 2012.

Phase II was made up of a fixed and mobile public monopoly. However, in contrast to the mobile public monopoly in Phase I, Phase II had international (private) ownership

and control. The major market structure change in Phase II was the reversal, in the mobile market, from a competitive sector to a public monopoly. The reversal was due to the acquisition of Leo by Telecom Namibia (CRAN, 2014). Subsequently, during Phase II only MTC and Telecom Namibia were providing mobile services, whilst Telecom Namibia remained the sole provider of fixed-line services. The Government via its 100% shareholding in NPTH owned the majority of shares, 66% in MTC and 100% in Telecom Namibia. MTC was, managed and controlled by its minority shareholder, Portugal Telecom (34%).

The identified element of sector reform in this Phase was regulation. The regulatory interventions introduced in the market during this Phase were the commencement of the Communications Act and the establishment of a converged regulator. Another regulatory intervention was the regulation of interconnection prices by reducing the termination rates and the on-net/off-net prices and the determination of licensees holding a dominant position in the telecommunications market. Regulation was identified to help explain whether the reversal in sector reform would have been prevented, if these regulatory interventions were introduced in a timeous manner.

#### 1.6.1.3 Phase III - Transition to Exclusive Public Monopoly with State ownership 2015-2019

Phase III occurred between 2015 and 2019 and was made up of a fixed and mobile public monopoly. However, whereas in Phase I, there was a fixed and mobile public monopoly, in Phase III, the government was the sole and exclusive shareowner, controlling, and managing the entities. This is because during this phase, both MTC and Telecom Namibia were 100% owned by the government through its shareholding in NPTH. MTC and Telecom Namibia were both declared dominant in terms of section 78 of the Communications Act (CRAN, 2015). However, due to the acquisition of shares in MTC by the government, market power, in both fixed and mobile sectors, was now indirectly consolidated in the State, *via* its shareholding in NPTH. The

identified element of sector reform in this Phase was competition. There was a need to implement elements of competition in order to dilute the public monopoly in both the fixed and mobile sector. The regulatory interventions introduced in the market during this Phase were the regulations on the quality of service, infrastructure sharing, and fair competition. Another regulatory intervention was the determination of licensees holding a dominant position in the telecommunications market. In approving the 100% acquisition of the MTC shares by NPTH, the regulator also imposed a condition that 30% of the shares in MTC must be listed on the stock exchange.

## 1.6 Scope of the Research

For purposes of this research, telecommunications market includes fixed, mobile voice and fixed, mobile data. The study looks at the period 1992-2019.

## Structure of the Report

Chapter 1 introduces the overview of the study by giving a brief historical background of the telecommunications market in Namibia.

Chapter 2 provides an evaluative report of literature analysing the challenges of sector reform on market development and ends with a brief overview of the aims and objectives of the study as illustrated in the purpose and problem statement. Chapter 2 also provides the theoretical and conceptual framework, which sets out the theories and concepts that inform the study and identifies the literature gap.

Chapter 3 sets out the methods and design used to conduct a qualitative case study.

Chapter 4, 5 and 6 outlines and analyses the changes, benefits and the market environment from which the benefits in Phases I, II and III, (respectively) were claimed by consumers. In other words, each chapter will analyse the nature of consumer benefits and the ways in which consumers benefitted in each phase. The analysis will be based on research data, also set out in the chapters for each phase.

Chapter 7 will make conclusions and recommendations based on the analysis in Chapters 4 to 6.

## 1.7 Chapter Summary

This chapter gave a brief overview of the Namibia telecommunications market during the three phases of sector reform from 1992-2019. The overview is in respect of the elements pertaining to ownership, market structure and regulatory interventions, and the overall impact of these elements on pricing and expanding access. The elements of competition and regulation will be used throughout the study to assess how sector reform in the Namibian telecommunications market affected competition and led to consumer benefits or not, between 1992 and 2019.

# Chapter 2: The Sector Reform Framework

## 2.1 Introduction

Chapter 1 gave a brief overview of the Namibian telecommunications market during the three phases of sector reform from 1992 to 2019 as outlined in Figure 1 in Section 1.6. Chapter 2 provides a literature review on the challenges of traditional theories vis-à-vis developments in the market, and what the outcomes of those studies were.

The essence of the review is to provide a context for the research and give an illustration of how the problem has been researched in the past. The chapter will primarily provide an evaluative report of literature on how consumers benefitted from competitive or monopolistic environments and thus provide the foundation of knowledge on the topic. Because the context of the study also involved assessing how these sector reform theories impact consumer benefits, the review will also look at the relationship and linkages between sector reform and the outcomes of reform.

The review also sets out the theoretical and conceptual framework and articulates the relationship between theory and the topic of research.

## 2.2 Key Theories and Concepts for the Framework

### 2.2.1 Sector Reform

In this report, sector reform is a blanket term used to refer to the theories of competition and regulation and the sub-elements of liberalisation and privatisation under competition theory.

Pisciotta (1997) sets out the following four models of reform:

*Table 1: Reform Models, Source Pisciotta, 1997*

| **Reform Models** |
|---|
| Privatisation with full competition |
| Privatisation with phased-in competition |
| Liberalisation without privatisation |
| Private sector participation without privatisation or liberalisation |

Adam and Gillwald (n.d., p.15) argued that if privatisation precedes liberalisation with a certain period of exclusivity, in order to attract equity partners, the tendency has been that a public monopoly will be transformed into a private one. This type of reform would lead to low penetration in the fixed-line and access to the network and further "in most cases privatisation resulted in vertically integrated market or oligopolistic players with a significant anti-competitive behaviour" (Adam & Gillwald, n.d, and pp13-14). This argument suggests that if privatisation precedes liberalisation, there will be minimal market development. It also suggests that sector reform designs must take into consideration the existing dynamics and reform initiatives in order to yield the desired market outcomes.

Liberalisation does not necessarily mean there is no room for regulation but increases the need for regulation (Piscotta, 1997, p.335). In Table 1 above, Pisciotta (1997), however, creates the impression that sector reform can only be attained by the implementation of liberalisation and privatisation. Nicol (2003) however, cautions that "…the introduction of privatisation, without at the same time establishing regulation

and opening markets to competition, can increase the power of the monopoly provider and delay network expansion" (p.68).

Melody (1997) adds to this debate by indicating that a sector reform design that only involves liberalisation and privatisation to the exclusion of regulation will not yield the required results of sector performance. This is because there are certain aspects of reform that are better dealt with by regulation in order for the market to function effectively (Melody, 1997, p.22).

Bauer (2009) demonstrates the role of regulation by arguing that many transitions from a monopoly to Competition were aided by the development of regulatory policy based on the existing market structure. Cherry and Bauer (2006, p.8) caution that a lot of studies failed to recognise that institutional variables, such as forms and methods of regulation, do not affect performance in an additive, stand-alone way as is typically assumed. Nicol (2003) also highlighted the benefits of regulation preceding privatisation in that "it increases telecom investment and stimulates progress towards universal service (p.68). This highlights the importance of sequencing of sector reform elements and its impact on the market outcomes. Pricing and access to products and services are important in market development, and the sequence of implementation would, therefore, have a bearing on the costs of the services.

Boylaud and Nicoletti (2000, p.6) argue that although there appears to be a consensus that reform is beneficial for telecommunications operators and consumers, there still remains a number of policy issues that need to be resolved. There is an absence of empirical evidence pertaining to the linkages between ownership, regulation, market structure and sector performance (Boylaud & Nicoletti, 2000, p.6). They raise the following important questions:

> Is it potential Competition or actual changes in market structure that bring about the beneficial effects of liberalisation? Does privatisation lead more quickly and

more effectively to the development of Competition? (Boylaud & Nicoletti, 2000, p.6).

Cherry and Bauer (2006) "assert that if we recognise that the telecommunications sector and the legal/policymaking institutions are co-evolving complex adaptive systems, then we must reconsider the appropriate roles for a regulatory policy as it relates to telecommunications." (p.2). The authors are suggesting that regulatory design is determined by the ecosystem design of a sector and caution that the experience with Information Communication and Technology policy reform indicates that there is not just one set of policies that can achieve efficiency (Cherry & Bauer, 2006, p.2). Fransman (2014) described the ecosystem 'as groups of symbiotically interacting 'players' which include companies and other players such as the providers of knowledge, resources, and 'rules of the game' (p.5). Fransman (2014) argues that because operators provide the output products to the consumer, they are the "engine" of the ecosystem (p.5).

### 2.2.2 Regulatory Theory

This section analyses the theory of regulation and its role in sector reform. Melody (1997, p.11) explained that regulatory objectives differ based on the history of the market and the government's policy considerations. From a theory perspective, there are two types of regulatory objectives, i.e. social objective, which means services must be available to everyone on reasonable terms, whether it is profitable to do so or not and the economic objective, which means that services should satisfy consumer demand and provided under conditions of optimal efficiency (Melody, 1997, p.13). Melody (1997, p.24) thus advocates for a regulatory model that does not focus on public service monopoly or regulated private monopoly but one that views regulation as a tool for achieving societal and economic objectives. The type of regulatory objectives designed to achieve this may thus include licensing, price cap regulation,

universal service fund and mandatory interconnection (Intven, 2000, p.1-4). Table 2 below compares regulatory theory to the law in Namibia:

*Table 2: Regulatory Theory applied to Namibia*

| **Theory** | **Law (Communications Act No 8 of 2009)** | **Regulatory tools currently implemented or not, to achieve the objectives** |
|---|---|---|
| Regulatory Social Objectives – services must be provided to all consumers on reasonable terms whether it is affordable or not | The social objectives of the Act are:<br>• "To increase access to telecommunications and advanced information services to all regions of Namibia at just, reasonable and affordable prices".<br>• To ensure that the costs to customers for telecommunications services are just, reasonable and affordable; | • Service and technology licensing regime (Introduced in Phase III)<br>• Price Regulation (Introduced in Phase III)<br>• Interconnection Regulations (Introduced in Phase III)<br>• Universal Service Fund not yet operational<br>• Number portability (Introduced in Phase III) |
| Regulatory economic objectives – services should satisfy consumer demand and supply under conditions of optimal efficiency. | The economic objectives of the Act are:<br>• "To promote the availability of a wide range of high quality, reliable and efficient telecommunications services to all users in the country.<br>• to ensure fair competition and consumer protection in the telecommunications sector." | • Infrastructure Sharing Regulations (Introduced in Phase III)<br>• Competition Regulations (Introduced in Phase III)<br>• Quality of Service Regulations (Introduced in Phase III)<br>• Complaint regulations (Introduced in Phase III) |

The essential characteristics of a telecommunications market are that it naturally favours the incumbent with an entrenched ubiquitous network in place (*de facto* monopoly). Policymakers regulate the market as an end-to-end monopoly (natural monopoly) (Lehr & Glassman, 2001, p.7). Lehr & Glassman (2001, p.7) emphasised the importance of regulatory design taking into account the existing market structure. In the absence of this consideration, regulation will transform an unregulated monopoly to a regulated monopoly, the impact of the former being far worse (Lehr & Glassman, 2001, p.7). The regulatory design in Namibia took the same format in that it sought to address the social and economic objectives as set out in Table 2. The regulatory tools in Table 2 were identified with due regard to the status of the market by matching the status to the general objectives. In addition, regulatory design must take into account the dynamics of small economies such as Namibia in order to offset some of the adverse impacts of such economies (Symeou & Pollitt, 2007, p.8).

According to Souter (1997, p.93), forms of regulation include the implementation of public policy objectives which are counter to natural market behaviour and the maintenance of competition, which may not be achieved if operators abuse their dominant positions in the market (Souter, 1997, p.93). The main objective of regulation being "to ensure that everyone has access to reasonable services at reasonable prices" (Melody, 1997, p.13).

Effective regulation leads to lower prices, a better quality of service and higher penetration (2019, pp.10-11). Nicol (2003, p.68) highlights some of the benefits of regulation, which includes investor confidence and encourages market expansion by eliminating market barrier tactics. Melody (2001) agreed that "regulation is necessary to provide a foundation upon which the markets can function more effectively" (p.22). One approach to regulation has been the technology and service neutral licensing regime, which is a reaction to the convergence of telecommunications services and results in the creation of converged regulators (Kahlil & Kenny, 2008, p.3). Kahlil and Kenny (2008, pp3-4) indicated that another regulatory approach would be to split the

functions between a “pure: infrastructure regulator and a content regulator, the first basing decisions on economic issues related to pricing and market dominance, while the second regulates based on cultural and social norms”.

The regulatory policy must be designed with due consideration to the drivers of change in the market and should desire to create a balance between the telecommunications sector and the legal and policy institutions. Bauer (2009, p.77) cautioned that a stringent regulatory approach will result in tremendous short-term benefits for consumers but will not yield any long-term benefits such as infrastructure investments. Further that a less stringent regulatory approach may be desirous as it generates more competitive low rates, high rate of innovation and investment (Bauer, 2009, p.77). Blackman and Srivastava (2011), state that, “an effective regulator is a vehicle to ensure credible market entry, as well as compliance with and enforcement of existing regulations” (p. 22).

The relationship between competition and regulatory theory is what Souter (2009, p.99) refers to as competition regulation. There must be a reference to the establishment and maintenance of competition in a market. Under the liberalisation phase, regulation imposes controls on the incumbent to enable new entrants to thrive. In the competitive phase, the focus is on maintaining a competitive environment. The theory of competition regulation indicates that competition yields benefits for consumers (Souter, 2009, p.99).

Souter (2009, p.102) acknowledged that one of the difficulties that regulators face is interconnection. While it is possible for operators to compete without interconnection, Souter (2009, p.102) confirmed that such an arrangement is not optimal. Interconnection enables consumers to communicate with all other consumers regardless of their respective networks. Interconnection requires network interoperability and accounting arrangements, which enable operators to pay each other for termination (Souter, 2009, p.102).

Regulatory independence provides that the government must set the policies and accountability standards but must not be involved in the management of the regulator. Echoing the seminal work of Melody (1997), there are two fundamental reasons why independent regulation is vital for successful telecom reform:

> It is essential that the competition among the major industry players be moved from the arena of politics and bureaucracy to the marketplace. This only happens if regulatory decisions are made on their substantive merits, not based on political favouritism or backdoor influence of the most influential industry players. Independence is also necessary for a regulatory agency to adapt effectively to changing conditions in a dynamic industry sector (Melody, 1997, pp.22-23).

Cambini and Rondi (2010, p.7) explained, "state ownership is another institutional factor that must be taken into account when assessing the merits of economic reforms in the public utility sector". Calandro et al. (2010, p.12) advocate for a reduction in direct government involvement in ICT markets. In South Africa, for instance, "the lack of clarity and subsequently divergent views on the role of the regulator (and Telkom), came to a head over the licensing of the third cellular operator (Gillwald, 2002, p.2). Thornton attributed this conflict to the fact that the Minister is the majority shareholder in Telkom and has an interest in its success, while the regulator is expected to regulate by implementing legislation, regulations and ministerial policy directives (2006, p.114). Noll (1999, p.18) however, argued that the features of ministerial influence are typically at a high level, which includes managerial appointments, but more pertinent issues such as prices and investments are done at the discretion of the chief executive officer.

Regulatory independence is also critical in a market where the state owns shares in operators. Traditionally, the Minister responsible for communications is vested with the power to enact policies, and the regulator has the implementation role. Calandro et

al. (2010, p.12) suggested that if the government is a crucial player in the market, then its influence in the implementation of sector reform must be limited.

### 2.2.3 Competition Theory

While regulatory theory was discussed in terms of its scope, efficacy and requisite design to achieve such efficiency, competition theory concerns the benefits that it yields to consumers and the prerequisites that are indicative of a competitive environment. Competition theory is a sector reform component implemented via regulation.

Stoyanova (2008, p.XVII) described competition in the provision of electronic communications networks as a mechanism which maximises consumer welfare and boosts investment. In addition to regulation, competition is essential in constraining market practices, which lead to anti-competitive outcomes (Stoyanova, 2008, p.XVII).

The benefits of competition are lower prices to the consumer, improved service quality and improved incentives for investment and innovation (Lehr & Glassman, 2011, p.11). The main benefit is the ability of a consumer to purchase services at lower prices, from multiple operators, which will incentivise operators to improve quality of service. Another benefit is that competition will fuel innovation which is an impetus for continued growth and network modernisation (Lehr & Glassman, 2011, p.11).
About competition, Symeou and Pollit indicates:

> A small economy's capacity to support many competitors is limited and it depicts high concentration in many of its industries. This suggests that small economies are generally open to breed monopolistic conditions. The concentration is driven by the number of firms in the industry and the main contributing factor is the size of the minimum efficient scale of production (2007, p.7)

On the contrary, monopoly markets have, as their primary objective, the maximisation of profits, which leads to inefficient prices, because they exceed economic costs (Lehr & Glassman, 2001, p.7). Consumers in a monopoly generally have limited access to services and products and poor quality of service (Lehr & Glassman, 2001, p.7).

Symeou and Pollit concluded that:

> Small economies are likely to have small markets, which in turn limit competition possibilities, due to the ease of market dominance by firms. Smallness also renders the exploitation of advantages deriving from economies of scale difficult as manifested by high prices. In the context of utilities, small economies tend to be characterised by natural monopolies (2007, p.7).

Pricing is largely, thus considered as the focal point in ascertaining the level of competition, measured by the price trends, pricing behaviour and pricing patterns of operators (Stoyanova, 2008, p.XVII). The pricing decisions of significant market power operators thus have an even more prominent role to play in the determination of the level of competition in a market and consequently consumer welfare (Stoyanova, 2008, p.XXI).

The research required literature on the relationship between regulatory and competition theory because the adoption of competition in an inherited monopoly with weak regulation will obtain very modest competition results (Melody, 2001, p.16). Melody (2001, p.16) expands on this relationship by explaining that if policymakers adopt a neutral position on competition, consumers will not receive any competitive benefits, albeit the presence of competition policy in their market.

Stoyanova (2008, p.XXI) explained that sector-specific regulation is a policy tool aimed at promoting competition. Further that, especially in a monopolistic environment, sector-specific regulation is an indispensable tool which rectifies market

failure, ensures market access and consumer welfare (Stoyanova, 2008, p.XVII). Hauge & Jamison (2009, p.5) cautioned that ineffective competition requires a level of regulatory intervention to improve efficiencies, but that it must be the appropriate form of economic, regulatory intervention, as the mere presence of regulation does not automatically improve efficiencies.

It is for this reason that regulatory delays and inappropriately designed remedies may hold up the effective competition, which in turn results in losses to consumer welfare (Stoyanova, 2008, p.XVII). There is, therefore, an intrinsic link between regulation and competition, i.e. competition is introduced as a regulatory tool, and the level of consumer welfare measures its impact. Consumer welfare is measured according to the pricing of services and products (Stoyanova, 2008, p.XVII).

Competition is a useful regulatory tool that yields the social and economic objectives of regulation and that a new approach to regulation is one where regulators ensure that "competitive opportunities are maximised, and anti-competitive behaviour is prevented" (Melody, 1997, p.17).

Hauge and Jamison (2009, p.1) considered the difficult challenge for policymakers to determine the level of involvement of the market and regulator in setting prices, services and investment decisions. The ineffective competition requires a level of intervention to improve efficiencies and policymakers, thus need to put in place the necessary regulatory interventions to attain those efficiencies (Hauge & Jamison, 2009, p.5).

Efficient interconnection is a regulatory intervention designed to permit the attainment of competitive opportunities (Melody, 2001, p.61). Melody explained that "without regulatory intervention, interconnecting arrangements are likely to reflect the respective market power of the players at the time of negotiation and be used to create

artificial barriers to entry and shape competitive opportunities to its own interest" (2001, p.61).

Competition has the benefit of lower prices to consumers, improved quality of service and incentivises innovation and infrastructure investments, which are propellers for network modernisation. Reduction in pricing and subscription numbers are the focal point for measuring the level of competitiveness, although the number of operators (and their ownership structures) in a market also play a role. The review also highlighted regulation as a tool to implement competition, as the mere presence of competition policy, without deliberate regulatory interventions, specifically on interconnection and price regulation, does not automatically result in competitive benefits for consumers. During Phase II, there was no termination rate regulation until Phase III, which resulted in price reductions for the voice market (NCC, 2011).

Thus far, the literature focused on the experience of a competitive market. However, because the Namibian market was a monopoly throughout the three phases, it is also important to look at principles of regulating monopolies. Since the early 1980's, there has been a move to privatise the telecommunications sector, which focused on the State's intervention in the market (Kim & Horn, 1999, p.1). The reform agenda also shifted from price regulation and enabling market entry to regulatory institutional design, privatisation and expanding competition (Kim & Horn, 1999, p.1).

Kim and Horn (1999) summarise the problem with natural monopolies as follows:

> Allowing a natural monopolist to set the monopoly price is undesirable due to the Pareto inefficiency, and forcing the natural monopoly to sell at the efficient price (i.e., marginal cost-based price) is infeasible due to negative profits. The solution to this problem was then to let the government operate the service, for example, at price equal to marginal cost and to provide a lump-sum subsidy to keep the firm in operation.

It is for these reasons, that natural monopolies, such as Namibia, require regulation in order to attain dynamic efficiencies (Kim & Horn, 1999, p.1). Further developing countries, may attain dynamic efficiencies, by introducing regulatory reforms to ensure that unregulated private monopolies make the necessary investments to attain quality of service and growth. These objectives are more important for the developmental agenda, compared to static efficiencies (Kim & Horn, 1999, p.2).

