

*A critical analysis of privatisation of the
telecommunications sector: The case of
TELKOM; who benefits, who loses?*

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Abstract

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The emergence of public enterprises was heightened in the middle part of this century at a time when the Keynesian theory dominated economic thinking. State involvement in the economy was viewed as essentially crucial for crowding in of investment. With recession creeping in the late 70s, coupled with dynamic and evolving economic thinking and policies of the time, degovernmentalisation assumed prominence. The central theme was that the private sector was more efficient in the allocation of resources. The UK led the way in 1979 with pronouncements of privatisation of state enterprises. Privatisation became the new buzzword, and was exported all over the world.

In South Africa, the problems encountered towards the close of the late 1980s paved the way for privatisation. South African Posts and Telecommunications' (SAPT) path towards privatisation was mooted in 1988 and chanted in October 1991 when it was commercialized to form TELKOM SA Limited. The takeoff to privatisation occurred in 1996 when 30% of TELKOM shares were sold off to Telekom Malaysia Bhd partnered by US-based SBC Communications Inc.

Telecommunications has pervaded all facets of human endeavors covering social, security and business functions. Intricately intertwined global processes have complemented the sector's propensity to expand and integrate since the late 70s. Despite its salient impact on political, economic and social development, telecommunications remains at a crossroads in South Africa. The seemingly dichotomous situation in South Africa presents an interesting development dilemma of social thrust versus private capital development. In telecommunications, there are

two conflicting objectives that have to be met: universal service provision versus growth and development of world class business services. Privatisation will have a profound impact on various stakeholders including the government, TELKOM, trade unions, residential and business consumers, equipment manufacturers and engineers among others.

The study therefore seeks to give an anagram of parastatals emergence, analysis of the privatisation process, as well as provide a critical and empirical review of TELKOM development trajectory. The analysis is made within the context of development using the following theories: principal-agent theory, theory of contestable markets and regulatory theory. These are central to issues behind privatisation since ownership; efficiency and regulation shape the policies and operations of companies today.

This thesis has found that TELKOM has performed relatively well over the last couple of decades but has been facing major challenges created by the new socio-political dispensation, globalization and a shift in economic thinking premised on capitalism. There are wide disparities in the provision of phones along spatial and racial lines. Competition is still a far cry although regulation structures are in place. For regulation to work there must be competition and free access to information, and this is non-existent. Regulation in an information asymmetry environment can render it ineffective.

The only route open for telecommunications in South Africa is privatisation, which should be implemented in stages in consultation with various stakeholders. Policy guidelines should emphasize the promotion of both the universal service and market services in order to close the gaps created by apartheid and make South Africa industry competitive. Models from the developed and developing worlds should be blended while taking into consideration historical and specific conditions prevailing in the country. The dynamic telecommunications industry is going to self-adjust through a process of partnerships and alliances while lower tariffs can be achieved through competitive provision of services and supply of equipment. Complementary telecommunication services should be provided through existing networks operated by Transtel, Eskom etc.

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GLOSSARY

AAT -	Alcatel Altech Telecoms
ATU -	Alliance of Telkom Unions
BOOT -	Build Own Operate and Transfer
BOT -	Build Operate and Transfer
BT-	British Telecom
BTUC-	British Trade Union Congress
CCB-	coin-collecting call boxes
CEO-	Chief Executive Officer
COSATU-	Congress of South Africa Trade Unions
CWU-	Communication Workers Union
DECT-	Digital Enhanced Communication Technology
GDP-	Gross Domestic Product
HQ-	Head Quarters
IBA-	Independent Broadcasting Authority
IDC-	Industrial Development Corporation
ILO-	International Labour Office
IMF-	International Monetary Fund
IP-	Internet Provider
ISDN-	Integrated System Digital Network
ISI-	Import Substitution Industrialization
ISO-	International Organisation for Standardisation
ISP-	Internet Service Provider
ISPA-	Internet Service Provider Association
ITU-	International Telecommunications Union
JIT-	Just -In-Time
JSE-	Johannesburg Stock Exchange
JTM-	National Telecommunications Company
KZN-	KwaZulu-Natal
LDC-	Least Developed Country
LEOS-	Low Earth Orbiting System
MNC-	Multi-National Company
NEDLAC	National Economic Development and Labour Council
NET-	National Empowerment Trust

NFA-	National Framework Agreement
NRF-	National Revenue Fund
NUMSA-	National Union of Metal Workers of South Africa
PE-	Public Enterprise
PTC-	Posts and Telecommunications Corporation
SA-	South Africa
SACP-	South Africa Communist Party
SADC-	Southern African Development Community
SAF-	South Africa Foundation
SAIX-	South Africa Internet Exchange
SAPT-	South Africa Posts and Telecommunications
SATRA-	South Africa Telecommunications Regulation Authority
SCC-	Specialized Communication Carriers
STM-	Syarikat Telekom Malaysia
TBVC-	Transkei Boputhatswana Venda Ciskei
TV-	Television
UNDP-	United Nations Development Program
USAID-	United States Agency for International Development
VAC-	Value Added Carrier
VANS-	Value Added Network Services
WB-	World Bank

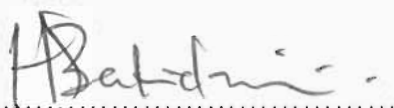
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DECLARATION

I Davison Herbert Batidzirai, candidate for the degree of Masters in Rural and Urban Planning: Development Studies, declare that this thesis is my original work. It is submitted for the first time in this form and content and has not been published at any institution. All sources and citations consulted, and ideas borrowed from someone are duly acknowledged.

Signed



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FEBRUARY 15, 1999.

Chapter One

Privatisation Theory

1. Introduction

This dissertation aims to deal with privatisation of telecommunications with special reference to TELKOM SA. The privatisation process is like a revolution transcending national boundaries across the globe. Statistics have shown that many governments throughout the world are now using privatisation as an instrument of economic policy. Privatisation models develop through experiences and more case studies will come out as the process unveils itself.

South Africa and TELKOM are significant in this study since the country has two faces, the developed world and the developing world. Similarly TELKOM's penetration rate reveals this duality. TELKOM is instrumental in the South African economy as telecommunications has played a pivotal role in the development process. There are a host of shortcomings that arise from lack of proper and efficient telecommunications.

(The challenges of the 1990s through globalization, changing economic paradigms, as well as technological dynamism have affected the way telecommunications operate. The process of change is being exerted from within by business, the public, etc. while MNCs, private capital, the World Bank and other institutions exert external pressures.)

This chapter introduces the subject of the study, the problem statement, research objectives and questions, methodology, significance of the study and an analysis of the theoretical framework. The advances in areas of economic theory including the principal-agent relationships, theories of competition and regulatory theory are driving the privatisation process of telecommunications. The analysis is also driven by technological and structural changes where private provision of services has produced successes, e.g. computer/internet industry and the cellular sector. The universality of privatisation has meant that all governments are affected and cannot just be spectators.

1.1 Significance of the Study

When privatisation was started its implementation was slower and there were no properly documented cases. With the passage of time extensive literature especially studies by the World Bank and IMF and other economists showed that privatisation leads to benefits if applied appropriately. However since privatisation is a process, there are problems that are encountered along the path as conditions and backgrounds of each case are different. The time factor including the political and economic conditions are crucial to the success or failure of each privatisation program.

(The government and TELKOM face challenges of growth and development as a result of apartheid legacy as well as the competitive environment. Telecommunications is a facilitator of development as the analysis below will show. This study is also significant because structural and technological changes taking place in the electronics sub-sector require a reevaluation of operational structures of telephone companies. The evolving economic theories as well as other global processes taking place such as democracy, transnationalization, mergers and acquisitions among other things have generated greater attention and change in telecommunications.)

1.2 Objectives of study

The thesis aims to contribute to the debate surrounding privatisation of the telecommunications sector by tracing the historical trajectory of TELKOM from the days of apartheid up to now. The paper attempts to give a balanced exploratory position and discussion of telecommunications privatisation. There are bound to be winners and losers. In this regard the parameters for the way forward will be proposed. This paper will also contribute to privatisation policy formulation as well as privatisation strategy for TELKOM within the context of global changes and the dichotomous social, political and economic situation that prevail. Finally this paper aims to act as a reference guide to those doing research on telecommunications and TELKOM in particular.

1.3 Statement of the problem and key questions

Telecommunications has the potential to significantly contribute to the development of the South African economy. Massive capital injections have been made resulting in excess exchange capacity in the 1980s. However there are massive areas that are underserved and unserved by TELKOM while on the other white areas are saturated with telephones. This cleavage will present challenges for the democratic government and TELKOM. Previously financing of SAPT was thought to be the main obstacle to expansion and efficiency of telecommunications. The central hypothesis is that privatisation will lead to a slowdown in the extension of telephones to poorer areas and will punish various stakeholders through loss of orders, tariff hikes, job losses etc.

The privatisation process which is seen as a solution to poor performance by public enterprises affects especially the government, business operations, residential consumers and equipment manufacturers. A number of enterprises have been privatised in other countries and yet there are still problems in those enterprises. Privatisation should not be seen therefore as a panacea to various problems but a process towards a solution. A literature review will thus help us understand the extent of the privatisation process. This should be supported within the context of international experiences. Economic indicators or experiences of other countries can be useful in attempting to steer the economy of a country. However they are only clues and may well be misleading if used to compare nations of different histories. The indicators used are to provide targets for planning." (Lehmann et.al., 1979). These should help provide a broader picture for providing solutions to the development debacle. All the problems at TELKOM can be addressed through the development of appropriate policies and programs that conform to the formula of overall economic management policies of the country. Without a holistic and systematic implementation of these policies privatisation *per se* cannot succeed. Liberalizing of telecommunications without liberalization of the whole economy will hinder the effectiveness and competitiveness of South African participation in the global economy.

The World Economic Forum (WEF) views South Africa as an uncompetitive country although there are signs that the economy is in the process of overcoming factors

limiting competitiveness. The table below shows the competitiveness of TELKOM in 1995, which is proof of the fact that labour efficiency and hence TELKOM efficiency, is still far from its counterparts in developed countries.

Labour Efficiency

USA	214
SPAIN	185
GREECE	168
UK	160
NEW ZEALAND	150
AUSTRALIA	145
KOREA	254
TURKEY	107
ARGENTINA	105
SOUTH AFRICA	63
ZIMBABWE	25

(Morgan, 1995)

Competitiveness is one of the criteria used by the investor to make investment decisions. National competitiveness is enhanced by telecommunications as all sectors make use of telecommunications.]

The study focuses specifically at TELKOM, where the privatisation process is already in motion. [The problem of TELKOM is that of telephone provision. The apartheid legacy left on one hand a sophisticated network that has elements of excess capacity while on the other hand there are areas with rudimentary and non-existent services.] Key questions being posed include; how best can universal service and market based service be provided rapidly and cost-effectively? What form should the privatisation process take? Does ownership matter? Will regulation be effective? Will privatisation promote efficiency? Will it improve penetration rate of phones? What effect will privatisation have on the equipment industry? Who will benefit and who will lose from the privatisation process? Will privatisation lead to the lowering of telephone tariffs? Will privatisation enhance competition and foster the development of the economy? What policy should government take with regards to the provision of telecommunications?

All these affect the rapid penetration of telecommunications and technological development of companies that seek to be globally competitive. This paper will try to analyse and find solutions to these problems. Guidelines for TELKOM privatisation will be proposed and implications on various stakeholders stated.

1.4 Methodology

The debate around privatisation is largely theoretical. This paper has largely based its study on secondary sources. However very little material was available on South African privatisation drive. Despite this problem the literature available had been quite useful in analysing the privatisation of TELKOM. Little primary research was undertaken as preliminary research revealed lack of co-operation from TELKOM. I faced buck-passing as I wanted to talk to senior officials of important stakeholders. However, the paper takes an empirical look at TELKOM through documents and reports, statements and journalistic articles in South Africa between 1995 and 1998. Telephonic discussions were held to augment the secondary research. In addition, I have made extensive use of the Internet. Informal chats with some business people, residential consumers and potential customers were held.

Taking into consideration these shortcomings in this research, this paper cannot solely be a true reflection of the analysis of the privatisation process, its impact on telecommunications and the various stakeholders. Nonetheless the fundamental principles argued for or against in this paper are a true reflection of the privatisation process within the telecommunications sector. The time span of the study can also present a limitation. The telecommunications sector is dynamic with changes occurring rapidly. In this respect new information and changes in economic thinking may render the analysis ineffective. It should also be noted that the bulk of the literature used is from the 1980s primarily because that was the period when privatisation cases shot up. However the material is still relevant today.

1.5 The approach/framework utilized

Public enterprises have played a critical role but are being superseded by new economic paradigms. TELKOM is now operating in a competitive environment where allocative efficiency and internal efficiency take centre stage. The competitive regime should however take cognisance of the political and social conditions that prevail. All

the changes locally and globally should be taken into consideration when evaluating the privatisation of telecommunications. This section provides the theoretical underpinning for understanding the privatisation process and the changes in the global economy. Privatisation is being driven by three theoretical foundations, which are in consonance with one another- principal-agent theory, theory of contestable markets and regulation theory.

In the *Wealth of Nations*- Adam Smith (1776) argued on efficiency and productivity grounds that: " In every great monarchy in Europe the sale of the crown lands would produce a very large sum of money, which, if applied to the payment of the public debts, will deliver from mortgage a much greater revenue than any which those lands have ever afforded to the crown...when the crown lands had become private property, they would, in the course of a few years become well improved and well cultivated." (Yarrow and Vickers, 1988). This quotation forms the basis for the analysis that follow using the intertwined theories mentioned above.

(i) Principal agent theory

This theory is concerned with the problem of information and incentives. Ownership influence incentive structures, economic performance and in particular the competitive structure of the industry in which the firm is operating. It is difficult to come up with the optimal incentive scheme for the principal to lay down for the agent because the principal and agent do not share the same objectives. The principal want the agent to act in his interest but he does not have full information about the circumstances and behaviour of the agent and so he has a monitoring problem. This prevents the principal from successfully telling the agent what to do, for he cannot fully observe what is happening. (Yarrow, 1988). This can be applied to situations such as employers and employees, landlords and tenants. Adam Smith noted that "the attention of the sovereign can be at best a very general and vague consideration of what is likely to contribute to the better cultivation of the greater part of his dominions. The attention of the landlord is a particular and minute consideration of what is most likely to the most advantageous application of every inch of ground upon his estate." (Adam in Veljanovski, 1989). This problem of information asymmetry makes it difficult for managers of parastatals to operate since they are controlled by the Minister who does not have adequate information about the operations of entities

under them. The Minister is accountable to parliament and the general public but such accountability is vague and imaginary. Normally the Minister gives directives to the parastatal which are not based on efficient allocation of resources. This was the basis of the extension of subsidies to uneconomic areas in the telecommunications investment programs.

Information flows to both capital markets and regulators will be affected by the market structure otherwise central planning decisions will be straightforward although it will have to deal with large information flows. Competition becomes paramount not only because of the direct effects of rivalry amongst firms but also because it tends to improve the information available to monitors and regulators which in turn facilitates the development and implementation of more efficient managerial incentive structures and regulatory policies. (Yarrow, 1989). Monopolisation of information means there is no quick and easy 'regulatory fix' that can be used to resolve the difficulties. This is the reason why a change to commercialisation for TELKOM in 1991 did not yield the expected results. Ownership matters because the transfer of a firm from the public sector to the private sector or vice-versa will lead to a change in the incentive structures facing its decision makers. (Yarrow, 1989). Principal-agent theory is similar to property rights theory where there is no access to shared information resulting in the government facing difficulties in providing appropriate incentives to public sector managers and in monitoring their performance. Private ownership concentrates rights and rewards; public ownership dilutes them. (Horwitz, 1992). The performance of privately owned firms will be concerned with meeting the requirements of the capital markets and may be faced with threats of take-over and bankruptcy, whereas public sector managers will depend on the satisfaction of ministerial objectives and the minimum output threshold. In private ownership there is direct link between agents (managers) and principals (shareholders) whereas in public ownership interactions between voters and politicians occur in imperfect political environment. "Caution should be taken though for it would be superficial to regard privatisation as a panacea for the various difficulties faced by the public sector in many economies as for instance a mere change of ownership or the introduction of private management would pave the road to financial and economic efficiency." (Vuylsteke, 1988:xi). Examples, such as the Malaysian case, will show that a mere

change in ownership is not enough.

Market structure is of central importance for incentives and performance while regulatory policy measures should be seen as a complement to and not substitute for, other measures to promote competition. The greater the degree of monopoly the greater the difficulty of regulating. TELKOM acted both as an operator as well as a regulator. This was definitely a monopolised environment. The primary objective of any policy would be to improve the flows of information to regulators. Competition generates more information, which can be used by owners of a firm to improve performance monitoring. (Yarrow, 1989). Thus competition and regulation work together to provide improved information flows and better incentive structures.

Competitive forces improves industry performance by the disciplining effect of competitive threats up the managers of public forms as well as the creation of opportunities for innovation.(Yarrow and Vickers, 1988). This explains why the telecommunications industry performed badly. The sector was insulated from competition as a result of supply agreements with SAPT. TELKOM too after commercialisation had small units created that did not compete with each other. The mechanism of competition between existing firms cannot be relied upon if the incumbent firm being privatised has a preponderant market share and if it is not being split into units that will subsequently compete with the other. (Yarrow & Vickers, 1988). It is then only the entry and growth of new rivals or at any rate the threat of it that can provide competitive disciplines for the incumbent firm.* The principal-agent theory is however criticised for assuming individualistic model of human behaviour. There are many examples of excellently run public enterprises just as there are terribly run private corporations. One study in the USA analysed 123 private and 30 public utilities (electricity) and found no significant difference in cost (in)efficiency between private and public firms. This suggests that if anything changes the behaviour of the firm it may be competition, not the fact of ownership. (Horwitz, 1992).

