



PROSPECTS FOR TELECOMMUNICATION SERVICES REGULATION IN SWAZILAND

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ABSTRACT

It is widely accepted that telecommunications play a crucial role in the development of economies and in today's global community. In addition, developments in telecommunications industry continue to be fast paced as the world moves towards convergence in the sector. Given the importance attached to telecommunications in the modern world and the fast pace changes in technological advancement, it is crucial that a conducive environment be put in place in every country to ensure peak performance in all aspects. This emphasises the need for regulation in all countries and Swaziland is no exception.

Whilst numerous studies have been done in the area of telecommunications regulation in developed countries and developing countries, very little if any at all have been done on telecommunications regulation in Swaziland. Swaziland currently does not have an independent regulator of telecommunications services. The main purpose of this study was to develop a framework for telecommunications regulation in Swaziland. A situation analysis of the telecommunications industry was undertaken and the regulatory structure compared with others across the globe as well as existing international guidelines on telecommunications regulation outlined in treaties that Swaziland is a signatory to. The study also sampled perceptions of players in the telecommunications industry and used same to customise the resulting regulatory framework for telecommunications regulation to Swaziland. The research revealed that the current regulator, Swaziland Post and Telecommunications Corporation (SPTC) through its Managing Director, operates the fixed telephone line services and additionally hold a stake in the mobile telephone services company, MTN Swaziland. The monopolistic tendency and poor regulation has led to under-investment in the telecommunications sector as well as poor quality service, as revealed by interviews with key informants.

In relation to the size of telecommunications industry in Swaziland the study proposes the introduction of the Department of Telecommunications Regulations to be headed by the Chief Regulator. In order to ensure operational independence and fairness it is further proposed that the Chief Regulator be hired competitively and also be given a security of tenure of office. This would ensure independent regulation at affordable budget.

DECLARATION

I declare that this research is my own, unaided work, except to the extent indicated in the acknowledgements, text and references. It is being submitted in partial fulfilment of the degree of Master of Business Administration to the Faculty of Management of the University of the Witwatersrand, Johannesburg, and has not been submitted before for any degree of examination at any other university.

Sam Dumisani Shongwe

Signed on this ____ day of _____, _____ in _____

DEDICATION

In loving memory of my grandfather
Samuel Nyangane Shongwe

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CHAPTER ONE: INTRODUCTION

The pace of globalisation has been very high mainly because of an equally high reduction in the costs of communication, brought about by advanced technology (Yoost, 2005). This is best demonstrated by the ability of individuals, organisations and countries to communicate instantaneously, and not only verbally but also visually and through transfer of data from one point in the world to another using the internet, mobile phone network, telephone-video conference facilities and satellite phone systems, in addition to the traditional fixed telephone line networks.

Tan and Leewongcharoen (2005) are of the opinion that information technology and economic development are correlated. Telecommunications is an integral part of information technology and hence, like any other technology in this category, needs development and maintenance for the strategic common good of the stakeholders; the stakeholders in this case include governments, corporations and citizens.

Over the past few decades various parties have debated the question of how to regulate this very important industry; Smith-Hillman and Brathwaite (2003) and the European Union (2000) argue that in the long term regulation improves, and encourages , whereas Bel and Trillas (2005) mitigate that regulation promotes bureaucracy. Tetrault (2001), on the other hand, claims that an impartial regulator increases market confidence.

Based on the category of regulatory bodies, there are three types of regulations: government-enforced regulations, regulations enforced by independent bodies outside the government, and regulations enforced by the market controlled regulation or total deregulation.

Recent history has consistently pointed towards deregulation of the telecommunications industry, with most countries with previously impenetrable barriers either introducing less stringent regulations or a substantial reduction of regulations. For example, the World Trade Organization (WTO) Telecommunications Reference Paper requires signatory countries to have regulatory bodies separate from, and not accountable to, organisations trading in telecom goods or services (WTO, 1996), Swaziland remains without an independent regulator. This study aims to assist in putting together a framework for telecommunication services regulation in Swaziland..

1.1 CONTEXT OF THE STUDY

Like many other African states upon independence, the government of Swaziland established a single Post and Telecommunications Service, Swaziland Post and Telecommunications Corporation (SPTC), that carried out regulatory as well as operational and decision making functions.

Until 1998 SPTC remained the sole provider of telecommunication services in Swaziland. In that same year, a mobile telephone operator, Mobile Telephone Network (MTN), was granted a ten-year exclusive licence for Global System for Mobile communication (GSM) services by the Swaziland Government, through a commission established under the then Ministry of Tourism Environment and Communications, now known as the Ministry of Information Communication and Technology. The government, through SPTC, has a fifty-one per cent stake in MTN, ten per cent of which was recently acquired by the Head of State; His Majesty King Mswati III (Mabuza, 2006). The industry is regulated through the Swaziland Posts and Telecommunications Act. The SPTC continues to be a policy maker, regulator and an operator (SPTC, 2004). This seems to run contrary to the SADC and WTO principles.

Swaziland is a signatory to the SADC Protocol on Transport, Communication and Meteorology, adopted by Member States in August 1996 (SADC, 1998). The Protocol calls for the separation of functions between policy making, the implementation of policies via regulation, and the provision of services. It is because of this scenario that the author proposes to look at the prospects of telecommunications regulation in Swaziland.

1.2 STATEMENT OF THE PROBLEM

1.2.1 MAIN PROBLEM

The main problem will be to develop a framework for telecommunications regulation in Swaziland. This should be understood in light of the fact that presently no independent regulatory body exists, despite the fact that the country is a member of both the SADC and WTO; it operates in disregard of the WTO Telecommunication reference paper and SADC Protocol on Transport, Communication and Meteorology. Both the WTO Telecommunication reference paper and SADC Protocol on Transport strongly recommend that there be separation between policy duties, market regulation and telecommunication services provision (SADC, 1998; WTO, 1996).

1.2.2 SUB PROBLEMS

The first sub-problem will be to investigate potential pitfalls and unravel opportunities for an independent regulatory body, for the provision of telecommunication services in Swaziland. Among the key areas that the study will concentrate on will be the role of the Monarchy/Head of Government, the role of Swaziland Post and Telecommunications Corporation and the Ministry of Information Communication and Technology, to ensure that organisational functions are clearly defined and articulated, in addition to eliminating possible conflicts of interest among the major players in the telecommunications industry.

The second sub-problem will be to rationally analyse existing regulatory frameworks and challenges facing telecommunications industry in Swaziland, with the view to future policy.

1.3 SIGNIFICANCE OF THE RESEARCH

This study will contribute to determining the impact of executive intervention/interference on telecommunications regulations. Even though the government of Swaziland, through a commission set up under the Ministry of Information Communication and Technology, acts as the regulator, there remains doubts about its independence, taken that it has controlling stakes in the MTN mobile telephone provider and maintains leverage on the SPTC, which independently regulates the fixed line telephone services and internet, whilst also directly offering the same telecommunication services (SPTC, 2004).

This study will look at the viability of independent regulation of telecommunications in Swaziland vis-a-vis promotion of monopolistic practices in Swaziland. Aspects such as revenue, returns and quality of service in relation to the client expectations will be examined in detail. These factors directly impact on foreign direct investments (FDI). Given that Swaziland directly competes with South Africa for FDI, due to their proximity to each other, policy makers are compelled to ensure that telecommunications services are comparable to South Africa's in order to attract investors.

1.4 LIMITATIONS OF THE RESEARCH

Due to time constraints this research will rely on the use of a structured interview with key informants, in addition to available documents at the Ministry of Information Communication and Technology, SPTC and MTN. This implies that

the data will be largely secondary in nature, making it difficult to eliminate bias and reduce credibility.

The study will focus only on the fixed line and mobile telephone telecommunications services, and not all the aspects of telecommunications covered by the Swaziland Post and Telecommunications Act, like broadcast operations and Internet service, among others (SPTC, 2004). The recommendations emerging after this study will then only be applicable to fixed line and mobile telephone telecommunications services.

Given that the main players are already in the 'good books' of the Government of Swaziland the study may receive a poor response, and results from interviews with key informants may not be impartial. In addition, government documents may only echo positive values promoted by the status quo in telecommunication regulations in Swaziland.

1.5 ASSUMPTIONS

The following assumptions will be made:

- 1 The current regulatory framework as supported by the Swaziland Post and Telecommunications Act (2004) is generally weak and defective, and hampers development of the telecommunications industry in the country.
- 2 The players in fixed line and mobile telephone telecommunications services provision in Swaziland will not change during the duration of the study.
- 3 The Regulator will be responsible for issuing all licences, in addition to management and monitoring of same, in the telecommunications industry in Swaziland.

CHAPTER TWO: LITERATURE REVIEW

The literature review intends to identify and examine issues associated with the regulation of the telecommunications industry in developing economies, such as in Swaziland. This incorporates the role of the regulator and the different types of regulations that exist. The literature survey has been split into various sub-sections. The information presented will address the following areas:

- 2.1. The importance of telecommunications
- 2.2. Rationale
- 2.3. The role of the regulator
- 2.4. Lessons learnt from selected good practices worldwide
- 2.5. Convergence policy
- 2.6. Propositions

2.1 IMPORTANCE OF TELECOMMUNICATIONS

An efficient telecommunications service is an essential requirement for a country's economic growth as it affects the operations of business and industry. This is supported by Varoudakisa and Rossotto (2004:1), who hold that "... telecommunications provide access and backbone services which affect efficiency and growth across a wide range of industries. The quality and price of such key services shape overall economic performance, as they affect the capacity of businesses to compete in foreign and domestic markets." Boylaud and Nicoletti (2000:2) concur by stating that "... telecommunications industry provides many services to businesses and consumers, using a growing variety of technologies and spanning an increasing range of communications media (voice, image, data, etc.)." Addressing a conference on the Caribbean - sponsored by the Caribbean/Central American Action (CCAA) and the Caribbean Telecommunications Council, in Miami on November 30, 1988 - Ambassador Borg, United States (US) Deputy Coordinator and Deputy Director of the Bureau of International Communications and Information Policy, announced that the US. international communications and

information policy was to expand the economic and social benefits of the information age to the developing nations as this would result in significant growth in their economies. He also conceded that efficient telecommunications networks are not a preserve of the industrialised world but are essential elements for the economic progress of every nation in a competitive world market increasingly dependent on the latest information. In addition, he also stated that trade in services now represents over 30% of world trade and sophisticated telecommunication networks are the central nervous system of a service-oriented global economy (US Department of State Bulletin, 1989). These issues resonate well with the idea of a global economy and increase in trade volumes which have ensured reduced costs in business transactions as new communications technology are increasingly used to negotiate trade logistics and contracts around the world.

Yaker (1994:1) goes further by linking sustainable economic development to a developed telecommunications service; he states that "... African telecommunications need to be developed in order to support sustained economic and social development". This is also supported by, Dlamini (1999:9), who remains categorical that telecommunications play a crucial role in the development of the economy:

As a growing sector, telecommunications plays a significant role in the economic development of a country by playing a fundamental supporting role for other industries. It has become a strategic resource for facilitating information transfer, accessing, processing and dissipating data in electronic form. Foreign investment such as the purchase of telephone companies by foreign investors, or joint ventures between local and foreign partners to establish new telecommunications companies, also contributes to the economic development of a country.

Dholakia and Harlam (1994:470), when looking at the cost aspects of telecommunications investments in the United States, concluded that "...

investment in telecommunications infrastructure can be justified because of the positive impact on economic development.” They further state that “... returns on investment are more attractive for countries at lower levels of the economic development spectrum.” World Bank data indicate that in 2006, in Swaziland the telecommunications industry accounted for 12.3% of Gross Domestic Product in revenue and that 13.2% of this was the investment in the sector (World Bank, 2006). This further reinforces that the industry remains a major player in economic development in Swaziland.

According to Melody (2003), telecommunications has fast become the electronic infrastructure for transmitting all kinds of information throughout all types of industries and social sectors. These include governments, agricultural sectors, postal services, manufacturing and natural resources. Melody (2003) states that telecom networks and services provide the foundation for national 'information society' programs as well as a rapidly growing information economy. As a result, its efficiency remains highly significant towards the overall performance of the economy. The efficiency of the telecommunications service in Swaziland is at best described as poor, with World Bank data indicating that the number of faults per 100 fixed telephone lines was 90 in 2006, the connection to mobile phone network stood at 22 per 100 people, and the fixed line connection was 3 per 100 people (World Bank, 2006).

The above suggests that telecommunications is key to the economic development of a country, especially poorly developed countries, such as Swaziland. The role of the regulator in ensuring development of the sector in developing countries cannot be over emphasised. In the following section (2.2) the rationale (or motivation) for regulation will be discussed.

Bearing in mind that the mobile and fixed telephone services remain monopolised it is no wonder that the performance of the telecommunications industry remains poor. A good and appropriate regulatory framework must therefore be encouraged

to ensure that competition leads to credible performance and service in the industry.

A study conducted by the International Telecommunications Union (ITU) concluded that telecommunications could increase the efficiency of economic, commercial and administrative activities, while also improving the effectiveness of social and emergency services. It was however noted that improved telecommunications has generally not been a central investment focus in developing countries (Alleman et al., 1994).

Alleman et al. (1994) are of the opinion that reasons for under-investment in the telecommunications sector in the Southern Africa region involve issues of control and ownership, and say that telecommunications authorities are state enterprises in most countries and, as a result, are subject to standard governmental budget practices. This means competition for budget allocations from the State along with all other government bodies and, in the process, the gains associated with telecommunications investment are ignored, underestimated, or simply unknown, due to the fact that externalities associated with an expanded telecommunications infrastructure are not recognised; the government may view the telephone as a luxury; the government, with more sinister purposes, believes that better communications will undermine its own position; and finally that the government has many other social/political motives, objectives or goals with little or no economic foundation (Alleman et al., 1994).