Symeou and Pollit (2007, p.3) generally agree that there is a research gap in telecommunications policy relating to small economies and acknowledge that the size of the economy may affect market liberalisation. Symeou and Pollit (2007, p.3) focused on creating "linkages between the liberalisation of telecommunications and smallness by associating them with the issue of universal service".

About competition, Symeou and Pollit indicates:

> A small economy's capacity to support many competitors is limited and it depicts high concentration in many of its industries. This suggests that small economies are generally open to breed monopolistic conditions. The concentration is driven by the number of firms in the industry and the main contributing factor is the size of the minimum efficient scale of production (2007, p.7)

## 2.3 Related Concepts

Privatisation and liberalisation are key sub-elements of reform, which not only influence competitiveness but may also be part of the regulatory design to achieve competition. Because of the linkages between these policy dimensions (regulation and competition), the literature revealed that the sequence reform tools is also crucial in the attainment of economic efficiencies. This evaluation disclosed that the sequence of components of sector reform has an impact on the outcome of reform and subsequently, market development. In Namibia; regulation was introduced in 2011 with the

commencement of the Communication Act, but in 2012 the privately-owned operator (Powercom (t/a Leo)) left the market. The study assessed whether the timing of reform would have made a difference in the market outcomes.

### 2.3.1 Liberalisation

The provision of telecommunications service was traditionally a natural monopoly, which meant it was a service efficiently supplied by one firm (Leo, n.d, p.140). Monopolies were also considered as functional because governments saw them as an opportunity to promote universal access to telecommunication services. Finally, some proponents argued that competition took long to emerge and required high regulatory costs to sustain and hence preferred monopolies (Leo, n.d, p.140).

Market liberalisation is the opening up of historically monopolised markets, by removing exclusivities from the incumbent fixed-line operator and, issuing licenses to new entrants (Souter, 2009, p.92). The main argument behind reform *via* liberalisation is that the telecommunications market is no longer a natural monopoly, and the market can benefit from competition (Das, 2000). Souter stated "liberalisation represents the process of transition from a monopoly market to a competitive one" (2009, p.92) and according to Pisciotta it is also characterised by "the loosened grip of legally protected monopoly" (2001, p. 333).

Liberalisation is thus signified by the introduction of competition in a once monopolised market and its growth to a competitive market. In Namibia, liberalisation was introduced in Phase II. Liberalisation is, however, not only a relatively new process but also complicated in as far as developing counties are concerned (Fink et al., 2003, p.444). The process typically involves a choice regarding privatisation of state-owned operators, the introduction of competition, the opening up of markets to foreign investments and the establishment of pro-competitive regulations (Fink, 2003, p. 444). It is a misconception that liberalisation equates to deregulation and that most "countries

engaged in liberalisation commonly experience a need for increased regulation" (Pisciotta, 2001, p. 335).

Souter (2009, p.103) argued that once liberalisation commences, there is a need to regulate prices because in most cases, there is no relationship between prices and the costs incurred to provide the service. Regulation is thus rectifying, through re-balancing, the monopoly era pricing models. The typical regulation model is however not designed to address retail prices (i.e. prices that operators charge consumers), but wholesale prices (prices which network operators charge other operators for access to the network) (Souter, 2009, p.103).

Souter (2009, p.102) however, advised that in the event where new market entrants find it difficult to operate in the market, retail prices must be regulated, either by approving such prices before implementation or by imposing a price cap. Both approaches are designed to yield price reductions for consumers. Souter described this approach as "as a surrogate for competition" (2009, p.103).

### 2.3.2 Privatisation

According to Pisciotta (2001, p.333), the wave of telecom reform, which commenced in the 1980s, is characterised "by the privatisation of national companies, either through public stock flotations or private sales to strategic investors and the general opening of opportunities for private investment." Souter (2009, p.92) described privatisation "[as] the transfer of ownership of a business from the Government to the private sector" and the award of licenses to private companies. Ros (1999, p.66) acknowledged that there is a myriad of reasons why governments introduce privatisation:

> Privatisation emerged as a policy issue amidst the debt crisis and worsening financial performance of the early 1980s. Privatisation presents an opportunity

to reduce net budgetary transfers and eliminate contingent external debt liability.

During the early 1990s sector reform was traditionally driven by international financial institutions, which placed colossal impact on privatisation as a means of improving underperforming state-owned incumbents (Adam & Gillwald, 2012, p.4):

The World Bank and IMF used loan conditions as one of the significant coercive tools for pressing privatisation. During the 1990s, as many as three quarters of World Bank loans or credits were conditional in part on privatisation of Government owned enterprises. The World Bank stopped lending to the monopoly operators making it much more difficult and expensive for African governments to raise investment funds for the incumbents, while at the same time, it expanded its finances for privatised telecom operators.

Blackman and Srivastava (2011) indicate that many countries privatised the incumbent operators, which was preceded by the Government performing the dual role of operator and regulator. Although the bottom line was sector reform, many countries introduced privatisation to attain different policy objectives: In Nicaragua, the proceeds from the privatisation of the Public Telecommunications Operator compensated citizens whose land was confiscated by the Sandinistas, while in Venezuela, privatisation improved the quality and penetration of telephone services. In Britain and Canada, privatisation was aimed at implementing a new political agenda (Pisciotta, 2001, p. 334).

Majumdar and Ahuja (1997, p.1590) argued that state ownership has an impact on the physical and human capital of an enterprise. Physical capital "leads to the centralisation of decision-making in bureaucracy, loss of managerial autonomy and modification of firms' investment priorities for political end". Concerning human capital "the provision of life-time employment leads to labour indiscipline and interventions in disputes for political reasons, consequently limiting the capabilities of firms to deliver products or services efficiently" (Majumdai and Ahuja, 1997, p.1590)

One of the benefits of privatisation is that it yields a substantial income for governments through the sale of shares in the incumbent to private individuals. However, the World Bank (2012, p.4) argued that the benefits go beyond the financial value of the transaction. The World Bank gives an example of Kenya, where the incumbent was privatised in 2007, which also saw the opening up of different segments of the sector to competition. The overall reform of the sector subsequently led to an increase in teledensity, which stood at 54% in 2012. It also increased to about 20 times in international traffic and a reduction in prices for wholesale capacity by 90 per cent since 2007 (World Bank, 2012, p.4).

Majumdar and Ahuja (1997, p.1590) motivate that privatisation is a policy reform initiative aimed at improving the efficiency of state-owned enterprises and that "one reason advanced for the existence of performance differences between private and government-owned enterprises is a misalignment of incentives in the public sector".

Majumdai and Ahuja (1997) attributed the difference between private and Government-owned enterprises to a "lack of capital market discipline to which state-owned enterprise agent managers can be subjected to by owner-principals. Additionally, public sector firms are subject to soft-budget constraints which increase financial profligacy and mutes incentives for attaining efficiency." (Majumdai & Ahuja, 1997).

Mohan (2001, p.4865) lists the objectives of privatisation as to promote increased efficiency, to raise revenues for the Government (and thereby to bridge fiscal deficits), to reduce government interference in the economy and promote more significant private initiative and to promote full share ownership and the development of the capital market. The promotion of efficiency appears to be the key driving factor to privatisation, because public ownership leads to lower levels of efficiency than private ownership (Mohan, 2001, p.4865).

According to Gillwald (2010, p.81), policy-induced constraints limits competition and ineffective regulation have resulted in excessive pricing, which limits access to mobile communication, especially in poorer households.

## 2.4 Trends in Sector Reform, Competition and Regulation in African Telecoms Markets

This section evaluates literature on the ways in which consumers benefitted from sector reform in the countries reviewed.

Gillwald and Stork (2008) assessed the impact of regulatory and policy objectives of telecommunications reform on actual sector performance in 17 African countries. Similar to this case study on Namibia, Gillwald and Stork (2008) reviewed sector performance based on ICT pricing and access and found that most African countries have policy objectives on delivering affordable access to telecommunication services. However, most of those objectives have not been met, or the results are limited, because costs continued to be high, therefore inhibiting access (Gillwald & Stork, 2008, p.ii).

The introduction of competition in some of the African markets reviewed led to price reductions (especially in mobile services) which improved access. However, markets with ineffective regulation or effective price regulation constrained the ability of consumers to access services, as prices remained high and therefore, unaffordable (Gillwald & Stork, 2008, p.ii). Regulation was acknowledged as a useful tool in ensuring competition in telecommunications markets (Gillwald & Stork, 2008, p.ii).

Gillwald and Stork (2008, p.2) argued that in order to establish the level of sector performance, there is a need to assess the linkages between markets and regulation and mobile service penetration rates. The indicators used to measure access and usage include broadband subscribers, internet users, fixed telephone subscribers and mobile cellular subscribers (per 100 inhabitants) (Gillwald & Stork, 2008, p.3).

Gillwald and Stork (2008, p.4) confirmed that there is a research gap between telecommunications sector policy objectives and the outcomes of such policy objectives. This is also true for Namibia, and hence this case study, which seeks to understand the ways in which consumer benefits were derived from monopolistic or partially competitive markets, in other words how policy objectives on competition may have benefitted consumers and further how regulatory interventions may have aided such benefits.

The study also found that consumers in markets that are liberalised (such as Nigeria, Ghana and Tanzania) have better access to telecommunications services due to pricing innovations (Gillwald & Stork, 2008, p.32).

Gillwald and Stork (2008, p.31) concluded that several African countries saw mobile operators become new incumbents, while fixed-line operators struggled to modernise their networks. Further, that high cost to telecommunication services continued to inhibit access and usage of services by consumers (Gillwald & Stork, 2008, p.31). Although African regulators have adopted sector reform strategies aimed primarily at improving affordability and access, most markets studied are not competitive because the incumbents remain vertically integrated (Gillwald & Stork, 2008, p.32).

In 2008, the East African region terminated the roaming charges due to market liberalisation. Gillwald and Mureithi (2011) studied the events that led to the successful termination of roaming charges in East Africa. The study found that it was the creation of a policy and regulatory framework, which enabled operators to transform national networks into a single cross-border network (Gillwald & Mureithi, 2011, p.1). This disruption occurred after the operator Zain designed a single network by offering roaming services at regular, domestic prices for voice. The effect of this was that roaming charges were terminated, mobile prices declined, and subscriber numbers increased (Gillwald & Mureithi, 2011, p.1).

Gillwald and Mureithi (2011, p.6) also explored the market environment, from which these benefits were obtained and found that it was the introduction of market liberalisation, which allowed Zain to enter the market as a competitor to the incumbent and also gain access to the international gateway. The study also found that while liberalisation in the East African region was initially slow, after Kenya, Uganda and Tanzania liberalised their markets, Zain (which had operations in all three countries) took advantage of the liberalised frameworks and launched a single cross border network (Gillwald & Mureithi 2011, p.6).

The outcome of this policy objective was that there was a competitive response in the entire East African region as follows:

- In Kenya, Zain was able to effectively compete with Safaricom and its subscriber numbers increased, although not as fast as Safaricoms' which had swiftly reacted to Zain's competitive advantage. By 2008, Zain had 3 million subscribers and a market share of 17%.
- In Uganda, Zain's subscribers increased faster than those of dominant operator MTN and its market share increased to 25 % by 2008;
- In Tanzania, Zain's market share increased to 28% by 2008. (Gillwald & Mureithi 2011, p.6).

Liberalisation in the East African region led to more players in the market. The introduction of the single cross border network was a disruptive competitive tool in that it forced incumbents to come up with competitive solutions, which resulted in the increase of cross-border traffic and decreased prices (Gillwald & Mureithi, 2011, p.11). In conclusion, the case study found that single network was feasible due liberalisation of international gateways in Tanzania, Uganda and Kenya, and the outcome is that it now supports regional integration at a reduced cost (Gillwald & Mureithi, 2011, p.11).

Gillwald and Stork (2008, p.32) interestingly highlight the relationship between competition and regulation by stating that regulatory burdens may be relieved by the

introduction of competition. Case in point was the termination of roaming charges in East Africa, which not only resulted in consumers having access at affordable prices but also regulators been relieved of implementing roaming policy objectives in the region. The case study of roaming in East African demonstrated that competition can be introduced in markets due to innovation, uniquely when the market responds to the lack of policy objectives, in a manner that gives consumers a choice (Gillwald & Stork, 2008, p.32).

The case study on Namibia does not focus on roaming but domestic charges for telecommunications services. The East African case study is, however, relevant because it demonstrates how traditional knowledge of market liberalisation and competition was applied with benefits for consumers. It demonstrates that liberalisation leads to innovation, which results in reduced prices, increase in subscriber numbers and changes in market structure. The same assessment that will be done in the Namibian case study, but for domestic charges not roaming. Ultimately, the overriding lesson from the East African case study is that "creating the policy and regulatory conditions for competition can be more effective in enabling price innovation than seeking to enforce resource-intensive regulation" (Gillwald & Mureithi, 2010, p.11).

Another essential element of competition in telecommunications sector reform is the formulation of pricing strategies that enable consumers to benefit from a competitive environment. Calandro and Chair (2016, p.14) looked into the policy and regulatory challenges caused by emerging pricing strategies. They advised that as competition increases, mobile operators need pricing strategies that do not lock in customers and allows them the flexibility to move to cheaper options. They observed that with the introduction of competition, mobile operators are generally shifting towards bundled prepaid packages as a pricing strategy (Calandro & Chair, 2016, p.13).

Calandro and Chair (2016, p.17) argue that competition generally leads to pricing innovation which in turn leads to lower prices. They demonstrated that pricing

strategies are typically aimed at customer retention and designed to benefit customers who want bundled services (Calandro & Chair, 2016, p.17). The study also demonstrated the importance of termination rate regulation, by arguing that it enables "competitive pressure by allowing smarter players to charge lower voice prices than their competitors" (Calandro & Chair, 2016, p.18).

The significance of the study by Calandro and Chair (2016, p.26) is that it demonstrated how regulatory interventions should accompany competition on interconnection price regulation as well as a properly designed pricing strategy to ensure telecommunications services are affordable to the consumers.

## 2.5 Conceptual and Theoretical Framework

The conceptual framework is premised on the principle that regulatory and competition theories have a positive impact on sector reform. The conceptual framework sets out a two-legged prerequisite to the attainment of sector reform: (i) regulatory theory, which makes provision for regulatory interventions aimed at attaining social and economic objectives; and (ii) competition theory, which focuses explicitly on the market structure and ownership.

The history of many ICT markets defines the need for sector reform, which was necessitated by the poor performance of state-owned operators. These markets are characterized as Government-owned monopolies with high barriers to market entry. The market went through various transitions in terms of market structure and ownership and a few regulatory interventions were made over the years. The main objective of this study was therefore to find out how consumers were able to reap benefits from the market, which was either partially competitive or monopolistic, during the three phases.

The framework is captured in Figure 2 below:

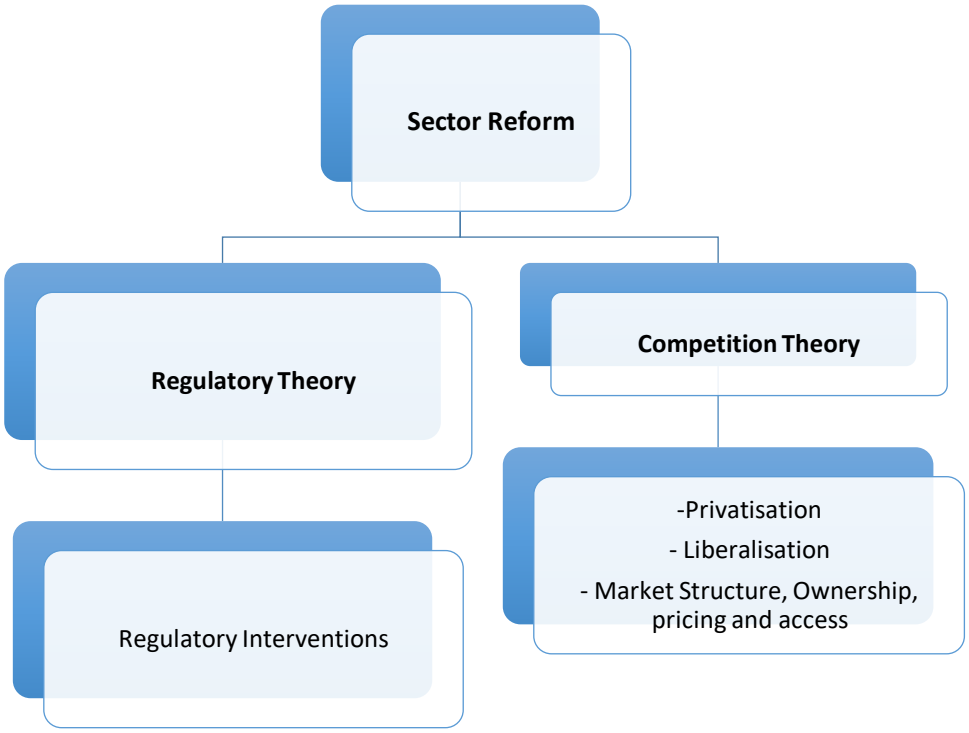



*Figure 2 Conceptual, theoretical framework*

The framework is described as follows: Sector reform refers to changes in the sector aimed at attaining consumer benefits, such as reduced prices for services, access to services and quality of service. Sector reform is attained *via* the implementation of competition and regulatory theory. The impact of regulatory theory on sector reform is based on the extent to which regulatory interventions implemented by the regulator are able to influence policy outcomes in the market. The policy dimension of competition theory focuses on privatisation, liberalisation, and market structure and has an element of pricing and access. Sector reform is the structure of the market and the substantive framework and or rules within which such services are offered. Sector reform also refers to the structure, and nature of institutions tasked with overseeing the implementation of reform as well the elements used for implementation.

Melody (1997, p.35) argued that the introduction of liberalisation and competition policy in monopolistic environments, with weak regulation, would result in market forces playing a modest role. The framework thus acknowledged that privatisation is characterised by a decrease of State ownership in the market, which in most instances is enabled by effective regulation. The *status quo* of any market structure is also relevant to regulatory reform design.

Competition, on the other hand, is imperative in stimulating innovation, price reduction and consumer protection, amongst others. Therefore, the concepts of pricing and access are critical to enabling competition. Ownership structures are also pivotal to enabling competition, as they relate to the ability of shareholders to attain the societal or economic objectives of running a telecommunications business. The relationship between competition and ownership is that they both have a positive impact on sector performance. Sector performance is used to measure the extent to which consumers were able to benefit from the market, based on the access and usage of services by consumers.

Market structure is defined as the entry, exist and the number of firms in a market (Labaj et al., 2017). Market structure defines the degree of competition, which also captures market behaviour and other demographics (Labaj et al., 2017). The presence of one operator to the exclusion of others, for instance, would constitute a monopoly, while the presence of multiple operators may signify a highly competitive market. It is also generally accepted that the levels of competition in a market, dictate the levels of market entry and penetration. Regulation, in general, is a tool for the implementation of privatisation and competition, because the regulator has the objective to promote competition and encourage privatisation in the market.

The above characteristics were used to examine the policy outcomes of sector reform objectives. The views of research participants will be analysed according to this

theoretical framework as the research questions have been designed to ascertain views on the different elements reflected in the framework above and their relationship.

## 2.6 The Literature Gap / Original Contribution

The literature review discussed academic articles about how competition and regulation led to benefits for consumers in other markets. The literature gap is that none of those studies was about Namibia, which means the gap in this study is on location or geography. The research seeks to understand the phases under which consumer benefits were derived and the conditions under which consumer benefits were realised. This understanding is significant because it can guide future policy and regulatory thinking on competition regulation.

## 2.7 Statement of Likely Significance

There is generally a gap in research on the relationship between telecommunications policy objectives and outcomes of such policy objectives in a developing country context, especially for countries with low and sparse population density. The outcomes of this research will indicate the level of sector performance, related to subscriber numbers and the prices at which consumers can access services. The primary significance of this case study is thus that it looks at how consumer benefits were derived from monopolistic or partially competitive markets in Namibia. This research is relevant to policy and economic issues. It will change the regulatory landscape in that it will highlight the efficacy of regulatory interventions introduced in the three phases. The outcome of this research may be used by the Ministry of ICT to influence future policy on sector reform and by the Regulator to improve the implementation of regulatory interventions targeted at ensuring sustainable competition and ultimately consumer welfare.

## 2.8 Chapter Summary

This chapter evaluated the literature that studied telecommunications sector reform and how consumers benefitted from the markets and the conditions under which the benefits were realised. The literature also looked at the market structure and regulatory interventions that were made to attain the benefits realised. The conceptual and theoretical framework was formulated by reviewing existing literature on competition theory and regulatory theory. This chapter described the theories on regulation and competition. Chapter 3 will set out the research design.

# Chapter 3: Qualitative Case Study on the Namibian Phenomenon

## 3.1 Introduction

The literature reviewed in chapter 2 highlighted the theoretical and conceptual roots of the study and illustrated the gap in knowledge, which this study sought to address. The research was a case study on how Namibia's market developments, reforms and structure fit traditional knowledge on sector reform. The research was designed to obtain answers to the research question, sub-questions and problem statement.