(ii) Theory of contestable markets

In a contestable market the threat of potential competition compels firms to meet customers' wishes that maximise efficiency, for otherwise new entrants will simply take their business away. It is possible to contest a market with high fixed costs, such as telecommunications so long as there are no sunk costs, e.g. equipment can be hired. The average cost of producing the industry's output might increase if competitors were excluded from the sector. Liberalising conditions of entry into an industry creates entry threats of sufficient power to impel the incumbent firm or firms to behave efficiently and in accordance with consumer preferences (Yarrow, 1988). Competition process provides a spur to internal efficiency and the elimination of X-inefficiency, as well as serving as a mechanism conducive to allocative efficiency. Where competition exist as in long distance phones (e.g. USA), efficiency and reduction in call charges occurs whereas in local networks there is national monopoly and inevitable market power. Profit maximisation may lead to monopolistic abuses, including higher prices to consumers hence to a deterioration in allocative efficiency. Contrary to some claims by monopoly PTOs, new market entrants are not cherry picking but planting cherry trees. They roll out networks at record speed because they augment existing networks, they bring new investment and employ new technologies. (OCDE/GD(96) 179). In competitive environment the allocative efficiency effect disappears or is of trivial importance: the internal efficiency implications of ownership transfer are dominant and in the absence of other substantial externalities privatisation is much more likely to have positive overall effects on economic efficiency. (Yarrow, 1989). Competition leads to price wars, business failures and consolidation, labour unrest, prices are realigned more closely with marginal costs resulting in price reductions in some areas and increases in others, variety of price/quality, workforce and wages reduced resulting in efficiency. (Horwitz, 1992).

This theory however assumes an unnatural sequence of events when entry occurs. It assumes that the entrant can establish itself, undercut the existing firm(s) on price, and take as much business as it likes, before the existing firms respond by lowering their own prices- this is not realistic. Dominant firm can make use of predatory tactics e.g. through aggressive pricing in such a way that the rival would regret having entered

the market. This will hurt the incumbent firm and therefore irrational. Predatory entry behaviour of various kinds (e.g. price and quality variation, overcapitalization, strategic advertising, denying access to technology and product differentiation) is entirely possible and policy measures are vital if dominant firms are not to choke off the threat of potential competition. (Yarrow & Vickers, 1988). Secondly the assumption of zero sunk cost is unrealistic. Cellular giants MTN and Vodacom in South Africa are entrenching themselves before a new competitor joins them. The new company cannot operate without installing its own advanced GSM equipment. The negative effect of profit seeking behaviour can be countered at least in theory by regulatory policy.

(iii) Regulatory theory

The purpose of regulation is the enhancement of economic welfare via improved efficiency in resource allocation, and that the established agencies faithfully pursue the implied allocative objectives. The government can still play a proactive role setting up standards and guidelines that ensure interconnection e.g. TELKOM and cellular companies, or cellular companies' interconnection. [The government should ensure that there is universal service, non-discriminatory access and use, and affordable rates.] In some industries the forces of competition are inevitably weak/non-existent. There is then the need for regulatory policy to influence private sector behaviour by establishing an appropriate incentive system to guide/constrain economic decisions. If there is good competition, regulation can be reduced or may even become redundant. The problem though is that of information asymmetry. Decision-makers in firms know more than the regulators. The problem of regulatory policy is one of incentive mechanism design, how to induce the firm to act in accordance with the public interest without being able to observe the firm's behaviour (refer to principal-agency theory above). (Yarrow & Vickers, 1988).

Due to information asymmetry between the regulators and the managers of firms it becomes extremely difficult to establish rules and guidelines. It becomes difficult to measure the financial performance, productivity, prices of calls etc. Public sector rates of return have been substantially below their private sector counterparts. [British Telecom before privatisation overpriced its trunk call and international services and under-priced its local services. Low rates of return can be attributed to some

combination of over investment (goldplating) and internal inefficiency, a phenomena, which resulted from deficiencies in the overall framework of control. (Yarrow & Vickers, 1988). This process has happened to TELKOM where there was rapid transfer to digital technology, poor planning and numbering system etc. All this could be attributed to lack of information on the part of regulators as well as the concentration of information within TELKOM.

Regulation should not be a function of the incumbent firm but an independent regulatory agency. There should be a separation of functions between delivery and policy formulation/regulation. Chowdary writing on India commented that the government should confine itself to establishing communication policies and objectives and regulating the industry. The regulator should:

1. Objectively assess terminal equipment developed by competing firms and approve connection to network.
2. Competing service providers are given fair feasible and undelayed access to and interconnection with the entrenched incumbent monopoly's network and that customers are charged cost-based, non-profiteering, commercial rates.
3. Prices charged to customers are related to cost and quality of services.
4. That the licensed service providers implement the national/service objectives of the government.
5. Production and manufacture of equipment are not monopolised by service providers and that monopoly buyer procures equipment at fair prices without preferring its own manufacturing arm or subsidiary. (Chowdary, 1992).

Once again it should be noted that TELKOM was both the monopolised operator as well as the regulator of the industry, thus putting itself in a conflicting position.

1.6 Implications for the research paper

Looking specifically at TELKOM the three theories have great relevance. Before part privatisation there was information asymmetry between the managers of the parastatal and the principal. Such ownership structure inhibited the growth and development of telecommunications. The belief that deficits would be financed by the Treasury lowered the incentives to cut costs and raise prices. Because there was no threat of

entry (industry insulated through legislation), TELKOM's performance was dismal and grossly inefficient. Regulation was difficult, as there was a high degree of monopolisation. With no competition, regulation policy became self-defeating. Competition can take one of the following forms and these forms were not available under SAPT:

1. Technological change and direct systems competition, which offers customers cheaper and better services: the model of the future is that of patchwork of interconnected networks rather than national integrated network.
2. Interproduct competition
3. Competition for capital and control- possibility of take-over forces companies to run services efficiently and innovatively
4. Competition for inputs
5. Competition on the network where there is common carriage. In the 19th century the railways owned both the tracks and the rolling stock. Common carrier solution will be to separate carriage from services where operators lease excess capacity on first come first served basis.
6. Competition for the market through franchising
7. Yardstick competition where targets are set. (This assumes information symmetry) (Veljanovski, 1991)

(There is a strong relationship between ownership, competition and regulation and these should not be treated in isolation. In the 1980s many governments began the process of privatisation and the bulk of them succeeded. This was a period of the privatisation revolution that was precipitated by technological changes (introduction of the cellular phones, the optic fibre cable, and the robust performance of the dynamic computer industry, all of which operated under market structures). The implications of these theories on the privatisation of the telecommunications sector are that:

1. Ownership of company is of importance to the performance of an entity.
2. Experience from other countries indicate that privatisation can achieve many objectives if applied after considering local conditions.
3. New technological changes necessitate changes in which companies operate and are to be restructured.

4. The privatisation revolution and the globalization process influence the organization of telecommunications.
5. Companies that privatised have performed far much better than non-privatised companies.
6. Regulatory regime is necessary but should be in touch with grassroots operations.
7. We cannot ignore the intricately intertwined global processes e.g. Asian recession has affected the performance of the South African economy.
8. Privatisation without competition is ineffective. Privatisation is a process and not an end itself.

1.7 Short summary of chapters that follow

Chapter one provided an introduction and the theoretical framework for the thesis. The theories used complement each other i.e. principal-agent theory, theory of contestable markets and regulation theory. Ownership matters because it determines the appropriate incentive structure and hence the efficiency of the enterprise. This can only work in a competitive environment with an independent regulatory regime. Chapter two will look at the concept of privatisation. This is intended to give a balanced view of the process in order to appreciate the challenges facing TELKOM. Privatisation methods will be outlined with International experiences being highlighted. Chapter three is concerned with the importance of telecommunications and the factors that limit the benefits accruing from telecommunications provision. There is no doubt that telecommunications is increasingly being seen as a major component of development. Chapter four focuses on the analysis of telecommunications sector of South Africa during apartheid until 1994 in areas of telephone penetration, telephone equipment industry, finances, staffing, etc. From this analysis it was seen that there is skewed distribution of phones on racial lines. However the technology used is among the best in the world. Chapter five is mainly concerned with post apartheid changes and a host of challenges and environment under which TELKOM is expected to function. Despite commercialisation the company did not function efficiently mainly because ownership did not alter, there was no competition and regulation was in the hands of TELKOM. Chapter six looks at the effect of privatisation on different stakeholders such as equipment manufacturers, business and residential consumers, trade unions and TELKOM itself.

These are obviously affected by the privatisation process. Overall these vested interests stand to benefit in the long run. Chapter seven concludes with a framework of policy formulation being provided. Privatisation is inevitable; it will succeed if applied properly in an environment that conforms to new economic thinking where efficiency is the prime objective.

Chapter Two

Privatisation: Context and Rationale

2. Introduction

Chapter one started with the introduction, significance of the study, objectives of study, statement of the problem, key questions to be answered, the methodology and the theoretical framework utilised. There is no doubt that the market structure is of paramount importance to the efficiency of public enterprises. The central theme is that of efficiency which is supported in theory and practice. This paper will look at the broader overview of the telecommunications sector right up to TELKOM's current *modus operandi*. In other words this paper follows a critical path from the global perspective (general) to the firm (particular) level. Privatisation takes place at two levels, one at the economy level and the other at enterprise level. This chapter will look at privatisation, its context and rationale. To contextualise the privatisation process one needs to have a look at the pros and cons of privatisation which will be wrapped up by highlighting the experience from both the developing and developed countries. There have been many changes taking place in the world today in areas of technology and economic policy analysis. (South Africa at the moment is responding to the internationalisation of telecommunications. Privatisation will bring more competition and eventually the need for effective regulation.)

2.1 Origin of Privatisation

Privatisation is the transfer of functions previously performed exclusively by the government usually at zero or below full cost prices, to the private sector at prices that clear the market and reflect the full costs of production." (Kent, 1987:4). The concept is used to describe the measures put in place to create equilibrium between the state and the private sector. The concept started with Britain in 1979 when the Conservative Party came to power under Prime Minister M. Thatcher. The UK was the pioneer of privatisation, setting out a large privatisation program, which could see the whole of state industry and commerce returned to the private sector within a short space of some 10 years. (Letwin, 1988: vii). For another view: "The British government may have been responsible for the start of the populist privatisation push, but it cannot take credit for establishing the word in the English vocabulary. It was an

Americanism created by Professor Peter Drucker. Arguments for privatisation were outlined in his book *The Age of Discontinuity: Guidelines to our Changing Society*, published in 1969." (Clutterbuck, Kernaghan and Snow, 1991:3).

In South Africa, State President P.W. Botha announced in 1988 a plan to privatise many state owned enterprises including TELKOM, ESKOM, IDC, and TRANSNET among others over a five-year period. Privatisation is now seen as a solution for poor performance and stagnation that has characterised many parastatals and the poor economic performance of the economy.

2.2 The Case against privatisation

There can be no simple way to demonstrate how nationalised industries have influenced growth because we cannot know precisely what would have happened had the enterprises been in private hands. But it is clear that efficiency of the large public sector must influence the whole economy. (Wiseman, 1989). Often free markets fail to take account of 'social costs' whereas public corporations can do so. Values established in competitive markets do not take account of costs falling on the community or benefits accruing to the community.

The main fear is that privatisation will lead to slower rate of growth of the telecommunications network as business concentrate on profitable routes. In some countries the concept of "universal public service" has been abandoned, with the granting of licenses to "second networks" in the UK, Sweden, and Japan."(Bolton, 1985:9). In this regard cross subsidies for keeping residential rates low is threatened by deregulation while there are fears that commodification of information will lead to deprivation of certain areas. The state should therefore strive to balance the provision of telecommunications services to uneconomic areas vis-à-vis the business sector, which require advanced services. Such a balancing act is necessary but will be affected by the economic reality facing poorer communities. In South Africa such investments will not yield much return until such time as the poor are economically empowered.

Empowerment is tied to financing of investment deals during privatisation. Empowerment avenues have been criticised because only the black elite benefits in most of the deals. The Deputy President Thabo Mbeki in March 1998 criticised the black elite for forgetting their fellow blacks and slicing cakes only for themselves. Such self-aggrandisement deals are not only peculiar to South Africa. New projects and expansion phases are increasingly being subcontracted to the previously disadvantaged groups. Most of them do not have money. "The net outcome can well be that, while the government disinvests certain of its investments in production units, its investments in enterprises that finance potential investors increase somewhat." (Ramanadhan 1987:207). Helping previously disadvantaged groups can be self-defeating as the government sets aside money for financing such deals and it will not be different from subsidizing inefficient public companies. Britain has achieved a great deal of privatisation but it is the world's financial capital drawing on the savings of its citizens and export earnings of the rest of the world and this option is not available to developing countries.

Empowerment is also tied to ownership especially if the Malaysian scheme is to be adopted. South African industrial ownership has been concentrated in a few hands. Pyramid directorships are not uncommon and tend to invalidate ownership changes if that is the aim of privatisation. Vorchies noted that "in South Africa selling off state assets to institutional buyers with their complex cross-linkages, could be self-defeating, only a handful of individuals will be first time buyers and serves to increase concentration and conglomeration and will not greatly increase competition in either the product or capital market." (Vorchies 1989:13). Thus TELKOM can potentially be turned into a private monopoly as Bell was in the USA. The private sector argues that a market monopoly is acceptable so long it does not receive state support. "A firm with a large market share, or with an industry that is highly concentrated has a market monopoly (Leach, 1989). If it does not receive government protection it is not a monopoly, even with 100% market share." (Vorchies, 1989:27-28). A private monopoly may produce goods and services more cheaply and more profitably than a nationalised industry; it does not produce the quantity of goods and services at a price, which maximises the welfare of consumers. (Veljanovski, 1989). This supports the principal-agent theory.

However, there are dangers that without competition, the monopoly will operate to maximise its profits unless constrained by allocative forces through regulation. On the other hand it can be argued that competition on its own is not enough for efficiency. In South Africa, there is an oligopolistic market in the cellular industry. Although private companies can be said to be efficient, there is no conclusive evidence that they are optimally efficient. Some evidence suggest that private producers have lower costs but this picture is complicated because of differences in their clientele as a result of the "creaming" of client populations by private institutions. Also studies usually do not measure quality thereby making it difficult to judge whether lower costs result from greater efficiency or deteriorating quality. Lower costs can stem from low wages as an example. (Hanke, 1987). Competition will have to be safeguarded by regulation.

There is concern that deregulation will lead to new focus of regulation. In the USA for example members of Congress who are most ardently promoting deregulation and less government are also those who are promoting regulation ... (Koenig in Turock 1996:41). "Deregulation is often a matter not merely of removing regulations that previously existed, but also of constructing new regulations to change the competitive environment"(Letwin, 1988:82) hence the creation of entities like SATRA. Cassese supported this notion saying, "the most difficult task is that of the regulatory state. In the wake of the privatisation operations the state is responsible for re-establishing a balance between the interests of the consumer and those of the producer."(Cassese, 1992:74). This might look self-defeating and the government will still have a large administrative task in the regulation arena.

Often PEs are overstaffed and are likely to shed labour during privatisation. There are fears that job losses will occur after privatisation. Since AT&T's divestiture, AT&T and the regional Bells have reduced their employee base by 200 000 mostly through attrition but industry observers believe deregulation will not create significant job losses."(Read and Youtie, 1996:19). The pre-privatisation process is designed to please buyers through the reduction of the wage bill. However, others believe jobs will be created over time as has happened in the airline industry. "The airline industry in Europe shed jobs but later grew by 70% generating between 300-500 000 jobs in the mid eighties over a five year period." (Read and Youtie, 1996:19).

Finally privatisation has been criticised as doctrinaire policy which ignores evidence that PE is a vital ingredient of modern economies- guaranteeing certain services and promoting the national interest in ways that the private sector cannot or will not. (Clutterbuck et al 1991). The high value telecommunications services in many nations have helped defray the operating costs of postal services, provide jobs and serve as a reminder to a nation of its sovereignty. Telephone monopolies are able to offer similar services to all citizens, whatever their income or geographic location – in line with the concept of public universal service. (ILO, 1991:24). Public sector investment will continue to complement private investment and be largely confined to areas where private initiative has failed to respond or responded slowly to meet demands of the economy. Such investment; will, however, as much as possible, be undertaken in co-operation with the private interests."(Ramanadham, 1987:202). It is somewhat doubtful if the benefits of liberalising the markets whether in the US or the UK and the considerable reductions in costs for users that have come about, would have been possible if the liberalisation had not been preceded by a long period of state monopoly (or a private monopoly regulated by the state), which enable the building of an infrastructure both in terms of telecommunications services as well as the telecommunications equipment sector." (Raghavan, 1997).

2.3 The Case for Privatisation

Monopolies tend to slowdown the expansion of telephone usage. Brock noted that the USA experienced pedestrian growth in telephone service during Bell's monopoly period but greatly outstripped most of European countries after the expiration of the Bell patents in 1876 opened the field to competitive entry." (Steinfeld 1994:6). Bell however was different from TELKOM today in that it was a private monopoly. Although much of public sector is said to be inefficient, much public sector is concentrated in areas of low profitability. Slow decision making due to political bureaucratic requirements, a pre-occupation with processes rather than results, a neglect of markets and clients and a management environment in which reward is only remotely related to performance characterise the public enterprises.

The weaknesses of nationalized industries derive basically from their large size, their statutory monopoly and their susceptibility to misuse for social and political purposes. Parastatals emphasize output maximization as their main goal rather than efficiency.