The ITU study underlined the importance of telecommunications by concluding that first, a positive relationship exists between economic development and infrastructure investment, including telecommunications in particular; second, that telecommunications investment alone is not sufficient to ensure economic growth but that lack of telecommunication investment can prohibit or significantly constrain economic development; third, investment in telecommunications infrastructure can not only increase general business efficiency but increase the impact of other infrastructure investments; fourth, investments in new types of

telecommunications infrastructure can result in greater benefits than marginal improvements to existing infrastructure; fifth, maintenance of the telecommunications infrastructure is necessary to obtain the full economic development benefits; and finally; that lack of telecommunications infrastructure clearly inhibits economic development in SADC countries (Alleman et al., 1994).

2.2 RATIONALE

Economic regulation aims to achieve two objectives, distinguished by time. The short-term objective is on stimulating competitive conditions that promote efficiency whereas the long-term objective is on increasing industry contestability through relaxing the barriers to entry (Smith-Hillman and Brathwaite, 2003). The regulatory dilemma arises from the need to provide low-cost, high-quality goods to consumers, while signalling a profit incentive that encourages the entrance of new producers. The European Union (EU) (2000) contends that, in African countries, the intervention of regulators is needed to enable the sector to progress in the right direction; increased competition in markets that produce both commercially and economically improved range of goods and services. This is because we still have relatively young markets in most of Africa. Figures 1 and 2 illustrates the position of the telecommunications industry in Swaziland and Africa

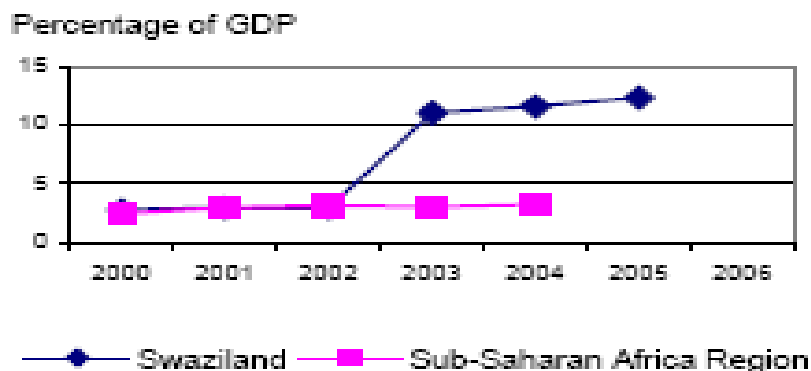


Figure 1: Telecommunications revenue in Swaziland and Sub-Saharan Africa 2000–2006. (Source: World Bank, 2006)

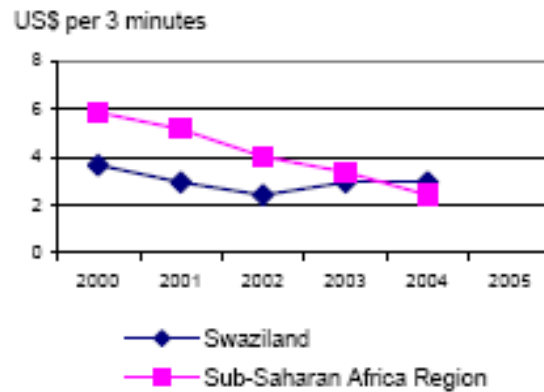


Figure 2: Price per call to US for 3 minutes in Swaziland and Sub-Saharan Africa 2000–2006. (Source: World Bank, 2006)

Despite the fact that in 2006 Swaziland had a higher gross national income (GNI) compared to Sub-Saharan African countries the performance of its telecommunications industry was much poorer in terms of access to telephone lines per 100 people, revenue generation percent of GDP and cost of levies per call, as shown in the figures above. Considering that credible regulation promotes competition, efficiency and performance (Brathwaite, 2003; European Union, 2000; Smith-Hillman and Tetrault 2001) it necessarily follows that the monopolistic tendencies in the operation of fixed line and mobile telephone services in Swaziland must be checked, by working out a new regulatory framework.

Despite objectives couched in the language of fairness and equity considerations, the regulatory role is perceived as having evolved to embrace redistribution functions that are less transparent (Smith-Hillman and Brathwaite, 2003). Governments are accused of using regulation as an alternative to subsidising consumer spending through extracting a greater proportion of monopoly rent than might be justified under strict application of regulatory economics. From this perspective, independence from the government is a critical component enabling

effective regulation. Smith-Hillman and Brathwaite (2003) also suggest that relative independence can be gauged through the extent of the regulator's powers; the clarity of roles described in regulatory legislation and the extent to which there is government accountability through the publication and justification of its decision making.

Boylaud and Nicoletti (2000) have observed that in the vast majority of countries, basic competencies are shared among three institutions: a ministry department, the sectoral regulator and the competition authority. The first two are often jointly responsible for entry, prices, dispute resolution and consumer policy.

Smith-Hillman and Braithwaite (2003) have also observed that African economies are highly susceptible to corruption due to attendants' attributes for collectivism, which is strongly linked to low per capita income levels and perceptions of leaders as deserving of special privileges. This complicates the implementation of regulatory regimes as sometimes the aims of regulation are compromised by lax government officials. Annett (2001) suggests that a negative correlation exists between the size of the government and corruption, such that the larger the share of government expenditure as a proportion of GDP the lower the inclination towards corruption. The acquisition of a 10% stake in MTN-Swaziland by His Majesty King Mswati of Swaziland can be interpreted as abuse of office especially by the Western Nations..

In 2000 within Nigeria, general government consumption as a percentage of GDP was estimated at 30.0%, while the Jamaica Government consumption was estimated at 16.9% (Annett, 2001). The more entrenched a culture of bribery and corruption is the greater is the likelihood that regulatory requirements will be by-passed in exchange for monetary gains by bureaucrats.

Boylaud and Nicoletti (2000:311) concede that "final and intermediate users of telecommunication services are likely to gain a lot from acceleration of liberalisation initiatives and regulatory practices that make it possible for new

foreign and domestic operators to compete effectively.” At the same time, there seems to be consensus that externalities may have justified (and in some cases still justify) regulatory intervention on some of the output and pricing choices of telephony operators in some services and segments of the industry (such as the provision of basic life-line and interconnection services).

However, the coming to maturity of the industry in developing countries (in terms of mainline penetration) and progress in regulatory techniques suggest that the type of command and control regulations used in the past may not be the best solution (Boylaud and Nicoletti, 2000). Given that the breadth and scope of both externalities and scale economies appear to be much less extensive than was originally thought, the case for public ownership or, for that matter, foreign investment restrictions appears to be very weak. In addition, public enterprises are subject to well-known governance problems, which may cause inefficiencies and rigidity in business behaviour.

According to Bel and Trillas (2005) regulation promotes a culture of bureaucracy within the service providers, such that the executives are prone to value public relations and political skills rather than the need for the regulating enterprise to play more of a regulatory role. They therefore invariably, unlike their counterparts in unregulated organisations, tend to have less influence on outcomes, which in turn would result in poor service delivery within the industry. It is on this premise that Kole and Lehn (1997) and Lehn (2002) find that deregulation removes the bureaucratic constraints and makes regulated managers resemble more closely their colleagues in non-regulated firms. Kole and Lehn (1997:424) argue that deregulation increases the importance of the managerial function in the firm: “Deregulation provides a unique opportunity to observe the Darwinian process at work. It serves as a shock that requires firms to adapt their strategies and organizational structures to the new rules of the game.”

2.3 ROLE OF THE REGULATOR

No matter which country is under consideration, regulation of telecommunications is often geared towards the achievement of customer satisfaction in terms of quality, choice, and value for money. In this respect a regulator must often have the necessary structure and logistical capacity to evaluate and monitor the industry; these may be pursued using various methods, emphasis and approaches due to the fact that each country has different social and economic environment. Factors like the ability of operators that try to influence decisions, competition levels, technological advancements' marketing strategies, among others, therefore play a key role in determining the type of regulation required.

According to the Asia Pacific Telecom Research (2003) secondary responsibilities of the telecommunications regulator may at times include annual and quarterly reporting of the performance of service providers with reference to consumer satisfaction, consumer benefits and quality of service; the continued availability of an untimed local call charge option; the establishments of standards for standard telephone handsets that prescribe facilities to be made available for people with disabilities; public education campaigns on various telecom issues; setting and implementation of customer service guarantees; ensuring appropriate membership or exemption from the telecommunications Ombudsman Scheme by all carriage service providers; registration, with safety-net style enforcement powers, of industry including consumer, operations and technical) codes of practice; setting of industry standards where codes fail or fail to be created; ensuring that carriers and carriage service providers are prepared to provide services for defence purposes; ensuring carriers and carriage service providers co-operate with law enforcement agencies and consult with law enforcement agencies about the possible impact of new technology on the operation of those agencies.

The above report also advises that regulations can be carried out by first constituting an 'advisory committees' tasked with examining telecom standards including the establishment and maintenance of technical standards; the policies and procedures for the testing, approval and certification of telecommunications

equipment; the technical specifications for type-approval; the formulation of the national position on technical issues at international forums; and the presentation of the national position at international forums. The advisory committee would then develop a numbering plan and institute examinations of issues touching on 'user interests', particularly customer satisfaction and information; other groups often emerging in telecommunications regulatory framework are 'Pro-Competition Bodies', telecommunications industry associations and government advisory taskforce bodies (Asia Pacific Telecom Research (2003)).

According to Tetrault (2001:2), the widely accepted regulatory objectives are the following:

1. Promote universal access to basic telecommunications services
2. Foster competitive markets to promote efficient supply of telecommunications services, good quality of service, advanced services, and efficient prices
3. Where competitive markets do not exist or fail, prevent abuses of market power such as excessive pricing and anti-competitive behaviour by dominant firms.
4. Create a favourable climate to promote investment to expand telecommunications network
5. Promote public confidence in telecommunications markets through transparent regulatory and licensing processes
6. Protect consumer rights, including privacy rights
7. Promote increased telecommunications connectivity for all users through efficient interconnection arrangements
8. Optimise use of scarce resources, such as radio spectrum, numbers and rights of way.

This is not to say, however, that regulation does not have shortcomings. Nevertheless, the attendant shortcomings can be anticipated and catered for in a number of ways. Tetrault (2001:2) further states that, within its function, "the

regulatory body should not however be involved in detailed management of the telecommunications sector. Its role should be one of maintenance of a regulatory environment conducive to the efficient supply of telecommunications services to the public.”

Another pitfall is the fact that the industry regulator generally has a fairly narrow concern in that its primary objective is to encourage competition and protect consumer interest within the industry that falls under its jurisdiction. Smith-Hillman and Brathwaite (2003:1) state that: “clear guidelines of the roles of government and regulators are essential in order to avoid a blurred relationship that ultimately leads to regulatory inefficacy and/or regulatory capture. Ultimately regulators must be held accountable for their actions and be obliged to report to parliament if circumstances dictate such a course of action.”

The level of independence of the regulator is another challenge that needs to be dealt with carefully. Melody (2003), states that the level of independence of the regulator plays an important role in shaping the environment and incentives for investment in the telecommunications sector. Although regulators cannot directly influence the markets or economies, the decisions that they make, however, do. Investors identify with less risk an environment in which there is an independent regulator and are more inclined to invest in the country. On the other hand, Melody (2003:9) also states that “governments (or regulators) using their monopoly power to auction licences and spectrum on the basis of up front cash payments of monopoly prices will suck investment capital out of the industry.”

According to Tetrault (2001), there will be an increased market confidence in the impartiality of the regulator as the degree of independence increases. “Telecommunication operators and investors normally have greater confidence in an independent organisation that will regulate a market objectively and transparently ” (World Bank, 1996:7). For example, in Uganda, there was marked improvement in the telecommunications sector after the introduction of an independent regulator. The country whose telephone penetration lagged behind

the region average caught up with the region after reform (Gebreab, et al., 2002). The credibility of the regulator in Uganda was strengthened by the government's conscious efforts not to interfere in the operations of the regulator; in spite of the fact that the regulator is not fully independent of the government. In Ghana, after an independent regulator was introduced, there was a rapid increase in telephone penetration. The increase was partly due to the fact that the World Bank was willing to finance massive expansion in fixed lines and the fact that a second national operator (SNO) was introduced (Haggarty, et al., 2002). Furthermore, an increase in mobile telephone subscribers as services improved was experienced.

Critics of regulation, however, believe that there cannot be independent regulation as governments interfere in markets for the purpose of increasing the common good (Cohen, 2003). They argue that regulators slow down innovation and market efficiency and protect the players within the industry at the expense of the public. The EU (2000:IV) also concedes that a deregulation policy "enables the market dynamics to establish itself and leads to reduced prices, network deployment and improvement in the range of services available." It also states that this state is attainable as economies develop and the first step to deregulation is regulation. The author will now focus on a few regulatory models.

2.3.1 REGULATORY MODELS

According to Zeh (1996), there are a number of regulatory models used throughout the world. No particular model is recommended but, rather, an approach is dependent on the level of development of the country. "The aspects of speed, improvement and cost of service need to be considered in the choice of model" Zeh (1996:4). The models described below in Table 1 were developed by Gillick (1991).

It is clear from the literature reviewed that government plays a critical role in enabling the regulatory process through the provision of sufficient resources. Most authors agree however, that in order for the regulator to be effective a degree

of independence is required from government. Table 1 illustrates various forms of telecommunications regulatory bodies functioning in different parts of the world.

Giacomo (2001) describes the basic regulatory framework as consisting of the principal and the agent, with the former being the regulated company that has private information about investments costs and demand, whereas the latter is the regulator who is disadvantaged with information and seeks to design incentives geared towards enticing the agent to behave in its interest. The regulators' tasks may later include profit evaluation.