## 3.2 Research Methodology: Qualitative Interpretivist Case Study

This case study will look at the sector reform in Namibia from a real-life context (Yin & Cambell, 1989). The goal of the case study is to understand "a complex social phenomena and real-life events such as organisational and managerial processes" (Ebneyamin, 2018). This research is a case study about how Namibia's market development, reforms, and structure fits traditional knowledge on sector reform. For purposes of this case study, sector reform refers to competition and regulation theory as per the context set out in Chapter 2. The research was designed to obtain answers to the research questions and sub-questions and address the problem statement.

### 3.2.1 Qualitative Interpretivist Approach

There are two types of approaches to research design, namely, quantitative and qualitative approaches:

- Quantitative research is generally utilised in instances where there is a need to quantify data and involves a numerical or statistical approach which is independent of the researcher (Williams, 2007, p.65). The qualitative approach is an investigation of a social problem in its original settiAndrade, 2009, p.13). . The investigation outcome is a description of the natural setting and consideration of the views of participants (Andrade, 2009, p.13). Interpretive research assumes "that our knowledge of reality is gained only through social constructions such as language, consciousness, shared meanings, documents, tools, and other artefacts" (Klein & Myers, 1999, p. 69).

- The qualitative method is a holistic approach to research design, involves the discovery, and focuses primarily on having a purposeful use for the description, explaining and interpretation of data (Williams, 2007, p.67). The study analysed how consumer benefits were derived out of limited sector reform in the Namibia telecommunications market, and this will require an understanding and extrapolation of the events that occured in the different phases of reform. The study will use statistical data on ICT pricing and access as evidence for consumer benefits. Document review were a source of data concerning the numerous transitions of the sector reform phases and interview data on why certain things happened during the period were collected.

The study also researched the natural setting of the telecommunications market by building a complex representation of the challenges, which was described and explained through the views and words of key informants and critical stakeholders.

The study design was qualitative because it identified reform challenges and elements through the careful examination of the interviewees' subjective views and words. The occurrence of events was sourced from documentation such as policies, newspapers, letters, annual reports, court cases, performance assessment reports and legislation. Kleine and Myers (1999) have promoted this method of data collection as a means of gaining knowledge about the reality of a social problem in its natural setting.

The philosophical assumptions of the study are interpretive. Interpretive studies mainly use social constructions such as documents, tools and other artefacts to ascertain knowledge. (Klein & Myers, 1999, p.69). According to Willis (1995), interpretivists are anti-foundationalists, who believe there is no single correct route or particular method to knowledge. Walsham (1993) argued that in interpretivism there are no "correct" or "incorrect" theories.

The researcher's knowledge of this social problem was generated by building a complex representation of the challenges of sector reform, which were described through the subjective views and words of informants during interviews. Klein and Myers (1999) argue that interpretivists consider this as an essential element of research, mainly because knowledge is gained through social constructions such as documents and shared meanings. The study seeks to acknowledge the existence of subjective knowledge, which is already in the social world, and to reconstruct and understand this knowledge through the subjective views of interviewees. According to Goldkuhl (2012), this is the core idea of interpretivism.

The conceptual and theoretical framework took into account prior studies on sector reform, the peculiar dynamics of the Namibian market, briefly outlined in chapter 1 and propounded in the problem statement and in line with the argument by Walsham (2005) that there are no correct or incorrect theories.

As indicated in the literature above (Klein & Myers, 1999, p.69) what makes qualitative research interpretive is the underlying philosophical assumptions of the researcher. The conceptual and theoretical framework states that in order to attain consumer benefits, both regulatory and competition theory must be introduced in the market. Regulatory theory pertains to the effectiveness of the regulatory interventions and competition theory focuses on the market structure and ownership.

The conceptual and theoretical framework also assumed that especially for historically monopolistic markets, competition theory might be introduced *via* the implementation of regulatory interventions, to address market failure. There is thus a correlation between

these two theories of sector reform. The correlation is that the implementation of competition and regulatory theory results in sector reform. In the end, the conceptual and theoretical framework assumed that consumers enjoy reduced prices and access to services, if the market is competitive and competition is attained via the implementation of regulatory interventions.

The study identified the sector reform elements applicable to each phase and the regulatory interventions to support the reform element. The interventions that must have been introduced to avert the outcome of reform in each phase were identified.

## 3.3 Data Collection and Ethical Clearance

### 3.3.1 Purposive Sampling

The essence of qualitative research is to ensure that the selected sample adequately captured the critical aspects and variations of the research phenomenon (Eliot & Timulak, 2005, p.151). Given the nature of data collection and the time required to do the analysis, the size of the sample, in qualitative research, is much smaller than in quantitative research (Eliot & Timulak, 2005, p.151).

Purposive sampling allows the researcher to use his/her subjective judgement in selecting a sample, which he/she believes, is "representative" of the population (Greenfield (Ed) 2002, p.189). This judgement, as described by Kumar (2011), is exercised by assessing the knowledge of the interviewees on the subject matter.

The purposive sampling method was used for this study in order to depict the essential and decisive aspects of the research question (Eliot & Timulak, 2005, p.151). The purposive sampling method gave the researcher the flexibility to choose the interviewees based on their knowledge of events in the Namibia telecommunications market during the respective phases. In addition, it enabled the researcher to make a judgement on the interviewees' extensive knowledge on the phases under investigation Kumar (2011, p.192).

From each stakeholder, senior managers were interviewed, using purposive sampling. The researcher was of the view that the nature of these strategic positions requires the incumbents to know the market structure, ownership, regulatory interventions, pricing and access matters, during the period covering the timeline of the phases, from 1992 to 2019. This also included past employees of operators and the NCC who made decisions relevant to the study. Interviewees needed to know the electronic communications market of Namibia.

### 3.3.2 In-depth Interviews

Interpretive studies use an open-ended strategy for obtaining data, and the inquiry is flexible and cautiously designed according to the uniqueness of the research problem in order to extract the particular experiences of each interviewee interviewed (Elliot & Timulak, 2005, p.150). Most interpretive studies regard interviews as a way of accessing the interpretations of informants (Walsham, 2005, p.323).

In-depth interviews were used as a primary source of data collection and proved useful in that it was easy to ascertain and reconstruct the existence of knowledge on the research question.

The following twelve (12) interviewees were purposefully selected and interviewed as follows:

1. **Regulated entities Government Owned**

    a. REGO 1- 12 December 2019
    b. REGO -2 – 22 January 2020
    c. REGO-3 – 24 January 2020
    d. REGO-4 – 22 December 2019

2. **Regulated entities – Privately Owned**

    a. REPO -1-13 January 2020

3. **Community Organizations/NGO**

    a. CO-1 – 18 January 2020

4. **Academic /Policy Experts**

    a. APE-1 – 22 January 2020
    b. APE-2 – 21 January 2020
    c. APE-3 – 16 January 2020

5. **Government Body**

    a. GB-1 – 14 January 2020

6. **Regulatory Body**

    a. RB-1 – 14 January 2020
    b. RB -2 – 14 January 2020

Each interview took approximately one hour. Reflective notes were used to record data during the interviews, as this did not only save the research time but also costs in transcription. All participants were also informed that participation in the research was voluntary and that they are free to withdraw at any stage without giving a reason and that are no risks to participation, signed an informed consent form. The informed consent form contained an introduction to the research topic and why it is been conducted and promises on explanations on issues such as withdrawals, confidentiality and anonymity. It is attached as **Annexure A** to the report.

It was also explained that the study may have several beneficial outcomes, as the topic is of interest to persons and institutions active in the ICT policy and regulation environment. Further, that a few quotations from selected interviews may be included in the final report, with the interviewees' details anonymised and that the examined research report will be published in the Wits Library Electronic Theses and Dissertations. Participants were also advised that any limited personal information collected will be kept confidential. Names will not be listed in the published report and that the anonymised data generated in the course of the research will be kept securely in paper or electronic format. The Human Research Ethics Committee (Non-Medical) issued ethical clearance on 15 October 2019.

### 3.3.3 Interview Guide

Data in qualitative research is typically not collected by way of predetermined questions but by way of raising issues on the topic of inquiry. It is thus essential to develop a loose set of issues to be discussed with interviewees' in the interview guide. By utilising the interview guide, the researcher ensured the preferred reporting and comparability of information across interviewees (Kumar, 2011, p.162).

Because the research seeks to understand the occurrence of numerous events in a sophisticated setting, an interview guide was designed with open-ended questions to

guide the data collection process. The interview guide is attached as **Annexure B** to the study. The interview guide was forwarded to participants before the interviews were conducted to enable them to acquaint themselves with the questions before the interview.

An interview guide also ensured consistency in the scope and focus of the questions asked and helps guide the researcher in his/her interaction with multiple participants. (Hoepfl, 1997). The interview guide was structured according to the main themes of the study; i.e. regulatory and competition theory as captured in the conceptual framework for the periods (i) 1992-2008, (ii) 2008-2014 and (iii) 2015-2019.

The questions were structured in a manner that allows the researcher to consistently obtain information on the same sub-themes in respect of all phases. The first set of questions allowed interviewees to describe the three phases of sector reform by expressing their views on the numerous transitions in terms of market structure, and ownership and the regulatory interventions made. The questions sought to ascertain the occurrence of events that led to the transition between phases and how consumer benefits were derived from monopolistic or partially competitive conditions in the different phases of sector reform. The second set of questions gauged the views and perspectives of interviewees on sector reform and how the current regulatory framework facilitated competition. The last set of questions ascertained the views of interviewees on how the current regulatory and policy framework will facilitate future sector reform in Namibia.

### 3.3.4 Reflections

One challenge experienced during the interview process was that the researcher works for the Regulator of the electronic communications sector of Namibia and most interviewees work for regulated entities. Some of the interviewees' digressed from the scope of the interview and rather expressed their dissatisfaction with the Regulator.

The digression was managed by re-directing the discussion to the issues as per interview guide. It was explained that data was collected onlyfor academic purposes and will not be used by the Regulator for any regulatory processes. Finally, they were also informed that participation in the study would not give them an advantage or disadvantage with the Regulator. Some of the digressions were considered as unimportant information and simply left out of the data prepared for analysis.

### 3.3.5 Documentary Sources

According to Walsham (2005, p.323), an interpretive study requires that interviews are supplemented by other forms of data collection, such as documentary reviews. Data was thus be collected by reviewing other documents such as policies, newspaper articles, official records, annual reports of licensees, sector review documents, court cases, performance assessments and legislation. Internal documents such as annual reports and policies are important because they may include strategies, plans and evaluations that are critical to the study (Walsham, 2005, p.232). The bulk of the data in this study was obtained from documentary sources. This is also, why the number of interviewees was reduced from 14 to 12 because the documentary sources provided an overwhelming amount of the information required to answer the research problem. The interviews were merely used to explain some of the gaps in the documents and to understand parts of the phenomenon that may not necessarily be found in the documents.

## 3.4 Data Analysis

In-depth interviews were conducted during the research and produced data from field notes, and therefore, the first step of data analysis was the preparation, which involved reading the whole data set together to enable the researcher to get a full overview of the researched phenomenon (Eliot & Timulak, 2005, p.153). During the pre-research reading and the first reading of the data, the researcher gained ideas about some of the

broad headings of the research such as regulatory and competition theory which in turn gave rise to the different domains (Eliot & Timulak, 2005, p.153).

The second step of the analysis commenced with the conversion of field notes into write-ups, which are readable and edited for accuracy (Mitchell et al., 2005, p.210). During this step, the researcher focused on omitting repetitions and irrelevant digressions but took care not to delete data that is important and relevant to the research phenomenon (Eliot & Timulak, 2005, p.153).

Data from in-depth interviews captured the essence of the content and of the recurring themes that bind them together accurately (Mitchel et al., 2005, p.210). The third step in the analysis was that the field notes were reviewed to identify themes, which are the "umbrella" constructs (Mitchel et al., 2005, p.211). The data were analysed by focusing on understanding the "meaning imbedded in participant experiences through an inductive, ongoing and evolving process of identifying themes within" the context of the Namibia telecommunications market Daley (2004, p.1). The conceptual framework of the study guided the themes of the analysis process.

The researcher also consulted secondary data sources such as annual reports, court case and sector review reports and the field notes were reviewed in light of information found in the secondary data sources (Mitchel et al., 2005, p.213). The next step involved dividing the data into distinctive meaning units, which "are parts of the data that even if standing out of the context, would communicate sufficient information to provide a piece of meaning to the reader" (Eliot & Timulak, 2005, p.153). During this delineation phase, the researcher also got rid of redundancies, which did not change the meanings contained in them (Eliot & Timulak, 2005, p.153). These meaning units form the basis of data analysis and the researcher took care to be able to trace the units back to the full data protocol, in case there arose a need to clarify something from the context of the research (Eliot & Timulak, 2005, p.153). The next phase of the analysis thus involved finding an overall organising structure for the data; this was done by sorting

the data into domains that provide the conceptual framework for the data, referred to in the grounded theory as axial coding (Elliot & Timulak, p.154).

The pre-research reading is important for this phase of the analysis because not only did it help with the constructing of the conceptual framework, but also assisted the researcher in introducing the structure into the data through research questions (Eliot & Timulak, 2005, p.154). The pre-research phase was also important to the analysis as the researcher used some of the data to restructure the conceptual framework, which (the conceptual framework) is critical in giving guidance to the interconnections and relationships between the different domains.

The fourth phase of the analysis involved coding or categorising the meanings within each of the domains (Elliot & Timulak, 2005, p.154). Elliot and Timulak (2005, p.154), explain categorisation as follows: The categorising evolves from the meaning in the meanings unit, and the creation of categories is an interpretive process on the part of the researcher, in which the researcher is trying to respect the data and use category labels close to the original language of participants. The generation of categories usually ends with a taxonomy that describes and interprets the whole phenomenon as it was contained in the data gathered.

The analysis also focused on deconstructing and categorising the concepts as per the theories in the conceptual framework, which gave rise to naming and describing concepts such as privatisation, liberalisation, and independence of the Regulator, regulatory performance and efficiency and pricing and access. These categories are important to communicate the essence of the phenomenon (Elliot & Timulak, 2005, p.155).

The analysis also focused on organising the data into the themes that make up the research questions and how the interviewees responded to each question in the interview questionnaire. It is important to organise the data by questions across all

interviewees in order to identify consistencies and differences. Thereafter the data was grouped into themes that arise from the raw data, such as privatisation, market structure and ownership, independence of the Regulator, market development, and pricing and access. "The goal is to create descriptive, multi-dimensional categories which form a preliminary framework for analysis" (Hoepfl, 1997).

A key component of the categorisation is a delineation of the relationships between the categories (Elliot & Timulak, 2005, p.155). These relationships and interconnections were created in the conceptual framework, which was depicted by the concept map and used as a strategy to search out and analyse the themes in the study, by creating categories or coding systems as discussed above (Daley, 2004, p.3.) The map was also utilised by the researcher to identify levels of hierarchy, interconnections and repeated concepts (Daley, 2004, p.3.).

The conceptual framework was used to create a logical representation of the data and to ensure that the interconnections and relationships between different and similar themes as well as the categories created in the domains. It is also evident that the themes and the interdependencies were created during the pre-research readings and eventually incorporated into the research questions. The main findings of the research have been abstracted by generating categories with coding that described and interpreted the whole research phenomenon within the context of the underlying philosophical assumptions as reflected in the conceptual framework (Elliot & Timulak, 2005, pp.155-156).

Document review is the main source of data with respect to the evolution of the sector reform phases. Interviews were used to provide data on why certain things happened during the period under review. The chapter will merely narrate the events as they occurred.

Chapters 4, 5 and 6 outlined and analysed the changes, consumer benefits and the market environment from which the benefits in Phases I, II and III, respectively. In other words, each chapter analysed the nature of consumer benefits and the ways in which consumers benefitted in each phase. The analysis will be based on research data, also set out in the chapters for each phase.

To ensure consistency and comparability of information between the three-sector reform phases, the analysis of each sector reform phase will cover the following themes: (i) market structure and ownership, (ii) pricing and access and (iii) regulatory interventions. Although this will be the main themes for each sector reform phase, the occurrence of unique events under the themes of some sector reform phases may lead to sub-themes, which may not be consistently applied to other phases.

## 3.5 Limitations of Research

The study described the phases of sector reform through numerous transitions in terms of market structure and ownership. As indicated in Figure 1, all three phases of sector reform had a level of Government indirect ownership. A study focusing on state ownership in a market ventures into a highly political area. Thus, the evidence of the government's involvement may be difficult to get. Another limitation was that some stakeholders were hesitant to respond to the research questions, especially interviewees that may deal with issues of conflict of interest and independence of the respective institutions.

This was managed by explaining to interviewees' that the research is being conducted for degree purposes only with the University and not for purposes of employment with the Regulator and that their participation is voluntary. Interviewees were also informed that they may decline and that nothing would be used by the Regulator for any regulatory issues. Finally, they will also be informed that participation in the study will not give them an advantage or disadvantage with CRAN.

## 3.6 Chapter Summary

The study was an empirical inquiry, which investigated how Namibia's market development, reforms, and structure fits traditional knowledge on sector reform. The case study was qualitative, interpretivist research, and interviews and documents were used as methods of data collection. Chapter 4 outlines the research results in respect of Phase I and analyses the outcomes.

# Chapter 4: Commercialisation, Licensing and Transition to Partial Competition 1992-2008 (Phase I)

## 4.1 Introduction

Chapter 4 describes Phase I of sector reform and demonstrates the numerous transitions in terms of market structure, and ownership, and the regulatory interventions that were made. The chapter then outlines and analyses the consumer benefits realised and the market conditions from which the benefits in Phases I were claimed. Phase I commenced with mobile and fixed public monopoly and is thus referred to as the transition from a public monopoly to a hybrid mobile market. The significance of Phase I is that it looks at how consumers benefitted from a market that commenced as a mobile monopoly and transitioned to a competitive market.

## 4.2 Market Structure and Ownership

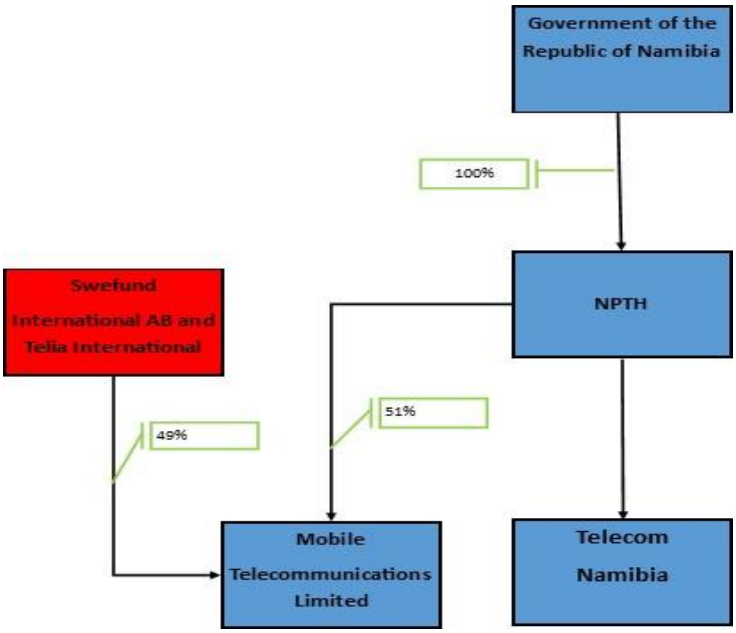
The Posts and Telecommunications Companies Act 17 of 1992 provides for the establishment and commercialisation of Telecom Namibia and the establishment of a holding company, namely Namibia Post & Telecoms Holding (NPTH). The Government of the Republic of Namibia (the State) is a 100% shareholder of NPTH. NPTH owns 100% of the shares in Telecom Namibia and 51% of the shares in Mobile Telecommunications Limited (MTC). Figure 3 below illustrates the shareholding.

Sherbourne and Stork (2010) argued that the Government held the acquired ownership in Telecom Namibia so that it could provide services to rural areas, as it was concerned that a private company would only focus on urban areas. Another reason for State ownership was an attempt to avoid the concentration of telecom infrastructure in the hands of foreigners (Sherbourne & Stork, 2010). Telecom Namibia had a performance agreement with the Ministry of Works, Transport and Communications and was a

monopolistic provider of international voice and data gateways (Sherbourne & Stork, 2010, p.4). Telecom Namibia was primarily a fixed-line operator and remained a monopoly provider of such services during Phase I.