Conflicting pressures upon management is a source of inefficiency too. "Notwithstanding the successful construction of infrastructure, utility parastatals came to be criticised for inefficiencies due to the arbitrary setting of costs and prices, and because the structure of the regulatory systems gave managers incentives contrary to market-oriented cost-minimising rationality." (Horwitz, 1992).

(Times have changed and there is need for integration now. The most ancient telecommunications regime that lasted from the 1850s until the late 1980s rested on the principle that each independent state had a right to absolute sovereignty over its national systems. However, the universal demand for sovereignty had to be balanced with measures to facilitate cross border transmissions. (Steinfeld 1994). These require interconnection and compatibility and cannot be operated as stand alone units. Integration of the network within each country is also a compelling necessity where MTN, Vodacom, Telkom, Transtel, Eskom etc. link up and provide services at a more cost-effective basis.)

(New global changes have facilitated the adoption of privatisation. "Making a change always risks making a mistake. However, not changing when the environment changes also prevents the same risk and the added risk that you may forfeit the opportunity to decide how to adapt to the change." (Read and Youtie 1996:117). This view is supported by Chowdary who noted that countries which do not follow the privatisation route risk seeing the wealth gap between themselves and other nations grow inexorably wider. (Chowdary, 1992). International institutions with their austerity measures have changed their *modus operandi*. The WB's policies in telecommunications, consistent with its other sectoral programs, are premised on preferences for trade liberalisation, private enterprise, and foreign investment while at the same time interested in Value Added Network Services. (Sussman, 1991:46). Pressure for privatisation has been exerted by external institutions particularly the IMF and WB and bilateral agencies such as USAID. Similarly globalisation of trade has had a significant influence on pressing for privatisation. Telecommunication services have been singled out as a fundamental target for incorporation within the overall GATT framework which attempts to progressively reduce barriers to free trade." (Steinfeld, 1994:12). This has led to opening up of international markets and

international liberalisation of the sector. Many nations, especially US, seek freer trade and the opportunity to make terminal equipment available to what is probably the most lucrative business of the future, telecommunications equipment and information services. (Dordick, 1986). In countries where privatisation is taking place, strong positive signals are sent to local and foreign investors by host countries that they are ready to be competitive international economic players.

The highly innovative and unregulated computer industry exposed inefficiencies of PTT monopolies and hence created pressures for entry restrictions for devices that could connect to the public networks e.g. data communications equipment. The business sector also required efficient services especially VANS. The appearance on the scene of new technologies, coinciding with the development activity, has intensified the pressure for the privatisation of the sections which are commercially the most profitable and which, furthermore, are in need of financial investments that governments were unable or unwilling to make."(ILO Report II 1991:24). Candoy is of the view that "privatisation avoids having the telecommunications system being overtaken by private telecommunications satellite development which was doing well without state monopoly." (Candoy, World Bank 1988:39). This gave the impetus to privatisation on efficiency grounds.

The changes taking place within the South African telecommunications industry are a result of complex interactions among technological, cultural, political, and economic factors. "The current global trend world-wide is to deregulate provision of telecommunications services so that they are not the exclusive preserve of a sole public network operator."(Kaplan, 1990:22). These changes are therefore catching up with TELKOM and any other public enterprise that is averse to competition. Traditional market structures and market regulations have proved to be inadequate in coping with changes in the telecommunications sector."(Kaplan, 1990:11). These changes will continue to occur although national governments have some degree of leverage to influence such processes. However, once a nation is left out it will be difficult to catch up with the rest and this impacts not only the telecommunications sector but the economy as whole.

The globalisation process has resulted in equipment producers becoming competitive and entering global markets. New entrants have come onto the market while in some instances new alliances have been formed cutting across national boundaries. "The effect of rapid technical changes altered traditional barriers to entry creating new classes of valued added services that can be efficiently offered by other providers as long non-discriminatory network access is available and the lowering of costs for certain kinds of infrastructure (e.g. satellite networks) and thus creating new incentives for entry by others." (Steinfeld, 1994:8). This is congruent to the principal-agent and regulation theories.

(Today almost all current equipment production has shifted to digital, microelectronic technology because of greater speed, efficiency and capacity of digital systems, combined with declining costs and increased demand for new information technology (IT) services which depend on digital telecommunications networks. (Hobday, 1990). The growth of these companies has been phenomenal. Ericsson for example is an international supplier and during 1995 and 1996, more than 1000 new jobs had been created within Ericsson every month. (*Webmaster@www.ericsson.se*). All these processes played their part in influencing the South African government's decision to privatise telecommunications.

(Cellular, satellite, paging and other wireless communication services have put pressures on traditional wireline telephone services of TELKOM. These will put financial pressures on TELKOM and will significantly offer competition and efficiency in the process. (see **appendix** for a synopsis of these services that are increasingly playing an important role in South Africa. These have largely operated in a free market environment and have largely succeeded.

Several advantages of privatisation have been proposed and these cannot be specific to a particular country. This section will only deal with a few of them. The first reason is that private ownership provides stronger incentives for performance than public ownership as the principal-agent theory proposes. Through privatisation the government in essence transfers the risk of service provision to the private sector, which is better equipped to deal with the uncertainties of the market place than is the government bureaucracy. Privatisation will involve some failures, there is no reason

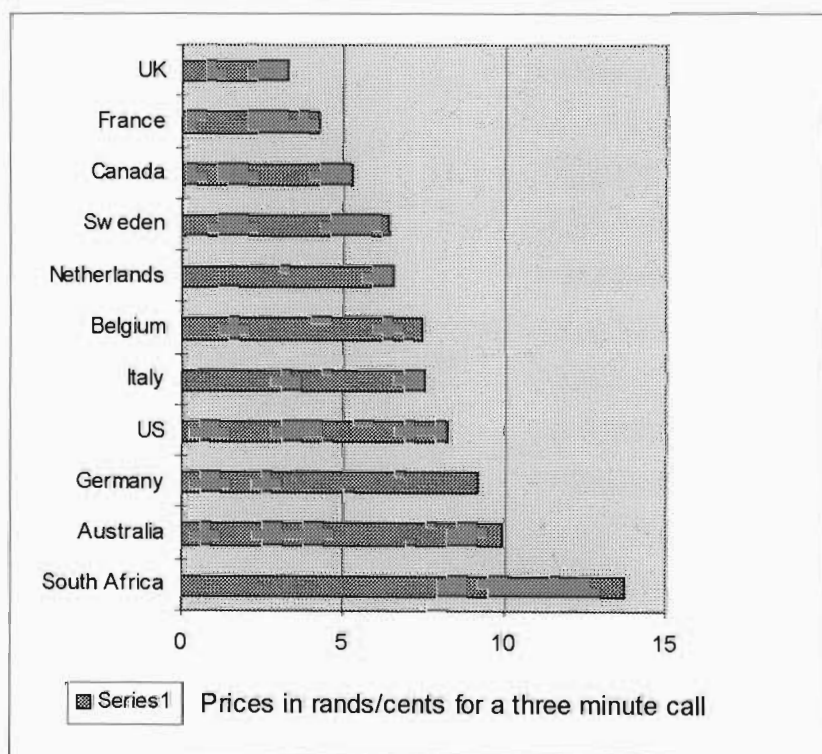
to mourn these failures; this is the way the private sector advances. (Kent, 1987). A mere change of ownership does not mean anything especially in monopolised markets like South Africa. Bell in the USA is a case in point. The company was not efficient and yet it was a private monopoly. *Ceteris paribus*, the privatised entity will bring revenue to the government, unlike the public utilities, which paid no taxes to the government. Sales of shares in UK state enterprises for example yielded over six billion pounds to the exchequer between 1979 and 1987. The South African government received a portion of the privatisation proceeds from the sale of 30% stake of TELKOM. "The sale of a public enterprise is only a gain to the treasury if the net price is greater than the net present value of the revenue that would have been earned by the assets in the absence of privatisation." (Horwitz, 1992).

[The need to improve economic performance and redistribute wealth has been advanced for privatisation.] Increasing popular participation in the management of the economy has been used in several countries like Malaysia. "In Malaysia, it was part of a national program to increase the ownership share by ethnic Malays in the national economy." (Steinfeld, 1994: 279). However the allocation of quotas is not in the spirit of free trade being expounded by most governments today. "If governments extend special privileges to state owned enterprise purchasers (protection, against external competition, tax holidays, subsidies, special access to funds or inputs etc.) there will not be any competition to talk about.." (Berg et al 1987:9). This is one of the contradictions of the privatisation process. Supporters in Europe have claimed that privatisation fosters the growth of the stock exchange. (Clutterbuck et. al 1991). TELKOM intends to list on the JSE in the near future.]

[The other benefit accrues to the consumer who is likely to be most satisfied when given the chance to choose from different suppliers. Choice unlocks the innovative genius of the entrepreneur who will provide new service delivery systems and technologies.] (Kent, 1987:10). Evans substantiated this argument by noting that the clothing manufacturers could realise economies of scale if they made clothing in only one size, shape and colour. Retail clothing stores could reduce inventories if they stocked uniform clothing. They do not do so because consumers desire, and are willing to pay for variety. (Evans 1983). Alternative suppliers should also mean

consumers will benefit from structured tariffs where basic services are reduced in price. It is estimated that international call rates will decline by 80% globally over the next 10 years. Long distance telephone was once seen as a luxury and created a false impression that distance equals cost. From the table below it is clear that international calls originating in South Africa are expensive calls when compared with those originating from other countries. This comparison should however be contextualised for it is placing South Africa in the same category with advanced countries.

Telephone Rates- South Africa vs. World



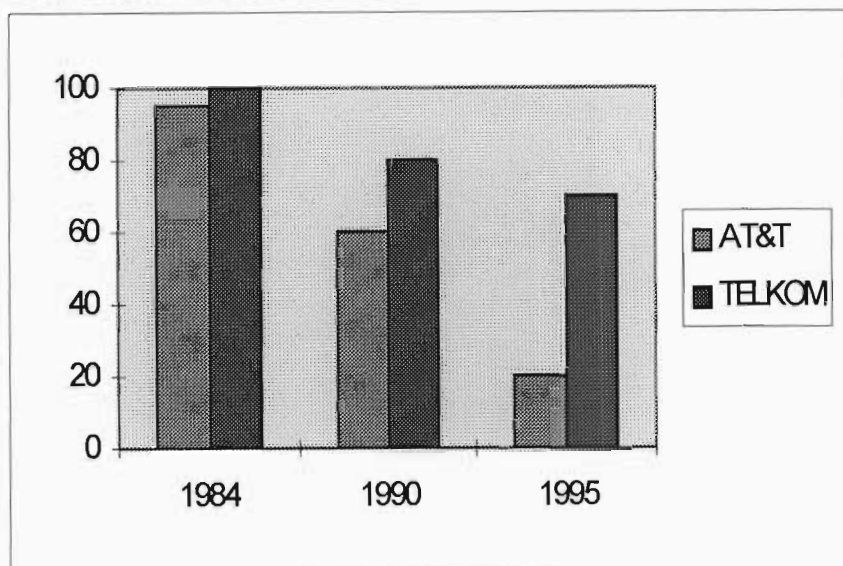
(Source: Sunday Times Business Times 29/09/96)

In the UK competition and tough regulations have reduced the cost of international calls by 35.5% and local long distance calls by 21% in 1997. (*Daily News*, 7/5/98). It is therefore envisaged that privatisation will bring lower charges. This argument should be contextualized too for the rate of number of calls per line and other economic factors influence the tariff structures.

Cross-subsidisation under a monopoly regime has meant that telephone services have been provided to uneconomic areas at the expense of those who could afford. "Local calls increased by 35% between 1985 and 1989 to offset cross-subsidisation. Compared to other telephone systems around the globe, TELKOM rates have been and are still considered to be high. AT&T rates have gone down since privatisation.

Real prices to consumers of telecommunications services provided by the US based private carrier AT&T, in a competitive environment is compared to those of TELKOM, a monopoly service provider. However South Africa might not generate the equivalent number of long distance calls if compared to USA.

Long Distance Call Comparison



Long Distance: 1984 - 1995 AT&T reduced by 75%

1984 - 1995 TELKOM reduced by 15%

(Source: South Africa Foundation, Feb. 1996:72)

From the analysis above, it is clear that privatisation has problems and advantages. Going private is the way to go given the demands placed by an integrated world economy. Parastatals have engendered many unwanted outcomes, including sheltered inefficiency, the suppression of innovation and misallocation of resources. (Horwitz, 1992). Because of the perceived benefits of degovernmentalisation, many governments have been actively privatising using a number of processes as outlined below.

2.4 Privatisation Methods

The building blocks for privatisation are numerous, the main ones being liberalisation, devolution, consolidation, deregulation, corporatization, transnationalization and integration. Most privatisation programs use a combination of these blocks, which can be subdivided into various processes. They can also be partial (which is the norm in most European countries).

Here is a model for how privatisation typically proceeds:

- 1) Expert assistance is the first step a government or parastatal should seek prior to privatisation. This requires political commitment as a basic ingredient. It is also pertinent that all stakeholders are involved for symmetrical information produces rationale decisions. Governments, which attempt to go on it alone, are likely to face problems since they do not have experience. Clear strategies and an action plan will have to be designed and produced.
- 2) The next step would be to set up an administrative unit for co-ordination. This unit will ensure that policies and activities are properly implemented and rules instituted. Cook and others noted that regulatory framework will have to be established to control the behaviour of the privatised enterprises. (Cook and Kirkpatrick, 1988). The regulatory structure should function in a symmetrical and competitive environment.
- 3) Next will be to commercialise operations and identify non-core operations for contracting out and leasing. Coin collection and maintenance of public call boxes for example can be contracted out. D. Zaaiman, the TELKOM Group Executive in charge of non core businesses, said other options include management and employee buy-outs, the creation of joint ventures and turning entities into subsidiaries or partially owned businesses. (*The Mercury Business Report* 23/7/98).
- 4) Sale of shares to small investors is one way to privatise. Privatisation consolidates the social and political grip of capitalism by building up popular capitalism and making the economy more competitive. Malaysia has done so by reserving special quotas for ethnic Malays. At the same time ownership in the private sector should be enlarged so that the share scheme is not grabbed by big companies such as De Beers, Anglo-American, Sanlam etc. (Letwin 1988:26).
- 5) Sale of public company to the private sector is one method but complete sale is very rare. Partial selling is normally done so that the government tests the waters before full privatisation. Normally certain portions are detached from the PE. This gives the government the opportunity to control the functions previously a preserve of its exclusivity. If the entire firm cannot be sold, it is possible that parts of the firm could be spun off into private enterprises.

The following list summarises the main privatisation techniques that can be used. The choice depends largely on objectives and targets set out as well as social, political and economic influences.

- ☎ Selling the whole by public share issue
- ☎ Test of market
- ☎ Sell portion
- ☎ Sell to workforce or management
- ☎ Contracting out/leasing
- ☎ Diluting the public sector in expansion and maintenance (BOOT/BOT programs)
- ☎ Buy out existing interest group
- ☎ Charge for service
- ☎ Break-up into compartments (Pirie, 140).

2.5 International Privatisation Highlights

A number of countries have embarked on the privatisation route varying from 'developed' to 'developing' countries and these include Britain, Japan, USA, Malaysia, Mexico to name just a few. In all these cases the benefits have outweighed disadvantages although the degree of benefits to specific sectors or programs varied from one country to the other. This section will however not go into greater details since the cases under review used different methods to privatise their telecommunications sector.

(I) Asia: Malaysia

Malaysia's privatisation of National Telecommunications Company (JTM) into Syarikat Telekom Malaysia (STM) was the first in the developing world. Various instruments were used including sale of shares, contracting out, leasing etc. The company was formally privatised on January 1 1987. However unlike TELKOM's recent moves towards privatisation, "JTM's first move to privatisation was in 1972, when, plagued by vandalism of its coin-collecting call boxes (CCBs), it turned over their installation, collection and maintenance to Uniphone Sdn. Bhd." (Lent in Sussman 176). This company was a monopoly. The idea was to shed the coin collection function to the private sector, which is believed to be 'efficient' (principal-agent theory).

There was no dismissal of staff despite an estimated 6 000 surplus staff. (ILO Rpt 41). Unions and employees normally object to privatisation on this premise. However this was the result of government policy on retrenchments: no retrenchments in the first five years. "What effects computerisation and privatisation will have on employment depend on a balancing act, the outcome of a race between the reduction in manpower linked to increased productivity and the increase in markets resulting from a higher degree of competitiveness."(Nora and Minc, 1980:33).

The objectives of privatisation were clearly set out with efficiency and empowerment as top priority. Kenny (1989) has no doubt about who benefited from the first hasty stage of privatisation in Malaysia. "Having created an elite within the telecommunications industry, first by limiting the field of players to Bumiputeras (Bumiputeras are ethnic Malays in Malaysia) and then separating the greater from the lesser through the turnkey contracts, the government was faced with increasing pressures to accelerate the flow of resources to the elite. Privatisation created a legitimised mechanism for dividing the spoils between the key players. (Lent, 1991).

There were a number of weaknesses that were noted in the Malaysian experience. Ong (1989) noted that the transition merely involved the transfer of a government monopoly to STM, another monopoly owned by the government. There was no private infusion of capital into STM and STM, is, for all intents and purposes, another PE... Secondly, STM still has a monopoly over the public switched telecommunication network. The notion of an infrastructure monopoly in telecommunications still has substantial political support almost everywhere. Claims for actual reduction of monopoly thus tends to be exaggerated. (Steinfeld, 1994). The initial privatisation was not congruent with the three theories outlined in chapter one above. "In other countries, alternative network operators have used railway trackside facilities and microwave, terrestrial and satellite, in preference to negotiating interconnect or resale facilities with the dominant company and governments..." (Bolton, 1985: 25). This should be comparable to Eskom, Transtel and SABC facilities that can be tapped by TELKOM. Given the absence of competition in network services, it is unclear to what extent STM will be compelled to improve the

efficiency of its delivery system (theory of contestable markets). Thirdly STM has yet to resolve issues related to the trade-offs between its profit motive and social responsibility. (Lent, 1991). Such serious issues still face South Africa's TELKOM today and as such it has a lot to learn from Malaysia's limited success.