Table 1: Models of telecommunications regulations

Model	Countries	Openness	Accountability	Independence	Cost
Autonomous, Semi-judicial commission	USA, Canada	Open	High	High	High
Independent official and office	UK	Variable	Variable	Variable	Med.
Independent official within ministry	France	Variable	Executive	Medium	Low
Government ministry	Japan, Germany	Primarily closed	Executive	Low	Low

Source: Gillick (1991)

In the case of Swaziland this is defied because the regulating commission is privy to information both at the SPTC and at MTN as the principal partner in all the telecommunication operation investments. However, Giacomo (2001) further points out that the traditional national regulators are limited by national jurisdiction and hence are unable to perform well due to global constraints. As such, he encourages international integration for effective regulations, especially in cases where multinational companies are involved. The case of Swaziland may however not be viewed as that of international integration because it goes against the international telecommunication practices, specifically the WTO Telecommunications reference paper and SADC Protocol on Transport, Communication and Meteorology papers (SADC, 1998; WTO, 1996), to which the country is signatory. This may actually attract litigation in the case of a potential investor feeling aggrieved.

Several regulatory scenarios may be observed in practice; most commonly this may include incentive regulation. In a study of port operations in Portugal, Barros (2003) defines incentive regulation as entailing the practice and adoption of legal structures to encourage a regulated body to achieve its desired goals by granting it some discretion. Furthermore, whereas this may be so, organisations enjoying the benefits of incentive regulation need constant monitoring with benchmarked costs, outputs, capacities and revenue generation to ensure good governance and economic efficiency.

Swaziland is currently experiencing a monopolistic practice in the telecommunications sector, as the Head of State, the Ministry of Information Communication and Technology, and MTN are the joint principal shareholders in it in the country. Swaziland's major challenge is therefore that of regulating a monopoly. Rather than using rate regulation-fixing of price to achieve a certain desired return on investment, Treynor (2003) suggests that it may be more advisable to regulate a monopoly by measuring the monopoly's variable unit input and its client's willingness to pay, as this leads to simpler and less controversial regulation because variable cost is easier to estimate than average cost and because only current data would be required for estimating costs and offloading the burden of investment risks off the customers.

The case of Swaziland is further confounded because the regulating authority (commission comprising the Ministry of Information Communication and Technology) is also, by extension, a provider of telecommunication products/services. The end result would probably be oversights in clients' protection and a tendency to condone trade malpractices by the telecommunications service providers.

Several regulatory bodies exist in the modern world. These are as tabulated in Table 2.

Table 2. Regulatory bodies of different countries

Country	Regulatory Body	Comments
Afghanistan	Telecom Regularity Board Ministry of Communication Afghanistan	
Albania	Telecommunications Regulatory Authority (ERT)	
Australia	Australian Communications Authority (ACA)	Australia's telecoms regulator – regulates cellular, landline and cable telecoms providers
Argentina	Secretaria de Comunicaciones	Argentinean telecoms regulator – site is only available in Spanish
Austria	TelekomControl	Austrian telecoms regulator – site is available in English and German
Bahrain	Telecommunications Regulatory Authority (TRA)	Site in English only
Belarus	Ministry of Posts and Telecommunications	Government department responsible for telecoms – site in Russian and English
Belgium	Belgian Institute of Postal Services and Telecommunications	Belgium's telecoms and postal services regulator. Available in French, English and Dutch
Bolivia	Superintendencia de Telecomunicaciones (SITTEL)	Bolivia's telecoms regulator – site only available in Spanish
Bosnia and Herzegovina	The Communication Regulatory Agency	Telecoms and broadcast regulator for Bosnia and Herzegovina. Was set up by

	(CRA)	the UN High Representative in the country. The site is available in English, Bosnian, Serbian and Croatian.
Botswana	Botswana Telecommunications Authority	Telecommunications authority for Botswana, Southern Africa. Authority for fixed telephony, mobile telephony, broadcasting, Internet, radio, and satellite communications
Brazil	ANATEL	Brazils' telecoms regulator press releases – English version
Brunei	Jabatan Telekom	Telecoms regulator for Brunei Darussalam – is currently part of the state owned land-line network, but is due to be separated prior to privatisation
Bulgaria	Communication Regulation Commission	Site also available in English
Burkina Faso	Direction générale de l'Office National des télécommunications (ONATEL)	State regulator, also operates the telecoms networks – site in French only
Canada	Canadian Radio Television and Telecommunications Commission	Canada's regulator for telecoms, radio and television services – available in French and English
Chad	Ministère de Postes et Télécommunications	Government regulator, very little information on the site – site in French only
Chile	Subsecretaría de Telecomunicaciones (SUBTEL)	Chile's telecoms regulator

Colombia	Comisión de Regulación de Telecomunicaciones	Colombia telecoms regulator – only available in Spanish
Croatia	Hrvatska Agencija za telekomunikacije	Croatian telecoms regulator – only available in the local language
Czech Republic	Czech Telecommunications Office	Front page is in Czech only, but is also available in English
Denmark	IT- og Telestyrelsen	A division of the Ministry of Science Technology and Innovation –available in English and Danish
Dominica	ECTEL Eastern Caribbean Telecommunications Authority	Eastern Caribbean Telecommunications Authority is the telecommunications regulator for five Eastern Caribbean states.
El Salvador	Superintendencia General de Electricidad y Telecomunicaciones	El Salvador's telecoms regulator –site available in Spanish only.
Egypt	Telecommunications Regulatory Authority (TRA)	Local regulator – site in both Arabic and English
Estonia	Estonian National Communications Board	A division of the Ministry of Economic Affairs and Communication – website in Estonian and English
Finland	Ministry of Transport and Communications	Available in Finnish and English

France	Autorité de Régulation des Communications Électroniques et des Postes (ARCEP)	French telecoms regulator, deals with landline, wireless and internet services – available in French and the latest news in English
Georgia	Georgian National Communications Commission	Georgia's telecoms regulator, given independence from the government in 2000 – site available in English, Georgian and Russian
Germany	Regulierungsbehörde für Telekommunikation und Post	German telecoms and postal regulator – available in both German and English
Greece	EETT (National Telecommunications and Post Commission)	Greek telecoms and postal services regulator – site is available in both Greek and English
Grenada	ECTEL Eastern Caribbean Telecommunications Authority	Eastern Caribbean Telecommunications Authority is the telecommunications regulator for five Eastern Caribbean states.
Hong Kong	Office of the Telecommunications Authority (OFTA)	Telecoms regulator for Hong Kong – available in English and Chinese
Hungary	Ministry of Transport, Communication and Water Management	Government department responsible for telecoms regulation – site available in both Hungarian and English
Iceland	Ministry of Communications	Government department responsible for telecoms regulation - site only available in Icelandic
India	Telecom Regulatory Authority of India (TRAI)	Government department, responsible for landline and wireless telecoms –

		site in English only
Iran	Islamic Republic of Iran Broadcasting	Government department that oversees telecoms regulation - site available in Farsi, with some English news
Ireland	Office of the Director of Telecommunications Regulation (ODTR)	Landline and wireless telecoms regulator – site only in English
Israel	Ministry of Communications	Israeli telecoms regulator – part of the government. The site is available in Hebrew and English and deals with both landline and cellular communications.
Italy	Italian Communications Authority	Laws, rules and market data. Available in English and Italian.
Japan	Ministry of Public Management, Home Affairs, Posts and Telecommunications	Japan's telecoms regulator. Available in Japanese and English.
Jordan	Telecommunication Regulatory Commission	Telecoms regulator for the Hashemite Kingdom of Jordan
Kenya	Communications Commission of Kenya	Established in 1998 – site in English only
Korea	Ministry of Communications and Informations	South Korean government department, responsible for all digital communications and media – site in Korean, Chinese and English
Latvia	Latvia Telecommunication State Inspection	Latvia's telecoms regulator – site available in both Latvian and English

Lebanon	Telecommunications Regulatory Authority	Site available in Arabic and English
Lithuania	Lithuanian Communications Regulatory Authority (CRA)	Site also available in English
Luxembourg	Institut Luxembourgeois des Télécommunications	Government department, responsible for telecoms, as well as utility services and media – site only in French
Macau	Office for the Development of Telecommunications and Information Technology	Telecoms regulator for Macau – available in Chinese, Portuguese and English
Malaysia	Communications and Multimedia Commission (MCMC)	Government linked department responsible for telecommunications – site mainly in English
Mali	Société des Télécommunications du Mali	National operator – site availability is erratic
Malta	Malta Communications Authority	The Malta Communications Authority is the National Agency responsible to regulate telecommunications
Mauritania	Office des Postes et Télécommunications	National regulator – site in French only
Mauritius	The Ministry of Information Technology and Telecommunications	Government department that is responsible for telecoms regulation.
Mexico	Comisión Federal de Telecomunicaciones	Mexican federal telecoms regulator – site is available in Spanish with press releases in English (click on the email type icon at the bottom of

		the page)
Morocco	National Agency for the Regulation of Telecommunications (ANRT)	Recently created independent telecoms regulator in Morocco – site mainly in French and Arabic, but also some English
Nepal	Nepal Telecommunications Authority	The Kingdom of Nepal's government telecoms regulator – site only available in English (no local language content)
Netherlands	OPTA	Dutch regulator for telecoms and posts - site mainly in Dutch but with press releases in English
New Zealand	Commerce Commission of New Zealand	Government department that also manages telecoms
Nigeria	Nigerian Communications Commission	Government regulator – site in English only with some pages still under construction
Norway	Norwegian Post and Telecom Authority	Norwegian telecoms regulator – site in Norwegian only
Oman	Sultanate of Oman Telecommunications Regulatory Authority	Site available in both English and Arabic
Pakistan	Pakistan Telecommunications Authority (PTA)	PTA was formed under the Pakistan Telecommunication Reorganization Act, 1996 – site only available in English
Papua New Guinea	PANGTEL	Papua New Guinea telecoms regulator – looks after telecoms, radio, tv, and amateur radio hams
Paraguay	Conatel, telecoms regulator	Paraguayan telecoms regulator – site

		only available in Spanish
Philippines	National Telecommunications Commission (NTC)	Government controlled telecoms regulator – site in English only – linked to the Dept. of Transportation and Communication
Poland	URTiP	Mainly in Polish, with a little background information in English
Portugal	Autoridade Nacional de Comunicaes (ANACOM)	Portugal's telecoms regulator, responsible for telecoms, television media and postal services – site in English and Portuguese
Romania	National Regulatory Authority for Communications	Site in both Romanian and English
Russia	Ministry for Communications and Information of the Russian Federation	Site in both Russian and English
Saint Christopher and Nevis	ECTEL Eastern Caribbean Telecommunications Authority	Eastern Caribbean Telecommunications Authority is the telecommunications regulator for five Eastern Caribbean states.
Saint Lucia	ECTEL Eastern Caribbean Telecommunications Authority	Eastern Caribbean Telecommunications Authority is the telecommunications regulator for five Eastern Caribbean states.
Saint Vincent and the Grenadines	ECTEL Eastern Caribbean Telecommunications Authority	Eastern Caribbean Telecommunications Authority is the telecommunications regulator for five Eastern Caribbean states.

Saudi Arabia	Communication & Information Technology Commission (CITC)	Available in both Arabic and English
San Marino	Segereteria di Stato per l'Industria, l'Artigianato, la Cooperazione economica, le Poste e le Telecomunicazione	San Marino's telecoms regulator – site in Italian only
Singapore	Infocomm Development Authority of Singapore	Telecoms regulator for Singapore
Slovakia	Telecommunications Office of the Slovak Republic	Government site with information on the country's telecom policies – site available in Slovakian and English
Slovenia	Ministry of Transport and Communications	Slovenian regulator for telecoms. part of the government – site available in both Slovene and English
South Africa	ICASA	The Independent Communications Authority of South Africa was established in July 2000. It took over the functions of the South African Telecommunications Regulatory Authority (SATRA).
Spain	Comision del Mercado de las Telecomunicaciones (CMT)	Spanish telecoms commission – site in Spanish only
Sri Lanka	Telecommunications Regulatory Commission	Government regulator – site in English, Tamil and Sinhala
Sweden	Post- och telestyrelsen (PTS)	Swedish regulator, responsible for

		radio, telecom and datacom areas – site in Swedish, with some English content
Switzerland	Federal Office for Communications (OFCOM/BAKOM)	Telecoms, radio and media regulator – site only in German
United Arab Emirates (UAE)	Telecommunications Regulatory Authority	Independent telecoms regulator – site available in English and Arab
UK	Office of Communications (Ofcom)	Independent telecoms regulator - site in English
USA	Federal Communications Commission (FCC)	USA telecoms regulator – responsible for both telecoms and radio/television media
Taiwan	National Communications Commission	Site available in both Chinese and English
Trinidad and Tobago (Republic of)	Telecommunications Authority of Trinidad and Tobago	Set up in 2004, covers telecoms and broadcasting
Turkey	Telekomnikasyon Kurumu	Mainly in Turkish, with limited information in English
Zambia	Communications Authority	Independent regulator set up in 1994 – site in English

(Source: <http://www.cellular-news.com/regulator/>)

2.4 GLOBAL LESSONS

The ITU advocates for the implementation of competition policy within all its member states. The ITU (1995:37) states that “safeguards against anti-competitive behaviour by market participants are necessary parts of national regulatory regimes for telecommunications. Implementations of safeguards referred to above may be entirely entrusted to an industry-specific telecommunications regulator applying competition and telecommunications law.” It is evident that for the telecommunications sector to be efficient and effective, an environment that allows for all participants to compete fairly is necessary.

Boylaud and Nicoletti (2000:5) argue that “the prospect of competition (as proxied by the number of years remaining before liberalisation) generally has a strong positive effect on the productivity and the quality of services and a strong negative effect on prices.” In their study, the term liberalisation is used as a reference to a relaxation of previous government restrictions in the industry. Indeed, for the whole study, liberalisation and deregulation are interpreted more or less as a paradigm shift from priority to suppliers (which is what governments have traditionally focused on) to the priority of the consumers. Hussain (2002) states that competition forces operators to become more efficient, hence resulting in the elimination of unnecessary costs and simultaneously a reduction in profit margins as prices decrease. This results in greater benefits for the consumers of telecommunications services. He further states that clear and effective regulation plays a critical role in achieving a balance between social objectives of governments and commercial incentives of the operators in a competitive environment.

Some authors, such as Zeh (1996), argue that in order for effective competition to take place within the telecommunications sector deregulation of the industry is the answer; others believe that liberal regulation is the solution.