In 1995, MTC received a mobile cellular license (Sherbourne & Stork, 2010), and was established as a joint venture between NPTH (owning 51%) and Swedfund International AB and Telia International (owning 49%) (Oloff & Miller, 2002, p.19). Figure 3 below shows the ownership structure at the commencement of Phase I:

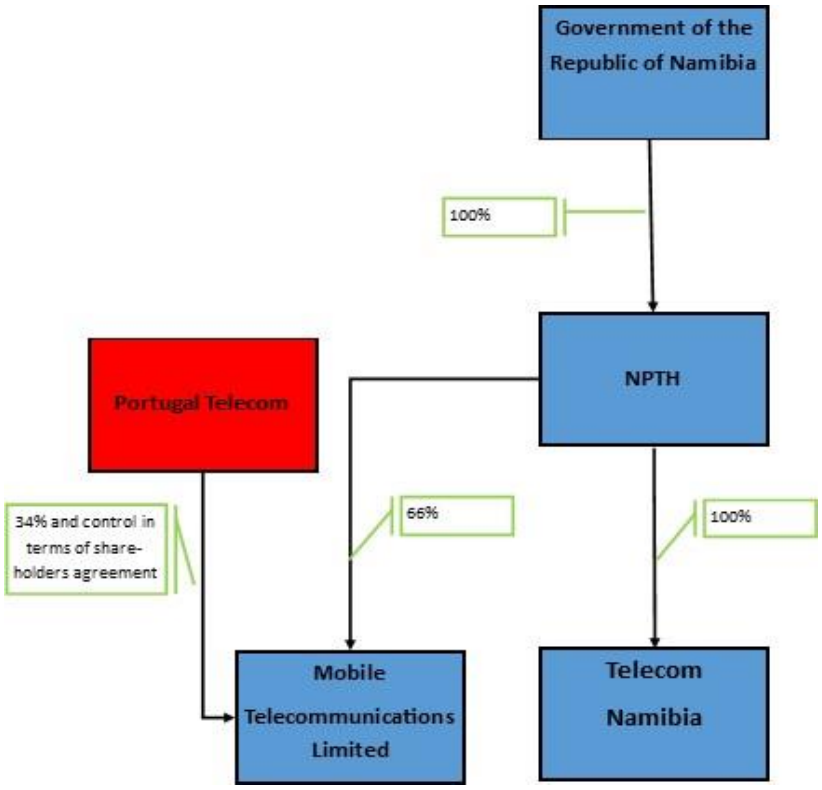
**Figure 3: Ownership Structure at the beginning of Phase I (Researchers compilation)**




In 2004, Telia Overseas AB and Swedfund International AB sold 49% of MTC to NPTH. In 2006 Portugal Telecom bought 34% of the shares in MTC from NPTH (Sherboune & Stork, 2010, p.5). Leo was licensed in 2006 and paid N$65 million for its licence to the NCC (Sherbourne & Stork, 2010). The Leo shareholders were as follows; Telecom Management Partner (39%), NamPower (37%), Nam-mic (12%), and Old Mutual Namibia (10%) as well as an educational trust established by the shareholders (2%).

After the transfer of control in MTC, the Phase I market structure changed as demonstrated in Figure 4 below:

**Figure 4 - Phase I Ownership Structure after transfer of control in MTC (Researchers' compilation)**




With the licensing of Powercom (t/a Leo), Namibia moved from a Government-owned mobile monopoly to a mobile market with two competing operators, one wholly privately owned (Sherbourne & Stork, 2010, p.10).

### 4.2.1 Consumer Pricing and Access to Services

**Fixed-line services:** According to Hesselmark and Miller (2002, p.18), there was a rebalancing of tariffs for Internet broadband which started in the year 2000 in Namibia, and led to a reduction of national and international charges, although international charges were still considered high. Hesselmark and Miller (2002) also observed that there was insufficient competition in the area of internet bandwidth as a 64 Kbps line was costing about 400 US$ per month and consumers complained about the poor quality of service (2002, p.18). Respondent REPO-1 explained that the fixed network is labour intensive and the private sector generally shuns the fixed market, because of the cost of labour and the regulatory impediments in constructing ICT infrastructure. Due to insufficient competition in this market, fixed prices in Namibia remained high. RIA (2006, p.18) conducted a fixed-line price comparison study between Namibia, South Africa and Botswana. The study found that Namibia's fixed-line costs were expensive compared to South Africa and Botswana. The study found that Namibia was one of the most expensive countries in the sample used (RIA, 2006, p.18). Table 3 below shows the cost of fixed-line services:

*Table 3 Fixed Line costs comparison, Source RIA, 2006*

| **Country** | **USAGE Bundle Cost (US$)** |
|---|---|
| Namibia | 4.0 |
| Botswana | 2.0 |
| South Africa | 1.1 |

Botswana is an example of how a sparsely populated country (such as Namibia) can enjoy reduced prices by introducing effective regulation and competition (RIA, 2006, p.17). By comparing Namibia's fixed-line costs to Botswana and South Africa, RIA concludes that Namibia's fixed-line costs are expensive. RIA concluded with an

assumption that prices in Namibia were likely to drop with the operationalisation of Leo and the introduction of fixed-wireless products by Telecom Namibia (2006, p.20).
The pricing for internet bandwidth was unaffordable for consumers, which also limited access to fixed broadband subscriptions by consumers.

**Mobile services:** The licensing of MTC required an amendment to the NCC Act to mandate the NCC to provide for the regulation of tariffs for voice and data services (Sherboune & Stork, 2010, p.6). In 2002, MTC's tariffs were much lower than those charged in South Africa with the per-minute charges ranging from 0.65 to 2.24 N$ per minute, compared to the Vodacom SA charges which vary from 0.87 to 2.85 N$ per minute (Hesselmark & Miller 2002, p.20).

However, the picture changed by 2006 as per the mobile costs in Table 4 below:

*Table 4 Mobile Costs Comparison, Source RIA, 2006*

| Country | USAGE Bundle Cost (US$) |
|---|---|
| Namibia | 6.9 |
| Botswana | 4.4 |
| South Africa | 6.0 |

In 2005 Namibia's cost was twice as expensive as South Africa and therefore that the 2006 costs as per Table 4 above were a good improvement (RIA, 2006, p.23). Between 2005 and 2006, the reduction in cost was attributed to a reduction in monthly subscription fees, reduced SMS costs and the introduction of off-peak rates (RIA, 2006, p.23).

The most significant market structure change in Phase I was the licensing of Leo in 2006. Respondent REGO-3 explains that on-net pricing was first to fall upon the

introduction of competition and the cost for broadband services continued to drop due to the competitiveness of the market. Respondent RB-1 concurred that when Leo entered the market, the mobile prices dropped. Telecom Namibia also dropped their retail prices but not the wholesale prices for fixed services. The drop in retail prices meant that services were more affordable and accessible to consumers. Respondent APE-1 concurs that mobile prices dropped after the licensing of Leo and led to the introduction of Long-Term Evolution (LTE) services by MTC. Respondent APE-1, remarks that with the licensing of Cell One, "the market became consolidated/concentrated" and that "this is quite unusual in market perspectives." The discussion below will now discuss how these market structure changes affected access and usage.

The picture was, however, different in the mobile market as the prices continued to decrease, although they were still higher than those in neighbouring South Africa and Botswana. Access to mobile subscriptions, therefore improved as pricing was now more affordable.

### 4.2.2 Increase in Subscription and Coverage

**Mobile services:** MTC reached a milestone of 100 000 mobile subscribers by 2001 and 150 000 subscribers by 2002, (85% of which were prepaid subscribers) (Hesselmark & Miller, 2002, p.19). The mobile phone penetration rate was at seven mobile phones per 1000 inhabitants by 2002 (Hesselmark & Miller, 2002, p.15).The geographic coverage was 65 % of the population by 2002 (Hesselmark & Miller, 2002, p.15). By 2005, Namibia had over 500 000 mobile subscribers and 100 000 fixed-line subscribers (RIA, 2006, p.24).

Respondent APE-1 reasoned that competition forced MTC to make infrastructure investments, which benefitted consumers. In 2006 MTC launched 3G broadband services and reduced the price of starter packs and recharge vouchers, which resulted

in an increase of its subscribers by approximately 150 000 (Sherbourne & Stork, 2010, p.5-7). There was a subscription increase of 33.8% in prepaid subscribers and 38% in post-paid subscribers (MTC, 2006, p.4). Respondent REGO-3 agreed that during Phase I competition enabled "MTC to invest in technology thus making it one of the most innovative telecommunications companies in Africa, by being the 1st to launch 3G services in our region". The introduction of 3G services was a technological innovation that led to ensure benefits for consumers.

Table 5 below shows that subscription numbers increased by 31.4% between 2007 and 2008, which means that access also increased:

*Table 5 Mobile Subscriptions 2007-2008 – Source World Bank 2014*

| Country Name | 2007 | 2008 |
|---|---|---|
| Namibia | 800,270.00 | 1,052,000.00 |

Respondent REGO-3 argues that competition enabled MTC to introduce pre-paid subscription packages that allowed the vast offering of broadband, voice and SMS bundled offerings, which MTC would not have done in the absence of competition. This also demonstrates that the presence of competition led to technological innovation in services and products. MTC agrees that the introduction of a second mobile operator created a conducive environment for market growth, which enabled MTC to provide better pricing and services (2007, p.4). MTC further attributes some of the growth to providing coverage in areas deemed as uneconomical or unprofitable (MTC, 2007, p.4).

In 2006, Leo announced that SIM cards would be available at the end of the year, but only launched its services at the beginning of 2007 (Sherbourne & Stork, 2010). In 2007, the Government introduced a 15% VAT levy on airtime sold to pre-paid

customers (MTC, 2007, p.4). In March 2007, Leo launched a GSM 900/1800 network, in all 13 regions in Namibia and in June 2008 switched on a W-CDMA based 3G network with coverage in Windhoek only (Telegeography, 2012). Notwithstanding the above price reductions and technological innovations, RIA argues that prices in Namibia continued to be high in comparison to other countries due to an inadequate regulatory framework and the monopoly powers of MTC and Telecom Namibia (2006, p.17). At this stage the NCC only had 3 professionals, and a budget of N $ 5.3 million, which was vastly underspent. The NCC was mandated with the regulation of the MTC, but not Telecom Namibia, which had a performance contract with its line ministry, which is the Ministry of Works, Transport and Communications (RIA, 2006, p.15). This clearly indicates that the independence and legitimacy of the NCC had a negative impact on market growth due to the lack of capacity to holistically and comprehensively regulate the industry.

Respondent GB-1 explained that the introduction of mobile services led to a decline in the fixed subscriptions because consumers migrated to mobile, especially at the household level.

**Fixed services:** During Phase I, the installation of fixed lines remained the preserve of Telecom Namibia, and the number of fixed lines doubled (from 51 000 in 1991) to 117 000 in 2002, and the teledensity was six lines per 100 inhabitants (Hesselmark & Miller, 2002, p.15). Table 6 below shows the number of fixed telephony subscribers during the years 2007-2008.

*Table 6 Fixed Telephony subscriptions 2007-2008 Source World Bank, 2014*

| Country Name | 2007 | 2008 |
|---|---|---|
| Namibia | 138,171.00 | 145,360.00 |

### 4.2.3 Introduction of CDMA

Telecom Namibia introduced Switch services and rolled out 800 MHz Code Division Multiple Access (CDMA) network (Sherboune & Stork, 2010, p.7-11). The implementation of the CDMA network meant that Telecom Namibia saved costs on service and maintenance, as it was no longer responsible for rolling out cables to consumer premises (Sherbourne & Stork, 2010, p.11). However, according to Respondent APE-3, the fixed market continued as a monopoly because there was no competitor against Telecom Namibia. Further that when Telecom attempted to introduce its mobile CDMA product, it looked like competition had arrived against MTC, but MTC used political lobbying to stop Telecom Namibia from rolling out the services.

The Cabinet decision to curtail the CDMA product to geographic boundaries effectively stifled another attempt at introducing competition in the mobile sector (Respondent APE-3). The fact that the Government-owned 100% of the shares in Telecom Namibia and 66% of the shares in MTC, meant that Cabinet could interfere politically with the market and make decisions to limit the provision of a service to geographic boundaries. This decision limited the growth of the market, as this service would have given some competition to MTC. It also meant that consumers found the service less appealing due to its geographic limitations. Respondent RB-1 argued that it is challenging to duplicate fixed-line services and hence the continued Telecom Namibia monopoly. Further, the inability of Leo to effectively launch as an operator was due to Telecom Namibia's continued fixed monopoly, because Telecom Namibia could charge whatever wholesale prices it deemed fit for leased lines. During this Phase, MTC and Leo pricing were regulated, but the NCC did not regulate that of Telecom Namibia.

This discrimination in pricing regulation between the three operators had an impact on the market. Respondent APE-2 explains that the fixed-line monopoly means very high leased line prices in international comparison and low fixed-line penetration, which holds back the expansion of mobile broadband as well. MTC, on the other hand, attributes the lack of growth of fixed services, to Telecom Namibia's introduction of mobile and other VOIP services (2006, p.34). CO-1 agreed that "fixed communications did not die, but the emergence of mobile services made it redundant".

MTC, on the other hand, regarded the introduction of CDMA as "a controversial development" because the sale of the 34% (shares in MTC) to Portugal Telecom was on condition that

> There will only be two mobile operators in the Namibian market for the next few years. However, the same Government has allowed the fixed-line operator to compete in the mobile arena without the necessary licensing requirements for mobile operators (MTC, 2007, p.4.).

This undertaking by Government, as highlighted by MTC (2007) , required an understanding of the interface between State ownership and market development. Respondent APE-3 explained that the fact that Government owned Telecom Namibia, which made it possible for Cabinet to make a decision, directing Telecom Namibia to limit its CDMA product geographically. Respondent APE-1 indicated that the shareholder took a political decision, and interfered in the market, which allowed MTC to thrive more. The fact that Government-owned MTC also meant that the Government was less inclined to step in when the Cell One was impacted by MTC price war. State ownership, according to Respondent APE-1, thus affected the market negatively. According to Samarajiva (2008) one factor that affects the legitimacy and independence of the regulator is State ownership.

**Fixed-line services:** Respondent RB-1 argued that it is challenging to duplicate fixed-line services and hence the continued Telecom Namibia monopoly. Further that the inability of Leo to effectively launch as an operator was due to Telecom Namibia's continued fixed monopoly because Telecom Namibia could charge whatever prices it deemed fit. Respondent REGO -1, however, claims that Telecom Namibia's high costs for leased lines were limiting market growth and hindering competition. As a result, other licensees started to duplicate infrastructure, which limits roll out to under-served areas, because instead of new entrants sharing infrastructure with Telecom Namibia, they are forced to make substantial capital investments in infrastructure. Respondent REGO-3 argues that the slow pace it has taken to liberalise the fixed market has created a lack of competition, lack of innovation and high costs in the fixed segment.

In October 2005, Telecom Namibia reduced its tariffs for international IP bandwidth by 20% and in July 2006, kilometre-based charging bands were abolished, leaving only national and local charging bands (Telecom Namibia, 2007.p.27). In October 2006, the unit-based charging system was changed to per-second billing and tariffs for fixed to mobile for selected destinations were also lowered by 15% (Telecom Namibia, 2007, p.27).

## 4.3 Regulatory Interventions

The Namibia Communications Commission Act, No 4 of 1992 came into force in 1992 with the establishment of the Namibia Communications Commission (NCC). Sherbourne and Stork (2010) describe the NCC as "a small and weak institution", funded from the Government budget under the vote of the Ministry of Information and Broadcasting. The NCC only had three professionals, and a budget of N$5.3 million, which was underspent. The mandate of the NCC was to regulate MTC, but not Telecom Namibia (RIA, 2006, p.15). According to Samarajiva (2008), a regulatory agency should “be independent of operators and government, based on expertise, procedural

legitimacy and effective". A regulator will attain independence if it is and has procedural legitimacy and operates in the public interest and shows results (Samarajiva, 2008). One factor that affects the legitimacy and independence of the regulator is State ownership (Samarajiva, 2008). The description by Sherbourne and Stork (2010) casts doubt on the independence and legitimacy of the NCC to effect change and enable market development.

In 1999, the Telecommunications Policy was adopted envisaging market liberalisation and the introduction of a second mobile cellular operator by 2003 (Sherboune & Stork, 2010, p.7). However, according to Respondent APE-2, in the year 2000, Cabinet was divided on whether the Namibian population was big enough to sustain two mobile operators. The NCC made a presentation to Cabinet demonstrating the case study of Botswana, which, despite a smaller population, had higher subscriber numbers and lower prices with only two mobile operators competing, and Cabinet decided that the NCC must issue a second cellular license. In 2000, the draft Communications Bill was also introduced, to the market for consultations, which made provision for the establishment of the Communications Regulatory Authority of Namibia (Sherboune & Stork, 2010, p.7).

The licensing of MTC led to the introduction of mobile services because Telecom Namibia was only providing fixed services. Consumers benefitted from this intervention in that they had an alternative to the fixed services provided by Telecom Namibia. The second regulatory intervention in Phase I was that the NCC was mandated to issue a second cellular licence, in line with the SADC Telecommunications Policy, which encouraged member states to introduce competition. The impact of this intervention will be discussed in Phase 2. The NCC however, had capacity restraints, which limited its positive impact on the market. In the end, consumers benefitted from a monopolistic and Government concentrated market.

In the case between MTC and Namibia Communications Commission and others, Smuts J noted that the amendment of the Namibia Communications Act in 2004 extended the jurisdiction of the NCC to competition issues, which consequently transformed the mobile market from a monopoly to one with multiple players (p.4). RIA conducted an assessment on the Telecommunications Regulatory Environment (TRE) for the period between 2002 and 2005, which revealed that the regulatory environment for fixed and mobile services was ineffective, despite the amendment of the Namibia Communications Act in 2004. However, mobile services were slightly better regulated (2006, p.25). The NCC did not regulate interconnection prices, and consequently, the licensees with a large customer base utilised high termination rates and high off-net rates to protect themselves from competition from newcomers (Sherboune & Stork, 2010, p.8). Once again, this highlights the NCC's lack of legitimacy as a regulator, which had a direct impact on market development.

## 4.4 Critical Analysis of the Transition to a Competitive Mobile Market

This section analyses the data presented in this chapter. The analysis aims to identify the changes, the consumer benefits and the market conditions from which the benefits were claimed.

The first two changes led to the transition from a monopolistic to a competitive mobile market, namely: the sale of 34% of MTC shares (and control of MTC) to Portugal Telecom and the licensing and operationalization of Powercom (t/a Leo). The changes led to what Sherboune and Stork (2010)) described as a competitive mobile market in Namibia and what Blackman and Srivastava (2011) described as sustainable competition. It was not perfect competition because neither the consumers nor the product itself was homogenous, and there was no price regulation. It was also not

effective competition because consumers were not protected from exploitative pricing (Blackman & Srivastava, 2011, p.28).

This is sustainable competition because consumers were able to benefit due to the pressure that these changes put on the market. The benefits are that mobile prices dropped and prepaid subscription packages were introduced, which offered voice, SMS and broadband bundles. The on-net prices in the mobile market were first to fall, and there was a reduction in the price of starter packs and recharge vouchers. The market also enabled technological innovation, which led MTC to introduce 3G broadband services. The subscriber numbers, also increased as by 2008 Namibia had over 1 000 000 mobile subscribers and the mobile penetration rate increased from 4.57 (per 100 inhabitants) in 2000 to 51 (per 100 inhabitants) in 2008. Comparatively, Botswana had three mobile operators, and the subscriptions increased from 220 000 in the year 2000 to 1.4 million by 2008 (ITU, 2019).

The TRE assessment conducted for the period 2002 to 2005 also revealed that the regulatory environment in Namibia was ineffective but that mobile services were better regulated than fixed services (RIA, 2006). The market conditions during Phase I commenced with the commercialisation of Telecom Namibia, and the licensing of MTC and Leo. The market commenced as a public monopoly with only MTC providing mobile services, but transitioned to a competitive market with the licensing ofLeo. The fixed market remained a public monopoly with only Telecom Namibia providing services.

The third change was the introduction of the 800 MHz CDMA network by Telecom Namibia. However, Cabinet resolved that the network must be limited to geographic boundaries. At the time that Cabinet made this decision, the Government indirectly owned 100% of the shares in Telecom Namibia and 66% of the shares in MTC. The Government (as a shareholder) thus made a political decision, which interfered with the market. The consequence is that the introduction of the CDMA network would have been a proper development for the market, as this would have meant more product

choice for consumers and perhaps would have increased the level of competition in the mobile market, by influencing further price reductions. The decision by Cabinet consequently suppressed market growth.

During Phase I, the regulatory interventions were the establishment of the NCC and the enactment of the Telecommunications Policy, which resulted in the licensing of Powercom (t/a Leo). Given the fact that the licensing resulted in reduced prices, the regulatory intervention is considered effective.

## 4.5 Chapter Summary

The analysis found that, with the changes of transfer of control of MTC to a private shareholder and the licensing of 100% privately owned Powercom (t/a Leo), the mobile sector in Namibia became sustainably competitive in Phase I. The consumer benefits claimed from the market were in the form of increased access (higher subscriber numbers) and reduced prices. Chapter 5 will analyse how consumers benefitted from a public mobile and fixed monopoly in Phase II.

# Chapter 5: Transition to Public Monopoly with Limited International Ownership 2009-2014 (Phase II)

## 5.1 Introduction

Chapter 5 describes Phase II of sector reform and demonstrates the numerous transitions in terms of market structure, and ownership, and the regulatory interventions that were made. The chapter then outlines and analyses the consumer benefits realised and the market conditions from which the benefits in Phases II were claimed.

Phase II took place between 2009 and 2014, and was characterised by a continuation of a fixed monopoly, as Telecom Namibia remained the only provider of fixed services. The competitive mobile market, which commenced towards the end of Phase I, also continued to Phase II. However, with the acquisition of Leo by Telecom Namibia in 2012, Phase II ended in MTC and Telecom Namibia being the only providers of mobile services. This is a crucial differentiation because, while Phase I looked at how consumers benefitted from a competitive mobile market, Phase II looked at how consumers benefitted from a monopolistic mobile market.

Respondent RB-1 indicated that although the State-owned shares in both Telecom Namibia and MTC during sector reform Phase II, this level of ownership did not affect competition because Portugal Telecom still privately controlled the management of MTC. This meant that, notwithstanding the fact that 66% of the MTC shares were owned by the State, decisions about revenue, technology and network investment were made independent of Government interference and to the benefit of consumers. Respondent RB-1 clarifies that any acquisition of the Portugal Telecom shares in MTC will be good for revenue but bad for the market, as it will amount to a reversal in sector reform demonstrates this. This shows that the control of MTC by a private entity was

a good factor for compliance to sector reform principles. The significance of Phase II is that it looks at how consumers benefitted from a market that moved from sustainable competition, as described in the analysis in Phase I, to a monopolistic market were services where mobile services were dominantly provided by MTC.