(II) Europe: UK, France

The PTO of Britain was privatised in 1984 to become British Telecom (BT). British Telekom was given a 25 year licence to operate. Hereunder is a chronology of activities showing the successes of a privatised BT. In 1985 BT faced its first competition with the launch of Cable and Wireless Company. In 1991 the government sold 48% of its stake in BT. In 1992 BT won a licence from the German government to offer satellite services there. In 1993 BT won a multi-million pound 5 year contract to provide a communications network to improve Europe's air traffic management. In 1994 the BT formed an alliance with Danish, Finnish and Norwegian firms as part of its push into Scandinavia. In 1996 BT bought a 25% stake in Clear Communications, New Zealand's second biggest telecommunications company. (*Reuters Information Service*, 3/11/96). Contracts such as these never happened before privatisation. Since BT's privatisation, the UK has netted twenty billion pounds in tax receipts. Over the same period, charges to customers have fallen by 46% in real terms and 62% in terms for long distance calls. (ILO, 1984). The company has achieved a yearly turnover of \$22 billion and a \$4 billion annual pre-tax profit since privatisation. Its success is also measured by listings on the London, Tokyo, Toronto and New York Stock markets. It also vindicates the view that private provision is efficient and benefits the government through taxes.

The number of small shareholders rose from two million to nine million. However only a few of these new shareholding are more than one time purchasers. "The problem though is that the numbers tend to rise at a major flotation and gradually decline as people cash in their shares." (Clutterbuck, 1991). The cashing in of shares is one of the main problems with portfolio investment. The government itself now holds a mere one percent of BT shares. (Principal – agent theory).

There is no doubt that the privatisation led to a reduction of employees (from 250 000 to 137 000) but as Peter Archer noted 80% of the employees that left BT are still

working in telecommunications and related industries, which have expanded due to the increasingly competitive environment. (*The Mercury Business Report*, 4/7/96). BT can thus be recorded as one of the privatisation success stories of the last decade.

France is an interesting example of successful privatisation from the point of view of state-worker participation. France succeeded in the privatisation of its telecommunications sector because of open dialogue that was practised in the 1980s. Labour relation issues were discussed, and political determination at the highest level was made. Almost 8000 meetings took place prior to privatisation while continuous training was provided and flexibility in the planning and execution of the program emphasised. (Landreau, _). It is therefore essential that the planning and implementation processes be done in consultation with all stakeholders. Overall restructuring should be transparent, otherwise the process will be derailed as has happened in Columbia, Turkey, Greece and Uruguay.

(III) South America: Chile, Mexico

In Chile, telephone lines increased after privatisation (1992) within four years. Labour efficiency doubled, investment surged and strong competition developed between the two main privatised service providers. The techniques used included public auctions and sale of shares to small investors to avoid concentration of capital in a few hands; discounts to those settling their debts on time; sale of shares to workers during the third phase of privatisation with pension funds used as an option to invest; and sale of shares to pension funds. The privatisation process also included sale of shares to large investors, domestic and foreign. Helen Nankani of the World Bank noted that one of the lessons from the Chilean experience is that if privatisation is to occur in a period in which the government is undertaking significant stabilisation on liberalisation programs, even more emphasis needs to be placed on adopting the right policy sequence, that is, deregulation, stabilisation, liberalisation, and privatisation otherwise reprivatisation is likely to be high. (Nankani, 1988).

In Mexico the sale of Telefonos de Mexico in 1990 was the biggest and most 'successful' privatisation of a telecommunications company in Latin America. Telmex had plans to increase telephone lines by 12% a year for the first three years.

The bulk of the population lacked access to telephones during the era of state owned telephone companies. There were six lines per 100 people in Mexico before privatisation. Access to phones improved markedly after privatisation, particularly among the poor. (SAF Feb. 1996:76). 'The network in Mexico was boosted from 5.3 million to 8.7 million lines between 1990 and 1994.' (*Sunday Times Business Times*, 29/9/96). All these cases highlight the fact that privatisation brings better options and growth within the telecommunications sector. It should be noted again that there is no single formula for privatisation but enough experience has been learnt to offer a framework that will work elsewhere. Third World cases are however not well documented unlike cases from say the developed world.

In Africa, in the past two years, five countries have partially privatised their telecommunications operators, two have introduced a second operator in the fixed line market, 15 private cellular companies have started up, while a dozen international providers have sprung up as Africa seeks to join the international economy. (*Sunday Times Business Times*, 3/5/98). All the above cases have shown fairly well that privatised companies operate better than state monopolies.

Conclusion

The concept of privatisation originated in the West and has been spreading rapidly to all corners of the world. It has been promoted as a solution to improve efficiency of state enterprises that have been operating inefficiently. Privatisation has its pros and cons but the plusses outweigh the disadvantages. The role of parastatals should however be recognised since they played a big role in shaping present economies. A balance should be struck between public and private enterprises. Careful procedural methods should be selected taking into consideration all local and foreign influences if privatisation is to succeed. Many western countries have succeeded with privatisation. Developing countries experiences are not properly documented but their processes bear an influence on the way South Africa will manage its privatisation process. It will be necessary to look at the importance of telecommunications to appreciate the context in which TELKOM operates.

Chapter Three

Telecommunications and Development

3. Introduction

The previous chapter highlighted the importance and successes of privatisation through a few international cases. The importance accorded telecommunications will determine the way it will be treated by governments and hence its promotion through privatisation. This chapter attempts to show the importance of telecommunications showing its extend in reaching all corners of society. Limitations of telecommunications will also be highlighted. This chapter together with chapter two sets out the context upon which TELKOM functions in this increasingly competitive world. Telecommunications is of paramount importance and has experienced dramatic changes since the discovery of the telegraph. Today there are a plethora of services, some of which cannot be provided by state corporations but under competitive regimes with proper functioning regulatory framework. There is strong relationship between changes taking place in technology and globalization/privatisation.

3.1 Importance of Telecommunications in development

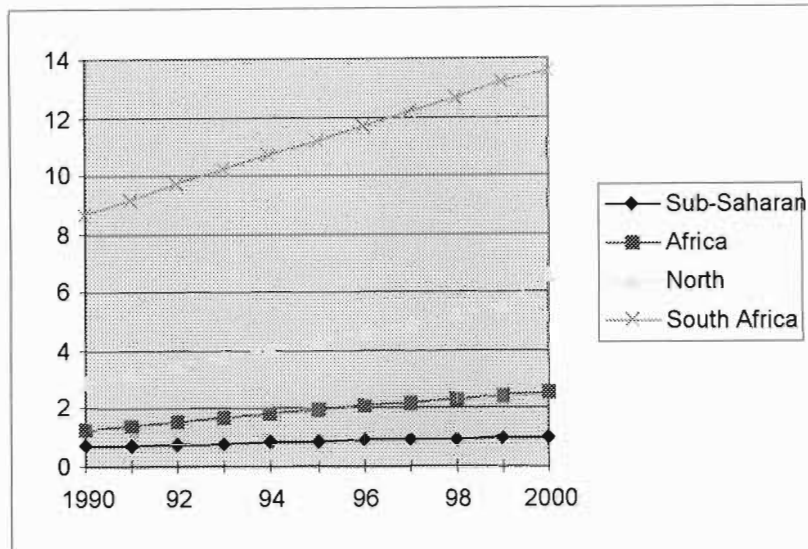
It is no secret that telecommunications is increasingly being recognised the world over as important for development though benefits are difficult to prove. "Economic planners and specially those with a passion for telecommunications technology have sought to quantify the economic benefits of investments in this technology. In the main, their searches have not borne much fruit; as an industry, telecommunications is of growing economic importance but attempts to measure the benefits derived from expenditures on the technology have been most difficult and, at best, only sophisticated guesswork." (Dordick, 1986:240)

There is a debate as to whether telecommunications contributes to development or vice versa. Telecommunication influences development over time and is usually noticeable with high economic activity and high telephone investment. There is close correlation between a country's wealth and its investment in telecommunications. The jipp curve, measures the relationship between telecommunications and economic development (GDP versus teledensity). This correlation can be seen in countries,

which have massive telecommunications infrastructure e.g. the USA, UK, Japan etc. In these countries' economies, industrial growth has been aided by telecommunications. The Executive Director of the Center for Development of Telematic (C-Dot) in India, KN Gupta, said improved telecommunications in a country increased the GDP of that country. Studies showed that for every dollar invested in telecommunications six dollars is added to the GDP. (*Daily News*, 7/5/98). The ILO contends that rapid growth in telecommunication services has resulted in a spectacular rise in peripheral industries, in Western Europe in the 70s and 80s boosted by the extension of the network, equipment and related services. (ILO Report II 1991). A study conducted in France in 1979 established that between 1955 and 1975, approximately 400 MNCs established in European countries other than France (principally in London and Brussels) because of poor telecommunications in the Paris area." (Hudson, 1984). In Africa, South Africa telephone penetration rate is higher than the rest of Africa. Its economic indicators correlate to the number of telephones in the country. There is no doubt then that telecommunications infrastructure is related to investment.

The growth of the telephone market is testimony of its importance. In 1945 there were 41 million phones worldwide. By 1982 there were 494 million, an increase of 1200%. (Hudson, 1984). Looking closely at Africa, the figure below shows a graphical telephone distribution pattern as analysed by the ITU. The comparison of South Africa versus the rest of the world does not show that there is uneven provision of telecommunications within South Africa.

Main Telephone Lines in Africa



(Source: *Sunday Times Business Times*, 3/5/98).

In the USA many businesses use telecommunications to enhance their competitive edge over other rivals. Productivity of industry has been improved as a result of telecommunications investments. In Singapore, the use of Tradenet communication saves Singapore's traders about \$1 billion a year through reduced delays and the need for fewer personnel. (Read and Youtie, 1996:28). Modern telecommunications is used in the development of information industries, computer and communication industries while MNC's operators require world-wide, round the clock communications in the form of global networks for banks, air traffic control, travel reservation, news and trade via ISDN network. (Dordick; 1986) These activities apply to South African urban areas but cannot be said with respect to rural areas.

Telecommunications is serving a facilitative role through the provision of employment and basic infrastructure pillars upon which industries rest. The potential contribution of telecommunications to economic growth is however more complex. "An historical analogy, that of railroads and their impact on economic growth, helps illuminate the role telecommunications may play. In the 19th –20th century to take advantage of economies of scale, corporations needed way to link geographically dispersed demand. The railroads provided the link. Railroads, it should be emphasised, did not create demand, but merely enabled innovations to become economically viable by linking markets and thus permitted firms to realise economies of scale. Telecommunications serves a similar function in today's

economy."(Williams et. al., 1989:7). Telecommunications has enabled the growth of peripheral industries e.g. electronics sub-sector incorporating the computer industry.)

International development organisations have not emphasised the development of telecommunications infrastructure compared to roads and energy. Very limited resources in development packages that were given to developing countries were devoted to this sector. Saunders states two primary reasons for World Bank involvement in the telecommunications sector now: to influence or refocus investment policies so that overall government objectives for development can be more efficiently pursued; and to promote institution building and policy improvements within the telecommunications sector and to help implement more rational long- term planning" (Hudson, 1984:13).

An interesting aspect of telecommunications has been the decline in costs over time. This has been attributed mainly to rapid technological advances spanning the whole electronics sub-sector. "Of the three basic infrastructures, energy, transportation and communications, in modern times, what has changed is not that energy and transportation resources are no longer important but that their importance relative to communication resources has shifted. Energy and transportation continue to experience increasing costs, while communications is experiencing decreasing costs." (Read and Youtie, 1996:104). This has given the impetus to large investments and renewed interest in telecommunications. Modern telecommunications is the nervous system of emerging industrial and services structures. It is the facilitator and one of the key building blocks for the internationalization of economies." (Steinfeld et. al., 1994: 123). Individuals who do not use telecommunications may benefit if socially or economically beneficial activities are enhanced through the use of telecommunication. Telecommunications may contribute to increased efficiency and services.)

Telecommunications leads to increased quality of life of individuals and speed up decision making processes as people save on transport costs and time. It allows people to live in pleasant places distant from their work places promoting the growth of tourism and the transport sector. South African townships have been situated far away from cities. This has created a taxi industry with more than 100 000 taxis. As a means

of access to information, telecommunication can allow quick and frequent access, by managers, and other users in a remote area, to the pools of information and talented advisers found in large population centers. (Hudson, 1984). In rural areas, people get timely access to relevant information such as weather reports and prices and availability of necessary inputs (seeds, fertilizers, tools, credit, etc.) ordering supplies and marketing of produce making rural agricultural enterprise more efficient."(Hudson, 1984:24). Presently in South Africa, mainly white farmers benefit since they have telephones, farms and markets for their produce. Such facilities cannot be applied to rural South Africa because black areas lack services; they are not ready for such services and telephone services will be used mainly for consumption purposes.)

Telecommunications may help promote social changes by promoting mobility for the population as Ball (1968) argued. "As family and friends are scattered geographically by mobility and change, ready access by telephone is made to compensate for the loss of shared environs while facilitating the dispersion." (Hudson, 1984:29). Depending on the approach one takes and the policies of the government, telecommunications allows the dispersal of the country's population. Williams noted that telephones allow businesses/companies to become footloose..." (Williams 1991). Telecommunications may increase the attractiveness of rural areas, with their lower land values and higher quality of living factors, as places to do business. Yet there is much concern that rural areas will become backwaters of the informal economy as competition is concentrated in urban areas, where the high volume of traffic makes telecommunications investment more profitable. Much of this is applicable in developed countries since South African rural terrain is not suitable for company relocation and human habitation.

3.2 Factors limiting benefits of telecommunications

Regional dispersion of people and economic activity affect the cost of provision of an integrated network. There are calls for the government to disengage itself from subsidizing the provision of telecommunication services, which can be provided at competitive level by the private sector. Cross-subsidisation of services is under threat, as businesses no longer want to subsidise domestic consumers.

Income inequalities present major hurdles for telecommunications provision. A mere push for a blanket telecommunications provision to uneconomic areas can be wasteful. It could be profitable if the business community were to subsidise household telecommunications provided such investment brings in returns to the sector and the economy as a whole. Rural areas present numerous problems but there are benefits to be derived from telecommunications there. Overall investments in rural telecommunications benefit the economy as a whole as seen in the table below.

Telecommunications and Rural Development

Effects of enhanced Telecommunications on Rural Development: Obstacles, Benefits and Drawbacks

Rural Development Obstacle	Benefits from Telecommunications	Drawbacks of Telecommunications
Geographic Isolation	<ul style="list-style-type: none"> *Reduces time for information transfer *May reduce need for travel 	<ul style="list-style-type: none"> *Lack of concentration of users makes advanced telecommunication infrastructure an investment risk
Declining job opportunities	<ul style="list-style-type: none"> *Many decentralise back-office jobs to rural areas *Opens urban markets to rural business *Increases business efficiency 	<ul style="list-style-type: none"> *Jobs that do decentralise tend to be low wage *Opens rural markets to urban business *Allows firms to bypass rural areas in developing countries
Lack of Human Capital	Provides access to education and training at lower costs	<ul style="list-style-type: none"> *May not reach those most in need *May widen gap between information rich and poor *Quality of remote learning may be less *Must overcome lack of familiarity and hesitancy to adopt
Lack of Services	<ul style="list-style-type: none"> *Provides access to education *Provides access to medical services outside of the area 	<ul style="list-style-type: none"> *May be expensive to provide *Must overcome lack of familiarity and hesitancy to adopt.
Lack of urban amenities	Provides access to electronic media amenities	Does not address lack of non-electronic amenities

(Source: Read and Youtie, 1996:14)

Some rural areas will still have to use the old type copper wire cables for transmission rather than optic fibres. They can also do with manual or at least electro-magnetic exchanges as an interim measure to alleviate the shortage of telephones. This process would be cost effective as telephone usage in rural areas differs from that in urban areas. However the use of cheap quality equipment in rural areas should be balanced with the need to keep room for future expansion and the use of advanced services in the near future.)

Choosing the best system to use for rural networks affected the rapidity with which telecommunications will be provided in the rural areas. Satellite services cannot be efficiently used in rural areas. Even Canada, the first to use satellite services in rural areas does not use such facilities on thin routes. The other option that can be explored is that of DECT system which uses radio signals to transmit and receive messages. This system can be used in high density and rural areas but is prone to problems. (See appendix A for details).

In South Africa, existing infrastructure such as roads and power supply are inadequate and poorly provided especially in poorer communities. There are no roads to access such areas, no electricity to support telecommunications and no telephone exchanges to support telephone services. Telecommunications investment policies may not correspond to national policies weighted toward rural development. From a theoretical perspective the marginal utility of an individual telephone in rural and low-income urban areas is supposed to be much higher than that in developed areas. Because of distance and transport costs rural areas should use phones more translating into more income for the telephone company. (Williams and Hobson, 1995). The problem is that, in South Africa more than 60% of the population lives below poverty line- ownership of phones at present cost is not feasible. However there is a portion of that population that had been excluded that can afford. The rate of investment return for TELKOM will be affected as the majority of black consumers lack the resources to utilise the phone. It is therefore crucial that a telecommunications strategy be accompanied by economic/wealth empowerment if this sector is to expand and generate income.]