The EU (2000:84) states that “it is certainly in the country’s interest to promote the emergence of competitive markets via a liberal regulatory system which, by affecting prices, access to capital and network deployment, will favour the access of the greatest number of people to telephone networks and consequently the sector’s economic growth.”

Gilwald (2003:17) states that “in addition to ensuring affordable tariffs and adequate service levels for consumers receiving services from the non-competitive components where consumers have no choice but to obtain service from that one provider, regulators are responsible for ensuring access to the network and facilities of monopoly or dominant operators if the benefits of competition in liberalised sectors are to be realised.”

In assessing the Australian telecommunications industry, Stuhmcke (2002) concedes that there are different levels of regulation, such that even in a deregulated industry there may be an independent regulatory body, which, however, co-regulates with another government body. This introduces the debate on the extent a country can apply regulation or more importantly de-regulation. Other authors such as Mattos and Coutinho (2005), whilst recognising that the trend is towards increased competition in telecommunications through reduced regulation, are of the opinion that in some instances the adoption of full deregulation may be premature.

It is evident from the literature reviewed that competition leads to improved provision of telecommunication services and investment within the industry. It is also evident that there needs to be a body that will ensure that the competition benefits consumers. As stated by the EU (2000), the regulatory body must, however, be liberal.

2.5 CONVERGENCE POLICY

Swaziland, like all other countries around the globe, has been co-opted into global policy debates by the relentless advance of globalisation fuelled by technological advances in information and communication technology (ICT). Globalisation has offered Swaziland a platform to proceed forward and adopt technologies comparable to technologies used in some of the most advanced countries. The challenge lies in giving legal recognition to the same and regulating the same. Thus, Swaziland may have to begin by looking at an enabling legislation dealing with Information Technology (IT). This would have to be followed by a move to regulate the converged ICT industry given the impending scenario of convergence of technology. Keeping this end in mind, it is important for the purpose of this research for the author to look at the implications of a proposed convergence policy.

A proposed policy framework on convergence must promote, facilitate and develop, in an orderly manner, the carriage and content of communications including broadcasting, telecommunications and multimedia (Gillwald, 2003). To achieve these aims, there will be need to establish an autonomous commission to regulate carriage of all forms of communication. In effect, no one entity will be able to use any part of the spectrum without assignment from the regulating authority.

As in the case of MTN Swaziland, and other would-be competitors, owning or providing any network infrastructure facility or providing any network services or any network application services, or any value-added network application services or any content application services without a proper licence or registration under the proposed legislation, would be illegal.

A single regulator would thus be able to oversee convergence of telecommunications, broadcasting, data communication, multimedia and other related technologies and services. This would allow for the development of a communications sector in a competitive environment, thus making

communication services available at affordable costs to all (Gillwald, 2003). Additional benefits would include increased access to information for the greater empowerment of citizens. Eventually, Swaziland would make strides in the direction of establishing a modern and effective communication infrastructure, taking into account the convergence of IT, media, telecommunications and consumer electronics.

To a number of scholars (e.g. Gillwald, 2003; Silva, 2007), it seems that the challenge is to establish an open licensing policy and ensure a level playing field for all operators, and to promote equitable, non-discriminatory interconnection across various networks. The driving force of such a proposed legislation must be the establishment of a structured mechanism to promote, facilitate and develop, in an orderly manner, the carriage and contents of communications in the scenario of increasing convergence of technologies.

Every attempt should be made to give the proposed regulatory authority an independent existence otherwise such a body runs the risk of blindly following all policy directives as may be communicated to it by the government. These directives may include the procedure by and mode in which any services are to be registered and licensed by the way of auction in the case of granting licenses, or in any other form. Any proposed legislation must also clearly spell out the procedures that a regulator would have to follow in order to ensure fairness and impartiality (Fink, Mattoo, and Rathindran, 2002). Standards or parameters of fairness and impartiality have to be defined unequivocally in such legislation and not merely be left to the subjective discretion of a Government controlled commission. As experiences elsewhere show, leaving such loopholes can be dangerous for the freedom of the press.

When considering approaches to information systems studies, Silva (2007) advocates for focus on regulation and discipline in the interpretation of rules by powerful agents in order to stop delegated agents from becoming unruly. He further acknowledges that the seriousness of political interference depends on an organisation's effectiveness in developing techniques of control and discipline, as

well as member's identities, to which loyalty to the organisation is paramount (Silva, 2007). In view of Silva's position it should be pointed out that it is also important to establish housekeeping rules based on trends and the challenges to Swaziland's telecommunication industry regulations.

2.6 PROPOSITIONS

From the literature reviewed it is clear that some form of regulation in the telecommunications sector in Swaziland is required. The extent to which regulation can be executed is however debatable, especially with regards to developing countries like Swaziland.

The following propositions have been formulated from the above literature and from the statement of the problem given in Section 1.2.

1. Telecommunications determines the level of economic development of a country and therefore developing nations such as Swaziland cannot leave the sector to the dictates of the market.
2. Although a regulatory body is required, the study proposes that such a body must be free from political interference.
3. The independent regulation of the telecommunications sector enhances competition within the sector.

CHAPTER THREE: RESEARCH METHODOLOGY

This chapter describes the research approaches used in this study. A case study approach was used, due to the fact that contextual features specific to the Kingdom of Swaziland on fixed line and mobile line telecommunications regulations needed to be captured.

This chapter is organised into the following sections:

- 3.1 Research methods and paradigms
- 3.2 Documentary research
- 3.3 Interview with key informants
- 3.4 Reliability and validity
- 3.5 Data analysis

3.1 RESEARCH METHODS AND PARADIGMS

This study was conducted using qualitative methods. Specific techniques that were used included documentary research and interviews with key informants. The qualitative methods were selected in this case because of their ability to be detail oriented, in addition to being able to portray processes in the active mode, as illustrated by Firestone (1987).

The case of the establishment of an independent regulatory body for the telecommunications industry in Swaziland can be considered as ideal for qualitative studies for the simple reason that it requires details, specificity and intensive analysis, and hence its narration is based on established theories. This fits in well with the description for qualitative case study methods' applicability given by Hancock and Algozzine (2006).

This research adopts a positivist attitude, namely that the study commences with conceptualisation of a document and design of research questions around it,

followed by analysis. It may also be labelled an instrumental case study, taken that it sets out to understand/investigate practices/processes of telecommunications regulation (Hancock and Algozzine, 2006).

3.2 DOCUMENTARY RESEARCH

Documentary research refers to the collection of information available from secondary texts: the texts may include contract documents, policy papers, newsletters, newspapers, inter/internal company communication papers like memos (among others), or electronic materials (Scott and Morrisson, 2006).

In this research the following documents were used as the main sources of information:

- i. Swaziland Post and Telecommunications Act, 1983
- ii. SADC Protocol on Transport, Communication and Meteorology, 1996
- iii. WTO Telecommunications Reference Paper, 1994
- iv. World Bank ‘Telecommunications and Information Services for the Poor’, 2002

The documents used were open-archival and published public documents authored by governments or local government departments, and dwelled on issues of great interest to the public and on good governance.

The main advantage of documentary research, namely of being able to be undertaken with limited resources and in the shortest time possible, as advanced by Wagner (2004), made it applicable to the study.

Furthermore, documentary research is highly critical in the role of informing public discourse, and has special relevance for human service professionals (for example teachers, social workers, community organisers, policy analysts among

others), working in diverse communities (Wagner, 2004). This is true because at preliminary level of knowledge dispensation only the key principles are given priority.

This method is however weak as a form of study due to the fact that it is difficult to simulate context of a document in its entirety. However, Hancock and Algozzine (2006) are of the opinion that as long as the questions relating to the following are asked to verify authenticity then the documentary research method remains preferable:

- i. Source and history of the document
- ii. Process of document availability to the public domain or research
- iii. Accuracy and timeliness of the document to the researcher
- iv. Integrity of the document
- v. Representativeness of the document
- vi. Complimentary sources to the document
- vii. Sources of information in the document
- viii. Author of the document.

In this particular study the documentation is open and meets all the desirable conditions above, hence the only considerations to be made will be on how the answers to research questions are presented so that accurate interpretation can be drawn from them.

3.3 INTERVIEW WITH KEY INFORMANTS

Selected interviews were conducted with key informants in the following areas:

- i. Management of mobile and fixed-line telephone operators
- ii. Government officials (civil servants)
- iii. Corporate client representatives (mobile and fixed-line telephone services).

Key informants chosen were people/personalities with a wealth of experience in the telecommunications sector, as clients or as managers. Semi-structured interviews are preferred for this case because of the fact that it invites participants to be more expressive and does not limit the interviewees to the researcher's perspective (Hancock and Algozzine, 2006).

The sample of potential respondents used for interviewing was purposive and non-probabilistic, as described by Rao (2000). The criterion of basing selection of participant on their level of subject knowledge was used (Sharraf, 1992). Table 3 gives the details of respondents selected for the key informants' interview.

The target interviewees were initially contacted telephonically and through electronic mail during which they were requested to indicate their willingness to participate. A follow up letter was then sent, inviting them to participate and explaining the purpose of the study. Appointments were then set up for interviews with consenting participants. All interviews were carried out at the respondents' offices or venues preferred by the respondent (if it was not possible to interview them at their offices). The interview venue had to be in a place conducive to holding a one-to-one conversation without any disturbance and with adequate confidentiality.

Table 3: Key informants interview distribution

Organisation	Number of respondents
MTN Swaziland	2
SPTC	2
Swaziland Government – Economic Planning, Communications and Tourism, Justice	3
Parliament	1
MTN Distributor	2
Conco Limited	1
Swaziland Electricity Board	1
Swaziland Law Society	3
Swaki Group of Companies	1
NERCHA	1
Royal Swaziland Sugar Association	1
Federation of Swaziland Employers and Chamber of Commerce	1
University of Swaziland	1

With the permission of the interviewees, interviews were recorded and notes taken to aid in the transcribing process. A copy of the questionnaire used in the interviews is included in Appendix 1.

3.4 RELIABILITY AND VALIDITY

Leedy and Ormrod (2001) describe the validity of a measuring instrument (in this case the interviews) as the extent to which the instrument measures what it is

meant to measure. It entailed asking the right questions targeted for the required content as well as the use of key informants who are representative of the telecommunications industry or play a major role in it, for interview which ensured validity at all times due to existing knowledge levels. It was assumed that the stakeholders are directly or indirectly affected by the regulation of the telecommunications industry, especially by the provision of telecommunications services in Swaziland.

Reliability is defined as the extent to which similar research conducted in future will result in similar outcomes (Leedy and Ormrod, 2001). It refers to the accuracy and precision with which the measuring instruments yield a certain result when the entity measured has not changed. The interviews with key informants were conducted with stakeholder representatives whose views and individual opinions were recorded and transcribed, so as to increase their validity.

The researcher strived to ensure that the results of the proposed study hold across the entire country despite the limited number of interviewees. This is mainly because Swaziland is territorially small, with a correspondingly low population and thus it was possible to get a fairly representative sample.

3.5 DATA ANALYSIS

The data collected from the interviews were categorised and interpreted in terms of common themes from which synthesis into the overall picture of the proposition herein stated was attempted (Chauke, 2003). Methods used were tabulations, categorisations, observations and other qualitative techniques. Factors discovered after scrutinising the data were included in the results and discussion of the results.

Triangulation was achieved by studying the research question from various forms of data and points of view. The data was then compared with other pieces of evidence retrieved from the literature.

Table 4 illustrates a summary of methods used in the research.

Research Question	Information needed	Method/Document used
What are the challenges of telecommunications regulation in Swaziland?	Background information on telecommunications regulation in Swaziland	Documents from the Government of Swaziland (the Treasury and Ministry of Tourism, Trade and Communications), World Bank data, UNDP Human Development reports, Swaziland Posts & Telecommunication Corporation database, MTN database, and Swaziland Post and Telecommunications Act, 2004. Interviews with key informants.
	Performance indicators of the telecommunications industry in Swaziland	Documents from the Government of Swaziland (the Treasury and Ministry of Tourism, Trade and Communications), World Bank data, UNDP Human Development reports. Swaziland Posts & Telecommunication Corporation Database, MTN database. Interviews with key informants.
	Size of the telecommunications industry or access to telecommunications in Swaziland	Documents from the Government of Swaziland (the Treasury), World Bank data and UNDP Human Development reports. Interviews with key informants.
	Economic contribution of telecommunications industry in Swaziland	Documents from the Government of Swaziland (The Treasury), World Bank data and UNDP Human Development reports. Interviews with key informants.
	Weakness/Failures of the telecommunications industry in Swaziland	Documents from the Government of Swaziland (the Treasury and Ministry of Tourism, Trade and Communications), World Bank data, UNDP Human Development reports. Swaziland Posts & Telecommunication Corporation Database, MTN database. Interviews with key informants.
	Management of Telecommunications in Swaziland	Documents from the Government of Swaziland (the Treasury and Ministry of Tourism, Trade and Communications), World Bank data, UNDP Human Development reports. Swaziland Posts & Telecommunication Corporation database, MTN database. Interviews with key informants.

What are the existing alternatives to the existing framework of telecommunications regulations in Swaziland?	What are the weaknesses of the existing framework? What are the international norms? What are the best practices? How unique is Swaziland's case?	Swaziland Post and Telecommunications Act, 2004. SADC Protocol on Transport, Communication and Meteorology, 1996. WTO Telecommunications reference paper, 1994. World Bank 'Telecommunications and Information Services for the poor'. Interviews with key informants.
What are the returns on improved regulation practice in Swaziland?		World Bank 'Telecommunications and Information Services for the poor'. Interviews with key informants.

CHAPTER FOUR: PRESENTATION OF RESULTS

This chapter presents results of the study. The chapter is arranged as follows:

- 4.1 Telecommunications in Swaziland: the state of affairs
- 4.2 Regulation and deregulation issues in Swaziland
- 4.3 International and Regional Policy on Telecommunications Regulations
- 4.4 Role of The Monarchy/Head of Government
- 4.5 Conclusions.