## 5.2 Market Structure and Ownership

### 5.2.1 The Policy Objective to Introduce Competition Contradicting Events on the Ground?

In 2009, the Government introduced the Overarching ICT Policy aimed at introducing regulation and market liberalisation. The main policy objective was to minimise anti-competitive behaviour and dominant operator advantages, create a levelled playing field for new entrants and reduce state ownership in the market (MICT, 2009a, p.7). The policy also provides for mandatory and mutual provision of interconnection and infrastructure development, and a market structure objective to reduce bandwidth prices (MICT, 2009, p.21).

Government also introduced the Telecommunications Policy in 2009. The Telecommunications Policy is based on principles such as competition and market access, independent regulation, protected rights of consumers and fair and transparent industry practices with the aim to grow the sector (MICT, 2009). The Telecommunications Policy also set out the institutional arrangements for the industry, which involved the establishment of the regulator (MICT, 2009b, p. 8).

The Telecommunications Policy was however, not effective because most of the sector reform elements that it sought to achieve were not happening in the market during Phase II. For instance, the policy sought to reduce the level of indirect State ownership in the market, but with the acquisition of Leo by Telecom Namibia, the level of State ownership increased mainly because the regulator approved the acquisition. Some of the policy objectives were

however, incorporated into the Communications Act, such as the creation of an independent regulator and provisions on dealing with anti-competitive practices.

### 5.2.2 Acquisition of Powercom (t/a Leo)

CRAN approved the acquisition of Leo by Telecom Namibia, in 2012, subject to the condition that section 2(10)(a)(iv) of the Posts and Telecommunications Act 1992 be amended to allow for the partial privatisation of Telecom Namibia with not less than 25% private shareholding. Another condition was that once section 2(10) (a) (iv) of the Posts and Telecommunications Act 1992 is amended, the actual privatisation of Telecom Namibia should take place (CRAN, 2012). CRAN feared that with the approval of this transaction, the level of indirect State ownership in the market would increase (CRAN, 2012). This is because Government already owned, via NPTH, the majority of the shares in MTC and Telecom Namibia as indicated in Figure 3. This fear was obviously based on the need to ensure regulatory legitimacy by reducing the level of state ownership.

These conditions were aimed at diluting this high concentration of the State ownership via the partial privatisation of Telecom Namibia. Privatisation can influence the performance of operators (Majumdai & Ahuya, 1997) which in turn will generate consumer benefits. In the matter between Guinea Fowl and Leo versus CRAN & Others, the Court considered the validity of the conditions imposed by CRAN and held that the conditions are not authorised by the Communications Act and thus invalid and set aside. The Court further referred the matter back for CRAN to reconsider the conditions, if any (Guinea Foul Investment & Others versus CRAN, 2012). No further conditions were imposed by CRAN.

The Namibia Competition Commission (NaCC) also approved the acquisition of Leo on condition that the shareholding structures of Telecom Namibia and MTC be separated and independent within two years and that no directors or employees of Telecom Namibia may serve as a director of NPTH (NACC, 2012, p.8). The NaCC conditions demanded changes to the ownership and management structures of both Telecom Namibia and MTC. Similar to CRAN, the rationale for these conditions was to neutralise the control of the Government

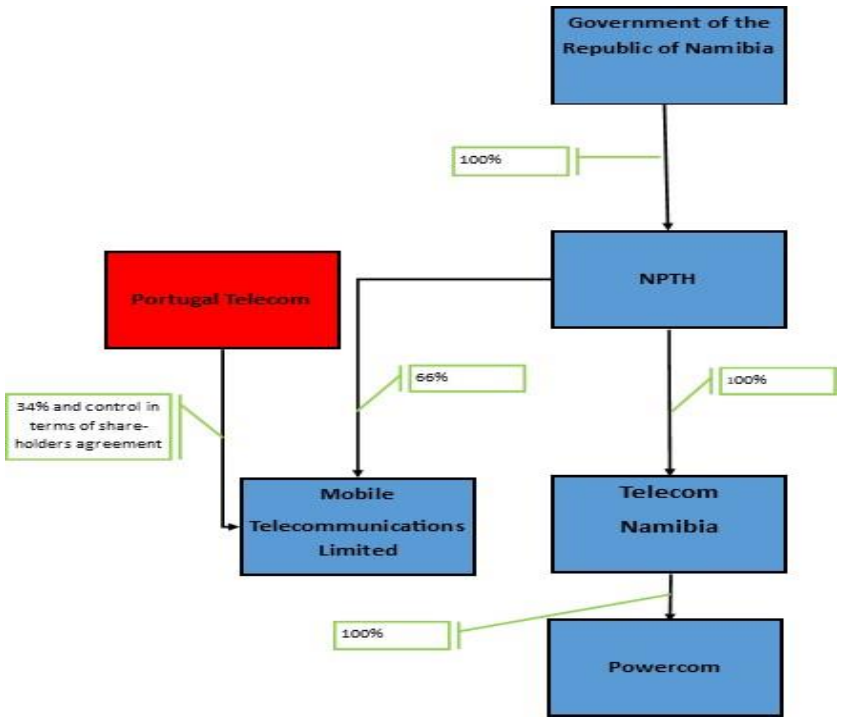
in the market.

CRAN (2012) argued that with the acquisition of Leo by Telecom Namibia, Namibia is now back to the pre-liberalisation era of 2005 with only two telecommunications operators offering national voice services both of which are either majority indirectly Government owned or entirely indirectly Government owned. CRAN was concerned that the acquisition led to reduced competition and high prices, but that it was too early to evaluate the impact on consumer price and quality of service. CRAN further observed that Telecom Namibia and MTC did not act as though they are owned by the same holding company; but seem to compete as independent entities. This was likely the result of MTC being managed by Portugal Telecom (2014, p.3).If MTC and Telecom Namibia could compete at "arms-length", this would mean that consumers may actually enjoy some benefits even in a market hugely dominated by Government indirectly owned operators. In 2017, CRAN made the following assessment:

> The reduced competition in the mobile sector as a result of the takeover of the only privately owned mobile operator by a 100% Government owned entity, Telecom Namibia and the uncertainty about the management of MTC lead to Namibia slipping in the African price benchmarking. Namibia ranks 16th among African countries in terms of cheapest voice and SMS product in a country. Namibia's cheapest product rank improved from 23 in Q1 2011 to 16th in Q2 2017. While the ranking has not much improved, prices nevertheless have steadily been reducing in USD until the first quarter of 2016. (2017, p.24)

The new ownership structure is depicted in Figure 4 below:

**Figure 4: Phase II Ownership Structure**




Critical to the research question, is an analysis of what led to the poor performance of Leo and the impact of the Telecom Namibia/Leo acquisition on market structure. Respondent GB-1 indicates that Leo existed from the market because it could not gain a competitive advantage over MTC. Further that the acquisition was not good for the market because the Government's indirect ownership was already high. Respondent RB-1 does not understand why the Government indirectly acquired Leo because there was a need to maintain competition by having more than one mobile operator.

CO-1 claimed that because of the increase in uptake of mobile services, Telecom Namibia was keen to erect a GSM network and hence the decision to acquire Powercom (t/a Leo). Following the acquisition of Powercom (t/a Leo), Telecom Namibia launched its mobile arm, TN Mobile in 2013 (Telecom Namibia, 2013). RB-1 argued that Leo

did not do proper marketing of their products and services and changed their name too often, which confused consumers. Telecom Namibia claimed that it was necessary to change the brand, because the Leo brand was proprietary to Orascom Telecom and also because there were historical negativities attached to the Leo brand (2013). Respondent REGO-1 concurs with Respondent RB-1 that Leo paid huge license fees as a new entrant, which led to their poor performance and further that MTC enjoyed exclusive rights for 10 years, which gave MTC an added advantage over Powercom (t/a Leo).

However, Leo struggled to gain sustainable market share (Sherbourne & Stork, 2010, p.10). According to Respondent APE-1 this was due to MTC's balance sheet which allowed MTC to outprice Leo and TN Mobile. Respondent APE-1 disagreed with Sherbourne and Storks' version that the licensing of Leo led to a competitive mobile market. Respondent APE-1 argued that "there was never a competitive market, it was always an MTC monopoly as they controlled over 90% of the market." Respondent APE-2 clarified this position by stating that Leo tried to enter the market by introducing new and innovative products, but the market was already skew due to MTC's entrenched monopoly. For this reason, Respondent APE-2 agreed that Leo was unable to effectively compete against MTC.

### 5.2.3 Determination of Dominance Position in the Market

Another occurrence in Phase II, which had an impact on market structure, was the dominance determination published by CRAN in terms of section 78 of the Communications Act 2009. The determination defined a licensee as dominant if it has at least 35% of market share based on revenue and/or if it controls some infrastructure that is necessary for the provision of telecommunications services. The determination concluded that both MTC and Telecom Namibia were dominant in that they held 52.6% and 41.5 % respectively, of the market share based on revenue.

The determination also found that both entities controlled some infrastructure for the provision of telecommunication services as follows: MTC controlled a GSM and WACS network, whilst Telecom Namibia controlled a CDMA network, national

backbone, GSM and WACS network (CRAN, 2012). The dominance determination must also be viewed against the fact that MTC and Telecom Namibia account for more than 99% of the assets as at 2013 (CRAN, 2014, p.4). Respondent RB-2 explains that one of the factors that led to a transition from a competitive mobile market to a mobile public monopoly was that there were no regulations to deal with abuse of market dominance.

The Communications Act empowered CRAN to impose additional obligations on dominant operators to mitigate anti-competitive effects. The purpose of the determination was to identify such dominant operators. However, CRAN did not impose any further obligations on the licensees after the determination. The further obligations would have typically focused on areas, which create dominance such as infrastructure, which is designed to encourage market growth by facilitating new market entrants. The inaction by CRAN to impose obligations on infrastructure sharing after the determination in 2012, thus had a negative impact on the market access by new entrants.

## 5.3 Consumer Benefits on ICT Pricing and Access

### 5.3.1 Termination Rates

At the beginning of 2009, Namibia's mobile termination rates (MTR) were very high at N$ 1.06 compared to Botswana at N$ 0.71 and South Africa at N$ 1.25 (peak) and N$ 0.75 (off-peak) (Stork, 2011, p.16). Leo's cost of termination was high due to the low traffic on its network; however, MTC was regarded as an efficient operator (Stork, 2011, p.16). Respondent RB-1 is of the view that there was a need for proper regulatory interventions on co-location and interconnection pricing. Further that the lack of regulation led to a price war between MTC and Powercom (t/a Leo).Therefore as was the case in Phase I, the lack of an effective regulatory framework impacted market development in Phase II. Although the price war was typically symbolic of competition, the absence of regulation on interconnection pricing and infrastructure sharing meant that Leo could not sustain the price war, which led to its failure.

The NCC (2011, p.1) argued that market entry in Namibia was restricted due to the continued fixed –line monopoly and oligopoly for mobile services and that this type of market structure required regulation to ensure competition for the benefit of consumers. This statement by the NCC pertained to the period prior to the commencement of the Communications Act. This is because the Communications Act was commenced in May 2011 and made provision for the issuance of service and technology neutral licenses, which simply meant that the market was open. The restriction thus pertained to the period prior to the commencement of the Communications Act. The NCC also regarded the market as an oligopoly, because it was made up mainly by Leo, MTC and Telecom Namibia providing mobile services, but with a significant barrier to market entry in the form of high termination rates. This is discussed below as the basis for regulating interconnection.

In a market with restricted entry and ineffective regulation, large operators may avoid price competition by setting high termination rates and high off-net prices (NCC, 2011, p.1). Stork (2011, p.23) indicated that there is a need to regulate mobile termination rates, because they were inherently monopolistic. The NCC (2011, p.1) thus regarded the regulation of termination rates as a necessary intervention to ensure that the size of the network does not shield large operators from competition. In 2011, the NCC (2011) thus reduced termination charges. Consequently, the MTR of N$ 1.06 per minute was cut by 43.4% to N$ 0.60 cents and the Fixed Termination Rate (FTR) of N$ 0.63 was reduced by 4.8% to N$ 0.60 cents (Telecom Namibia, 2011). The effect of the reduction was that terminating a mobile or fixed call on another network, costs the same as on the caller's own network. The decision also prohibited operators from anti-competitive cross-subsidisation (Telecom Namibia, 2011).

This intervention was aimed at gradually enforcing cost-based termination rates for interconnection between operators, in line with international best practices and the provision of the envisaged Communications Bill (Telecom Namibia, 2011). During the

discussions on the reduction of the termination rates, MTC had argued that its Earnings Before Interest, Taxes, Depreciation and Amortization (EBITDA) margin would drop if the termination rates were dropped, however after the reduction, MTC's EBIDTA margin rose from 50.9% in 2008 to 53.8% in 2010 (NCC, 2011, p.2). According to Maverick (2018):

> EBITDA is considered a more reliable indicator of a company's operational efficiency and financial soundness because it enables investors to focus on a company's baseline profitability without capital expenses factored into the assessment.

After the reduction in MTR, Leo and Telecom Namibia attracted new customers by introducing new packages at reduced prices (Stork, 2011, p.20). Telecom Namibia's low user basket prices also reduced from N$ 89 (in 2008) to N$ 24 (in 2010). MTC's low user basket also reduced from N$ 83 in 2005 to N$ 36 in May 2010 (Stork, 2011, p.20). This huge price reduction signified that lower tariffs lead to market expansion (Stork, 2011, p.20). Lewis and Abrahams (2013) quantified the status in 2011 as follows:

> According to the ITU, the market in Namibia as at 2011 was broken down as follows: 140 000 fixed-line subscribers; 2 439 300 mobile subscribers. This translates to a per capita market penetration rate of 6,0% for fixed-line, 105,0% for mobile and 11,6% for the Internet (from 6,9%, 67,2% and 12,0% respectively in 2010) (Lewis & Abrahams 2013, pp. 224-225).

In addition, the MTR reduction had a positive effect on the market for both consumers and operators – it was a win-win for all. A further reduction in the termination rates occurred in November 2013 when, after consultation with the operators, CRAN reduced the MTR and FTR to N$ 0.20 and the SMS to N$ 0.01 (GG 5369, Notice 511, dated 20/12/2013). Respondent REGO-1 stated that the termination rate reduction did have an impact on pricing but only in MTC's favour. This is because more traffic was generally

interconnected on the MTC network. Respondent REGO-1 further argued that although a reduction in termination rate may have resulted in retail price reductions, some licensees were not able to give consumers the benefit of a price reduction, because of the high back-to-end (leased line costs) transmission costs. Respondent REGO-1 claimed that the high leased line costs, meant that whatever relief came from a reduction in termination rates, was simply absorbed by high leased line costs.

### 5.3.2 Off-net Price Regulations

In April 2009 Leo launched a formal complaint with the NCC about the high off-net rates and bundled minutes and SMS and requested the NCC for off-net price regulations (NCC, 2011, p.1). In considering the complaint, the NCC demonstrated why off-net price regulation was critical to competition as follows:

> Large operators may use on-net to off-net ratios to limit competition and keep traffic on their network through so-called "Club Effects". These arises because rational consumers prefer the network with a largest pool of subscribers in order to benefit from the possibility to call and be called at a lower calling rate (on-net rate) by the largest possible number of subscribers. "Club Effects" have an adverse impacts on competition and consumer welfare, they prevent large operators from having to compete on price and/or service quality. (2011, p.3).

In March 2011, the NCC enforced a retail price cap for mobile prices, which required that off-net prices and fixed line prices be equal to on-net prices. The NCC argued that off net price regulation was necessitated by the following considerations (MTC versus NCC & 3 Others, 2011, p.5):

> Club effect negatively affects competition in that it creates traffic distortion across the different networks and subsequently affects the consumers. Cross-subsidisation and the bundling of prices as a strategy to acquire customers, which is predominantly the case when the customers receive discounts to

purchase a combination of products and services. The last issue was anti competitive pricing where an operator prevents entrants from gaining any reasonable foothold within the market by aggressively charging very low prices.

The NCC's rationale for a price cap was to benefit consumers as per Figure 5 below:

Figure 5: Estimated Impact of off-net regulations on consumer, Source NCC, 2011

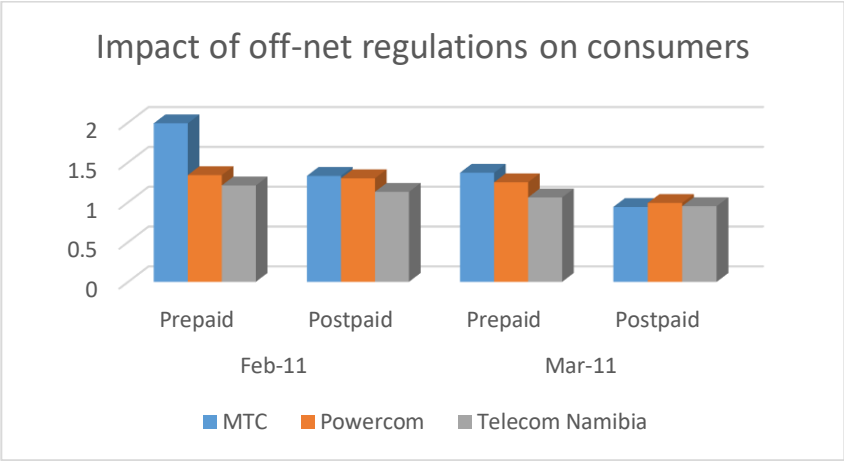



Figure 5 indicates that the reduction in termination rate had a price reduction benefit for consumers as follows:

> MTC's average price per minute dropped from N$ 1.39 to N$0.94 for postpaid and from N$ 1.99 to 1.37 for prepaid products. Leo's average voice tariffs dropped from N$1.3 to N$0.99 for postpaid and from N$1.34 to N$1.25 for prepaid. Telecom's Switch is now also cheaper with average rates dropping from N$1.13 to N$0.95 and N$1.21 to N $1.06 for postpaid and prepaid respectively (NCC, 2011, pp.5-6).

From 1992 to 2008, the NCC generally did not regulate termination rates or off net retail prices. This is notwithstanding the fact that in 2004, a legislative amendment was passed to extend the mandate of the NCC to price and tariff regulation.

## 5.3 Consumer Benefits on ICT Access

Telecom Namibia experienced a decline in its voice revenues due to wider use of mobile phones and VoIP applications. The revenue from ADSL doubled in 2013, making it the most important source of revenue for Telecom Namibia (CRAN, 2014 p.17). CRAN indicated that the decline in Telecom Namibia's fixed data subscribers was a concern, because faster data was becoming the new competitive and marketing tool (2014, p.19). Consumer were migrating to mobile broadband subscriptions. CRAN (2014) further observed that Telecom Namibia will only become a competitive data provider if it improves speed, quality of service and pricing (p.19). Interestingly Respondent APE-1 argued that "the mobile public monopoly during this phase resulted in low mobile prices for Namibia and above average quality of service that led to Namibia been the second country to introduce LTE in Africa."

CRAN analysed the implied prices with the aim of identifying the price developments independent of prices and product choices of users (2014, p.10). The analysis revealed that there is no evidence to suggest that MTC is under any competitive pressure which would warrant it to cut its post-paid prices dramatically (2014, p.12). This according to CRAN (2014, p.12) is because MTC's post-paid services are competing with its prepaid services. This means that MTC is not competing with other operators but its products are competing with each other. Respondent APE-1 confirmed that MTC was able to drop prices, but the other operators were not able to match such low prices. MTC's implied price went up, whilst the overall implied prices of the market dropped to N$ 0.43 in the last two quarters of 2013 (CRAN, 2014, p.10). This is owing to the fact that the termination rates were dropped and more of the MTC customers transferred to prepaid packages. Owing to the fact that the prepaid packages were low, consumers migrated to prepaid as opposed to migrating to Telecom Namibia.

The acquisition of Leo also did not assist Telecom Namibia in growing its subscriber numbers. Respondent REPO-1 indicated that Leo was focused on quick returns and did

not make sufficient investments to retain the business in the long run. Telecom Namibia acquired the marketed products and not an actual business case. The fact that Leo customers were integrated into TN Mobile also meant that Telecom Namibia did not benefit from the Leo as a going concern (REPO-1). This is because consumers were not familiar with the TN Mobile brand, consumers simply migrated to MTC as opposed to TN Mobile.

Respondent REPO-1 indicated that MTC gained more subscribers from the Telecom/Leo acquisition. Respondent REPO-1 further indicated that it was not clear what Telecom Namibia's strategy was with Powercom (t/a Leo). Respondent REGO-1 agrees that Leo should have continued to operate as an independent going concern, as consumers were more familiar with the Leo brand. Further that the introduction of number portability would have also assisted with the uptake of more subscribers by Telecom Namibia. Telecom Namibia explained that there were negative externalities associated to the Leo brand and hence the decision to establish the TN Mobile brand (2013).

