

**TRANSPORT ECONOMIC REGULATORY INTERVENTION
IN THE TRANSPORT INFRASTRUCTURE: A PUBLIC-
PRIVATE PARTNERSHIP EXPLORATORY STUDY**

by

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DECLARATION

I declare that *Transport Economic Regulatory Intervention in the Transport Infrastructure: A Public-private partnership Exploratory Study* is my own work and that all sources that I have used or quoted have been indicated and acknowledged by means of complete references.

John Khulumane Maluleka

15 January 2008

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ABSTRACT

The aim of this study is to determine whether the introduction of a transport economic regulatory authority would serve as a valid intervention mechanism in the Public-Private Partnership of the transport infrastructure in South Africa. In order to achieve this objective, the study focused on the analysis of the concept of Public-Private Partnership, and how it has unfolded in a number of industrialised countries. Much attention was devoted in examining how the Public-Private Partnership arrangements followed by the studied countries influenced the current transport infrastructure management process in South Africa.

To deal with the above, a host of macro-environmental variables were analysed in respect of their potential impact on the South African Department of Transport. The establishment of various agencies by the Department of Transport was seen as a consequence of the influence of the prevailing environmental forces. The outcome of the analysis revealed that a sustainable transport infrastructural development is a product of genuine partnership between the public and private sectors.

Competition for the market and the significance of such competition in the transport infrastructure were outlined. The main goal of competition within the context of this study is to diffuse the economic power of the toll road industry and the protection of the individual's fundamental rights. The study also unearthed a need to deepen the talent and skills of both public and private sector officials as this would enable them to protect the citizens' right to make well-considered choices in the toll road industry.

The study identified a need to establish a transport economic regulatory authority that would control the market dynamics of power relationships in the transport industry. Such a body should be creative and need to have regulatory oversight

over transport infrastructure.

Key concepts

Public-Private Partnerships, transport infrastructure, concession agreement, regulatory intervention, competition for the market, competition in the market, road user' fundamental rights, regulation of toll road industry, Department of Transport, transport economic regulatory authority.

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CHAPTER 1

A PERSPECTIVE ON PUBLIC-PRIVATE PARTNERSHIP

1.1 INTRODUCTION

Presently transport businesses world-wide are increasingly becoming exposed to the economic elements of competition, private ownership and tendered operations to the extent that transportation matters have taken on important economic dimensions. These economic elements have created new challenges that have prompted the public sector to loosen its monopoly on transportation and deliberately strive toward designing strategies geared at improving the provision of transportation services, thereby reducing the level of subsidy from the State. The efficacy of the strategy to involve the private sector as a partner in service delivery is excellent; and Hensher and Brewer (2001:14) support that the provision of electricity, telecommunications, water and gas utilities, and postal services could be done more effectively in partnership with the private sector. The outcome of the above research study clearly indicates that the application of Public-Private Partnerships (PPP) is a phenomenon that if extended to the transport sector could benefit it tremendously.

In fact, Mr Radebe, the then Minister of Public Enterprises has in his foreword address in 2000, stressed the fact that South Africa has begun to integrate itself into the global environment as a worthy member of the international community. More precisely, South Africa has become an important agent towards the realisation of the African Renaissance dream. In this regard, the accelerated restructuring process involving the Public-Private Partnership that aims to enable the private sector to have a stake in state-owned enterprises has become a matter of urgency because of the private sector's economic muscle. Seen in this context, the researcher of this investigation is not only motivated but is also indebted to the study conducted by Hensher and Brewer (2001), which shows

clearly how Public-Private Partnerships could achieve wonders in improving the economy. Thus, the focal point of this study is to determine the efficacy of Public-Private Partnerships in the transport sector with regard to the improvement of service delivery. This will receive attention in the chapters that follow.

Having said the above, the National Treasury (2001:3) acknowledges the fact that the concept of Public-Private Partnerships is a relatively new phenomenon in South Africa. Consequently, Treasury Regulations have come out with a simple definition that sees Public-Private Partnerships (PPP) as

“...a contractual arrangement between a public sector entity and a private sector entity whereby the private sector performs a departmental function in accordance with an output based specification for a specified, significant period of time in return for a benefit, which is normally in the form of financial remuneration. Such a contract also involves a substantial transfer of all forms of project-life-cycle risk to the private sector. The public sector retains a significant role in the partnership project either as the main purchaser of the services provided or as the main enabler of the project”.

The process of accomplishing a Public-Private Partnership includes a stage usually referred to as the commercialisation phase. According to Roodt (1991:33), “commercialisation is aimed at making state enterprises economically viable without the transfer of ownership”. Seen from the context of toll roads, commercialisation is regarded as bringing the roads into the market place, putting them on a fee for service basis and managing them as a business (Heggie 1995:32). Roodt (1991:30) supports this by saying “commercialization implies a change in organisational culture. This calls for the redefinition of new values by management for both the organisation and its employees”.

The validity of the statements by both Heggie and Roodt is confirmed by the way

the South African National Roads Agency Limited's Horizon Twenty Ten Strategy has encouraged the private sector to submit unsolicited bids to develop and maintain the road infrastructure and services (SANRAL, 2002:28). According to SANRAL (2002:7), the public sector has transformed its organisational structure, which is a clear indication of a move towards a change in organisational culture and values because it is only in the presence of such a move that Public-Private Partnerships can come into being.

Roodt (1991:33) stresses the importance of communication during the commercialisation process, as this would help to facilitate production and innovation. This is also confirmed by the Horizon Twenty Ten Strategy document which states that the Agency has moved beyond organisational structure that typifies bureaucracy and has since its formation, embarked on informing, educating and communicating to various stakeholders with a view to stimulating the interactive relationships. The internal capabilities and attributes of employees of the South African National Roads Agency Limited have also been factored into the organisational design of the agency.