4.1 TELECOMMUNICATIONS IN SWAZILAND: THE STATE OF AFFAIRS

The United Nations Economic Commission for Africa, et al. (2006) reports that in Swaziland fixed and mobile penetration is relatively high compared with in some of the neighbouring Southern African states and that the Government has taken steps towards unbundling the national operator in order to create discrete telecom and regulatory entities/functions and, in due course, to privatise the national operator.

The fixed network is 100% digital and supported by a countrywide optical fibre network with self-healing capabilities via national rings, and the network can support Integrated Services Digital Networks (ISDN) up to 128 Kilobits per second (Kbps). Fixed line connections in 2006 were 46 000, or 4% teledensity (United Nations Economic Commission for Africa, et. al., 2006). In 2008 though the number of fixed line subscribers had decreased to 44 849 connected subscribers (SPTC,2008).

MTN is the sole mobile telephone operator, holds the operational licence and is jointly owned by the state, through SPTC (51%), MTN International (30%) and Swaziland Empowerment Ltd (19%).In 2006 MTN reported 120 000 subscribers connected to the mobile network, representing a teledensity of over 12% (United Nations Economic

Commission for Africa, et al., 2006). Unlike fixed line subscriber numbers that showed a decline between 2006 and 2008, there was significant growth in mobile subscribers as MTN reported 523,039 mobile subscribers in 2008 (MTN Group Limited, 2008).

A summary of the performance indicators for the telephone services in Swaziland are presented in Table 4.1.

Table 4.1: Performance indicators for telephone services in Swaziland

Description of performance indicators	Year			
	1999	2003	2005	2007
Populations in millions	0.98	1.0	1.1	1.1
Main telephone lines per 100 inhabitants	3.0	3.5	4	4.27
Number of fixed operators	1	1	1	1
Number of mobile operators	1	1	1	1
Mobile cellular subscribers per 100 inhabitants	4	10	13	33.29
Percentage of people covered by mobile telephony	13	70	90	90

(Sources: ITU, 2009; United Nations Economic Commission for Africa, et al., 2006)

The key informants generally rated the response time of SPTC to faulty operation of the fixed line as poor. The fixed and mobile telephone lines were generally judged to be in fairly good condition, with an acceptable fault rate. Most respondents deemed the costs of using telephone communication in Swaziland as affordable and deserving in relation to the business operations gains.

4.2 REGULATION AND DEREGULATION ISSUES IN SWAZILAND

By 2006 the Government of Swaziland had endorsed a telecommunications policy that would lay the necessary foundation for the separation of functions of the Ministry

(policy), regulator (regulation) and operators (separation of Posts and Telecommunications), with a Draft Bill intended to be used to implement this policy being endorsed by Cabinet.

Both the fixed and mobile operators have facilitated the deployment of privately operated public call offices over their networks. By 2006 there were over 2765 privately operated fixed network lines generating revenue of E 2 million/month. Charges to the end user are not regulated hence it is not uncommon to experience end-user exploitation. The mobile network operator MTN provides this service via a third party through airtime resale.

After independence, the Government of Swaziland established (SPTC) to undertake regulatory functions in the telecommunications industry. In 1998, MTN was granted a ten-year exclusive license for GSM mobile services through a commission set up under the Ministry of Tourism Environment and Communications to join SPTC in the provision of telecommunications services in Swaziland.

The challenge lies in the development and implementation of policies that create a favourable climate for stability, predictability and fair competition, in order to attract private investment for ICT infrastructure development and the meeting of universal service obligations in disadvantaged areas.

A non-existent legal and regulatory framework in a converging ICT market structure has led to emphasis on the need for the regulation of telecommunications and other ICT services if local and foreign investment, and increased access through affordable service rates, are to be encouraged.

The 2006 ICT policy set out to ensure the enactment of the Telecom and Postal Bill by mid-2006, namely: establish a privatisation plan for the fixed network operator by 2007; operationalise the Competition Act by the end of 2006; operationalise the privatisation policy by the end of 2006; constitute a multi-stakeholder group to manage the domain name by the end of 2006; and update the Companies Act by 2006, among other targets.

When asked to assess the relevance of the existing telecommunications policy in Swaziland to the prevailing global telecommunications environment most informants judged the country's policy as harmful to market development and competition. They considered it as running against current global trends, wherein a free and efficient market is promoted. The informants agreed that there was a need to review the policy to allow an open platform for player's to provide the latest technology and serve customers with minimal restriction.

Upon further interrogation, the respondents felt that Swaziland's current policy in telecommunications could be streamlined to allow for greater liberalisation, as was the case in neighbouring countries like South Africa and Mozambique, so that benefits could be reaped in applications of new technologies like voice over internet protocol (VoIP) and data communication. There was general consensus that any review be tailored towards developing a unique solution to Swaziland's telecommunications industry. Some respondents urged the Government to move with haste to sort out regulation issues as the current policy has led to inefficiency in service delivery and amounted to support for a monopoly. It was felt that any review of policy that would encourage greater interconnection would benefit the users, as there would be potentially more partners within the country.

When discussing the role of regulation, one should consider the legitimacy of the department or office charged with the task. Indeed, before 1990 there were only 10 telecommunications regulatory bodies, but by 2000 the number had risen to 84, with most of the new entrants in the developing countries (ITU, 1999). Samarajiva (2000) attributes this to the need for stability in the investment environment as these bodies are seen as the only way of dispensing non-arbitrary decisions and ensuring that there is not arbitrary expropriation of capital invested in telecommunications. Nevertheless, Samarajiva (2000) maintains that the regulatory bodies can only succeed when there is a semblance of legitimacy among the stakeholders. This, he claims, can only be gained by a combination of factors like adequate compensation for the regulatory personnel, adequate legislation,

an open communication process, and use of cost based methodologies, while regulating for competition.

Specific regulatory documents in the statutes of Swaziland are discussed in Sections 4.2.1 and 4.2.2.

4.2.1 POSTS AND TELECOMMUNICATIONS REGULATIONS, 1993 (UNDER SECTIONS 63 AND 76)

This statute gives the SPTC the exclusive rights to establish, maintain and operate telecommunications services within Swaziland and between Swaziland and other countries and to determine firstly the conditions, and, subject to the approval of the Minister, the rate payable by subscribers for use of those services, and secondly the terms under which any person may construct, maintain and operate private telecommunications facilities and services.

With regards to private telecommunications operations the Posts and Telecommunications Regulations (1993) specifically states that no person shall erect or maintain a privately owned telecommunication line and equipment without the permission of SPTC and that the Corporation may grant such permission or a licence under the Private Telecommunications and Wires Regulations (1992) and on such other conditions as it may think fit, or may refuse such permission or licence without giving its reason for so doing.

The act gives the conditions for refusal of service by SPTC as, firstly, lack of suitable facilities for the purpose, secondly, disconnection of telecommunication services for any default or offence; thirdly, where the corporation considers that the provision of such telecommunication service is contrary to the public interest, and lastly, where the provision of such service is, in the opinion of the Corporation, likely to interfere with other telecommunication services provided by the Corporation.

4.2.2 THE SWAZILAND POSTS AND TELECOMMUNICATIONS CORPORATION ACT, 1983

This act gives SPTC the exclusive privilege of providing telephone services and of constructing, maintaining and operating telephone apparatus within Swaziland. This is based on the conditions provided by the act, that the Managing Director undertakes the following.

- i) In accordance with regulations made under section 63 the construction, maintenance and operation of telephone apparatus by such persons, or of such classes and descriptions of persons or apparatus, as may be specified in the regulations, either absolutely or subject to such conditions as may be specified or grant a licence to any person to construct, maintain and operate a telephone apparatus either for the purpose of his private or business affairs or for the purpose of telephone communication by members of the public between any place in Swaziland and any foreign country.
- ii) Issue a telephone line subject to such conditions as the Managing Director may think fit, including the payment of any prescribed fee, the purposes for which, the person by whom and the circumstances in which the telephone apparatus may be constructed.
- iii) Unless previously revoked by the Managing Director, allow a telephone licence to continue in force for such period as may be specified in the licence.
- iv) Revoke a telephone licence may be revoked or the conditions thereof varied, by a notice in writing from the Managing Director served on the holder of the licence.
- v) Any telephone licence that is granted to a person for the purposes of telephone communication with any place outside Swaziland, the Managing Director shall include in such licence provision whereby any person within Swaziland may, subject to such reasonable conditions as may be determined have telephone communication with any place outside Swaziland to which the holder of the licence is authorised to operate telephone services; and for such purpose the Managing Director shall make all necessary arrangements for the connection of the telephone services provided by the Corporation with those provided by the holder of the licence.

In case of public emergency or where public safety and tranquillity are of paramount interest the Minister responsible for internal security may temporarily confiscate any telephone apparatus within Swaziland; or may intercept and disclose any information communicated over the telephone service within Swaziland. SPTC is exempted from any liability resulting from interruption in telephone services, irrespective of the reasons or cause.

With regards to the regulation of telephone services, the Minister is mandated to make regulations governing the construction, maintenance and operation of any telephone apparatus. This would specifically relate to the conditions on which telephone services may be provided by the Corporation or by the holder of any public telephone licence; and the conditions on which any telephone licence may be granted under this Act. SPTC is however mandated to determine the charges to be made for any telephone service or licence; the fees charged must however be published in the Post Office Guide.

Unlawful operation, maintenance or ownership of a telephone apparatus is a legal offence and is liable to punishment by payment of a fine of five hundred Emalangeni (E) or to imprisonment for a term not exceeding one year, or to both such fine and imprisonment. This act can be seen to place more emphasis on punitive enforcement than stakeholder participation via self-certification or independent certification. In this respect it goes against the proposals of Tyler and Bednarczyk (1993), namely that enforcement mechanisms include a combination of detection by field staff or filed complaints, voluntary compliance by stakeholders, independent certification, pre-approval of interfaces and self certification, and that legal enforcement is often relied upon as the ultimate weapon for ensuring that the regulatory codes are adhered to.

Interviews with key informants in the industry revealed that most players considered SPTC as the regulator as flying in the face of government commitment to privatisation and promotion of competition. Informants further expressed surprise at the role of SPTC in relation to the WTO reference paper on telecommunication and SADC protocol on Transport, Communication and Meteorology.

4.3 INTERNATIONAL AND REGIONAL POLICY ON TELECOMMUNICATIONS REGULATIONS

The key international documents used by Swaziland as reference guides to its telecommunications regulations policy framework are the SADC Protocol on Transport, Communication and Meteorology and the WTO Telecommunication's reference paper. Swaziland is a signatory to these documents and hence any discussion on telecommunications regulations in the country must include them. Details of these documents are discussed in Sections 4.3.1 and 4.3.2.

4.3.1 SADC PROTOCOL ON TRANSPORT, COMMUNICATION AND METEOROLOGY

The SADC Protocol on Transport, Communication and Meteorology, to which the Kingdom of Swaziland is a signatory, calls for the separation of functions between policy making, the implementation of policies via regulation, and the provision of services. This protocol establishes the theme of cooperation as a way of solving the problems associated with regulation in the ICT sector. Goulden and Msimang (2005) highlight the capacity problem in the ICT regulation in the SADC region by stating that many less developed countries in the region find it difficult to attract and maintain capable staff for ICT regulation bodies and government departments and as a result lose them to the private sector. This is in addition to the fact that poor legislation and weak institutions create organisational and institutional inefficiencies that greatly impact on service delivery in the SADC region.

Article 10.7 of the SADC Protocol on Transport, Communication and Meteorology specifically urges member states to ensure the separation between the regulation and operation of telecommunications services within their national jurisdictions. It also pledges the establishment of autonomous, independent and national regulatory bodies which shall have statutory authority to regulate and monitor specified

telecommunications-related activities in the respective member states, and encourage the establishment of industry-based bodies or forums with a view to ensuring participation by industry in telecommunications policy development.

Article 10.8 of the SADC Protocol on Transport, Communication and Meteorology outlines the responsibilities of national regulatory bodies as negotiating and setting universal service obligations for network service providers, including public network service providers; monitoring the usage of universal service funds by national universal service agencies where such agencies and funds are established; licensing of telecommunications service providers; and frequency spectrum users in as far as the licensing of such users is not undertaken by separate broadcasting regulatory authorities; monitoring adherence to licence conditions; undertaking type-approval of telecommunications equipment and setting rules for their connection to public telecommunications networks; determining harmonized interconnection guidelines; regulating tariffs, if required; administering the national numbering plan; promoting the stability of the telecommunications industry and enhancing fair competition among other duties.

4.3.2 WTO TELECOMMUNICATIONS REFERENCE PAPER, 1996

The WTO telecommunications paper was prepared in consideration of the role played by trade in IT products in the development of information industries and in the dynamic expansion of the world economy, the goals of raising standards of living and expanding the production of and trade in goods, the need to encourage the continued technological development of the information technology industry on a worldwide basis, and the positive contribution information technology makes to global economic growth and welfare.

The content of the WTO Reference Paper (1996) undertakes to prevent anti-competitive practices in telecommunications among suppliers by specifically engaging in anti-competitive cross-subsidisation; using information obtained from competitors with

anticompetitive results; and not making available to other services suppliers on a timely basis technical information about essential facilities and commercially relevant information which are necessary for them to provide services.

Interconnection with a major supplier is supported by the paper as it states that “at any technically feasible point in the network under non-discriminatory terms, conditions (including technical standards and specifications) and rates, and of a quality no less favourable than that provided for its own like services or for like services of non-affiliated service suppliers, or for its subsidiaries or other affiliates; in a timely fashion, on terms, conditions (including technical standards and specifications) and cost-oriented rates that are transparent and reasonable, having regard to economic feasibility, and sufficiently unbundled so that the supplier need not pay for network components or facilities that it does not require for the service to be provided; and upon request, at points in addition to the network termination points offered to the majority of users, subject to charges that reflect the cost of construction of necessary additional facilities” (WTO Reference Paper, 1996).