CRAN (2014) argued that by comparing Namibia's mobile prepaid and leased line prices, with international prices, Namibia fell behind in terms of affordability and that it was competition from a privately owned operator (Leo that brought 3G services to Namibia in 2006 and subsequent lower voice and data prices (p.34). This was because the presence of more operators meant the market was competitive, which also meant that there was more room for technological innovation and infrastructure investment. CRAN indicated that it would monitor changes in 2014, as part of its evidence based regulatory approach, which is aimed at ensuring regulatory objectives of competition, affordability and universal access and usage, innovation and quality of services (p.34).

### 5.3.1 Regional Comparison

During this period, the sector in Botswana was liberalised with 4 operators and a converged regulator (RIA, 2013, p.18). The dominant operator, MASCOM had 53% market share. In 2012 RIA conducted a TRE on 12 African countries' mobile services,

measuring dimensions such as anti-competitive practices, tariff regulation (affordability), interconnection and market entry. Botswana ranked 8th as most ineffective, South Africa 11th, whilst Namibia ranked 2nd most effective. Interestingly and notwithstanding the fact that Botswana had more operators and its market more liberalised, the poor ranking is attributed to poor performance in dimensions such as anti-competitive practices and tariffs (RIA, 2013, p.18).

What then is the relationship between the competition and pricing? As discussed above, in Namibia during this same period, the market only had two players, both Government owned, however the effectiveness is better than Botswana. This is in line with the theoretical framework on substantial competition, which indicates that competition is measured not according to the number of players in the market, but according to the benefits that consumers obtain from such a market. According to RIA's comparison of OECD's 40 minute basket of voice calls, Botswana's tariff were significantly higher than both Namibia and South Africa in 2013 (RIA, 2013, p.15).

In 2013, RIA also conducted a study on the cost of the cheapest 1 GB prepaid data bundle, which revealed that Botswana was 11th most expensive country at USD 73.48, whilst Namibia was 7th at 31.89 USD per bundle and South Africa at 11.23 USD (p.18). In 2013 the same year Botswana had a termination rate of 0.35, whilst Namibia was at 0.30. In the same year Botswana had a mobile penetration rate of 150 and Namibia had a penetration rate of 122.14 .RIA attributes Botswana's poor performance indicators to high interconnection rates, which led to high mobile retail prices (2013, p.18.).

## 5.4 Regulatory Interventions

The Communications Act provides for the issuance of service and technology neutral telecommunications licences. According to Lewis and Abrahams (2013), Namibia now has a fully converged licensing regime in respect of individual licenses and partial

convergence in respect of class licenses. In April 2012, CRAN issued service and technology neutral licences to a number of telecommunications operators. MTC (2012, p.8) welcomed the move indicating that it will accelerate converged networks.

MTC (2012) was however, concerned that the service and technology licences seem to be accessible to any entity. REGO-2 indicates that the Namibian market is not big enough for duplication of the core network infrastructure but requires a regulatory framework, which encourages Mobile Virtual Network Operators. REGO-2 thus concludes that Telecom Namibia must be compelled to share infrastructure and MTC must be compelled to facilitate national roaming.

Section 33 of the Communications Act deals with the promotion of competition and how CRAN should deal with competition issues in the telecommunications sector anti-competitive behaviour. In December 2011, CRAN entered into a memorandum of understanding with the Namibia Competition Commission. The Objective of the MOU is to

> Enable the Authorities to coordinate and harmonise the exercise of their jurisdiction over matters of mutual interest and to secure the consistent application of their respective laws governing anti-competitive behaviour, as well as mergers and acquisitions in the information and communication technology sector (CRAN, 2012b).

Section 53 of the Communications Act deals with the procedure for tariff approvals for the provision of telecommunication services. This section has empowered the regulator to regulate pricing by ensuring that tariffs are reasonable, not unreasonably discriminatory and that it does not impact competition. Respondent REGO-3 however claimed that the lack of enforcement of regulations by CRAN, unavailability of spectrum, lack of network unbundling and interconnection have all impaired market development.

Respondent APE-3 argued "the lack of an effective and independent regulator to curtailed MTC's monopolistic outpricing of Leo and crippled the market, which led to MTC been dominant." It was however, MTC's anti-competitive pricing, which led to Leo leaving the market. The market was not a monopoly but had three operators providing services. MTC did however, become dominant after Leo left the market. The most important regulatory intervention for this Phase was thus the operationalisation of the Communications Act (No 8 of 2009) on 18 May 2011. The objects of the Communications Act were to open up the telecommunications sector to competition, to provide for the regulation of communication activities and to encourage private investment.

Respondent APE-3 is however, of the view that sector reform was introduced very late in 2009 with the on-net decision by the NCC, but should have been introduced in 2007, when Leo was licensed. According to RB-1, the regulation of termination rates and abuse of dominance could have prevented the reversal in sector reform. Respondent APE-2 claims that MTR's should have being cost based before allowing any new market players such as Powercom (t/a Leo).

Respondent REGO-3 argues that it is the lack of regulatory enforcement of the regulations by CRAN and MTC's aggressive competitiveness, which empowered MTC to keep new entrants from obtaining market share, thus creating a de facto monopoly. Respondent RB-1 argues that infrastructure sharing, competition regulations and proper tariff regulations should have been introduced to avoid the reversal of the mobile sector to a public monopoly and the NCC should have imposed a price cap on Telecom Namibia's leased line costs.

Respondent GB-1 argued that CRAN should not have approved the acquisition of Leo by Telecom Namibia but that instead, Telecom Namibia should have been privatised. According to theory, privatisation leads to the operator performing optimally and thus yielding benefits for consumers (Majumdai & Ahuya, 1997). The privatisation of Telecom Namibia would have thus been better for consumers, than the continued

indirect ownership of Government. Further that the current market structure, which resulted in Government concentration in the market now constitutes a barrier to market entry. Respondent APE-2 claims that the NCC was not in a position to effectively introduce regulatory interventions, due to a lack of funding, requisite skills and capacity. Respondent REGO-3 the presence of an effective regulator would have prevented the reversal of the sector to a monopoly.

According to Respondent APE-1, the continued fixed monopoly allowed Telecom Namibia to set prices above costs in respect of its resellers. Respondent APE-1 indicated that Mweb Namibia Ltd took Telecom Namibia to Court in Phase II. Mweb Namibia sought an order interdicting Telecom Namibia from charging ADSL rates which do not distinguish between retail and wholesale customers. The High Court ruled that Telecom Namibia's pricing did not unconstitutionally violate their right to conduct business (Mweb Namibia Limited versus Telecom Namibia Limited, 2011).

In 2011, Mweb appealed the High Court decision in the Supreme Court. Mweb argued that it is involved in the provision of internet services and has to compete with Telecom Namibia (Mweb Namibia Limited versus Telecom Namibia Limited, 2011, *p.5).* Further that section 2(2) of the Telecommunications Act imposed an obligation on Mweb to obtain a license from the NCC in order to provide such services, but no similar obligation is imposed on Telecom Namibia (Mweb Namibia Limited versus Telecom Namibia Limited, 2011, p.5).

Mweb argued that the effect of this is that "Telecom is free to roam around beating its monopolistic drum" (2011, p.5). Mweb further argued that there is no rational connection between the object of the Act and the exemption from regulation for Telecom Namibia. In the end, the Supreme Court concluded that the exemption was aimed at enabling Telecom Namibia to raise revenue and provide services to uneconomical or unprofitable areas. The Supreme Court also found that this was a political judgment and it would be imprudent for the Court to reverse it (2011, p.45)

According to Respondent APE-1 this decision entrenched the fixed monopoly status of Telecom Namibia and negatively affected the development and expansion of broadband services.

## 5.5 Reversal to a Public Mobile Monopoly

This section analyses the data presented in this chapter. The analysis aims to identify the changes that occurred in Phase III, the consumer benefits and the market conditions from which the benefits were claimed.

Two changes occurred in Phase I, which led to competition in the mobile market, namely the licensing of Leo and the transfer of the control of MTC to Portugal Telecom. The mobile market was generally already an MTC entrenched monopoly. This monopoly was because MTC was licensed in 1995 and had no competitor until Leo commenced operations in 2007. Phase I found that Leo changed the market, which resulted in a sustainably competitive market. The main change in Phase II was the acquisition of Leo by Telecom Namibia, which led to a reversal to a mobile public monopoly. The market conditions changed after the acquisition in that Namibia only had two mobile operators, MTC and Telecom Namibia. Telecom Namibia was however an ineffective operator, which made MTC an effective monopoly. In January 2013 for instance, Telecom Namibia had 97 817 subscribers, but by December 2013, Telecom Namibia only had 75 752. MTC on the other hand had 2.3 million subscribers by December 2013, which was an increase from 2 065 258 in January 2013 (CRAN, 2014). MTC also had a revenue of N$ 1.8 billion, while Telecom Namibia only had N$ 1.3 billion at the end of 2013 (CRAN, 2014). By 2014, MTC had a factual mobile monopoly in the sense that 98% of the total mobile traffic in the market belonged to MTC and 99.9% of the traffic was on MTC's network (CRAN, 2014). This analysis thus seeks to explain how the mobile market transitioned from a sustainably competitive market in which consumers enjoyed benefits in Phase I to a mobile public monopoly in Phase II.

Firstly, the study found that Leo could not gain a competitive advantage over MTC, because before Leo became operational, MTC had been providing mobile services as a public monopoly for over 10 years. MTC's monopoly was also supported by the Cabinet decision to restrict the Telecom Namibia CDMA network to geographic boundaries, which meant MTC had no competitor for 10 years. By 2009, the MTR was very high at N$ 1.06 compared to Botswana at N$ 0.71. This also meant that Powercom (t/a Leo)'s cost of termination was high due to the low traffic on its network.

Secondly, there was a price war between MTC and Powercom (t/a Leo). As explained in chapter 4, consumers benefitted from the price war as it led to price reduction. However, in 2009, Leo submitted a complaint to the NCC about MTC's high off-net charges. The complaint revealed that there was anti-competitive pricing on the part of MTC. In the matter between MTC and Namibia Communications Commission and others, (2011), anti-competitive pricing in the Namibian context was defined as:

> Where an existing operator prevents entrants from gaining any reasonable foothold within the market by aggressively charging very low prices. That incumbent would then be able to subsequently raise prices to recoup lost profits which resulted from such an exercise, after repelling its opposition.

The price war was essentially about MTC forcing Leo out of the market by charging very low prices, which Leo could not match and once Leo was out of the market, they would recoup those lost profits. It is however interesting that, notwithstanding this anti-competitive behaviour regarding the high off-net pricing versus low on-net pricing, consumers benefitted from the market. At the time, Leo had 170 000 subscribers, MTC had about 2 million subscribers, whilst Telecom Namibia had 50 000 (The Namibian, 2012).

Given the fact that MTC had higher subscriber numbers, the MTC consumers benefitted the most, as MTC set high off-net prices and low on-net prices to shield itself from Powercom (t/a Leo). For instance in 2008 MTC charged subscribers N$3, 35 per minute to call a landline, while Leo charged N$1, 79 (The Namibian, 2008).

Powercom (t/a Leo)'s viability was therefore, affected by the price war with MTC. The price war was mainly due to the high interconnection rates that MTC was charging. Although this price was affected Leo negatively, consumers benefitted due to price drops and subscriptions increased. There were 800 720 subscribers in 2007, and this doubled to 1 631 576 in 2009. This is effectively why Leo struggled to make inroads into MTC's market share.

The termination rate was subsequently reduced to N$ 0.60 cents in 2009, for on-net and off-net, which resulted in Telecom Namibia and Leo attracting new customers and introducing new packages at reduced prices. The need for a 40% MTR meant that prices in Phase I may have been reduced due to the licensing of Leo. However, had the relevant regulatory interventions addressing anti-competitive behavior been introduced, prices could have been even lower.

The regulatory intervention of reducing the termination rate should have been introduced in 2007 when Leo commenced operations. The benefits described above as a result of the reduction in MTR, was simply not sufficient to sustain the viability of Powercom (t/a Leo), as 2 years later Leo was placed on the market for acquisition. Had the termination rate been reduced when Leo commenced operations in 2007, there would not have been anti-competitive pricing and all consumers in the market would have benefitted. The price war could have also been avoided. Another reason was that the reduction in the MTR appeared to have benefitted only MTC, whose EBITDA margin rose from 50.9% in 2008 to 53.8% in 2010. This supports the finding above, that MTC subscribers may have benefitted more from the market during Phase I due to MTC's anti-competitive pricing behaviour. In 2009 MTC had 1 283 500 subscribers, which increased to 1 535 000 in 2010 after the decrease in termination rates (CRAN, 2014).

There is however, another objective to sustainable competition, which is the creation of a level playing field, to ensure that consumers and operators do not suffer the negative effects of anti-competitive practices (Blackman & Srivastava, 2011, p.29). The finding in Phase I was that the market was sustainably competitive. However, in

2009 the NCC admitted the negative impact of the high interconnection charges on the consumers, which resulted in the reduction of termination rates. The viability of the Leo was affected negatively by the on net anti-competitive pricing behaviour of MTC. Therefore, the market in Phase II was not sustainably competitive because consumers and operators suffered the negative effects of predatory pricing. This is also perhaps why it was found in Phase I, that MTC was charging low prices and their subscribers benefitted the most. The study however, found no complaint or evidence of anti-competitive pricing in Phase I and hence the conclusion that Phase I was sustainably competitive.

The study also found that Telecom Namibia was setting prices, for the resale of leased lines, above costs (Respondent APE-1). The impact of the MTR price reduction could thus not help sustain Leo because there was no price cap was imposed on the back-to-end transmission costs (leased lines), which remained unaffordable. In 2014 a E1 2 KM distance charge was costing N$ 1330 per month in Botswana, while in South Africa it was costing N$ 1211 and Namibia charged N$ 1980 per month (CRAN, 2014).

Although Leo was able to pass the reduction in termination rates to consumers, Leo could not sustain it because it was absolved by high-leased line costs. Telecom Namibia's unregulated leased line costs thus had a negative impact on the growth of the mobile market, especially for new entrants. The reduction in termination rates should have been coupled with a price cap on wholesale prices for leased lines. This is the only way consumers for both dominant and new operators could equally enjoy price reductions.

In addition, the study found that it was the lack of regulatory interventions that contributed to the ineffectiveness of Powercom (t/a Leo). Once again, this demonstrates that there was a lack of regulatory legitimacy, which affected the effectiveness of the regulator during Phase II. The conceptual framework stated that the introduction of regulatory interventions in a market is critical to creating a levelled playing field for new market entrants. It is thus thought-provoking, that Leo exited the market shortly after sector reform was introduced with key principles on market liberalisation and the

establishment of an independent and converged regulator The Communications Act (Republic of Namibia, 2009) should have been enacted in 2007 when Leo became operational, because by the time regulation was introduced in 2011, it was simply too late to save Powercom (t/a Leo). The theory on sector reform sequencing indicated that a market might require regulatory interventions in order to correct anti-competitive practices and to ensure market entry.

The analysis will pause here to clarify that the market in Namibia has been regulated since 1992 with the enactment of the NCC Act. The research however, found that the NCC generally lacked powers to deal with abuse of dominance and anti-competitive practices, which has been identified as the main factors that led to the ineffectiveness of Powercom (t/a Leo). Although the NCC Act was amended in 2004, to include tariff regulation over MTC, it only regulated termination rates in 2009. This once again confirmed the theory that regulatory delays and inappropriately designed initiatives may hold back sector reform. In other words, the introduction of a new market entrant (Powercom) into a market that was historically dominated by MTC, without putting in place regulatory interventions to address anti-competitive practices, did hold back sector reform. In the end, the mobile market reversed to a public mobile monopoly due to the acquisition of Leo by Telecom Namibia.

In the end, there was anti-competitive pricing by MTC in Phase II, which led to regulatory intervention on reducing interconnection pricing. After the 40% reduction in MTR consumers benefited from reduced prices. However, after the acquisition of Leo by Telecom Namibia, the mobile market continued as a monopoly with MTC providing services, but prices continued to drop. The research thus found that monopolies do produce consumer benefits but competition produces much greater benefits and Phase II simply represented what to expect from a monopoly.

## 5.6 Chapter Summary

In Phase II, consumers and operators suffered the negative effects of predatory pricing. The acquisition of Leo by Telecom Namibia, resulted in the mobile market reversing to a public monopoly. The reversal was caused by a lack of timely regulatory interventions to address anti-competitive behaviour, interconnection pricing, and a price cap on leased lines. The consumer benefits in Phase II were claimed first from an anti-competitive market, and later from monopolistic conditions. In both instances the benefits were not claimed from competitive conditions. Chapter 6 will analyse how consumers benefitted from an exclusive public monopoly in Phase III.

# Chapter 6: Transition to Exclusive Public Monopoly with State ownership 2015-2019 (Phase III)

## 6.1 Introduction

Chapter 6 describes Phase III of sector reform and demonstrates the numerous transitions in terms of market structure, and ownership, and the regulatory interventions that were made. The chapter then outlines and analyses the consumer benefits realised and the market conditions from which the benefits in Phase III were claimed. Phase III occurred between 2015 and 2019. Phase III was characterised by a continuation of a fixed monopoly, as Telecom Namibia remained the only provider of fixed services. The mobile public monopoly, which commenced in Phase II also continued to Phase III. However, this mobile public monopoly is different from that in Phase II, because in Phase III the Government owned 100% of MTC and Telecom Namibia via its holding company NPTH. Graph 4 illustrates the ownership structure. The significance of Phase III is that it looks at how consumers benefitted from a market that was Government concentrated with private control, which shifted to one that is 100% owned and controlled by the Government.

## 6.2 Market Structure and Ownership

### 6.2.1 Acquisition of MTC Shares

In 2018, CRAN approved the transfer of control of all licenses issued to MTC from Samba Luxco S.a.r.l or its wholly-owned subsidiary Samba Dutcho B.V to NPTH. The approval is subject to the following conditions (CRAN, 2019, p.2):

- That 20% of the ownership in MTC must be acquired by Government Institution Pension Fund or by a local private investor(s) subject to sections 35 and 46 of the Communications Act; and
- That MTC must be listed on the Namibian Stock Exchange within 12 months from the date that this resolution is communicated to the petitioner - of which 29% of the shares should be allocated as free float and sold to local investors subject to sections 35 and 46 of the Communications Act.

The conditions were aimed at diluting Government concentration in the telecommunications market and were thus designed to increase local and private participation. Private control is crucial because it dilutes Government concentration in the market. The 12 months' timeline reflected above, was extended by 18 months in 2019 to July 2020. By the time that this report was written, MTC was still in the process of complying with the listing conditions.

With the acquisition of the MTC shares by NPTH, Namibia now only has two mobile operators, both owned by the Government, as was the case in Phase I before the licensing of the Leo (CRAN, 2019, p.4). Government concentration increased in the market; MTC and Telecom Namibia controlled 91% of the assets and 88% of the revenue as of 2018 (CRAN, 2019.p.4). CRAN (2019, p.4.) cautioned that this high concentration "raises the concern of insufficient competition with higher consumer prices and lower quality of service as a result. This is particularly because MTC is dominant for mobile telephony and Telecom Namibia for fixed-lines and national data connectivity."

The new shareholding structure is as depicted in Figure 6 below and contrasted with Figure 7 on the left to depict the increased level of government concentration in sector reform Phase III:

**Figure 6 Phase III Ownership Structure**

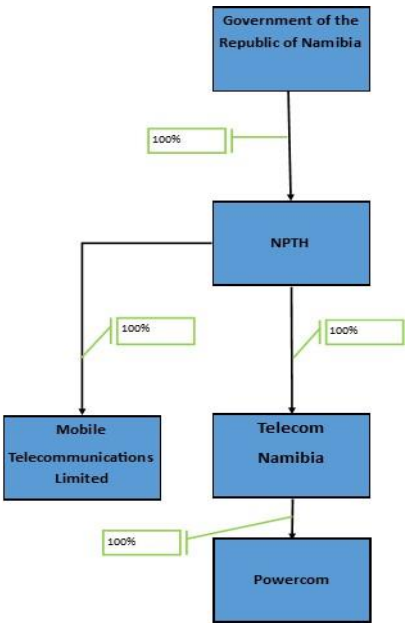
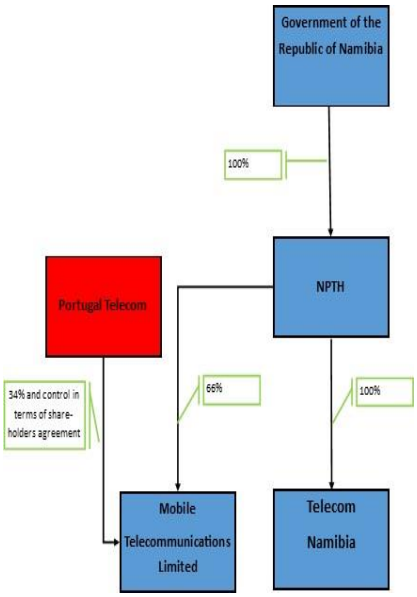



**Figure 7 Phase II Ownership Structure**




### 6.2.2 Determination of Dominance

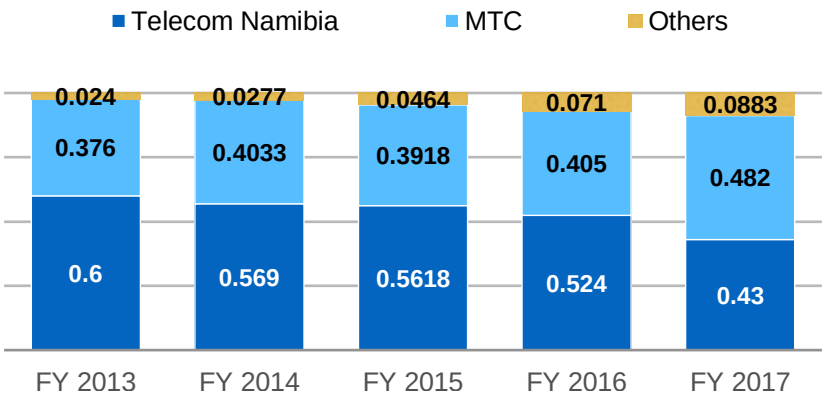
In 2015 and according to section 78 of the Communications Act, CRAN conducted a dominance study and defined the markets as fixed and mobile call termination, wired end-user access, national data transmission, wireless end-user access and broadcasting (CRAN, 2015(a), p.7). Telecom Namibia was declared dominant in the wired end-user access and national data transmission markets, while MTC was declared dominant in wireless end-user access market (CRAN, 2015a, p.11). The market for fixed and mobile termination is a natural monopoly, and all licensees have been declared dominant in that market (CRAN, 2015a, p.10). This determination means that both MTC and Telecom Namibia are dominant operators. The determination of all other licensees been natural monopolies in the fixed and mobile termination has little impact on the market structure, because all licensees have been declared as dominant and the call termination rates are charged as regulated by CRAN. CRAN (2015a, p.10) explained

that this market was a natural monopoly because only the operator who owns a subscriber can terminate the calls in respect of such subscriber.