Conclusion

The basic function of traditional telecommunications is to overcome distance. There is no doubt that telecommunications plays a key role in the development of any country in this regard. Telecommunications benefits cut across sectors and have become transnational in nature. Telecommunications improves efficiency, expands market area of business, provides significant cost savings over alternative information delivery systems, enhances the socioeconomic development of isolated regions of nations, reduces uncertainty, improves government delivery of services, facilitates contact and coordination by government. This, in turn, may allow reduced costs of communication, time savings or compression, greater message frequency, greater selectivity, and in general, increased connectivity in that more individuals, groups or organizations can be in touch with one another. Although these benefits prevail, influences such as distance, terrain financial resources and the capacity of people to use telephone services affect the speed with which telecommunications is provided. This becomes the subject of the next chapter where the country profile for telecommunications in South Africa is analyzed. The development of telecommunications in South Africa has been skewed and the new government is facing major challenges to transform the sector. Given this scenario it would be proper to see how South Africa fares with its telecommunications structure. It would be necessary therefore to give first an account of telecommunications operations during the period of apartheid and later during the democratic era.)

The international literature in general suggests that telecommunications is crucial for development but this ^{may not} ~~cannot~~ be true for South Africa. Telecommunications provision to poorer communities of South Africa may not be viable because the communities are not yet empowered. The communities do not have enough resources to spend on telecommunications as they have other pressing priorities such as housing, water and sanitation, power etc. Telecommunications in such situations will not be used for productive purposes. This view is supported by J.L. Youtie who noted that telecommunications services provide an important foundation for economic competitiveness but providing advanced telecommunications capabilities may not necessarily spur business development especially if communities have not otherwise prepared for economic growth. (jan.youtie@edi.gatech.edu -1997. Poor communities of South Africa are not ready for such services at least for now.)

Chapter Four

Telecommunications Under Apartheid

4. Introduction

The previous chapter showed the importance of telecommunications within the development context. There is overwhelming evidence to show that telecommunications plays a critical role in development. South Africa still lags behind in some parts while it has shown great achievements in other areas. It will be the subject of chapter four to scan the telecommunications sector of South Africa from the late seventies up to 1991 and from 1991 up to 1994. Telecommunications has experienced rapid growth especially in the white and business areas. Rural and black areas remained largely poorly served. The government has been operating SAPT through the Ministry of Broadcasting and Telecommunications until 1991. In 1991, postal and telecommunications services were separated to form two government companies. However looking back at the three theories outlined in chapter one, no meaningful impact was achieved since there was no ownership change to influence the incentive structure, no competition was allowed and no effective regulation was instituted. Around 1992 the waiting list for example stood at 125 448, which is an indicator of low efficiency level.

4.1 Country Profile

TELKOM has grown to become the 25th largest telecommunications company in the world. This increase should be contextualized considering the fact that previously there was a government and a public telephone utility that discriminated against certain sections of the community. This led to uneven development and the increase in the number of phones skewed in the favour of whites. However some of the factors for poor development of telecommunications are purely economic while societal obstacles like land tenure system prevented the expansion of the network to mostly black areas. It is noted that "geographic conditions such as the type of terrain and population density also influence costs of providing infrastructure and the viability of different services...." (Steinfeld, 1994:15).

4.2 Situation under Apartheid up to 1994

(a) Penetration Rate:

Telephone distribution and penetration in South Africa reflected a close correlation to the politics of the last four decades with clear racial differences as the table below shows. It is clear that white areas had 102.5 phones per 100 households compared to 38.5 per 100 households in urban areas for blacks.

Residential Phones vs. Racial Groups

DISTRIBUTION OF RESIDENTIAL TELEPHONES IN METROPOLITAN AND RURAL AREAS COMBINED BY RACIAL GROUP, 1986		
	Total Residential phones	Phones per 100 households
White	65.7%	102.5*
Coloured	10.4%	53.2
Indian	5.8%	71.8
Black	18.1%	38.5 (urban) 13.8 (rural)
Total	100%	

(Source: Kaplan, 1990).

The compartmentalisation of South Africa into separate development entities meant that subsidies from the state were extended to whites while other races were excluded. After the white areas became saturated, services were extended to Indian and Coloured areas. Whites got telephone services even in uneconomic areas. Black rural areas were isolated from economic hubs, covered difficult terrain and the majority of them had no resources to enable them to engage actively in economic activities. The revenue issue made it uneconomic to establish telecommunications in disadvantaged communities. The scenario in South African townships, most of formerly homeland areas, rural areas and all informal settlements, the telecommunications network ranged from the rudimentary to the non-existent and from the inadequate to the inefficient. In places like the Transkei, private telephones were limited and where they existed were based on a party-line system." (Stavrou 1992). In urban areas, if incomes were increased for blacks this could have stimulated black demand for telephones. Unemployment was a thorny issue especially in rural areas with no meaningful and sustainable jobs being provided apart from small piece meal public works programs. Extensions to black areas were due to the need for more revenue to expand and service TELKOM's investment commitments. In general, outstanding features of telephone distribution revealed inequalities in racial grouping between metropolitan

and rural areas and between white South Africa and the then TBVC and self governing territories"(Kaplan 1990:51) as the table below shows.

Phone Distribution by race

Distribution of Residential Telephones in the Metropolitan Areas by Race, 1987		
	No. of Phones (millions)	Percentage
White	1,63	72
Coloured	0,27	12
Indian	0,16	7
Black	0,20	9
Total	2,26	100

(Source: Kaplan, 1990).

Racial overtones rather than economic considerations took precedence over economic influences in telephone distribution during the time of apartheid.

(b) Technology and Digitalization

In the 1980s, despite the decline in economic performance of South Africa, a lot of investments in telecommunications took place. Massive injection of technology and the digitalisation of the network resulted in the telecommunications market being saturated in the 70s for whites. Expansion of the digital or electromagnetic telecommunication started in 1978-9. The investment did not relate to cost structures and led to excess capacity of the network. The network ran at 80% of capacity translating into 800 000 lines representing a loss of about R480 million around 1990. A regime with more excess capacity will underestimate the shift in the cost function by the total productivity index. (Foreman-Peck, 1991). The 1991 report of TELKOM said it paid 250% more for equipment and consequently an investment worth R1.2 billion in switching equipment was not being utilized. Beltel (videotext service) was operating at a loss in 1992 with 30000 subscribers. This created pressure for the creation of VANS where TELKOM faced potential competition. "The use of a private data communication network for the purpose of transmitting data and text for third parties was prohibited." (Song 1994). Two offices could not interconnect directly without using TELKOM lines.

More than 90% of the network was digitised by 1994. ("First digital telephone exchange operated in 1981. By 1988, 159 digital electronic exchanges and 218 remote controlled digital concentrators had been installed." (Kaplan, 1990:57). Coupled with digitalization, transmission was improved and expanded through the introduction of optic fibres. Optic fibres and compact digital systems have far greater efficiencies over older systems such as the copper wire. "Traditional telecommunications has utilized low frequency carriers. New technology meant quality and effectiveness were boosted." (Kaplan, 1990:16). However the service quality remained relatively poor.)

(c) Equipment market

SAPT was controlled by the government and submitted annual reports on its budgets, accounts and proposed capital expenditure to the Auditor general who then wrote a report on the SAPT. The parastatal had to compete for funds with other government capital projects therefore it suffered from lack of government funds. The Tender Board authorized equipment purchase, which meant that SAPT had no full control of its operations. "SAPT accounted for 70% of all telecommunications equipment purchases on domestic market and this equipment was not made on the open market." (Kaplan 1990:85). The market was controlled by a few firms as shown below.

SA Telequip market share, 1985

Firm	Telecommunications Sales	Firm Sales	Local Industry +
STC (Telecommunication and Business Communications Division)	283	71%	24.8%
Teltech	115	100%	10.1%
Siemens	237	36%	20.7%
Plessey	57	55%	5.0%
TM	150	100%	13.1%
TOTAL	842		73.7%

+Total local market for telecommunications in 1985 was R1.1422 billion

(Source: Kaplan, 1990:80)

A system of agreements existed between TELKOM and telephone equipment companies. Manufacture and supply agreements were initially for 10 years. The companies initially wanted 15-year agreements. These agreements were intended to foster product development but they inhibited them. The agreements excluded new smaller companies that might have been highly innovative. (Horwitz, 1994). The telecommunications industry was designed to promote self-sufficiency, job creation, industrial development, balance of payments and trade support and provide the engine for economic growth (Hainebach, 1995). Williamson noted that long-term arrangements are susceptible to haggling in these kinds of markets, i.e. markets where there are a small number of buyers and sellers and in which the product traded is "technically complex" and "periodic redesign and/or columns are made in response to changing environmental conditions. (Williamson in Evans, 1983)

Its export capacity was dismal, as there was no competition (competition theory vs efficiency). Equipment manufacturers exported a mere 1.5% of their products in 1985. The telecommunications market is not different from the broader industrial organization. "Many firms in South Africa are exporting (often at a loss) what they are unable to sell in the local market; and have not engaged in developing products specially for the export market." (Kaplinsky et.al. 1995:24). There was in fact no export capacity on the part of companies in the telecommunications industry. This scenario was retrogressive, designed to promote the domestic telephone manufacturing companies. This export was seen to be essential for survival of the industry. There is however no market big enough for competitive scale economies (Hainebach, 1995). Maybe by addressing the challenges faced by the new government will equipment companies create export markets.

(d) Finances

SAPT used to get its funds from the treasury just like any other government department. This inhibited the motivation and efficiency of the managers of SAPT (principal-agent theory). In 1972 SAPT received permission to seek its own offshore finances. Over time the parastatal accumulated huge debts as a result of over forecast demand and 'goldplating' (De Villiers in Horwitz, 1994). This is a situation where SAPT made a rapid conversion to digital exchanges and transmission starting from

1979. It was also the time when gold and the Rand were losing value. By 1993 TELKOM had a total debt of R10.33 billion. At the same time bad debts were increasing such that in 1993 bad debts totalling R77 million were cancelled. Revenue sources were also skewed with only six percent of TELKOM subscribers (78% business, 22% residential) contributing 50% of the total telecommunication revenue on average. The bulk of subscribers made few calls per day although residential consumers had more phones. TELKOM was therefore heavily reliant on business earnings.)

Phone Distribution in Metropolitan Areas

	Metropolitan	Rural	Total	Percentage
	--Millions--			
Residential	2,26	0,78	3,04	71,8
Business	0,95	0,25	1,20	28,2
TOTAL	3,21	1,03	4,24	100

(Source: Kaplan, 1990)

Capital expenditure increased five-fold over a seven-year period (1980 – 1987) while the Rand depreciated in value. Operating revenue grew by 1.9% between 1987 and 1991 whereas operating expenses grew nearly twice as fast (3.7%) resulting in profit margins decreasing (Horwitz, 1994). Because of escalating costs there were no funds allocated for replacement and purchase of new equipment resulting in TELKOM being unable to keep up pace with business customers.)

(e) Tariffs

Tariffs were set below the level that would have enabled SAPT to expand its operations. Early 1990s, the ANC felt subsidies would continue to be part of future tariffing policies (covering call charges, connection and rental fees) and to be structured on communities of interest rather than distance. (ANC, 1994). Long distance tariffs were high with calls to the USA costing some 30 – 40% more than a USA originated call to SA. (Horwitz, 1994). TELKOM came under threat from international discount carriers that offered telecommunications connections at USA carriers' rates e.g. Diners Club, IDT, Word-Phone. (Horwitz, 1994). A new industry

SCCs has grown which establish its own telecommunication system between cities. Customers dial into the system using the local phone company's lines. Companies called Value Added Carrier (VACs) do not build their own long-distance lines. Rather they rent lines from the Phone Company and using their own equipment, add services not available from the Phone Company. (Singleton, 1983:172). De facto competitors were already there by the time of TELKOM commercialisation in 1991. Large corporations used computer networks and private satellite links to carry data and telephone calls around the world (Financial Mail August, 1995). TELKOM responded by cutting its own international rates but this threatened to erode TELKOM's earnings. This undermined the ability to cross subsidise and expand the basic network while large margins in TELKOM tariff may have encouraged competitive bypass of the long distance network.)

(f) Employment

SAPT was the focus of a job reservation system whereby unemployable whites were given jobs by the state or its parastatals (Horwitz, 1994). Equipment manufacturers were also mandated to hire whites during the earlier phases of the birth of the telecommunications industry. Employment in TELKOM rose from 47000 to just under 60 000 between 1981 and 1986 (28% increase) and revenue increased primarily because of telecommunications network expansion" (Kaplan 1990:61). Increase in employment can be justified with the expansion of the network and the provision of new services, which required for example electronic engineers, software engineers, corporate staff etc.)

The ability to create jobs within the industry or downstream industries is a factor in the success measurement of TELKOM. The digitalisation process undertaken in the 80s resulted in employment loss but this was insignificant (About 3000 workers lost their jobs). Blacks constituted 31% of TELKOM's staff complement in 1991 with only 9.1% in Management. (*Sunday Times Business Times*, 29/9/96). Affirmative action will be one of the criterion for evaluating TELKOM's success. However TELKOM's transformation program designed to elevate business efficiency and prepare it for international competitiveness, poses considerable danger for black employees, most of who are in low-skill jobs and support functions such as catering

and administration. Some of these may be spun off, creating an uncertain future for unskilled employees.)

TELKOM Affirmative Action

		<i>BLACKS</i>	<i>WHITES</i>
Recruitment	1993	38%	62%
	1995	67	33
Promotion	1993	28	72
	1995	49	51
Natural Attrition	1993	40	59
	1995	29	71

(Source: *Sunday Times Business Times*, 29/9/96).

As can be seen from the table above, more blacks are being recruited into TELKOM and more are being promoted as opposed to their white counterparts. This is designed to create a balance in the organisation, which saw whites getting only professional level jobs in the 60s through to the 80s.

4.3 SAPT changes before 1994

In October 1991, Posts and Telecommunications were separated from each other and were freed from ministerial control. Changes were called for mainly because of pressures for better quality, choice and opportunities to compete. Technical changes in the transmission of messages also contributed their part in the process of change. The optical fibre and mobile phones begun to erode the natural monopoly conditions in telecommunications. Commercialization assumed prominence because the government wanted to create a market oriented culture. This first step towards degovernmentalisation was aimed at splitting the organizations into manageable components: Corporate Customers, Commercial and Consumer and International business units. It also involved the elimination of statutory monopolies, legal privileges, artificial limitations on entry and the capital structure. (Littlechild, 1989). However the capital structure was not changed in the process. A new company was formed: TELKOM South Africa Limited, which was registered under the Companies Act with the state as the single shareholder. Its terms of reference were set with the following guidelines: (i) to generate own profits, (ii) to pay taxes, (iii) to receive no

subsidies, and (iv) to secure own financing (Horwitz, 1994).

Positions of client managers were created for important corporate clients. Ownership did not change and therefore the efficiency factor was compromised. The Department of Posts and Telecommunications acted as an interim regulator. Other liberalisation measures were implemented resulting in relatively good quality cheap service. Customers started to receive huge incorrect bills around 1992 attributed largely to computer error and service theft. TELKOM's policy was not favourable to customers. Customers were told either to pay up or else their service will be cut. According to Horwitz there was just arrogance and lack of concern for the single customer. (Horwitz, 1994).

TELKOM's standards fell too short of global standards, e.g. it took 29 days for TELKOM to activate a new service in 1994, while top international operators provide a new residential service in three to five days and a business service in less than a day. The corporation intends to reduce this from 29 to six days. The quality of the network was (and still is) poor with roughly 90 faults per 100 access lines per year against fewer than 15 faults per 100 lines for the top 10 operators. (*Sunday Times Business Times*, 29/5/96). It is only now that the company is trying to address these issues. "TELKOM has been given five to six years to double its network and asked to improve on its hitherto poor customer service record." (*Sunday Times Business Times* 6/4/97).

Local tariffs were however low by international comparison. Call charges of 4.3 cents per minute for a distance less than 50 km in 1993 was the cheapest rate in the world. (Morgan, 1995) (ANC, 1991). In general TELKOM continued to experience the following problems up to 1994; poor productivity, continuous and unchecked TELKOM price rise, non development of any indigenous technology, high cost of production, absence of adequacy and variety, inefficient and customer hurting practices, deficiencies in planning and numbering scheme and inadequate management structure. The main policy levers available to achieve the profit motive, structural options (increase availability of basic telephone service, affordability and high quality services for the business sector) were competition, regulation, and changes in the status and organisation of the dominant supplier.

Conclusion

TELKOM penetration rate remained poor despite the impressive technological advances made during the 1980s. Racial duality continued to be part of the characteristic of telecommunications under apartheid. With the dawn of globalisation and privatisation, technological changes and other factors, SAPT was forced to take a more competitive outlook resulting in the restructuring exercise in 1991. However the government continued to be the single shareholder of the new TELKOM SA limited. Such ownership structure prohibited the development of an efficient telecommunications structure as propagated by the principal agent theory. Competition was prohibited thus destroying efficiency. The winds of change continued and TELKOM continued to reform but at a slower pace to face the challenges that were looming around 1994. The next chapter will therefore look at the telecommunications structure of 1994 and beyond as well as evaluate the performance of TELKOM. The need for privatisation will be contextualized by looking at the technological advances that have permitted certain sectors of communication to thrive without state control. Below are summary statistics of telephones and resources of TELKOM up to 1994:

Lines, Employees, Income, Expenditure

Number of main Telephone lines	3659863
Number of business lines	1213657
Number of residential lines;	2396562
Number of public telephones	49644
Number of employees	60172
Turnover	834809900 p.a.
Net Income	759746000 p.a.
Capital expenditure	2226697000 p.a.
Fixed Assets	13800504000

Chapter Five

TELKOM Challenges in the Democratic Era

5. Introduction

Chapter four highlighted the telecommunications structure of South Africa during the days of apartheid. It was noted that digitalisation was pursued at great speed although many areas remained poorly served. Digitalisation resulted in 100% digital transmission in metropolitan areas and 78% in rural areas. There was excess capacity in the TELKOM network while delivery service was not favourable. Due to mounting pressures such as high debt burden, depreciation of the Rand, and lack of competition, the performance of the TELKOM remained relatively poor. This chapter takes telecommunications development within the context of the new democratic era where TELKOM was expected to meet challenges of both universal and market services. The chapter will highlight some of the achievements and obstacles in providing telecommunications looking through TELKOM's ability to deliver and its transition from 4-in-1, ^[1] ^[2] (policy, regulation, ^[3] ^[4] and service provision and equipment production) to corporate enterprise.