The paper pledges that procedures applicable for interconnection to a major supplier will be made publicly available to ensure transparency and further states that a service supplier requesting interconnection with a major supplier will have recourse, either: at any time or after a reasonable period of time which has been made publicly known to an independent domestic body, which may be a regulatory body to resolve disputes regarding appropriate terms, conditions and rates for interconnection within a reasonable period of time.

The WTO Reference Paper (1996) provides that where a licence is required, the following will be made publicly available; firstly all the licensing criteria and the period of time normally required to reach a decision concerning an application for a licence and secondly the terms and conditions of individual licences with the reasons for the denial of a licence being required to be made known to the applicant upon request.

WTO reference paper (1996) also requires that an independent regulatory body must not be accountable to any supplier of basic telecommunications services. The decisions of and the procedures used by regulators shall be impartial with respect to all market participants. It should be noted that this contradicts Swaziland's position taken that the tenure of office for the regulators is not constitutionally protected.

4.4 ROLE OF THE MONARCHY/HEAD OF GOVERNMENT

Baloro (1994) reports that Swaziland's independence from British colonial rule in 1968 and subsequent constitutional amendments in 1973 and 1978 entrenched the Dlamini monarchy, giving them absolute political powers in the country. This implies that all cabinet ministers including the Minister for Communication and that for Internal Security serve at the pleasure of the King. In essence therefore, under the telecommunications regulations in Swaziland, the Monarchy through the Ministers for Communication and for Internal Security retain total control of the telecommunication industry because of their powers to appoint the Managing Director of SPTC who handles regulation issues, and also the licensing commission, which also plays a role in market regulation.

4.5 CONCLUSIONS

In terms of coverage/teledensity, taking the data of the United Nations Economic Commission for Africa, et al. (2006) and ITU (2009) into consideration, the performance of both MTN and the fixed telephone network in Swaziland has been improving over time. It should however also be noted that the quality of service has been deteriorating with time. Many key informers, who were both the service providers and also formed the clientele base for telephone service operations, openly admitted this.

There exists a monopoly in the telephone services provision in the Kingdom of Swaziland with the state owned SPTC enjoying the sole position of being the only fixed telephone services provider in the country. The mobile telephone services are provided by MTN Swaziland, which is a partnership between SPTC, Swaziland Empowerment

Ltd. and MTN (United Nations Economic Commission for Africa, et al. 2006). A number of interviewees ascribed the existence of the monopoly to poor quality service and suggested that the introduction of other players in the field could lead to better telephone services.

The current regulatory structure in the Kingdom of Swaziland can be described as weak, ineffective and inappropriate for the culture and economy of Swaziland. This is because it lacks the capacity and legitimacy to ensure the basic technical standards of operations and legitimacy. This is considering the fact that all the appointees tasked with regulations are indirectly answerable to the King of Swaziland through the Prime Minister, and simultaneously, the fact that the Managing Director of SPTC is tasked with licensing implies that the market is skewed against competitors to the organisation. Besides, it should be noted that this is a case of SPTC acting as the supplier/service provider and regulator at the same time.

CHAPTER FIVE: ANALYSIS AND DISCUSSION

This chapter analyses findings of the study under the following sections:

- 5.1 Telecommunications in Swaziland: the state of affairs
- 5.2 Regulation and deregulation issues in Swaziland
- 5.3 Regulations and convergence
- 5.4 International and regional policy on telecommunications regulations
- 5.5 Role of the Monarchy/Head of Government and regulatory structure
- 5.6 Conclusions.

5.1 TELECOMMUNICATIONS IN SWAZILAND: THE STATE OF AFFAIRS

5.1.1 *INFRASTRUCTURE*

Even though it is reported by United Nations Economic Commission for Africa, et al. (2006) that fixed and mobile telecommunication penetration in Swaziland is relatively high compared with in some of the neighbouring Southern African states the situation could be improved. This is so, considering that, according to ITU report (2004), the neighbouring South Africa had 11.2 people-fixed telephone lines per 100 people and 36.4 mobile telephone lines/subscribers per 100 people. This is in comparison with Swaziland's statistics of 4 fixed telephone lines per 100 people and 13 mobile telephone subscribers per 100 people, as reported by the United Nations Economic Commission for Africa, et al. (2006).

At a glance of the infrastructure indicators it is therefore conceivable to say the there is an apparent under-investment in telecommunications in Swaziland. Considering that telecommunications/telephone industry control and service is entirely government run, the allegation by Alleman et al. (1994) is qualified, namely that under-investment in the

telecommunications sector in the Southern Africa region revolves around issues of control and ownership and that, as state corporations, telecommunications authorities are subject to standard governmental budget practices, which makes them ignore new investments leading to under-performance.

It is therefore highly imperative that the Kingdom of Swaziland move with haste to privatise its telecommunications sector by offloading government shares to private concerns. This would lead to increased investments in the industry and an equally greater economic development, as advanced by Dholakia and Harlam (1994) and Yaker (1994), who all link sustainable economic development to improvements in telecommunications infrastructure.

It is worth noting that when asked about what their rating of the telecommunications policy was in Swaziland the majority of the respondents acknowledged that it was poor (refer to Figure 5.1). On further inquiry most of the respondents advocated for its overhaul (refer to Figure 5.2).

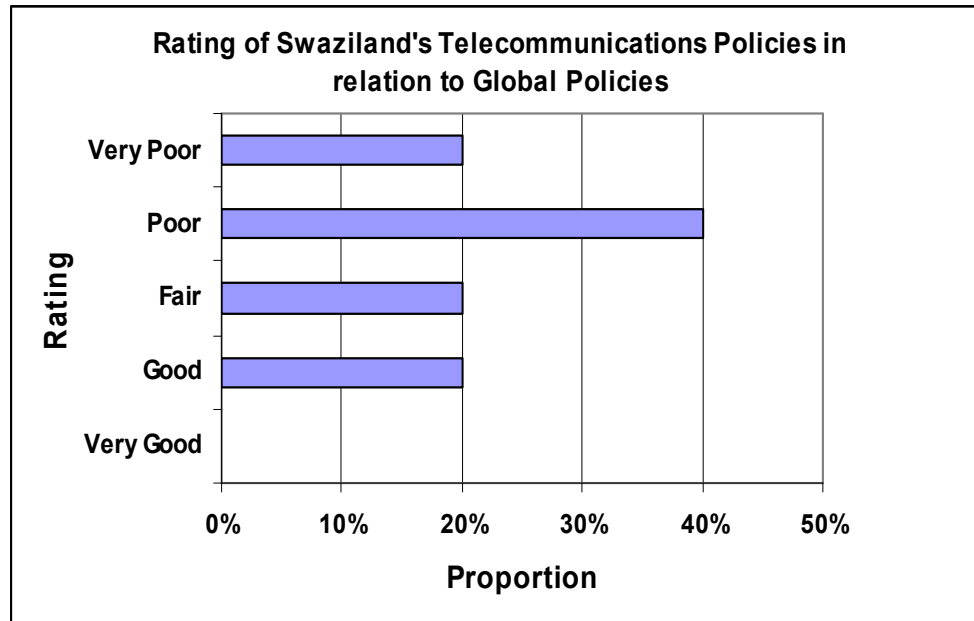


Figure 5.1 : Rating of Swaziland’s telecommunications policy. (Source: Interview)

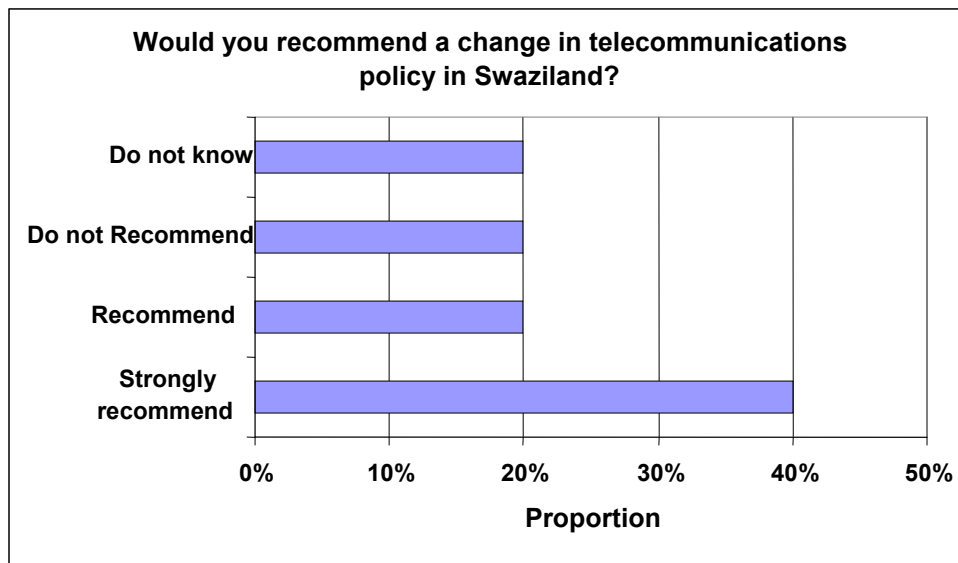


Figure 5.2: Recommendation of a change in Swaziland’s telecommunications policy.
(Source: Interview)

5.1.2 MONOPOLY

Swaziland Post and Telecommunications Corporation currently runs a monopoly as the only fixed line telephone operator in Swaziland; this is also replayed in the mobile telephone sector, taken that it also owns controlling shares at the only mobile telephone operator in the Swaziland (MTN). From earlier studies, Smith-Hillman and Braithwaite (2003), Tetrault (2001) and the EU (2000) all concurred that credible regulation promotes competition, efficiency and performance, and that monopoly will always lead to poor service delivery. This explains the reasons behind the poor telecommunications performance in Swaziland despite its higher Gross National Income in 2006 compared to Sub-Saharan African countries in terms of access to telephone lines per 100 people, revenue generation per cent of GDP and the cost of levies per call.

In the end it is therefore advisable that for greater growth the existing monopoly be dismantled or regulated to minimise its effects, as proposed by Treynor (2003), who suggests regulating a monopolist by measuring the monopoly's variable unit input and its

client's willingness to pay. This would mean the creation of efficiency monitoring units within the government structure to evaluate performance indicators and costs issues in the telecommunications sector. Dismantling of the monopoly is however preferable, as it would lead to reduced bureaucracy and equally reduced costs of operations. Results of interviews revealed that this is especially applicable in the fixed telephone line service where a good majority feel that they get poor service; in the mobile telephony area the clientele still feel that the service is satisfactory (refer to Figures 5.2 and 5.3).

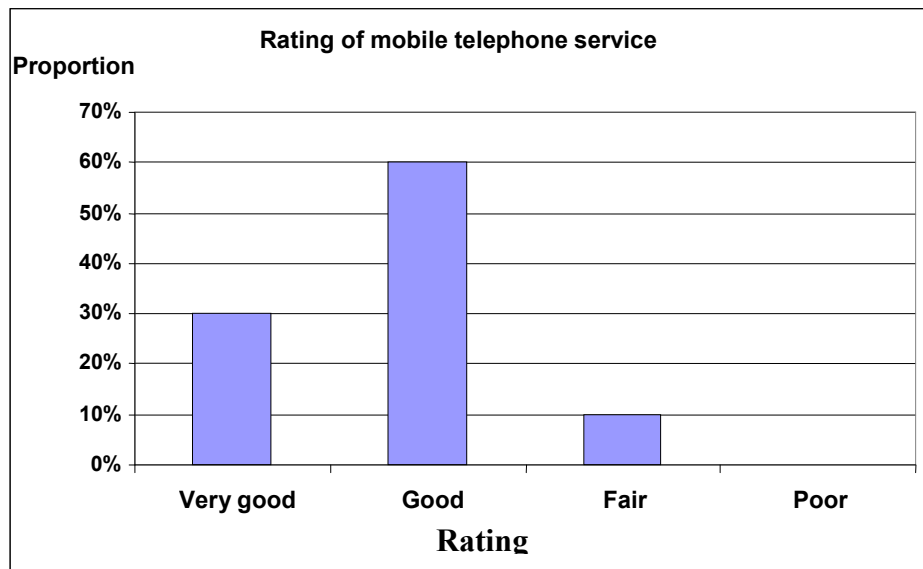


Figure 5.2: Rating of mobile telephone service in Swaziland. (Source: Field interview)

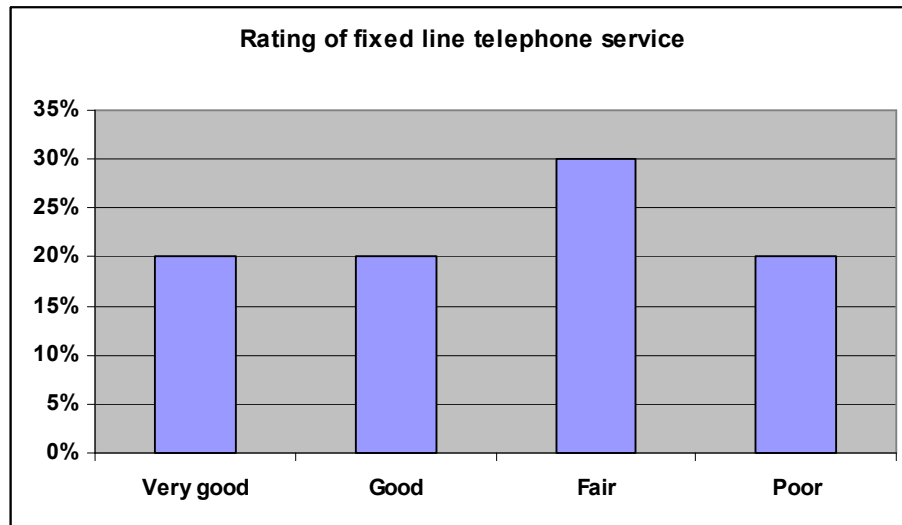


Figure 5.3: Rating of fixed-line telephone service in Swaziland. (Source: Field interview)

5.2 REGULATION AND DEREGULATION ISSUES IN SWAZILAND

Even though the Government of Swaziland had endorsed a telecommunications policy that should lay the necessary foundation for the separation of functions of the Ministry (policy), Regulator (regulation) and operators (separation of Posts and Telecommunications) there is still no movements in this direction. All the functions of policy formulation and management, regulation and operations/service provider are still being performed by the Government, under the Office of the Minister for Communications, and through the proxy of SPTC. Indeed, the existing local regulations (The Swaziland Posts and Telecommunications Corporation Act, 1983, and Posts and Telecommunications Regulations, 1993 (under Sections 63 and 76) vests absolute powers to licence, regulate and manage telephone operations on the Managing Director of SPTC.