### 6.2.3 Pricing and Access

By 2016, MTC and Telecom Namibia controlled 93% of the assets and 88% of the revenues of all licensees with smaller licensees accounting for 7% (CRAN, 2016, p.4). CRAN further indicates that MTC is much more efficient in that it generates 53.3% of sector revenues, with 40.5% of the assets (2016, p.5). By 2017, smaller operators started gaining market share measured in terms of assets and revenues, but MTC and Telecom Namibia continued to control 91% of assets and 88% of revenue (CRAN, 2019, p.4). Figure 8 below shows the growth in market share (assets) for the period 2013-2017.

*Figure 8. Assets as market shares for the financial years end in 2013-2017 (company) (Source CRAN, 2019)*




CRAN attributed the difference in the asset to revenue by the different type of infrastructure required for service delivery, i.e. wireless end-user connectivity requires more infrastructure compared to landlines and wired data connectivity (CRAN, 2017, p.5). Paratus and MTN had the highest percentage of additions to ICT infrastructure for the period 2016-2017 (CRAN, 2019, p.7).

CRAN argued that "this high market concentration raises concerns of insufficient competition and higher consumer prices and lower quality of services as a result" (2016, p.4). This argument by CRAN highlights the correlation between high market concentration and insufficient competition and the causal link between insufficient competition and consumer benefits, which primarily included high prices and low quality of services. However, in 2015 MTC's Aweh Aweh Gig product was considered as dynamic in the sense that consumers paid N$ 120 per month for 4 GB of data, which was less than what South African consumers paid for 1 GB per month to (RIA, 2015). This observation by RIA is not in line with the causal link established by CRAN above, because in comparison to South Africa, consumers in Namibia were benefitting from lower prices, notwithstanding the high indirect Government concentration.

Table 6 below shows the mobile subscriber numbers for the period 2013-2018:

*Table 6 Mobile subscriber numbers in 1000s (Source CRAN, 2019)*

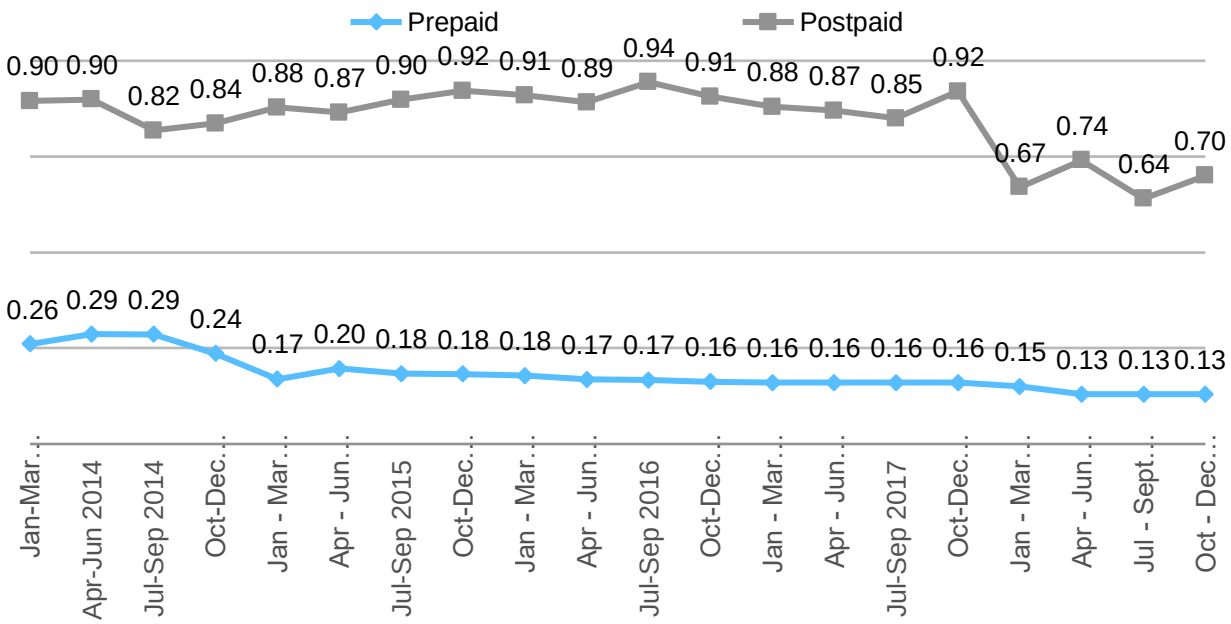
| Mobile subscriber numbers in 1000s | | 2013 Dec | 2014 Dec | 2015 Dec | 2016 Dec | 2017 Dec | 2018 Dec |
|---|---|---|---|---|---|---|---|
| Active SIM cards ('000) | Postpaid | 152 | 168 | 180 | 191 | 195 | 193 |
| | Prepaid | 2,308 | 2,503 | 2,370 | 2,469 | 2,485 | 2,566 |
| | Total | 2,539 | 2,671 | 2,550 | 2,660 | 2,680 | 2,759 |
| | Change | | 5.2% | -4.5% | 4.3% | 0.8% | 3.0% |
| Mobile Broadband ('000) | Dongle / Routers | 67 | 70 | 37 | 31 | 36 | 127 |
| | Mobile Phone | 721 | 732 | 1,406 | 1,580 | 1,377 | 2,114 |
| | Total | 788 | 802 | 1,443 | 1,611 | 1,413 | 2,241 |
| | Change | | 1.8% | 80.0% | 11.6% | -12.3% | 58.6% |

By 2018 there was an increase of 59% in fixed and mobile broadband subscribers since 2013 and 83% of the population has 3G, while 36% has 4G (CRAN 2019, p.4). CRAN makes the following observations on pricing:

> The average cost of prepaid minutes dropped to below 15 cents in 2018. MTC's implied price for post-paid products is higher and increased in 2017 to above N$ 0.90. However, the prices decreased in 2018 significantly (2019, p.12).

Any operator wishing to compete with MTC in Namibia would need to build a business model around a valid price of N$0.13 as per Figure 8 below. CRAN (2019, p.12) also highlights that the post-paid monthly average minutes of use (MOU) have been decreasing while those of prepaid is increasing, which increase is due to the bundled products of the Aweh family.

*Figure 9: MTC's implied prices (voice APRU divided by MOU) (Source CRAN,2019)*

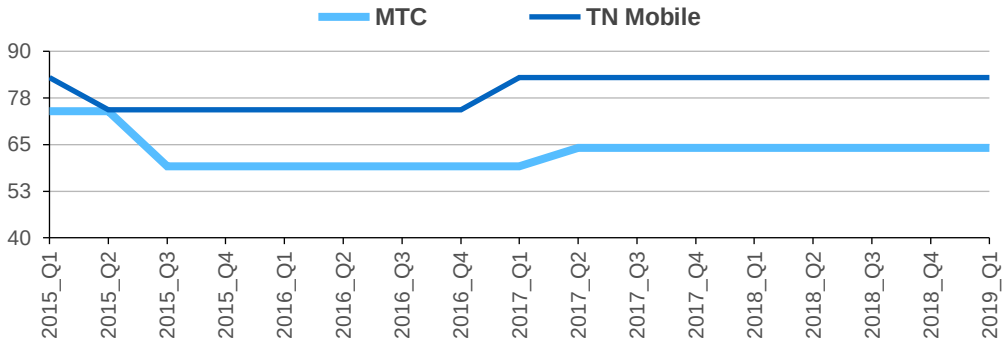



The reduction in post-paid is attributed to the fact that most customers use smartphones which have features that support Over the Top (OTT) applications. Another factor is the post-paid/prepaid substitution, which sees most post-paid customers having a second SIM to take advantage of the cheaper data connectivity bundles on prepaid (CRAN, 2019, p.15).

CRAN (2019, p.17) opined that for Telecom Namibia to effectively compete with MTC it must make infrastructure investments, but that it is unlikely to happen due to its declining fixed and mobile line ARPU's, which fell from N$ 141.50 per month in 2016 to N$ 47 in 2017. The decline in ARPU is because consumers are calling less on the Telecom Namibia network, which may be due to poor quality of service but mainly due to Telecom Namibia's limited coverage. The only way that it would increase is by upgrading and increasing the network capacity. CRAN (2019, p.17) further stated that the decline of the fixed-line ARPU may result in reduced retail revenues, which may lead to Telecom Namibia naturally transitioning to a wholesale company. Figure 10

compares MTC and Telecom Namibia (TN Mobile) cost of cheapest prepaid mobile product, and shows that MTC basket was cheaper than that of Telecom Namibia from 2015 to 2019. Figure 10 interestingly also shows that, although the MTC basket remained cheaper, it started increasing from quarter 2 of 2017.

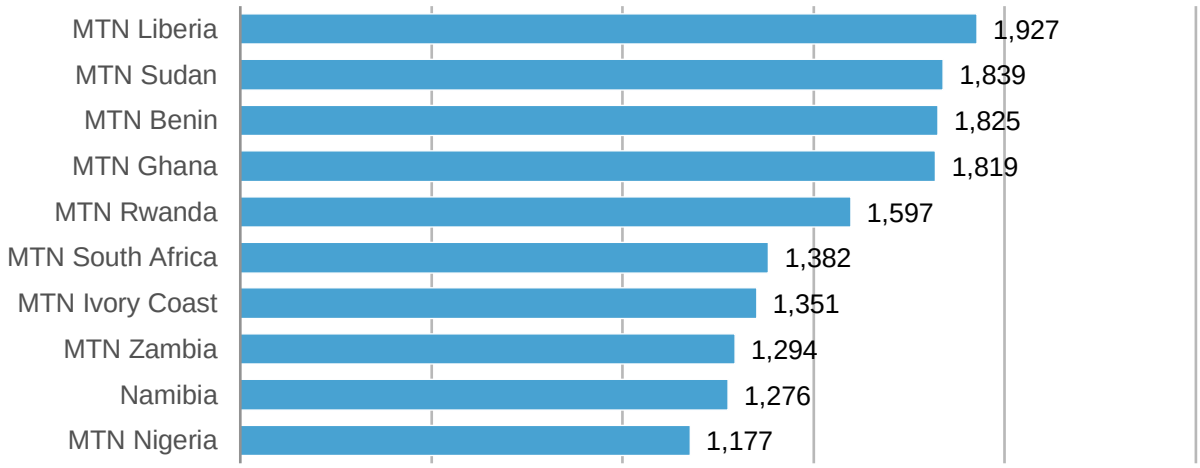
*Figure 10 Cost of cheapest prepaid mobile product for OECD 30 calls and 100 SMSs per month basket by operators in N$ (Source: Research ICT Solutions)*




CRAN (2019, p.20) concluded that the reduction in competition in the telecommunications sector has resulted in Namibia's price ranking in Africa dropping. In 2015, Namibia was amongst the ten cheapest countries for broadband data in Africa but ended in the lower third in 2018. For voice products, Namibia was ranked as 24th in Africa in 2018.

Figure 11 below shows a comparison of mobile broadband of Namibia and a few African countries.

*Figure 11 Average MB use per month per active mobile broadband subscriber in 2018,* Source CRAN (2019)




By December 2016, the Namibian market had 2.66 million subscribers; post-paid subscribers grew by 4.9%, which CRAN attributes to the need for increased mobile broadband (CRAN, 2017, p.12). Respondent APE-2 explains that notwithstanding the reversal of the sector from a competitive to a public mobile monopoly, mobile subscribers continue to increase due to technological innovation, which resulted in many consumers moving from fixed to mobile. Fixed-line subscriptions remained stagnant, and the market saw a commencement in the rollout of fibre to the home (CRAN, 2017, p.12). CRAN concludes that there was no competitive pressure in 2017 in the market that would lead to MTC reducing its post-paid prices (2017, p.12). The pressure was reduced by the increase of State ownership, due to the 100% acquisition of MTC by NPTH. This was the only change in the market structure during this Phase.

By 2018, Namibia's fixed telephone subscriptions decreased from 8.03 in 2014 to 6.32 in 2018. Both South Africa and Botswana also saw a decrease in fixed teledensity. Respondent APE-2 explained this decrease, that the fixed-line monopoly means very high-leased line prices in international comparison and low fixed-line penetration.

Respondent REGO -1 claims that Telecom Namibia is not stimulating market growth because they hinder competition from a cost perspective. Other licensees started to duplicate infrastructure, which limited roll out to under-served areas because instead of new entrants sharing infrastructure with Telecom Namibia, the capital was used to duplicate infrastructure.

## 6.3 Regulatory Interventions

CRAN enacted the Regulations Prescribing Sharing of Infrastructure were aimed at enhancing market development by allowing licensees to share infrastructure and the Regulations to ensure Fair Competition in the Telecommunications Sector, which was primarily aimed at promoting competition and protection against anti-competitive practices. The impact of these regulations is that the market has a comprehensive framework for the sharing of infrastructure and fair competition, which the NCC did not have. However, as discussed in chapter 5, there were concerns about the ability of CRAN to enforce compliance. Respondent REGO-3 however, argued that none of the regulations were earmarked for fixed services. Respondent REGO-3 is concerned that Namibia is only halfway in reaching a full reformed sector, due to a *de facto* monopoly in the market, lack of efficient spectrum utilisation and management, no implementation of universal access and services and lack of enforcement of network unbundling.

Respondent APE-3 indicated that the current regulatory framework is heavily impacted by State ownership and control, and it will thus be challenging to facilitate competition. Further that Telecom Namibia must set cost-based tariffs, in order to reduce its losses and improve its mobile offerings. Respondent APE-3 argued that regulatory interventions were made on the assumption that Telecom Namibia and MTC are efficient operators. Further that it is unlikely that the regulatory interventions will have

the desired effect, given the indirect ownership of Telecom Namibia by the Government and its weak financial position.

Some respondents blamed poor sector reform outcomes on the fact that CRAN did not enforce the implementation of the regulatory framework. According to Respondent CO-1, the Communications Act is an adequate piece of legislation, but there are challenges with its application by CRAN. The research found that these challenges pertained mostly to the enforcement of compliance with the infrastructure sharing and number portability regulations. Besides, REGO-2 claimed that CRAN is not transparent towards the market. Respondent GB-1 indicated that CRAN needs to create a levelled playing field, deal with anti-competitive behaviour and ensure the quality of service. Once again, this demonstrates that there was a lack of regulatory legitimacy, which affected the effectiveness of the regulator during Phase III. Respondent RB-1 suggests that the current regulatory framework must focus on number portability. Respondent REPO-1 agreed that CRAN will only achieve sector reform if it imposes performance targets on operators with penalties for non-compliance.

Respondent RB-1 was of the view that in order for Namibia to ensure a competitive market, the autonomy of the Regulator must be safeguarded from political interference. Especially given the high concentration of the market in the Government Respondent APE-3 argues that "perhaps we should give up on the idea of having a competitive market and focus on fair and reasonable prices and quality of service, benchmarked with the Region". Further that TN Mobile should close its doors as it is a loss-making operation, MTC regulated as a monopoly and Telecom Namibia must continue to provide fixed services and its prices regulated based on regional benchmarks. Respondent REGO-2 believes that the implementation of infrastructure sharing and national roaming will result in a competitive market. CO-1 argues that Government concentration is distorting the market because the Regulator and operators all report to the same Ministry.

Respondent REGO-3 argues that because there is a regulator, ownership should not be viewed as impacting market development. Further that the biggest hindrances to ICT development is the slow pace that it takes for regulations and policies to be passed and enforced. Also, Respondent REGO -3 argued that ' the Regulator continues to fail to avail spectrum to the telecommunications providers. The majority spectrum is hoarded by entities that use this method of anti-competitiveness to hold a lock on the sector and keep players from participating in broadband services through spectrum hoarding."

## 6.4 Effect of Fixed and Mobile Public Monopoly on Consumer Benefits

This part will analyse how the mobile and fixed monopoly affected the ways in which consumers benefitted from the mobile market throughout the three phases of sector reform.

**Fixed services:** The fixed market continued as a monopoly with only Telecom Namibia providing services. The NCC had no mandate over Telecom Namibia. By 2008, Namibia had 145 000 fixed subscribers. The fixed subscriptions, however, increased from 7.11 (per 100 inhabitants) in 2008 to 8.03 in 2014. Namibia's leased line prices, (compared to international prices) had also fallen behind in terms of affordability. Although there was a reduction in retail prices in the fixed market, some mobile operators struggled to effectively compete due to the high cost of leased lines provided by Telecom Namibia. This is in line with the findings in the conceptual framework that inefficient prices typically characterise monopolistic markets.

This position was entrenched by the Court ruling in the MWeb case, which found that these high-leased line costs did not unconstitutionally violate Telecom Namibia's right to conduct business. This decision also negatively affected the development and expansion of broadband services, because other operators were forced either to roll out

their networks or to pay the high cost of leased lines, instead of using the capital to expand the provision of broadband and voice services to consumers. It is difficult to duplicate a fixed network, which means that in most instances, new entrants were compelled to lease lines from Telecom Namibia. The monopoly further meant that fixed-line consumers had limited access to services and products.

The growth of the mobile sector also contributed to the lack of growth in the fixed sector. This is because consumers migrated to mobile services from fixed services. Fixed services, therefore, did not decline, but became redundant due to the emergence of mobile services. This is why mobile subscribers increased from 800 000 to 1.6 million between 2007 and 2009, but fixed subscribers only increased by 7000. The research also found that the introduction of VOIP and other mobile services by Telecom Namibia negatively affected the growth of the fixed services. This is because Telecom Namibia no longer had a direct vision on growing the fixed services but juggled between fixed and mobile, which resulted in the mobile services of Telecom Namibia taking off poorly and the fixed services remaining dormant with no growth.

Significantly, during Phase II, Telecom Namibia experienced a reduction in voice revenue due to broader uptake of mobile phones and VOIP services by other operators. The ICT usage indicators showed a slight increase in Phase II. Percentages of individuals using the internet were at 14.8% in 2014. The fixed broadband subscriptions also increased although they were still much lower compared to other countries in the region.

As discussed in Chapter 5 the research also found that Telecom Namibia had high leased line prices in international comparison and a low fixed-line penetration, which held back not only the expansion of fixed services but also mobile broadband. The research further found that even up to 2018, the Regulator had not put in place a cap on the leased lines, which continued to be high and affected market growth negatively.

**Mobile Services:** MTC and Telecom Namibia controlled 91% of all assets and 88% of revenue in the sector during Phase II. The market structure changed in Phase III, with the sale of the MTC shares to NPTH, which meant that the Government owned 100% of the shares in Telecom Namibia and MTC. These changes effectively amounted to de-privatisation of the mobile market, but translated the market into a public monopoly. Notwithstanding these changes in ownership and market structure, the number of subscribers increased by 59% in 2018 compared to 2013 and the average cost of prepaid minutes dropped by 15 cents and other prices decreased significantly (CRAN, 2019, p.4).

By 2018, Namibia failed to maintain its 2015 ranking as one of the top ten cheapest African countries and fell into the third lower rating (number 44th in Africa). This drop in rating meant that the MTC acquisition harmed pricing. Interestingly, the research found that there was price reduction in Namibia, but that prices in other countries are going down much faster than in Namibia (CRAN, 2018). The question is, however, why prices went down, but the rating did not improve. The research found that the problem with Namibia was, that prices were decreasing but not fast enough in comparison to other countries (CRAN, 2018). This is why Namibian consumers are enjoying reduced benefits, but the ranking did not improve.

The following market conditions were found within which the benefits described in Phase III were yielded: Firstly, according to CRAN (2019) the asset and turnover ratio, indicated that both MTC and Telecom Namibia are becoming operators that are more effective. By 2017, MTC had overtaken Telecom Namibia in terms of assets. According to CRAN (2019), this was due to the 081 campaign, which MTC rolled out to build more base stations especially in rural areas, which also increased coverage and led to a reduction in prices. Secondly, the market recorded a considerable drop in ARPU levels due to the reduction in termination rates and found that MTC was competing against itself.