5.1 Post Apartheid Changes

The former Managing Director of TELKOM Brian Clark announced a R60 million restructuring and re-engineering strategy that would break up the parastatal into customer focussed business units. This was because TELKOM continued to suffer from high input costs, overstaffing, heavy debt affecting investment and unbalanced tariff structure. (Morgan, 1995). Failure to break-up large corporations reduces the effectiveness of regulation and diminishes the capital market and organisational pressures for greater efficiency and customer responsiveness. (Veljanovski, 1989). Despite corporatization in 1991 several constraints were faced. Tariffs and borrowings were not favourable, internal structures were not reformed and over 40% of debt was held in foreign currencies. The cost of borrowing has been increasing and so has been the exchange rate. Labour costs continued to soar consuming 40% of TELKOM's costs. (Morgan, 1995). Debt repayment as a percentage of revenue has been increasing over the past two decades. More rapid network growth could have a positive impact on TELKOM's cash flow from a larger network (Morgan, 1995) as

the suppressed demand among blacks could be tapped. Reforms were therefore required in the areas of legislation, (ownership, competition and regulation) human resources, tariffs and local equipment industry in line with the principal-agent theory, theory of contestable markets and regulation theory.

South Africa is unusual in that it is facing a debate on deregulation of the telecommunications industry before the basic infrastructure has been widely installed. (Stavrou like many others believe that the development of telecommunications in South Africa can be divided into two sectors: one in which predominantly driven by market forces and the other in which market and social forces need to be carefully blended, as the market forces alone are not sufficient to provide broad and rapid access to services. (Stavrou, 1995). This is necessary because of the existing pattern that reflect the general economic pattern of the country where concentrations of telephone services are found in Gauteng Province, Western Cape and KwaZulu-Natal, the economic hubs of the country.

A closer look at South Africa shows the following penetration rates in black areas, areas that require massive investments.

Current Penetration Rates and Targets

Current (1997) black household telephone penetration *Five-year target*

<i>Current (1997) black household telephone penetration</i>	<i>Five-year target</i>
Northern Province	15-20%
Eastern Cape	20-25%
KZN	15-20
North West	20-25%
Mpumalanga	>35%
Free State	>35%
Northern Cape	20-25
Gauteng	30-35
Western Cape	>35%

(Source: Sunday Times Business Times, 4/7/97)

TELKOM officials put a rough estimate of R1 billion for new services to be introduced to cater mainly for businesses. This was designed to ensure that TELKOM

was not left behind in the digitalisation age. The residential base continued to have most of the country's telephones while the business sector contributed the bulk of TELKOM's revenue.

5.2 Public Telephones

Affordable universal access to all citizens, equal private ownership for those who can afford and provision of a public telephone within an acceptable walking distance that can be used at an affordable rate for those who can afford was the short term goal of TELKOM after the 1994 elections. The network of public telephones that existed then (and still exists) consists of the following types:

1. Coin operated telephones.
2. Prepaid card operated phones.
3. Mr phone bureau.
4. Prepaid card cellular agency phones introduced by Vodacom and MTN.

Public phones are inadequate and problematic. "Common problems with coin operated phones include waiting in queues, incorrect monetary units, unhelpful telephone exchanges, lack of privacy, and damaged or vandalised telephones. Maintenance and fixing of breakdowns is problematic because of distance between technicians and the location of the phones. Furthermore it would not be cost effective to collect money from public telephones in remote rural areas." (Morris and Stavrou 1992:11). The only solution to this problem is to adopt and adapt the Malaysian system as discussed under international experiences. This will put TELKOM to its core business in line with the context of the principal-agent theory where private ownership has greater incentives than the public sector in the utilisation of resources.

Pre-paid cards were introduced to thwart vandalism and make it convenient for users. The chief problem lies in the customers' frequent distance from shops selling phone cards nearby and this can be frustrating. TELKOM was also rocked by a fraud problem at the beginning of 1997. Phone cards with forty cents left on them were manipulated to give credit up to R7500 costing TELKOM of a lot of revenue.

The Mr Phones concept was an entrepreneurial effort, which saw the establishment of telephone booths in urban and township areas. These generate revenue for TELKOM

and the owners but their charges are high. They are also convenient to most people because of low noise levels. TELKOM has been cheated too here when an international service is set up and after the first bill arrives, the owner will leave having pocketed thousands of Rands from international phone callers.

Pre-paid agency cellular stations are relatively new and have been introduced by MTN and Vodacom as part of their community obligations and expansion programs to marginal areas. There are some that use solar panels to generate power and they also use cards similar to those used by TELKOM.

5.3 Finances

The main sources of funds for TELKOM are from telephone calls as well as borrowings from local financial and overseas institutions. Sixty percent of TELKOM's revenue in the past came from the business market. The table below shows that the corporation's income and assets have been increasing slightly on a year to year basis.

Assets and Net Income of TELKOM

Assets 1995	R 18 133 000
Assets 1994	R 16 414 000
Net Income 1995	R844 000 000
Net Income 1994	R795 000 000

(Source: *Financial Mail*, 10/05/96).

The revenue increase has been primarily through cross-subsidisation and higher charges levied on the consumer. TELKOM's revenue per employee was \$46 570, a quarter that of Mexico. After commercialization in 1991, financial returns have been improving but not at a rapid pace. Earnings a share increased by a compound of 45% a year. Revenue went up by 15% a year with income stream slowly diversifying from its traditional domestic call base to international calls, cellphones and the Internet. (*Sunday Times Business Times*, 29/9/96).

5.4 TELKOM staffing

There has been no significant change to the staffing composition. The pre-1994 situation prevails although there are measures that were put in place to address the problem. The personnel complement fell to 58 793 in March 1995 from 60 172 a year before. (*Finance Week 200*, March 28 1996). This was a result of the restructuring exercise that was in the process of being implemented. This decline was not significant compared to the decline in staff of certain sectors such as mining.

Demographics of TELKOM

	AFRICANS	COLOUREDS	INDIANS	WHITES
South African 1991	64.5%	11.7%	3.3%	20.5%
TELKOM- Oct 1991	30.3	12.9	2.5	54.3
TELKOM- Oct 1995	32.4	13.6	3.1	50.9

(Source: *Sunday Times Business Times*: 29/9/96)

Whites as a percentage of total workforce in relation to the national demography have been on the decline while that of other races increased slightly as the table above shows. Despite the reduction, staff costs as a percentage of revenues are among the highest in the world at 37.8% compared with 22.2% in Mexico and 14% in Malaysia. (*Sunday Times Business Times*, 29/9/96). Increases in salaries and the militant labour movement in South Africa have affected staff costs.

5.5 Universal Service

Universal service is the minimum level of service available to all and affordable by all. (Hainebach, 1995). The ANC in its 1994 telecommunications discussion document felt universal service meant that all citizens will have access to telecommunications services at prices they can afford, irrespective of race or where they may live. (ANC, 1994). The important parameter is whether each household should have access to a telephone service or should a full telephone service actually be delivered to each household. The definition is important because it affects the speed of delivery of universal service as well as costs. (Morgan, 1995). Universal service has been mainly concerned with the provision of the basic voice telephony. This is a crucial issue that needs to be addressed by the new thrust of TELKOM. In

advanced countries with high penetration rates, universal service involves the provision of advanced broadband services. TELKOM's vision is that in rural areas, one public telephone per 1000 people should be provided and these phones should be within a distance of 5 km from an economic centre such as a trading store or community centre. There is need for creation of telematic centres to overcome network, service, cost and qualification barriers. State efforts have traditionally focused on promoting universal service and maintaining low prices. The extension of affordable and accessible universal service will enhance the social and economic activities in historically disadvantaged communities by providing infrastructure as well as generating employment in the telecommunications sector. However there are dangers that universal service may be politicised by the present government in order to win support in the forthcoming elections. Universal service has been abandoned in some networks and there are fears that this might happen to South Africa.

The fact that TELKOM is committed to providing four million lines is a testimony of the movement towards universal service. Previous activities showed that the corporation was not operating for the whole population hence the low rate of phone penetration in black areas. The table below shows the penetration rate by household. There is no doubt that the majority of whites are well served with phones while the majority of blacks who constitute more than 60% of the population have a mere 17.36% of the phones.

Telephone Penetration by Household

	<i>Residential Phones</i>	<i>% Households</i>
<i>1. White</i>	1673312	88.59%
<i>2. Coloured</i>	249522	45.46%
<i>3. Asian</i>	111462	66.48%
<i>4. Black</i>	488904	17.36%
<i>Total</i>	2523200	46.55%

(Morgan 1995).

Privatisation will thus aim to maintain customer loyalty of existing clients coupled with the creation of new ones.

5.6 Government Privatisation drive

Although the privatisation drive (started in 1988) was temporarily shelved, it picked up momentum after the first general elections of 1994. Some authors suspect that privatisation was politicized at the time of transition. Whether or not the government intended it, the effect of privatisation would be to take the parastatals out of the hands of the black majority come a democratic transition. The ANC was saying parastatals privatised before political accommodation would be (re)nationalized. (Horwitz, 1994). In 1996 the Minister of Public Enterprises Stella Sgcau pronounced that the government had a clear policy on privatisation and went on to list a number of public enterprises intended for privatisation including TELKOM. Government policy on telecommunications operates within a framework of wider national industrial program. As such telecommunications policy cannot be understood in isolation from the broader political economic demands and directions of which generally it is in consonance. (Sussman, 1991:63). As such, all government levels, the management of the economy, and other parastatals have been undergoing structural and operational changes.

The tariff structure of telecommunications is still skewed in favour of the residential consumer and attempts to satisfy several objectives, which are often inconsistent with each other. Jay Naidoo, the Minister of Broadcasting and Communications, reaffirmed government commitment to universal service when putting a thrust to privatisation. Since the government has alternative choices, it can adopt either a social program or an economic growth program or a combination of the two. "An important issue is whether regulatory instruments should be designed to optimise one goal (such as efficiency) or multiple goals (such as efficiency and social policy goals)." (Steinfeld 29). Some critics have noted that regulatory flexibility policies designed to promote economic development may threaten universal service. Charles Zielinski however cautions that maintaining universal service may thwart the goals of increasing economic opportunities and productivity for individuals and businesses in the state. (Williams, 1989). The state's vision for telecommunications is that of providing a balance between the provision of basic universal service to disadvantaged communities vis-à-vis the delivery of services to the business sector which is vital for business growth and competitiveness. The ANC preferred universal service and ready

access to full range of modern telecommunications services but felt that this lies in public ownership of the national network under an independent regulatory regime (but this does not preclude competition in service provision). (ANC, 1994). The ANC has since promoted privatisation as opposed to public ownership of the telecommunications company. People ownership (all government assets and companies belong to the people) does not work, as it is not recognized by collective political processes. (Veljanovski, 1989).

5.7 Precursor to privatisation

During the participation of various stakeholders in drafting of policies for the economy, Coopers and Lybrand was commissioned to do a study on telecommunications in 1991 by the Department of Posts and Telecommunications. Coopers and Lybrand identified government policy objectives for the telecommunications sector as:

1. Telephone penetration – improving access to basic service in the townships and rural areas
2. Affordability- keeping tariffs at lowest levels that are consistent with economic and efficiency of use
3. Service level- increasing the variety and quality of services available to business users at internationally competitive prices. (Coopers and Lybrand, 1992).

The major dilemma that faced TELKOM was to have a thrust that sought to correct the disparity created by apartheid or keep up with the advanced services to compete successfully with developed countries or both. Coopers and Lybrand came up with 3 scenarios- One- Base case- which sought modest expansion and investment Two- Network expansion – which sought increase in access lines, capital injections of four billion Rands to retire an equivalent of long term debt. This money could come from government or through privatisation of TELKOM. Three- Competition- that sought to rebalance all prices over 5 - 7 years to reflect actual costs. Coopers and Lybrand suggested that scenario two and three addressed two main political-economic policy positions with respect to telecommunications. The Coopers and Lybrand report was used as a guide. This guide was in consonance with the theories of principal-agent, theory of contestable markets and regulation theory. It was suggested that the Minister responsible for telecommunications be responsible for policy making while the role of

the government as a shareholder should be exercised by the Ministry of Finance. (Horwitz, 1994). The separation of functions was designed to improve the performance of TELKOM as proposed by the regulation theory. The report recommended the setting up of a regulatory agency and the monopoly period to be extended for several years up to five years. Competition was restricted and set out as follows:

1. Competition in long distance and international voice telephony should not be permitted for at least 5 years but consideration should be given to licensing local networks where these could supplement TELKOM's coverage. "TRANSNET and ESKOM for example have internal networks that could be used for telecommunications. (Song, 1994). SABC too can evolve into a carrier.
2. Resale of network capacity for voice services should not be permitted for 3- 5 years.
3. VSAT services should be allowed but with no connection to the public switched networks
4. Licensing of two cellular networks. (Coopers & Lybrand, 1992.)

Privatisation policy should maximise competition where feasible since it is the surest and most effective means of generating greater efficiency and consumer benefits. (Veljanovski 1989). Competition in services would reduce investment cost per line and hence the prices chargeable to customers.

5.8 Thirty percent Equity Partner

Given the dualism in the South African market, the policy choices that were open to South Africa were not as stark or as readily implemented as they might be in mature markets or in countries which are really in essence "greenfields" telecommunications markets. (Morgan, 1995). TELKOM was not interested in short-gun weddings but being increasingly buffeted by a variety of forces policy makers felt joint ownership was useful as a transitional measure hence the decision to get an equity partner for TELKOM. This was designed to infuse moribund TELKOM with new investment capital for expansion programs. According to the former Managing Director, Brian

Clark, selling of 30% stake was necessary to raise funds to pay contractors working on Vision 2000 program (Sunday Times, 2/6/96). In the end Telekom Malaysia Bhd partnered by US-based SBC Communications Inc. bought a 30% stake in state utility TELKOM for US\$1.261 billion in 1996. US\$1 billion of proceeds from the sale of 30% stake in telecommunications were earmarked to fund infrastructural expansion while the rest was set aside for the National Revenue Fund (NRF). There was a delay in the implementation of Vision 2000 leading to estimates for the roll out program ballooning from R32 billion to R53 billion."(Sunday Times Business Times 6/4/97). TELKOM is now planning to spend R53 billion on four new lines, which include the replacement of party lines in most areas around the country.

The first five years have been reserved exclusively for TELKOM. This time is needed to prepare TELKOM for competition and rebalance its tariff structure. During the shielding period, TELKOM operations will be liberalised in stages under the guidance of an independent regulator, SATRA. SATRA will have varied responsibilities that include:

1. promoting consumer interest- price control regulations and monitor quality of services
2. protecting TELKOM's monopoly- policing provisions which define boundaries
3. protecting competitors- fair competition
4. Community service obligation- monitoring and enforcing
5. Technical regulation- ensuring quality and safety are protected and that flexibility and efficiency in the use of resources is promoted. (Coopers & Lybrand, 1992).

The white paper on telecommunications had called for the establishment of SATRA, the Universal Service Agency, phased liberalisation of the industry and TELKOM's exclusivity period to be set at six years. Pinky Moholi Group Executive, Regulatory Affairs had hoped for a longer period of exclusivity. (Sunday Times, 7/1996). The white paper was preceded by the green paper which proposed among other things the establishment of phone shops and entrepreneurship skills to run them, local contractors to be engaged in the installation of telecommunications services,

implementation of a BOOT and BOO process, empowerment of women, implementation of affirmative action program.

5.9 Planned Activities

TELKOM's mission statement states: *"To establish widespread telecommunications access, to provide the business sector with advanced value-added services and to operate efficiently in an increasingly competitive environment."* This mission should be perceived within the broader plan of action for the period during which no competition is allowed. This statement is comparable to that of the RDP program, which aimed to provide universal affordable access for all as rapidly as possible within sustainable and viable telecommunications system, to develop a system that is capable of enhancing, cheapening and facilitating education, health care, business information, public administration and rural development, and to develop a Southern African cooperative program for telecommunications. TELKOM planned to undertake the following activities during its exclusivity period:

(a) Telephone network

Spend R53 billion on rollout of:

1. **2.8 million** new lines
2. **1.25 million** analogue lines digitised
3. **120 000** payphones
5. **2000** free Internet connection and computers

The envisaged network expansion takes into cognisance the need to service previously under-provided areas under the universal service scheme as well as the need for advanced services for business that sought to give room for technological changes through a convergence of telecommunications via computers. Free internet usage especially to rural schools might not yield the expected results if the communities are not yet ready for advanced services. Other economic activities, social, and political processes have to change if the benefits are to be reaped.

(b) Human resources

1. **R2.32 billion** training program
2. **80 000** training courses per annum
3. Affirmative action (**35%** black management by 2002)

4. R200 million in bursaries and education funding

The training component is necessary in the period of change to create an organisation that can adapt to rapid changes. Investing in black students can help transform the corporation as well as improve the industrial relations in the country. However the affirmative action program should not be used as racism in reverse. What is of paramount importance is the delivery of services as well as efficiency in such delivery.