The local regulations specifically outline that the Managing Director of SPTC has the authority to refuse any persons or parties permission to construct, maintain and operate telephone apparatus without a required explanation. This provision may be abused, taken

that the position of the Managing Director of SPTC is not constitutionally protected and has no fixed terms; it is also a political appointment, which is not subject to competitive recruitment policy. This may lead to abuse of office and entrenchment of monopoly. The end results are a reduced rate of economic development and deterioration in service delivery.

In addition to the above, the local regulations give absolute powers to the Minister responsible for Internal Security to temporarily confiscate telephone apparatus within Swaziland; or to intercept and disclose any communication over the telephone service within Swaziland in case of public emergency or where public safety and tranquillity are of paramount interest. This is also open to abuse as it may mean that provision of telecommunications services is at the whim of the Minister and that business operators may not disagree with political players.

Interview results revealed that most respondents considered the current telecommunications regulatory framework in Swaziland a non-performer and further recommended that it be overhauled. Details are shown in Figures 5.4 and 5.5.

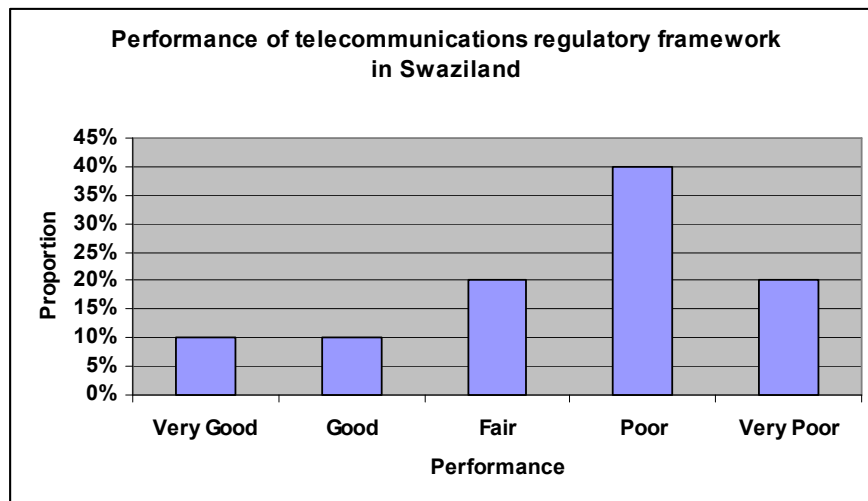


Figure 5.4: Performance of telecommunications regulatory framework (Source: Field Interview)

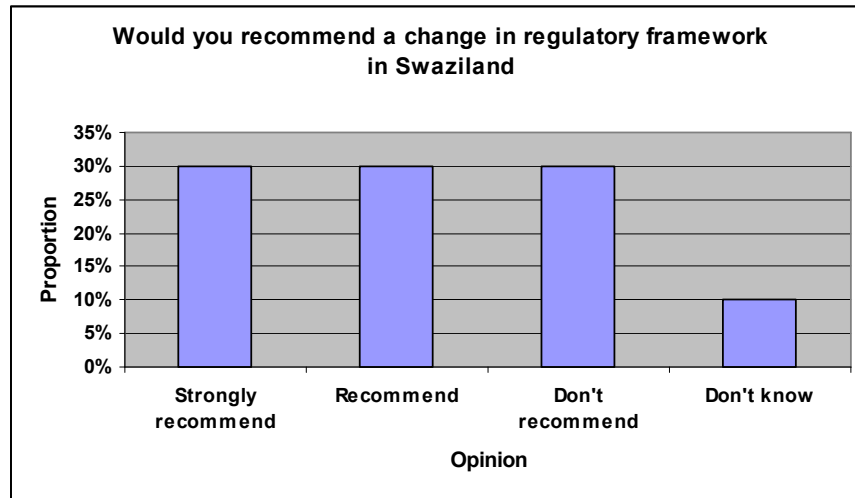


Figure 5.5: Would you recommend changing telecommunications regulatory framework. (Source: Field Interview)

5.3 REGULATIONS AND CONVERGENCE

Current telecommunications regulations in Swaziland do not take convergence into account. De La Torre and Rush (2006) define convergence as the capacity of different telecommunications networks to carry out similar services or that of one network to carry out different services. The services in question may range from internet access and television to mobile handsets and the bundled offer of voice, data and video or television services offered by cable television networks and ISPs. According to De La Torre and Rush (2006) convergence is accelerating as existing networks are improved to offer new services, as it gives the advantages of expansion of competition among networks and technologies compete without technological or regulatory restrictions; fosters the development of increasingly efficient technologies and services and, most importantly, reduces the costs of telecommunications services.

Swaziland needs to experience all the benefits of convergence while at the same time responding to the challenges of a regulatory framework. This would entail adopting the strategy already in practice by India, for example, which simplifies licensing procedures by offering categories of service entry licences, as shown in Figure 5.6 (De La Torre and Rush, 2006).

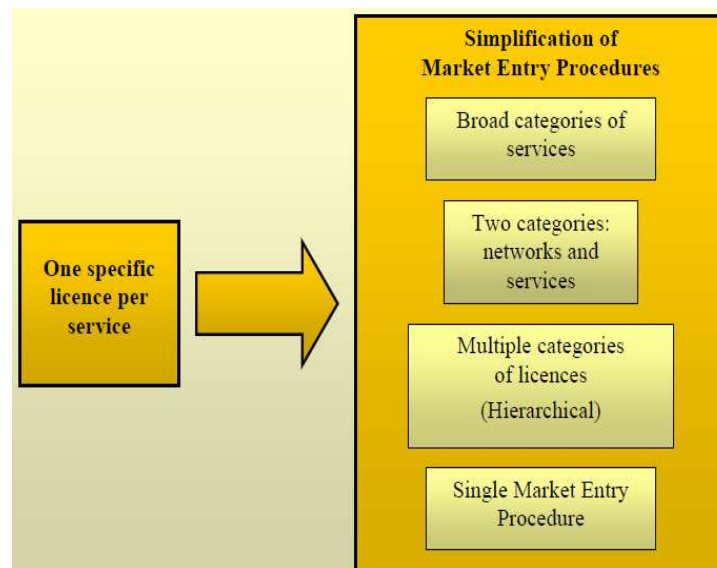


Figure 5.6: Simplification of market entry intervention. (Source: De La Torre and Rush, 2006)

It should be noted that currently even simple convergence services in telecommunications like VoIP are illegal in Swaziland. VoIP considerably reduces international telephone call levies and leads to reduced costs of operating business. This brings about the issue of the interplay between economics and regulations. In support of the need for regulations to reduce costs, Smith-Hillman and Brathwaite (2003) discuss the need to provide low-cost, high-quality goods, whereas the EU (2000) admits that increased competition in markets leads to both commercial and economical improvement of goods and services offered.

5.4 INTERNATIONAL AND REGIONAL POLICY ON REGULATIONS

On the regional front, the SADC protocol on Transport, Communications and Meteorology recognised the need for private sector involvement in restructuring state corporations and laid the framework for cooperation during such exercises. This led to harmonisation of the telecommunications policy with countries like Swaziland, Lesotho, Mauritius, Malawi, Namibia and Mozambique using this as the basis of their ICT policy (Goulden and Msimang, 2005). The draft policy is however yet to be adopted in Swaziland, largely because the protocol remains only a guideline for cooperation, with no need for enforcement.

Whereas both the WTO Telecommunications Reference Paper (1996) and the SADC Protocol on Transport, Communication and Meteorology strongly impedes the engagement in trade in telecommunications products or services, while at the same time undertaking the duties of regulations, the Government of Swaziland through the Ministry of Communication and the SPTC openly does this in violation of its commitments to the custodian of this bodies.

The WTO Telecommunications Reference Paper (1996) defines the practice in Swaziland as anti-competitive and supportive of an existing monopoly. It is however regrettable that this document is not binding and no punitive measures are prescribed to deal with non-conforming signatories. As a result, countries are left to their own conscience to correct telecommunications malpractices without interference of the WTO.

It should not be lost to analysts that the SADC Protocol on Transport, Communication and Meteorology goes ahead to define in detail the duties of telecommunications regulatory authorities in Sections 10.7 and 10.8 of the charter. The SADC Protocol on Transport, Communication and Meteorology remains however only a guide to signatories of the document.

Both the WTO Telecommunications Reference Paper (1996) and the SADC Protocol on Transport, Communication and Meteorology fall short of recommending the structure of a regulatory authority in telecommunications and a means of enforcing compliance. This has become the main bottleneck in the ability of these documents to translate into meaningful restructuring in the telecommunications industry in Swaziland.

5.5 ROLE OF THE MONARCHY/HEAD OF GOVERNMENT AND REGULATORY STRUCTURE

As the Head of Government, the Dlamini Monarchy has total control over the key players' involved in regulatory structure, namely the Minister of Communication, Minister for Internal Security and the Managing Director of SPTC. As a result the monarchy is the only entity capable of ensuring the restructuring of the telecommunications industry. In Swaziland today, the need to regulate is immensely overwhelming. Mechanisms for dealing with user complaints, the principle of universal of service and non-discrimination in the service provision in the telecommunications sector are lacking, which makes the country an ideal candidate for reforms in the sector. Due to the fact that all the ministers and their principals serve at the pleasure of the King, it is important that all the moves to spearhead reforms in the regulations of telecommunications sector be initiated with his blessings.

Tyler and Bednarczyk (1993) explain the need for regulations as due to “the desire to achieve the idea of universal service across the social spectrum or within different social groups, protection of the rights of telecommunication users and dealing with the user complaints, supervision of the often dominant public telecommunications service provider, ensuring technical precondition for effective operation of public network, creation of environment conducive to the growth of new services, ensuring transformation and non discriminations in the provision of service, management of common resources and stimulation of investment in the public network”.

Suitable reform in the telecommunications industry would suit the country if it results in the separation of roles with regards to policy, regulatory functions and service delivery/products vending. In other words, it would be in Swaziland's best interests if the government stayed on as the policy formulator/manager, with an independent body being constituted as a regulatory authority. SPTC would then remain as the service provider in fixed telephone line services while simultaneously being forced to dispose of its stake in the mobile telephone sector. The above proposal is largely supported by Boylaud and Nicoletti (2000), who proposed that the structure of management in the telecommunications industry is best run when three institutions (a ministry department, the sectoral regulator and the competition authority) operate as separate entities.

Gillick (1991) lists the following types of models of telecommunications regulation: autonomous/semi-judicial commission, or independent official with office/secretariat or independent official within ministry, or Government ministry. In the case of Swaziland regulation is by the government ministry of communication. This form of regulation is closed and is impervious to scrutiny, thus making it worse for developing economies like Swaziland which are highly prone to corruption, as alleged by Smith-Hillman and Braithwaite (2003).

When considering the most applicable model for regulating the telecommunications industry, Zeh (1996) advises that speed, improvement and cost of service need to be the key determinants in the choice of model. It must however be noted that the direct cost of running the telecommunications regulatory structure in Swaziland is relatively low as the functions are largely bundled together under the Office of the Managing Director of SPTC and the Minister for Communications. However, it is noted that without further monitoring or restructuring the country is highly susceptible to loss of income due to expanded networks and cost effective service delivery, which is only possible in a competitive environment.

It must also be noted that, considering the prevailing political culture in Swaziland, only slight modifications can be done on the current systems to ensure greater independence in

the Office of the Regulator. This may entail entrusting the powers of regulations to an independent regulator working in the Ministry of Communications but enjoying the security of tenure of office with a fixed term and clearly defined role and code of operation. Recruitment for the post of Regulator would then be independently and competitively done to ensure high competency of the official. This would ensure that the model operated is the third one (that is, an independent official with office/secretariat or independent official within ministry). This model of regulation is similar to the one practised by France, where ARCEP (Autorité de Régulation des Communications Électroniques et des Postes) performs the function, and its effectiveness is dependent on the versatility and stamina of the regulator and the secretariat's structure.

Swaziland may also need to learn from its neighbouring countries as they operate in similar economic environment, and decisions taken in countries like South Africa greatly affect it. South Africa regulates its telecommunications industry using a three-tier system of the Minister for Communications, The Department of Communications (DoC) and The Independent Communications Authority of South Africa (ICASA), with the Competition Commission (CC) also playing a role in processes with regards to competition issues (Mokgosi, undated). The Minister is invested with authority under the provisions of the Telecommunications Act to issue policy guidelines, approve regulations made by ICASA, and to initiate and participate in the licensing process. Participation in the licensing process is clearly spelt out as including acceptance of recommendations made by ICASA, requests for further information from ICASA, rejection of recommendations from ICASA, and also reference of issues to ICASA (Mokgosi, undated).

Of great importance when discussing the regulation of the telecommunications structure is the mode of regulation. Tyler and Bednarczyk (1993) outline approaches to regulations as either a routine exercise of control or the tendency to act only in exceptions, and a direct or indirect approach to controlling aspects of the behaviour, and performance of the telecommunications service provider. In Swaziland the mode of regulation needs to be a combination of these, with a provision for the Minister or the King's agent to exert control via legal provisions and indirect controls via levying of special taxes for

organisations not abiding by an established operational charter. This would ensure that the King's control is maintained while at the same time the country moves ahead to benefit from increased competition and advanced technology.

Whatever the structure that the government chooses to implement in telecommunications regulation in Swaziland the key issue will be independence in the performance of the duty at hand.

In this study all the key respondents were unanimous that reform and restructuring are urgently needed in the telecommunications sector in Swaziland. The study revealed that, among the respondents, the preferred model for telecommunications regulation in Swaziland was an independent regulator with a secretariat, followed closely by government regulation; a small percentage, however, preferred the status quo to prevail (see Figure 5.7).