The changes described in Phase III resulted in price reductions and increased subscription numbers. The market conditions were that the market was de-privatized and the Government indirectly owned both dominant licensees. This occurrence is not in tandem with the conceptual and theoretical framework which stated that a high concentration of State ownership distorts the market and that such market conditions do not yield consumer benefits (Calandro et al., 2010). However, the benefits realised and the market conditions from which they were yielded, are in line with the theory that monopolies do produce consumer benefits in the form of low prices but competition produces much greater consumer benefits. In other words, although the benefits described in Phase III are similar to those yielded under competitive conditions, Phase III was not competitive.

## 6.5 Effect of regulatory interventions and ownership

The study primarily looked at the changes that occurred throughout the three phases of sector reform, the benefits derived and the market conditions that yielded the benefits. In order to understand this, it is also necessary to analyse data on the effect of regulatory interventions and ownership, for each of the three phases of sector reform. Throughout the three phases, both the fixed and mobile markets were dominated by State ownership, with different models of regulation. This section will thus look at the effect of State ownership and regulatory interventions on consumer benefits.

The study found that a high concentration of State ownership in the market does not automatically amount to reduced benefits for consumers as was evidenced in Phase I, where the market yielded benefits even though the Government-owned the majority of the shares. These benefits were mainly reduced prices, which resulted in increased subscription numbers. Calandro et al (2010) however argued that State ownership is an institutional factor that must be reduced in order to attain economic benefits in public utilities (Calandro et al., 2010). However, this should be viewed in the context that

MTC was still privately controlled (during Phase I), and Leo was 100% privately owned. Therefore, the concentration of the market in the Government may not be adverse to consumer benefits if there is some level of private control. This type of benefits should have beenthat the Regulator sought to achieve with the conditions imposed in the MTC acquisition, requiring that 30% of the shares be sold privately, as described in Phase III.

The study found that prices were high in Phase II because of the unregulated interconnection prices and anti-competitive practice in the form of predatory pricing. The regulatory intervention was implemented when the NCC reduced both MTR and FTR, which led to a price reduction as measured in the low user baskets of MTC and Telecom Namibia. This reduction highlights the importance of regulation as a catalyst for consumer benefits in liberalised sectors and confirmed the theory by Nicol (2003, p.68) that the presence of privatisation without regulation merely increases the power of the monopoly and delays market expansion.

The reduction in termination rates and the price cap benefitted Powercom (t/a Leo), whose off-net calls made up over 40% of its traffic, while most of the MTC traffic was on-net (NCC, 2011). In Phase III, the monopoly in the mobile market was a result of the Government in-directing owning 100% of the MTC shares, via its shareholding in NPTH. This type of monopoly is different from that in Phase II because of the heightened level of State ownership. The monopoly in Phase III is also because in 2015, both MTC and Telecom Namibia were declared dominant and in 2016, they jointly controlled 93% of assets, and 88% of revenue (CRAN, 2019).

The research also analysed how consumers enjoyed benefits in a monopolistic mobile market mainly described in Phases II and III. Telecom Namibia had the vision to expand its GSM network and considered Leo as a catalyst to this vision, hence the decision to acquire Powercom (t/a Leo). Leo was generally good at marketing its products, which made it appealing to consumers, but the regulatory framework did not

support its business strategy as a new market entrant. While the regulatory framework allowed new market entry, there were no immediate interventions to address the emergence of anti-competitive practices from dominant operators. The regulatory framework at the time was also not comprehensive enough to create a level playing field for new entrants to thrive, as it did not have regulations on infrastructure sharing or number portability, nor did it deal with anti-competitive prices.

In addition, Telecom Namibia did not benefit from the acquisition because it chose to incorporate Leo into its TN Mobile department. As a result, consumers simply migrated to MTC because they were not familiar with the TN Mobile brand. Telecom Namibia should thus have continued to run Leo as an independent going concern. In the end, it was MTC that benefitted the most from the Telecom Namibia?/Leo acquisition. The MTC subscriber numbers increased after the acquisition and those of Telecom Namibia decreased.

The study also made a comparison to Botswana, which had four operators at the time, and according to the theoretical definition, this signified a highly liberalised market. However, prices were still high compared to Namibia, with only two Government owned operators. The differentiating factor was that Namibia regulated interconnection prices in 2009 and 2011, which Botswana left unregulated. A liberalised market thus (signified by more operators with privatised shareholding) does not automatically yield consumer benefits such a price reduction, in the absence of other mandatory regulatory interventions, such as interconnection pricing. The presence of privatized operators in a market is not sufficient to yield consumer benefits, in the absence of the necessary regulatory interventions. RIA confirmed that Botswana needed interconnection price regulation to address the monopolistic behaviour, which was delaying retail tariff reductions (2013). Namibia too had the same experience in Phase I but was addressed with the reduction in termination rates during Phase II.

## 6.6 Chapter Summary

The fixed market continued as a monopoly with only Telecom Namibia providing services. The growth of the mobile sector also contributed to the lack of growth in the fixed sector. This is because consumers migrated to mobile services from fixed services. The market structure changed in Phase III, with the sale of the MTC shares to NPTH. These changes effectively amounted to de-privatisation of the mobile market, but translated the market into a public monopoly. Although the benefits yielded in Phase III are similar to those yielded under competitive conditions, Phase III was not competitive. Chapter 7 concludes on how sector reform yielded consumer benefits in the Namibia market and makes recommendations on future reform.

# Chapter 7: Conclusions and Future Perspectives

## 7.1 Introduction

This chapter concludes on how customer benefits were derived in a monopolistic market, or in a partially competitive market, which occurred throughout the three phases of sector reform in Namibia. The chapter finally makes recommendations on future perspectives on competition in the Namibia telecommunications market.

## 7.2 Consumer Benefits and Market Conditions

The market structure in Phase I was characterised of a fixed monopoly and a mobile monopoly. Two changes led to the transition from a monopolistic to a competitive mobile market, namely: the sale of 34% of MTC shares (and control of MTC) to Portugal Telecom in 2006 and the licensing of Powercom (t/a Leo. These events led to a competitive mobile market in Namibia because consumers were able to enjoy reduced prices due to the pressure that these events put on the market. The benefits are that mobile prices dropped and prepaid subscription packages were introduced, which offered voice, SMS and broadband bundles. The on-net prices in the mobile market were first to fall, there was a reduction in the price of starter packs and recharge vouchers, and the introduction of 3G broadband services. The benefits resulted in the growth in subscriber numbers, as by 2008 Namibia had over 1 000 000 mobile subscribers and the mobile penetration rate increased from 4.57 (per 100 inhabitants) in 2000 to 51 (per 100 inhabitants) in 2008. The market conditions were competitive but with a high concentration of state ownership and poor regulatory quality and legitimacy.

The market conditions in Phase II was a fixed monopoly and mobile monopoly, due to the reversal in the mobile market. The main changes that led to a reversal was the acquisition of Leo by Telecom Namibia. Before the reversal, this Phase II had a price war between operators, which led to consumers enjoying benefits in the form of reduced prices. MTC had higher subscriber numbers than Leo.. MTC also set high off-net prices and low on-net prices to shield itself from the competitive pressure of Leo, which meant that the MTC consumers' benefitted most, because of this anti-competitive behaviour. Leo's cost of termination was thus high due to the low traffic on its network.

Consequently, the following changes negatively affected consumer benefits in Phase II: MTC's anti-competitive pricing behaviour, Telecom Namibia's high-leased line prices, and the unregulated interconnection prices. The study thus found that the introduction of regulatory interventions in a market and the timing of such interventions is generally critical to creating a levelled playing field, especially for new market entrants. Further, the study found that consumers enjoyed benefits, even amid anti-competitive pricing behaviour. After the regulatory interventions about the reduction of MTR and FTR and off-net prices, consumers enjoyed further price reductions. These regulatory interventions made competition fairer and unlocked the power of privatisation, which led to lower prices. The NCC did not establish competition soon enough.

The need for a 40% MTR reduction in Phase II, however, shows that prices in Phase I may have been affordable due to the competitive pressure that Leo put on the market, but they were still high due to the lack of regulatory interventions aimed at addressing anti-competitive behaviour, especially interconnection prices. The research however found no evidence of anti-competitive pricing anti-competitive pricing in Phase I, and hence the conclusion that it was competitive. The study found that regulation is an essential catalyst for consumer benefits in liberalised markets and that the presence of privatisation without regulation merely increases the power of the monopoly and delays

market expansion. This occurred because MTC was partially privatised, the regulatory framework was weak and it merely resulted in MTC becoming an entrenched monopoly. This delayed market expansion, because it also led to the closure of Leo.

The NCC was regulating the market since 1992, but it generally lacked powers to deal with anti-competitive practices, which was the main factor that was leading to Leo's ineffectiveness. Although the NCC Act was amended in 2004, to include tariff regulation over MTC, it only regulated termination rates in 2009. The study thus confirmed the principles in the conceptual framework that regulatory delays and inappropriately designed initiatives may hold back sector reform. In addition, the presence of a comprehensive regulatory framework is not sufficient, as regulatory legitimacy and quality, remain the key to market development. In the end, the mobile market reversed to a public monopoly due to the acquisition of Leo by Telecom Namibia.

The main changes in Phase III was the 100% acquisition of MTC by Government, which makes it an exclusive state ownership phase. These changes effectively amounted to de-privatisation of the mobile market. Notwithstanding these changes in ownership and market structure, the number of subscribers increased, and the average cost of prepaid minutes dropped by 15 cents, and other prices decreased significantly. The market structure in Phase III was a fixed and mobile monopoly, due to the reversal in the mobile market.

In 2018, Namibia failed to maintain its 2015 ranking as one of the top ten cheapest African countries and fell into the third lower rating (number 44th in Africa). This confirmed that the MTC acquisition harmed pricing. Although prices were indeed decreasing, prices in other countries were decreasing much faster than in Namibia (CRAN, 2018). In Namibia, prices were decreasing and consumers were enjoying reduced benefits. However, the prices were not decreasing fast enough in comparison to other countries. There was a need for the Regulator to put in place interventions to

ensure that the price decreased fast enough in comparison to other countries and that the ranking also becomes competitive as it was in 2015.

During Phases II and III, the Namibian market yielded benefits such as price reductions and increased subscription numbers, although the market conditions were monopolistic and the Government owned both dominant licensees. However, the consumer was worse off compared to other markets where prices were decreasing fast enough for those countries to retain their competitive ranking. The benefits in Phase III were not influenced by another operator as was the case with Leo in Phase I, but came from a purely Government concentrated market. This could be attributed to the fact that the groundwork was done during the Phases I and II, in that prices had been decreasing, and operators would naturally not reduce prices. Because MTC has a market share over of 93%, there is no real competitive pressure from Telecom Namibia. The research found that the MTC post and prepaid products are competing against each other. The lack of competitive pressure thus means that MTC is keeping prices stagnant and hence the finding that there are no price increases in Namibia, but in comparison to other countries, Namibia's global ranking is getting worse.

The fixed market continued as a monopoly with only Telecom Namibia providing services. Notwithstanding, the reduction in termination rates, prices in the mobile market continued to be high because there was no price cap on Telecom Namibia's leased line prices. There was a reduction in retail prices in the fixed market; however, some mobile operators struggled to effectively compete due to the high cost of leased lines provided by Telecom Namibia. The fixed monopolistic market was thus typically characterised by inefficient prices throughout all three phases. The Court decision in the Mweb case decision also negatively affected the development and expansion of broadband services, because other operators were forced either to roll out their networks or to pay the high cost of leased lines, instead of using the capital to expand the provision of services to consumers. The growth of the mobile sector also

contributed to the lack of growth in the fixed sector because consumers migrated to mobile services from fixed services.

Throughout the three phases, both the fixed and mobile markets have been heavily dominated by State ownership, with different models of regulation. The high concentration of State ownership did not result in zero benefits for consumers. In Phase I, consumers enjoyed benefits, even though the Government owned the majority of the shares. This finding is not entirely in line with the conceptual framework, which held that State ownership is an institutional factor that must be reduced in order to attain economic benefits in public utilities (cite). During Phase I, MTC was still privately controlled and Leo was 100% privately owned.

The study also made a comparison to Botswana, which had four operators at the time, and according to the theoretical definition, this signified a highly liberalised market. However, prices were still high compared to Namibia, with only two Government owned operators. The differentiating factor is that Namibia regulated interconnection prices in 2009 and 2011, which Botswana left unregulated. A liberalised market thus does not automatically yield consumer benefits such a price reduction, in the absence of other mandatory regulatory interventions, such as interconnection pricing. In the end, the study found that consumers in Namibia were able to enjoy competition like benefits firstly because of the presence of a competitor who influenced the dominant operator to lower prices and invest in market expansion. Although this operator was able to inspire this level of benefits for the consumers, they did not have the means to sustain their business operations, because of the entrenched monopolistic practices of the dominant operator. The lack of regulatory interventions such as interconnection pricing, which would be aimed at protecting new entrants, worsened the market conditions. Secondly, when the market reversed back to a public mobile monopoly, prices continued to drop and consumers obtained benefits, albeit in monopolistic conditions. However, because of the monopolistic environment, prices were not dropping fast enough compared to other markets. This confirms the theory that

monopolies do produce consumer benefits but competition produces much greater consumer benefits. The Regulator may improve this by continuing to monitor operators with significant market power, such as MTC and impose appropriate regulatory interventions to safeguard consumer interests (Souter, 2009, p.104).

## 7.3 Future Perspectives and Recommendations

The study found that consumer benefits are enjoyed once the necessary sector reform elements are implemented. It is for this reason that the perspectives and recommendations made under this section all relate to the introduction of sector reform elements, with the understanding that once correctly implemented the result will be that the market becomes competitive and yield consumer benefits.

The first perspective is that the current regulatory framework has the necessary sector reform elements to ensure fair competition, which includes tariff and interconnection regulations, competition regulations, infrastructure sharing, quality of service and number portability, amongst others. The presence of a comprehensive regulatory framework is however not sufficient due to a lack of enforcement to ensure compliance with the framework. In order to ensure regulatory legitimacy and quality, it is recommended that the Regulator put in place a proper enforcement and compliance framework to ensure that the market adequately benefits from the sector reform elements contained in the regulatory framework. This recommendation is based on the principle that in the absence of competition, regulatory interventions will play a greater role in advancing consumer benefits.

The Regulator must impose price caps on the cost of leased lines as charged by Telecom Namibia and fully implement number portability, and infrastructure sharing. The Regulator must also liberalise the market, either by introducing interventions that allow MTC and Telecom Namibia to effectively compete against each other or one

where new entrants can effectively compete and make inroads into the market share of MTC and Telecom Namibia.

The regulatory framework is based on essential policies such as liberalisation, privatisation, local participation and the promotion of competition. The market is concentrated in the Government, which discourages private investment. The level of State ownership in the market must therefore, be decreased.

The fourth perspective focuses on ICT infrastructure investment and sharing of such infrastructure in order to attain market expansion and encourage technological innovation. The research found that the Government does not have a capital budget for ICT infrastructure, and only operators invest in the market. The research also found that Telecom Namibia would be able to effectively compete with MTC, if Telecom Namibia invests in the deployment of ICT infrastructure, especially for mobile voice and broadband. Namibia must therefore adopt a regulatory approach that gives effect to policy guidelines. Stringent regulatory approaches will result in tremendous short-term benefits with no long terms benefits such as infrastructure investments.

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# ANNEXURE A

# PARTICIPANT INFORMATION SHEET

**MASTERS RESEARCH ON THE CHALLENGES OF SECTOR REFORM AND COMPETITION IN THE TELECOMMUNICATIONS MARKET 2009-2019**

**PARTICIPANT INFORMATION SHEET**

**Dear Participant,**

**Request:** You are invited to participate in this study by responding to a limited number of questions for the purposes of postgraduate research. The examined research report will be published in the Wits Library Electronic Theses and Dissertations. The institution has been selected as a key informant because of its position in the telecommunications market in Namibia. The interviewer would like to conduct a one-on-one interview, which should take approximately one hour. Please read the following outline in order to consider your participation. An informed consent form is attached for your signature.

**Deciding to participate:** Participation is entirely voluntary. You are free to withdraw at any stage without giving a reason. There are no risks to participation. The study may have several beneficial outcomes, as the topic is of interest to persons and institutions active in the ICT policy and regulation environment. A few quotations from selected interviews may be included in the final report, with the respondents details anonymised. If you have any questions during or afterwards about this research, feel free to contact me on the details listed below. This study will be written up as a research report which will be available online through the university library website. If you wish to receive a summary of this report,

I will be happy to send it to you (optional). If you have any concerns or complaints regarding the ethical procedures of this study, you are welcome to contact the University Human Research Ethics Committee (Non-Medical), telephone +27(0) 11 717 1408, email Shaun.Schoeman@wits.ac.za.

**Anonymity and confidentiality:** Any limited personal information collected will be kept confidential. Names will not be listed in the published report. The anonymised data generated in the course of the research will be kept securely in paper or electronic format.

**No conflict of interest:** The researcher is an employee of the electronic communications sector regulator. This may be perceived as either a conflict of interest, and, or creating some possible bias. I herewith explain that these interviews are for University degree purposes only and not for purposes of employment with CRAN. Furthermore, the data will not be used for any other purpose and will also not be shared with CRAN.

Thank you,

Researcher: Emilia Nghikembua, 0811425836,
enamwoonde@yahoo.com

Supervisor: Lucienne Abrahams,
luciennesa@gmail.com and lucienne.abrahams@wits.ac.za

# ANNEXURE B

# INFORMED CONSENT

**INFORMED CONSENT FORM FOR INTERVIEWS**

I _____hereby agree to participate in the research study.

**Title: CONSUMER BENEFITS SQUEEZED OUT OF LIMITED SECTOR REFORM NAMIBIA: 2009-2019**

I will participate in the interview in which I will give my views on the Challenges of sector reform and competition in the telecommunications market in Namibia from 2009-2019. The research has been explained to me and I understand the study. I have been informed of:

(i) the name and affiliation of the researcher;
(ii) the purpose, content, objectives and potential benefits of the study;
(iii) the fact that the content of my responses may be reported, anonymously, in the study's published outputs (e.g., research report, conference paper, journal article, book chapter, lecture);
(iv) the study's procedures for storage and use of the data collected from the interview in a manner that ensures anonymity and confidentiality of the data;
(v) the steps I can take if I have questions or concerns or feel that I have been harmed by the research;

(vi) If I had any questions relating to the research and what will be required of me.

I understand that this is a research project whose purpose is not to benefit me personally.

**Please initial box**

1. I confirm that I have read and understand the information sheet or the above study and have had the opportunity to ask questions. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason. ☐

3. I understand that the researcher will not identify me by name in any reports using information obtained from this interview and that the views I express will remain confidential; **OR**

4. I agree to my name being listed as a participant in this study in the annexure to the report, but not to be referenced in the main body of the report. ☐

5. I agree to the interview being audio recorded. ☐

6. I agree to the use of anonymised quotes in the dissertation. ☐

7. I agree that data gathered from me in this study may be stored (after it has been anonymised) and may be used for future research. ☐

Name of Research Participant Date Signature

| Name of Researcher | Date | Signature |
|---|---|---|

# ANNEXURE C

# INTERVIEW GUIDE

**Postgraduate Research Interview Guide**

**Changes that occurred in the various phases of sector reform 2009 - 2019**

1. What events and factors during the fixed and mobile public monopoly era led to a competitive mobile market?
2. How did the continued fixed monopoly impact overall market development during this period?
3. What events and factors led to a transition from a competitive mobile market to a mobile monopoly?
4. What regulatory interventions and tools could have been utilised to prevent this reversal in sector reform?

**Effects of sector reform on market development**

5. How did the implementation of competition affect market development in Namibia?
6. How did this transition impact pricing and access to ICT products in the market?
7. To what extent did the market structure and ownership of the operators have an impact on market development?

8. How did the introduction of regulation affect market development?
9. What policy and regulatory mechanisms were in place to promote market development and sector reform?
10. Do you have any other comments on sector reform, past, present and future?

**Views of key stakeholders on the current phase of sector reform and competition**

11. How will the current regulatory framework facilitate a competitive market in the fixed and mobile segments?
12. What other interventions do you think are necessary to ensure a competitive market?

# ANNEXURE D

# ETHICAL CLEARANCE

**SCHOOL OF Literature, Language and Media RESEARCH ETHICS COMMITTEE**

| | |
|---|---|
| **CLEARANCE CERTIFICATE** | **PROTOCOL NUMBER: SLLM-M19-01** |
| **PROJECT TITLE** | The challenges of sector reform and competition in the Namibian telecommunications market 2009-2019 |
| **INVESTIGATOR** | Mrs Emilia Nghikembua |
| **SCHOOL/DEPARTMENT** | SLLM/ LINK |
| **DATE CONSIDERED** | 15 October 2019 |
| **DECISION OF THE COMMITTEE** | Approved |

**This ethical clearance is valid for 2 years and may be renewed upon application.**

**EXPIRY DATE** Date of submission of the project report

**ISSUE DATE OF CERTIFICATE** October 2019 **CHAIRPERSON**

cc: Supervisor : Lucienne Abrahams/ Stanley Shanapinda

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**DECLARATION OF INVESTIGATOR**

To be completed in duplicate and **ONE COPY** returned to the Chairperson of the School/Department ethics committee.

I fully understand the conditions under which I am are authorized to carry out the abovementioned research and I guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee.

**Signature** **Date** 29 / 10 / 19