(c) Customer service

1. Achieve **90% clearance** of all faults reported within 48 hours
2. **90% of coin phones** and **95% of card phones** to be serviceable
3. Clear residential listing by Oct. 1999
4. **Meet 80% of orders** for residential phones within 28 days
5. Cater for handicapped people
6. Introduce itemised billing

Some of these activities were already underway by the end of 1996. (*Sunday Times Business News*, 29/9/96). Some of these activities would be best provided through subcontracting. In a way, this can empower previously disadvantaged groups. Customer service is the cornerstone of any business that needs to survive in a competitive environment.

Conclusion

Digitalisation has improved the performance of the South African telecommunications sector from around 1979 throughout the 1980s. Because of goldplating, there is excess capacity at many exchange centres, which translate to money lying idle. TELKOM had no resources and capacity on its own to embark on a massive program envisaged under Vision 2000 program in 1991. Its capital structure did not change after commercialisation. TELKOM operations have succeeded to a certain extent though at a higher price hence the thrust towards privatisation. After the 1994 elections, it became apparent that black areas required massive provision since their demand was previously suppressed. Public phones were increased including the provision of card phones from 1991 to 1996. However such increases were not fast enough as TELKOM had no funds to commit itself considering the timeframe and the framework set by Coopers and Lybrand and the White Paper on

telecommunications. The financial performance though not rosy has been improving. Staff complement has declined and has been fluctuating around 55 000 people. More blacks are being appointed and promoted using the affirmative action criteria.

The equipment market was previously closed to foreign companies. TELKOM gradually started to open up its market to international players. TELKOM has committed itself to the provision of phones to formerly disadvantaged communities while at the same time ensuring that business has leading edge technology. Since the ownership structure did not significantly change, and competition and regulation still a far cry, overall performance by TELKOM was not good enough.

The new government has played a facilitative role in privatisation leading to the search for a TELKOM partner in 1996. This led to the expansion plan of the envisaged Vision 2000 that was already underway with a massive roll out program designed to operate within the exclusive period of five years set by SATRA. Such a massive project will affect various stakeholders such as equipment manufacturers, business and residential consumers etc.)

Chapter Six

Effect of Privatisation on Stakeholders

6. Introduction

The previous chapter gave a critical look at TELKOM during the period 1994 up to the present scenario. It was noted that TELKOM continued to experience a strain in its delivery given the context of the development challenges and fiscal pressures faced by the incumbent government. In all its spheres of operation the commercialised company continued to experience difficulties in the pace of the roll out program, staffing, cash flows etc. The ingredients used to evaluate TELKOM and the analysis of the telecommunications structure in South Africa revealed that the company did not perform very well. Coupled with changes taking place in computer, cellular and other forms of communication, and the processes of globalisation the drive towards privatisation started. The government gave the nod to privatisation and issued 30% equity to a Malaysian consortium in 1996. The planned activities are ambitious and can only succeed if all stakeholders fully participate. This chapter will analyse a few of the stakeholders that will be affected by the drive towards privatisation.

6.1 Stakeholders

The rising importance of telecommunications in international trade, political communication and cultural production has promoted new organised groups of powerful stakeholders with fighting ranging from structural changes, limited selective regulation, widespread privatisation, and multimedia regulation. The old telecommunications paradigm is being swept aside; those poised for change will reap the rewards of providing the most sophisticated and least expensive communications. Telecommunications is constantly changing and the positions of stakeholders have been constantly changing too. Information is recognised as the central organising structure hence the interest it has generated among various groups. A distinct number of stakeholders can be identified as the government which is the principal shareholder and policy maker, TELKOM management which is concerned about viability and nature of regulatory regime under which it will operate, TELKOM employees who are mainly concerned about tenure of office and rewards, business users who would like fair tariffs and access to advanced products and services and greater choice of

supply, residential users who are concerned about affordability and availability of local telephone service, trade unions who will be concerned mainly about jobs, their organisational role and social security, TELKOM's competitors who would like to see a strong and independent regulatory structure. These would also wish to minimize their own contributions to the cost of meeting community service obligations. TELKOM's traditional equipment suppliers would like to see import protection as critical for maintenance of a significant local manufacturing capability, while investors in the sector need predictable regulation to underpin their evaluations of specific opportunities (Coopers and Lybrand, 1992). There is however no uniformity in the degree of effects on the various stakeholders and such effects are affected with time through economic, political, social and technological changes.)

6.2 Telecommunications Equipment Industry

The telecommunications industry in South Africa is found within the broader electronics industry. TELKOM has had a very long mutual relationship with telecommunications companies (dating back to 1958) as noted in chapter four. TELKOM ensured stability of supply and availability of equipment specifications from these companies. TELKOM led the telecommunications industry in innovating and implementing new programs and equipment. With the dawn of privatisation, this would mean more competition, more imports of equipment, to the detriment of the domestic telecommunications firms. Equipment prices outside South Africa keep falling and this will benefit TELKOM in the long run since the world is now closely knit. The company will have to open up its market to competitive foreign companies for its network to succeed and expand.

Asia and Africa have the potential for accelerated growth in equipment supply for years to come. More equipment will go to these regions. The South African telecommunications equipment market is small although it has been growing in recent years. Siemens for example is a giant company with a turnover of some R3.6 billion, employing 4400 South Africans. Among its products going to world markets is an electronic digital telephone exchange, an optical fibre distributed concentrator, and a system of expanding an area covered by a single exchange. (*The Mercury Business Report*, 10/3/98). The South African companies will have to be competitive if they are to survive. Ingenious companies will have to start looking for opportunities across the

globe rather than concentrating on the domestic market.)

Manufacturing companies were fearful that the privatisation of TELKOM would jeopardise guaranteed markets through long-term agreements. Brian Clark, the former Chief Executive of TELKOM, noted that long-term agreements have been replaced with more flexible, short term contracts since long-term contracts were not fair, open and limited TELKOM's access to world suppliers at competitive terms. (*Sunday Times Business Times*, 29/9/96). "System of contracts with telequip suppliers kept foreign equipment providers out of the market. This foreclosed national equipment providers from capitalising on economies of scale, discouraged the equipment manufacturers from engaging in the kinds of rapid innovation such as was occurring in the computer industry, and resulted in higher costs and lower benefits to end users. (Steinfeld, 1994:39).

There is increasing internationalisation and moves by non-telecommunications firms into traditional telephone markets. This will squeeze funds away from TELKOM. There is progressive erosion of the traditional market boundaries and the emergencies of multiproduct IT corporations. (Hobday, 1990). It is therefore large multiproduct, transnational corporations that are going to succeed in the telecommunications sector. Suppliers such as NEC, Okidata etc. are now outwards looking as the opportunities around the world are ripening. The USA and other powerful countries would like to penetrate many untapped telecommunications markets of both the developing and developed worlds and has the power and resources to do so. "The USA will win because its companies have had 10 years of highly competitive even cut-throat, industry and now that they are lean and fighting fit they are hungry for new markets and more profit." (Ford, D. <http://www.inc.co.za/online/Sunday-life> (1997). International services, global free-phones and network management will be options for customers of companies such as AT&T and BT if they expand on basic telephony.

D. Van Zyl, the managing director for Plessey in South Africa, is of the opinion that the company will have to increase productivity to be competitive in the global market. Local telecommunications market could yield new business worth R50 billion by 2000, R30 billion from the extra 4 million phone lines. Plessey clinched new contracts

e.g. payphones, the expansion of MTN cellular, and low cost wireless telephone systems and rural communication systems (DECT). (*The Mercury Business Report*, 23/7/96). Competitive local companies are beginning to benefit. John Pitout, the Managing Director of Alcatel Alcatel, noted that large orders have been placed with local companies, which in turn are placing orders with small to medium sized enterprises. (*Sunday Times Business Times*, 3/5/98). Small firms are involved in the installation and commissioning of equipment in this expansion phase. This obviously has led to lower level job creation, a component necessary for the growth of the economy. Craig Venter, the Chief Executive of Alcatel Altech Telecoms (AAT), announced that, his company secured a R1.3 billion wireless local loop telephone contract, which has boosted the company's order book for this financial year. (*Sunday Times Business Times*, 3/5/98). Vodacom has placed orders with Alcatel, Motorola and Siemens for the supply of various equipment. The unique combination of a small highly developed and technologically sophisticated sector alongside large underdeveloped and underprivileged regions has attracted suppliers of information technology from all over the world including South Africa. (Harfoush 1994). The implications of globalization and privatisation are that:

1. Telequip industry will have to market and compete for the favour of millions of individual customers
2. There will be a lot of investment in R&D, development of new products, building in of new features, and companies convincing network operators of the superiority of their products.
3. None will survive with one product and of invariable design
4. Collaborations, consortia, acquisitions, sell-outs would be the norm. Local players will be forced to form alliances with international partners. Presently there are mergers and alliance with three or four global camps e.g. AT&T which consist of McCaw, USWest, General Magic, Time Warner, Viacom, PF Magic, Southern Bell, NCR, Bell South, Newscorp, other). These impact on South Africa telecommunications industry.
5. Personnel turnover will be high as companies look for and "acquire" the talented

and accomplished and experienced. (Chowdary, 1994).

6.3 Business Consumers

Business consumers have always supported the privatisation of TELKOM. "Economists and business leaders believe privatisation is central to restoring investor confidence..." (*Business Times*, 23/06/97). The business community however recognises the need for social provision but feel cross-subsidisation should go. The Director for Europe and Africa at British Telcom, Peter Archer noted that the selling of TELKOM without introducing competition might help bring services to previously disadvantaged communities but it would not help to provide, better, more cost-effective data networks for South African business. (*The Mercury Business Report*, 4/7/96). This supports the theory of contestable markets where competition will lead to efficiency in a privatised and regulated market. The private sector's position is based on the belief that increased competition will lead to enhanced basic telephone services in call forwarding, answering services and other features with independent companies installing telephone cabling.)

The business sector is concerned with the possibility of tariff hikes. This will affect the cost of doing business. Allan Lighton, the Executive Director of the Cape Chamber of Commerce and Industry, felt businesses are hardest hit by rate increases and will undermine the competitiveness position of South Africa companies in the global market. He felt TELKOM is taking advantage on its monopoly in order to finance the extension of telephone services to disadvantaged communities in far-flung parts of the country. (*Cape Argus*, 7/11/97).

Banking has benefited a lot from advances in the telecommunications sector. Banks benefit in two ways i.e. they can transfer funds via electronic superhighways from one point to the other while on the other hand they provide finance that is required for the expansion program. Banks are in support of privatisation and the extension of broadband Integrated System Digital Network (ISDN) services on the network as they increasingly rely on telecommunications for their transactions.)

The business community is no longer interested in simple voice telephone services. However, though the investment is desirable only big companies and transnational companies will make use of facilities such as ISDN. TELKOM has installed such a facility but has not generated much interest from the business community. The corporation has the capacity to use value-added services but this is one component of TELKOM that should be addressed.)

6.4 Residential Consumers

The majority of people I talked to informally do not see the difference between a privatised TELKOM and the public company TELKOM. Many however fear that privatisation will mean telephone rate hikes in the future. In an article titled "A plan for legalised mugging" in the Mail and Guardian, July 1997, Brendan Martin, a concerned citizen and residential telephone consumer, spoke strongly against privatisation. He felt the beneficiaries will be the one percent who already own phones, big business and transnational corporations which have money to invest in other countries. He cited Mexico, which left consumers worse off by \$33 billion largely because of tariff increases. Mexico's case is however interesting in that on one hand there were more telephones installed while on the other tariffs went up. The brunt of rebalancing tariffs is being borne by residential users and payphone users who make longer calls.

Chowdary noted that telephone and other telecommunication users under state corporations were not customers but subscribers, captives, choiceless bill payers, praying for early connection, dial tone, restoration of service, rectification of bill errors, shift or transfer of telephone from one location to another or from one person to another. Telephone liberation and competition will lead to:

1. liberation of customers from sole supplier
2. prices related to costs and quality
3. settlement of bill by unbiased independent authority
4. variety of services

5. being solicited for continued patronage and for taking a telephone
6. no take or leave pricing but range of tariffed services for customers' specific needs
7. Choice of phone and attachments without inspections (Chowdary, 1994).

6.5 Trade Unions

In general, trade unions position is that, they are there to protect workers and promote worker interests. COSATU (established 1985) a tripartite alliance consisting of the ANC and the South African Communist Party (SACP) is a major player in the shaping of the South African economy. There are currently twenty trade unions affiliated to COSATU with a combined membership of over 1.75 million. (*Webmaster@anc.org.za*) (20/03/98). These include TELKOM's six large trade unions which have formed themselves into two major alliances split along racial lines: POTWA, PEASA, SAPTEA formed Communications Workers Union (CWU) (predominantly black) representing 26000 of TELKOM's 58 000 workers while SATA, PTA, MU, banded together to form Alliance of Telkom Unions (ATU) (predominantly white) representing 32% of TELKOM workforce. (*Sunday Times Business Times*, 29/9/96). The white alliance was opposed to restructuring for fear of job losses. In the end "trade unions have measured their success or failure to influence the process of structural change by the degree to which they have been able either to prevent privatisation or at least to neutralise it." (Bolton, 1985:7) This attitude prevailed within COSATU such that if the trade unions rally support from workers, this becomes their strengthening pillar.

Addressing the World Economic Forum in 1996, Sam Shilowa the Secretary General of COSATU summarised union sentiments. COSATU views privatisation as one of the major threats to the vision of a "better life for all." (Sam Shilowa, *Address to the World Economic Forum, Cape Town, 23/5/96*). COSATU feels management has a history of corruption and is not committed to serving the interests of the entire community. Any talk of privatisation to enhance efficiency is therefore premature. COSATU would like to see a change in management of the corporation. He felt telecommunications was a social provision and should be better provided by the state.

The organisation feels privatisation is part of the international trend by MNCs to expand their markets and profits. However COSATU has made a slight about turn in 1996 and taken a softer stand. It is in favour of restructuring of state enterprises, as a tool for upliftment of South Africa's people but does not believe that privatisation should be used as a central method of this restructuring. (*Ibid*).

Employment has been the main concern for unions. To COSATU, efficiency means retrenchments and therefore cannot support a program, which is to the detriment of workers. COSATU'S arguments are validated by a few cases of privatisation such as that of British Airways (BA). When BA was targeted for privatisation in 1981, it had 50 000 employees. One year later it had only 26 000. (Innes et al., 1992). The unions do not look at long-term prospects where more jobs will be created. In a study in the US (NY), it was indicated that deregulation had a significant impact on job creation, for the period 1987- 1995. (Read and Youtie, 1996). Workers should be more competitive and not just fear for their jobs.

Unions also feel that since the private sector functions in a monopolistic market, there will not be true competition because privatisation will transfer state monopoly into private monopoly to the detriment of small business and users of services. This therefore calls for the introduction of competition in telecommunication services. Tony Eremich of COSATU feels there should be structured telephone rates for example, to take into account poorer sections of the community. (*The Cape Argus*, 6/11/97). Efficiency in the delivery of products/services as well as lower cost to the end user are primary objectives that should be part of the telecommunications policy.

6.6 TELKOM- Management

Initially when the idea of privatisation was mooted, Management was reluctant to accept privatisation as an option arguing that certain services like basic voice mail can only be supplied at a loss hence the need for cross-subsidisation and the maintenance of a monopoly. 'The government and TELKOM executives argued forcefully that a measure of protection is vital if the group is to meet the enormous infrastructure challenges facing South Africa.' (*Sunday Times Business Times*, 29/9/96). Many officials opposed privatisation because it reduces their area of authority as well as the opportunities for patronage and corruption, and hence their status. (Berg et al 1987).

Management is now in favour of privatisation since it stands to benefit from such a process. Management has been exposed to information that allowed it to make informed decisions.

6.7 TELKOM- Workers

Employees are opposed to privatisation because they feel they will lose security of tenure once they are no longer civil servants. Commenting on the general trend in organisations targeted for privatisation, Berg noted that the employed labour force is opposed to privatisation because over-manning is endemic in most PTOs and almost universal in troubled ones that are considered for sale. This might lead to compression of the workforce. (Berg, 1987). Certain categories will welcome the privatisation drive because it will mean improved status for them, high mobility and rewards. Writing on India, Chowdary noted that for engineers, privatisation will mean:

1. they will not be the drivers, they will be hired by business oriented companies
2. Telkom business will be driven by economics, costs, profits, markets and not what engineers think is good for applicants
3. job and location changing
4. performance, talent and devotion related advancement
5. fewer holidays
6. more pay, better perks
7. work ethic will replace welfare ethic (Chowdary, 1994)

Conclusion

This chapter looked at a few stakeholders who will be affected by privatisation. The impact differs from one group to the other. The telecommunications equipment industry stands to benefit if alliances are formed with major suppliers abroad. Such companies stand to gain if they are innovative and penetrate African and Asian markets. Major beneficiaries will be outside companies that have experience in

telecommunications and have become transnational in character. The business sector stands to gain from a policy that seeks to promote the development of advanced services. Companies that are in the information technology sector and other contractors stand to benefit from the partnerships that will arise from the roll out program. Consumers are likely to benefit from increased penetration of phones but will bear the brunt of such penetration through frequent price increases as TELKOM recoups its capital expenditure. Trade unions will lose their support base through privatisation as we enter a period of labour flexibility. Some TELKOM employees will benefit, as they become highly marketable while others will be retrenched. The fortunate employees will form companies that will subcontract services to TELKOM.