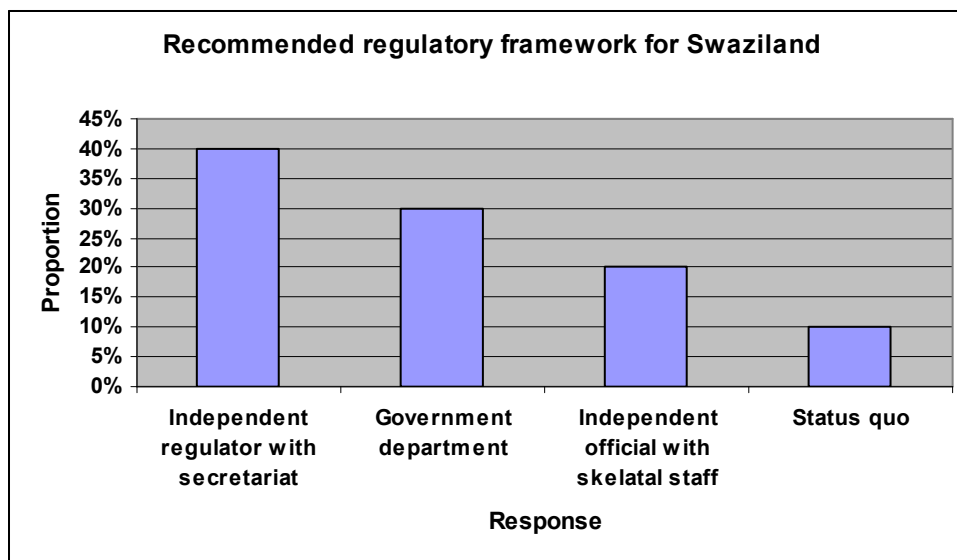


Figure 5.7: Preferred telecommunications regulatory model. (Source: Field Interview)

5.6 CONCLUSIONS

Poor infrastructure indicators in Swaziland may be attributed to under-investment in telecommunications due to the fact that the telecommunications/telephone industry control and service is entirely government run and, as a result, is subject to budgetary constraints typical of governments in developing countries. This supports the views of Alleman et al. (1994). Rather than use the idea of Treynor (2003) of regulating a monopolist by measuring the monopoly's variable unit input and its client's willingness to pay it would be preferable to dismantle the monopoly if bureaucracy and operational costs are to be reduced

The Government of Swaziland's telecommunications policy advocating for the separation of functions of the Ministry (policy), regulator (regulation) and operators (separation of Posts and Telecommunications) needs to be implemented with haste if improvements in performance in the sector are to be achieved. As a result, SADC and WTO would need to actively lobby the authorities in Swaziland to ensure that their prescribed modalities of operations in telecommunication regulations are established. The Monarchy is the only entity capable of ensuring the restructuring of the telecommunications industry. As a result its influence must be lobbied for successful reforms in the regulatory structure for telecommunications in Swaziland.

CHAPTER SIX: CONCLUSIONS & RECOMMENDATIONS

The author of this research set out to investigate the need for telecommunication regulation in the Kingdom of Swaziland, and the associated challenges. This entailed undertaking a situation analysis of the telecommunications industry in Swaziland and specifically comparing its regulatory structure with others across the globe.

The situation analysis revealed that SPTC enjoys a monopoly in the provision of telephone services in the Kingdom of Swaziland. SPTC, through its Managing Director, is the regulator (Kingdom of Swaziland, 1983; Kingdom of Swaziland, 1993): it operates the fixed telephone line services and also has a stake in the mobile telephone services company the MTN Swaziland (United Nations Economic Commission for Africa, et al, 2006). The monopolistic tendency and poor regulation has led to under-investment in the telecommunications sector as well as poor quality service, as revealed by interviews with key informants. This is exemplified by low coverage/teledensity for mainly fixed telephone network, with the concentration mainly between the cities of Manzini and Mbabane, and very poor coverage in other rural areas. A number of interviewees felt that the introduction of other players in the field could lead to better telephone services. It has also been revealed that the Kingdom of Swaziland does not allow use of telecommunication convergence technologies and as a result the clientele base is not getting full worth of their money paid for services. It would be prudent for Swaziland to begin by looking at an enabling legislation dealing with convergence so as to reduce costs of communication.

The weak telecommunications regulatory structure in the Kingdom of Swaziland is related to the fact that the Managing Director, who is the *de jure* regulator, is appointed directly by and at the discretion of the Minister for Communications, in accordance with the Post and Telecommunications Corporation Act, which does not give guidelines of the qualifications requirements, and does not enjoy a security of tenure. As a result he will serve at the behest of the executive, making it difficult for him to perform his function.

This situation goes against the principles of the SADC Protocol on Transport, Communication and Meteorology, which defines the structure and functions of telecommunications regulatory authorities and the WTO telecommunications reference paper, which prohibits the regulatory body from engaging in the provision of telecommunication services. This is in itself ironical, taken that the Kingdom of Swaziland is a signatory to both principles. These principles are however only policy documents and are not legally binding in anyway; this often results to non-implementation.

It should be noted that whereas the Government of Swaziland's telecommunications policy advocates for the separation of functions of the Ministry (policy), regulator (regulation) and operators (separation of Posts and Telecommunications), the policy is yet to be implemented. It would be advisable for the stakeholders in Swaziland, SADC and the WTO to lobby the authorities in Swaziland to ensure that the ICT policy is implemented. The key to any success in this area is focussing lobbying activities at The Monarchy because of its strong political and cultural hold. It is evident that the establishment of an independent regulatory framework in Swaziland will not only increase market competition but will also lead to improvement in the quality of services in the telecommunications sector. This is supported by Tetrault (2001) who argues for regulation as a means of improvement of service quality.

The author of this report proposes the use of either an Independent Official and an Office/Secretariat or an Independent Official within the Ministry as the regulatory agency which is prone to result in increased efficiency and cost of service as Zeh (1996) recommends. According to Tyler and Bednarczyk (1993), the options recommended are ideal because they would rely on the resources from the parent ministry while simultaneously gaining legal legitimacy through reforms. Swaziland is a small country with limited resources and a small population – 1.1 million people; in 2005 contribution to GDP from telecommunications was less than 4% per annum in 2005 (World Bank 2006). Although not fully divorced from the parent ministry, these bodies can be viewed to be independent if measures like the introduction of security of tenure for the Chief

Regulator and competitive hiring of the officials are introduced. This would however be a great challenge to the Kingdom of Swaziland, taken that it faces serious human resource challenges due to competition for qualified personnel by the regional economic powers like Namibia, Botswana and South Africa. This predicament is best described by Goulden and Msimang (2005), who state that less developed countries in the region find it difficult to attract and maintain capable staff for ICT regulation bodies and government departments. The Government of Swaziland therefore needs to move with haste to not only reform its legislation and practices but also to introduce favourable terms of service for those in the telecommunications regulatory departments.

A typical structure that the Department of Telecommunication Regulation could adopt is as illustrated in Figure 6.1.

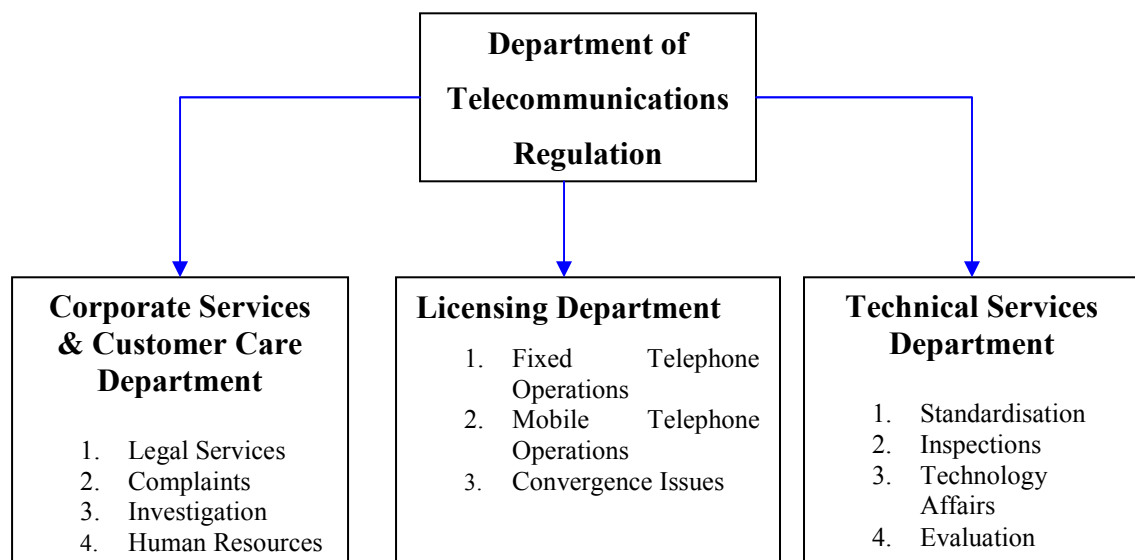


Figure 6.1: Recommended Swaziland Department of Telecommunication Regulation organisation. (Source: Author's construction)

The Department would be divided into three sub-departments, namely Corporate Services, Customer Care, Licensing and Technical Services; whereas the Corporate Affairs would be involved in administrative duties and client support operations, the licensing department would only concern itself with licensing issues as pertaining to different sectors of telephone operations.

For the suggested structure to function well three degrees of operations as suggested by Tyler and Bednarczyk (1993) must be attained: first, independence from the operational organisation responsible for telephone service operation, second, independence from the parties with commercial interests in the telecommunications service industry, and third, independence from the Ministers and other political leadership influence (Tyler and Bednarczyk, 1993). The idea of telecommunications regulation in this manner is therefore greatly dependant on the goodwill of the stakeholders involved. This goodwill must however be inculcated continuously: it is not a result of a single effort. This process would not be unique to Swaziland but it has been seen used in various countries – a good example of which is in Sri-Lanka, where legitimacy was only developed with continuous meetings of stakeholders who then drew up a charter addressing the thorny issues in telecommunications regulations (Samarajiva, 2000).

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APPENDIX A: INTERVIEW QUESTIONNAIRE

Identification of the Respondent:

- Name.....
- Title:.....
- Organisation:.....
- Postal address:
-
-
- E-mail:
- Tel:.....
- Fax:

Date:

Please tick the appropriate box that best describes your view on each item. Where more room is required to answer any of these questions, please use a separate sheet (clearly marking which question this refers to).

1. How would you assess the relevance of the existing telecommunication policy in this country to today's telecommunication environment?

Very Important	Somewhat Important	Irrelevant	Harmful to market development and competition	No opinion/ not familiar with Telecommunication policy
a	b	c	d	e

2. Would you kindly elaborate on your response above?

3. Do you think the current policy should be replaced by other policies in place in other countries that you are familiar with?

Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	No Opinion
a	b	c	d	e

4. Kindly explain your response to the above question.

5. In your view, how does the domestic policy scene compare with the situation in international telecommunications?

6. Do you think that any decision on whether to review and modify the existing telecommunications policy in Swaziland should be deferred?

Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	No Opinion
a	b	c	d	e

7. If you ticked either a or b, please explain why you consider it would be appropriate to defer any decision and also until when the decision should be deferred; or if you ticked c or d, please state why you consider this option to be inappropriate?

8. Do you think there are any new areas or changed or evolving circumstances in telecommunications that would benefit from being addressed in an inter-governmental regulatory agreement with treaty-level status?

Strongly Agree	Somewhat Agree	Somewhat Disagree	Strongly Disagree	No Opinion
a	b	c	d	e

9. If you ticked either a or b, what are the new areas which you consider relevant for incorporation into a treaty level agreement; or if you ticked c or d, please state why you consider this option to be inappropriate?

10. Please kindly indicate any other comments on the Swazi telecommunications policy that you may wish to share.

11. How is the response time of SPTC to faulty operation of the fixed line?

Very Poor	Poor	Good	Very Good	No Opinion
a	b	c	d	e

12. How many fixed telephone lines do you have?

13. How often do you experience faulty telephone lines in your operation?

Seldom	Sometimes	Often	Very Often	No Opinion
a	b	c	d	e

14. How often are you unable to operate with you mobile lines due to faults in the network?

Seldom	Sometimes	Often	Very Often	No Opinion
a	b	c	d	e

15. What is the percentage of fixed line telephone costs in your organisation's budget?
16. What is the percentage of mobile telephone costs in your organisation's budget?
17. Do you feel the cost of telephone affects the operations of your organisation?
18. How would you rate the performance of the existing telephone regulatory framework?

Very Poor	Poor	Good	Very Good	No Opinion
a	b	c	d	e

Kindly explain your response to the above question.

19. What are the weaknesses identified in the existing telephone regulatory framework?
20. What are the strengths identified in the existing telephone regulatory framework?
21. Have you ever experienced wrong telephone billing? If the answer is yes, how often do you experience wrong telephone billing?

Seldom	Sometimes	Often	Very Often	No Opinion
a	b	c	d	e

APPENDIX B: INTERVIEW REQUEST



Graduate School of Business
University of the Witwatersrand
2 St David's Place
Parktown
Johannesburg 2193

Sir / Madam

Re: The prospects of telecommunications services regulation in Swaziland

This serves to confirm that the above-mentioned research forms part of a dissertation in partial fulfilment towards the completion of Master of Business Administration (MBA) at the Graduate School of Business, University of the Witwatersrand.

The primary objective of the research is to develop a framework for a telecommunications regulation policy in Swaziland. In-depth interviews will be used to extract information from key stakeholders within the telecommunications industry and other role players to realise this objective. Although the interviews will be recorded, be assured of complete confidentiality.

It must be noted that your participation in the interviewing process should not be limited by the scope outlined by the interviewer. Any additional comments and contributions from yourself/organisation/stakeholders related to this topic would be highly appreciated.

Yours sincerely,

Sam D. Shongwe (Researcher)

Prof. K. Koen (Research Supervisor)