Chapter Seven

7. Conclusion

This section attempts to draw conclusions from the critical analysis of privatisation of the telecommunications sector. All the problems at TELKOM can be addressed through the development of appropriate policies and programs that conform to the formula of the overall economic management policies. Without a holistic and systematic implementation of these policies privatisation per se cannot succeed. The central issues that were analysed centred on how best to service universal service and market based systems at a rapid pace cost-effectively, the form of privatisation, the importance of ownership, effectiveness of regulation, improvement in penetration rate of phones in relation to privatisation, effect of privatisation on the equipment industry, winners and losers from the privatisation process, tariffs, privatisation and competition, and policy issues the government should tackle with regards to the provision of telecommunications.

Chapter one introduced the subject of study and set out the theoretical foundation. The theories used were principal-agent, theory of contestable markets and regulation theory. It was noted that ownership matters such that it determines the efficiency factor of an enterprise. For efficiency to work there must be competition. Without competition privatisation becomes ineffective. Competition will work to a certain level; a regulatory regime will be required to act as a referee for the various stakeholders that are affected by the whole process. Chapter two contextualized the privatisation process by looking at the pros and cons of privatisation. This was intended to give a balanced view of the process. Privatisation methods were outlined but it should be noted that there is no single process that can be carbon copied to other situations. The best way is to look at each case taking into account specifics surrounding each enterprise. International experiences from both the developed and developing worlds were given to show that privatisation can succeed if applied properly. However it must be recognised that all processes of privatisation are not implemented smoothly. Chapter three looked at the importance of telecommunications and the factors that limit the benefits accruing from

telecommunications provision. Telecommunications is increasingly seen as a major component of economic and social development. Chapter four looked at the telecommunications sector of South Africa during the apartheid era (from the 70s until 1994). The chapter specifically looked at TELKOM and its profile. It was found out that a massive digitalisation program was implemented in the 1980s and the penetration rate exhibited a skewed pattern mainly because of apartheid policies based on race relations. The equipment market was closely controlled while the finances of SAPT and its service record continued to deteriorate. This led to the commercialisation of the parastatal in 1991. Chapter five looked at post apartheid changes and challenges faced by TELKOM. Universal service was actively supported but there were no funds dedicated to the project as the cost of maintenance and new service provision started to increase. Coupled with technological and structural changes (new communication paths), globalisation and shifts in economic thinking, there was a push towards privatisation. TELKOM operations were not efficient even when profits were being posted. Chapter six concentrated on analysing the effect of privatisation on different stakeholders. The bulk of stakeholders stand to benefit in the long run from the privatisation process.

Privatisation is seen as an attempt to improve the performance of public enterprises by altering the market structure. Success or failure of a program depends on the suitability of the methods chosen and the interplay of ownership, competition and regulation forces. Policy formulation should not be rigid to allow various stakeholders to participate. The Malaysian case has been successful especially with local empowerment resulting in improved service and quality. The privatisation program should be promoted encompassing the models of various countries as well as the development of techniques that are grass roots based. Achievement of efficiency depends on framework of competition and regulation in which privatised firms are to operate. Market power should be balanced by regulation. TELKOM at the moment cannot operate efficiently because the government owns the majority of shares (70%). The government should dispose of its shares to various stakeholders including a stake in black ownership. This should be done gradually to give time for the establishment of rules and regulation. Though desirable, proposals for full privatisation even among the active reformers are rare- because most governments believe that even if

ultimately deemed desirable full-privatisation is too large a step to be taken all at once. (Kent, 1987). Pressures from abroad have forced TELKOM to change its *modus operandi*. TELKOM has no choice but to respond to these pressures. Cell phones and the Internet for example, have proved that a monopoly is hard to sustain and efficiency and effectiveness are enhanced through private ownership. British Telecom is a good barometer for TELKOM operations efficiency, as the company has been sharpened and expanded.

The skewed provision of telecommunications that was inherited from the past requires addressing. There should be a two throned approach in the telecommunications policy of the government. Trade-offs should be struck between universal service and market based telecommunications development. The unconstrained pursuit of profits might conflict with social objectives so regulations in the form of price controls and universal service obligations should remain. The Malaysian model may promote one aspect, while the British model promotes another within the context of South African case.

TELKOM is not competitive by international standards. This may be in part a true reflection of the overall economic performance of South Africa. Competitiveness is crucial for economic development. Labour productivity is very low compared to other developed or emerging economies. Foreman-Peck noted that total productivity indices suggest an improvement in the productivity performance of the telecommunications industry because of privatisation. (Foreman-Peck, 1991). "British Telekom quoted a calculation that productivity improved by 1.8% over the five years to 1984 and by 3.4% per annum over the five years to 1989 showing that total-factor productivity increased after privatisation. (Horwitz, 1992). However the telecommunications industry which has been producing certain products on licence basis is poised to become competitive if it manages to seize the opportunity being created by markets opening up. Global alliances, strategic partners and mergers have become the norm today and these will greatly influence operations of telecommunications companies.

Competition has not been good so far. In fact there is very little form of competition except in the cellular industry which is more market oriented. TELKOM is facing

increasing competition in its long distance phone from global carriers such as AT&T and other carriers, which threaten to eat into TELKOM's revenue base. Competitive provision of services in both the local and long distance phone can be successfully implemented provided there is good regulation and there is separation of service provision and infrastructure provision. Transtel, ESKOM and SABC can provide interconnection facilities alongside TELKOM's and partnerships sought to share the revenue that might be taken away from the corporation. Such collaborative effort would also help defray expenses by pooling resources together.]

In a nutshell privatisation of TELKOM will achieve the desired objectives if the market structure is altered, competitive provision of service is introduced and a good regulation capacity is instituted. Privatisation has to be part of a larger program of reforms promoting efficiency in order to work. In the case where the private sector is growing fast, the government should not concentrate on privatisation per se but try to promote the emergence of the private sector.

7.1 Beneficiaries and losers

There are no absolute winners and losers in the privatisation process. In one sector there are those who benefit and those who lose. Equipment manufacturers initially felt uneasy with privatisation since they had contractual obligations with TELKOM. They are now going to enter service markets as well and import goods from overseas markets. These companies are also likely to diversify into other IT areas especially office systems as this is the worldwide trend. Nippon Electric Company (NEC) of Japan diversified into other electronic fields in the last decade. Government policy at the moment is congruent with the overall industrial strategies of the country e.g. export promotion thrust. This will automatically put electronics firms on competitive path for their products. Markets are being opened up and new companies are now supplying TELKOM. Bouyant companies are starting to team up with other foreign partners and penetrate other African as well as Asian and European markets. Indigenous firms will also benefit but to a limited extent as they do not have the technical ability to undertake such projects. Although there are measures to protect the domestic electronic sector, new policy measures should be in line with GATT programs.

MNCs will benefit from the privatisation process, as they want to increase their market shares/profits. These companies are spanning their tentacles to all corners of the world. The major benefactors are companies in the industrialised countries like AT&T and British Telecom. "Sub-Saharan African countries and several other developing countries and least developed countries will suffer net losses." (Raghava, 1997).

The business sector will benefit from specialised services as part of TELKOM's two thronged strategy for telecommunications provision. Small business contracts to emerging SMMEs will be available to those in the technical field. However the business sector will still need a social responsibility program if it has to operate in a dynamic environment.

Residential consumers are likely to benefit from competition because it will increase telephone access. Underprivileged areas will get more phones during the rollout program. More public phones will be made available in areas, which cannot get residential phones as part of universal service commitment. The problem is that an increase in phones without accompanying economic empowerment in terms of job creation will not yield the expected results for TELKOM. This might result in TELKOM and its partner increasing tariffs with time to recoup costs expended during the expansion phase. In Mexico, a World Bank report reveals that foreign shareholders made \$12 billion out of the sale of Mexico's telecommunications utility, Telmex, and that local telephone tariffs have gone up so much that the big losers are consumers worse off by \$35 billion." (Business Day 03/06/96). This can be averted in South Africa if there are interlinkages with other network operators in the provision of telecommunications.

The region is also likely to benefit from privatisation. South Africa is poised to become a telecommunications hub of Southern Africa. The SAFE project (South Africa Far East) in collaboration with Malaysia Telkom plan to lay a fibre optic cable between South Africa and Malaysia with various spurs along the way. (Mikej@wn.apc.org) (May 1997). Regional interconnection to the Far East will thus flow via South Africa and this could be a source of revenue for South African

telecommunications. The Far East is important for South African trade. In North Africa SEA-ME-WEA fibre cable has recently been laid along the Red Sea (Djibouti and Egypt). SAT-2 fibre link to Europe and North America is also an important backbone for South Africa. TELKOM's growth has to be integrated within the other African telecommunication operators offering transit facilities to Sub-Saharan countries. However it is recommended that telecommunications provision in the region be provided cost effectively through shared hub services within the SADC communications protocol.

[TELKOM will benefit as cellular networks, ISPs and other third party networks leasing services from the corporation pay licences, fees and other charges. Increased phone penetration would mean more revenue as the subscriber base is widened. It should be noted however that the business sector contributes more revenue despite the fact that residential consumers have more phones than the business sector.]

The government will also benefit through taxes and dividends from TELKOM. The *Sowetan* reported that TELKOM has contributed R1,1 billion in taxes during the 1997-98 financial year and paid over R400 million in dividends to the Government. and did not receive any funding from Government. During the 1997-98 financial year the corporation recorded a profit of R3,5 billion. (*Sowetan*, 6/7/98) The Government's positive attitude towards the telephone service provider over the years will enhance the business for TELKOM for years to come.]

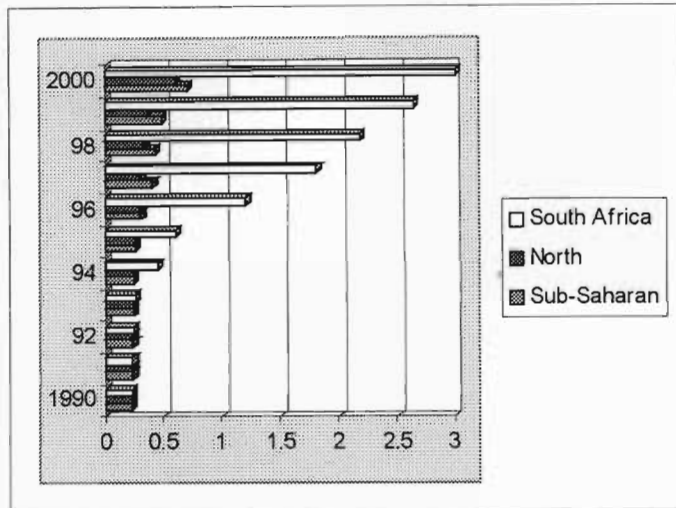
Presently the government in South Africa is promoting the GEAR strategy, which is a compromise between social and market provision of goods and services. There is growing evidence that delaying the introduction of liberalisation would considerably slow expansion of universal service in countries with relatively low penetration rates. Telecommunications should be part of overall economic growth that should not be pursued in isolation but as an integrated development strategy for it to work. It is therefore essential that a multi-sectoral approach be implemented to take care of such things as housing, water and sanitation and the provision of electricity otherwise a parochial focus on telecommunications alone will not yield the desired results.)

Appendix A

A1 Cellular Communication

Cellular communication has supplemented fixed wire communication but has been largely confined to urban areas and the business sector due to the cost factor. Cellular phones are used as ancillary to the established landline service for some while others use it because they do not have landlines. Set-up costs are high and the terminal equipment and rentals very high. In April 1993 licences were put to tender for a 15-year cellular licence. Vodacom (50% shares owned by TELKOM) won and was switched on in June 1994 with 120000 subscribers in the first six months. (Song, 1994). In September MTN won the second tender creating a two way oligopolistic competition. Cellular telephony would have been cheaper if the networks were allowed to use Transnet and Eskom networks. The annual turnover of VODACOM is an indication of cellular success: for the financial year ending 31 March 1998 turnover was R4.5 billion. (*Sunday Times Business News*, 3/5/98). Cell phones in South Africa have been a huge success beyond expectation, as the analysis below will show.

Cellular Subscriber Growth in Africa



(Source: adapted from ITU in *Sunday Times Business Times*, 3/5/98).

The cellular industry has led to job creation as well as business efficiency. TELKOM itself has benefited although the cellular industry has taken away a portion of telecommunications market from TELKOM. Benefits for TELKOM include charges made from calls that go via the fixed wire network of TELKOM. In this respect TELKOM has earned close to R1 billion from both Vodacom and MTN since the launch of the cellular networks. The government has also raked in R6 billion in taxes over 10 years. (*Sunday Times Business Times*, 29/9/96).

The cellular market is oligopolistic and there have been accusations from various quotas about collusion between the two successful companies. This calls for a closer supervision to prevent collusion. Vodacom will invest R2.5 billion to increase its capacity after reaching a subscriber base of one million in 1998. Up to 1996 the company had invested R2.8 billion higher than the R811 million over 10 years as indicated in its application licence. There is room to create capacity for two million users by 1999 as it is estimated that there is potential for 10 million cell users in South Africa. (Alan Knott-Craig, *Vodacom's Group Chief Executive* 4/98).

In an effort to increase competition there have been calls to award a third cellular licence to another company. Some see this as an opportunity for black economic empowerment in the telecommunications sector as there has not been such a deal in the part privatisation of TELKOM. The MTN Chief Executive poured cold water over

the idea by saying "I wouldn't want to be the guy running it, because by the time it is operational- in probably two to three years- the two existing players, which now have about R5 billion invested in infrastructure will have around R9 billion invested. I don't know where that kind of money will be forthcoming..." (Chaphe, *ibid*). It will be difficult for the proposed cell company to set a foothold in South Africa considering the investments already made and the more than one million customers each for MTN and Vodacom.

[MTN and Vodacom have also a vision for the disadvantaged people through their commitment to universal service. In 1996, the two companies introduced Companion and Vodago respectively. This system makes cellular phones more affordable. It is not aimed exclusively at the poor but for those who want to control their finances. Successes in the cellular industry have thus put a thrust towards privatisation of telecommunications in South Africa.]

A2 Wireless Services

"Private telecommunication provider find less of investment risks in upgrading high volume, high profit urban areas, without similar upgrades, rural communities could fall further behind. Greater use of wireless technologies in rural areas nullify this drawback." (Read and Youtie, 1996; 14). SA has started to use the DECT system, which is designed for high-density residential areas. The system is also designed to quicken the pace of installation and beat theft of copper wires. Wireless technology is designed to redress past imbalances in the provision of basic telecommunications. About 60% of the planned roll out of 2.8 million new lines in the period of TELKOM's exclusivity will use wireless technology, DECT. (Dante Mashile, *Department of Communications 5/98*). The main problem with the system that the system is prone to many pressures such as bad weather patterns.

A3 Satellite Systems

Satellites can be used to provide cheaper forms of communication especially to poorer areas. Such systems will speed up the provision of telecommunications in South Africa and will be in competition with TELKOM. There are plans for other satellite communication based system such as Iridium and Teledesic which are designed to enhance improved communication from the most remote areas of the continent, but

costs are unlikely to be within the reach of the average person for until the first decade of the next century. (Jensen, 1997). In Canada, the first country to operate satellite telephony in rural communication, there is still lack of service on thin routes/remote areas because of prohibitive costs.

A4 The Internet

The Internet is a multi-million dollar industry with estimates of turnover ranging from R150 million to R200 million a year and 4000 people in its employ. (*Sunday Times Business Times* 2/11/97). It has been growing without anybody noticing since the servers are located in various parts of the world. The Internet globally is not centralised and is much freer from government control. It is however under threat in the USA and other countries because it is posing big security risks to national security as evidenced by hacking incidences. In some illiberal countries such as Singapore, the Internet is censored since it has the potential to risk the moral fabric of society. At one stage or the other self-policing rules will become obsolete and there would be need for regulation as the network and the degree of complexity grows (regulation theory). "Major risks of the Internet include information overload (congestion), safeguarding privacy of e-mail messages, credit card information, sensitive data, and unauthorised entry. Building 'firewalls' and anti-spoofing software programs has created a boost for another industry- software development/programrs." (Jussawala, 1995). Information asymmetry between the north and south may lead to more one-way information from the north to the south, rather than the promotion of genuine communication.

SAIX was established by TELKOM as a central tool for accessing international information highway at a cheaper rate. SAIX has 20 000 subscribers to the dial-up market while it is estimated that there are 154 276 South Africans accessing the Internet through dial-up modems via Internet Service Providers (ISP). (*Sunday Times Business Times*, 2/11/97). The Internet Service Providers Association (ISPA) has however disputed the role of TELKOM's SAIX. TELKOM cannot be both the provider of access route and terminal Internet service provider because it is possible that TELKOM subsidises SAIX to the detriment of other ISP providers. According to TELKOM, SAIX was launched to provide South Africans- business and private use-, with low-cost entry into the world of superhighway. (*The Mercury Business Report*

4/7/96). Other telecommunications companies around the world are doing the same but ISPA sees this as a threat to their businesses and have taken TELKOM to SATRA for arbitration.

TELKOM's position was supported by the Telecommunications Act (103 of 1996) which provides for a licence to be granted to TELKOM to provide basic telecommunications services with a period of exclusivity for the provision of national long-distance telecommunications services, local access telecommunications services and public pay-telephone services. Internet access is thus not mentioned but TELKOM can say it's a basic service. Continued exclusivity will harm employment and operations of other Internet companies. The Internet industry cannot be isolated from the international privatisation perspective. On the other hand if IPSs are allowed to operate on market forces, they will lead to a costly Internet access since they are likely to be driven by the profit motive. What is required then is effective independent regulation. The problem is compounded by lack of policy over the Internet on the part of the government.

Thus the Internet has provided an impetus for privatisation of TELKOM as it has operated independently. Regulations are required as the organisation has become too big to institute self-policing measures. This is in line with capitalist economic principles, which call for regulation where market forces cannot operate effectively.)

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