In his research, Roodt (1991:33) further reveals that government officially embarked on a commercialisation programme in 1987, when a White Paper on privatisation and deregulation was tabled in Parliament. Although supported in the political and economic environments, these initiatives were rejected by the black unions affiliated to COSATU as they were deemed not to serve black interests. The process of Public-Private Partnerships as discussed in this study takes into consideration the South African situation that encompasses the stages from the time when the national roads network was still under the South African Roads Board (SARB) (Mitchell and Dehlen, 1980:205). The process includes the contemporary era of the South African National Roads Agency Limited as reflected in the Horizon Twenty Ten strategy document (SANRAL, 2002:1).

According to the White Paper on National Transport Policy (1996:10), government has a role in controlling tariffs and in setting service and safety

standards. Attention is focused mainly on how to subject the concession companies to economic regulations. This brings the dimension of striving to establish regulatory intervention in a Public-Private Partnership arrangement which is part of what this study seeks to achieve.

It is crucial to point out that this study focuses on transport infrastructure with extensive emphasis on the Public-Private Partnership initiatives as applied in the road network. The focus is therefore on the road transport infrastructure precisely because a number of countries identified for this exploratory study had in the past, executed Public-Private Partnership projects in the road infrastructure.

1.1.1 Need for the regulatory authority

The Department of Transport has increasingly recognised that its role should be in crafting policy for service provision, and not in providing services. This separation of policy making from provision makes it possible to introduce the private sector entities that normally compete in the provision of services in the market place. What needs to be avoided at all costs is to allow operators to operate as monopolies. This view is supported by Arnold (2008:273) who maintains that natural monopolies need to be subjected to among other things, price regulation. It is on the basis of this reasoning that the study strives to explore various regulatory interventions in the Public-Private Partnership arrangement.

Regulation means government imposed controls on particular aspects of business activity. When government regulates an infrastructure sector, it imposes direct and indirect controls on the decisions or actions of enterprises within that sector. Government controls can cover many dimensions of business activities. In addition to economic regulation, a government may impose environmental requirements on infrastructure enterprises. The focus of this study is on the economic regulation of private sector entities dealing with transport infrastructure such as roads.

Within economic regulation, the two core regulatory tasks are the setting, monitoring, and enforcing of maximum tariffs and of minimum service standards. Of the two, control over the maximum prices that enterprises can charge is the more visible and controversial regulatory task. Although tariff levels usually receive the most public attention, they are by no means the only dimension of economic regulation. Economic regulation may also include controls over tariff structures, quality of service standards, access conditions to networks, entry and exit conditions for participants, and investment obligations relative to existing and new customers.

1.1.2 Private versus public good characteristics

A public good is one where the benefits of its provision cannot be limited only to those who pay for it, and where its use does not limit the quantity available to others. The provision of a road is an example of a public good. Anyone using a road benefits from such a road and the fact that one person uses it does not decrease the amount available for someone else. What this study strives to attain is that toll roads operators should not be allowed to operate as monopolists.

1.1.3 Pricing versus fairness

Shiftan, Button and Nijkamp (2007:541) stress the importance of charging motorists prices which cover the costs of congestion and environmental damage they impose on others. While this study is in support of the wisdom outlined by the above theorists, a motivation to establish an economic regulatory authority is presented to ensure that there is fairness in the determination of prices to be paid by the users of transport infrastructure. The study would therefore encompass the analysis of how other countries have ventured into Public-Private Partnership and also how regulatory mechanisms were set in place to ensure that the process unfolds unhindered.

A transport economic regulatory authority serves as an institution with oversight responsibilities on the setting of tariff structures for operators. In an attempt to

assess the validity of establishing such an institution, an outline of regulatory institutions in other selected countries would receive attention to guide the study to arrive at the right regulatory option in South Africa.

Figure 1.1 details the process whereby the Public-Private Partnership is supposed to begin to take charge of the national roads that were under the Department of Transport's Roads Board. In this context, however, it should be noted that the formation of the South African National Roads Agency Limited is aimed at affording the Department of Transport to align itself with government's commitment to the process of the transformation of the public sector. The latter body was thus formed in 1998 as an independent statutory company operating along commercial lines to deliver and maintain the national road network in South Africa. Its purpose is to maintain and develop South Africa's 7200 km national road network (SANRAL, 2002:6). This study also explores whether a Public-Private Partnership is indeed the recommended strategy for implementation in its current status, which lacks the intervention of an independent transport economic regulatory body.

Consequently, the Project Information Memorandum (1998:22) which was prepared by the N3 Consortium clearly states that toll roads are not owned by the toll concession companies but they remain the property of the state and are handed back to the state after a 25 to 30 year concession period. Sader (2000:90) also confirms the idea that the private sector may not own the infrastructure but would have the right to build it, to operate it and to transfer it back to government under a Build Operate and Transfer (BOT) agreement.

Again, it should be noted that the process of change meant to usher in the Public-Private Partnership has impacted on the Department of Transport thereby giving rise to a commercialisation phase as indicated in Figure 1.1. This led to the need to apply business principles to government-owned enterprises, hence various agencies were formed, inter alia the National Roads Agency. With the advent of this process, new opportunities presented themselves and the result

was the formation of various private sector entities, amongst which the establishment of toll concession companies like the N3 Toll Concession (Pty) Ltd. The South African National Roads Agency played a catalytic role in ensuring that the concessioning process of national roads takes place as planned.

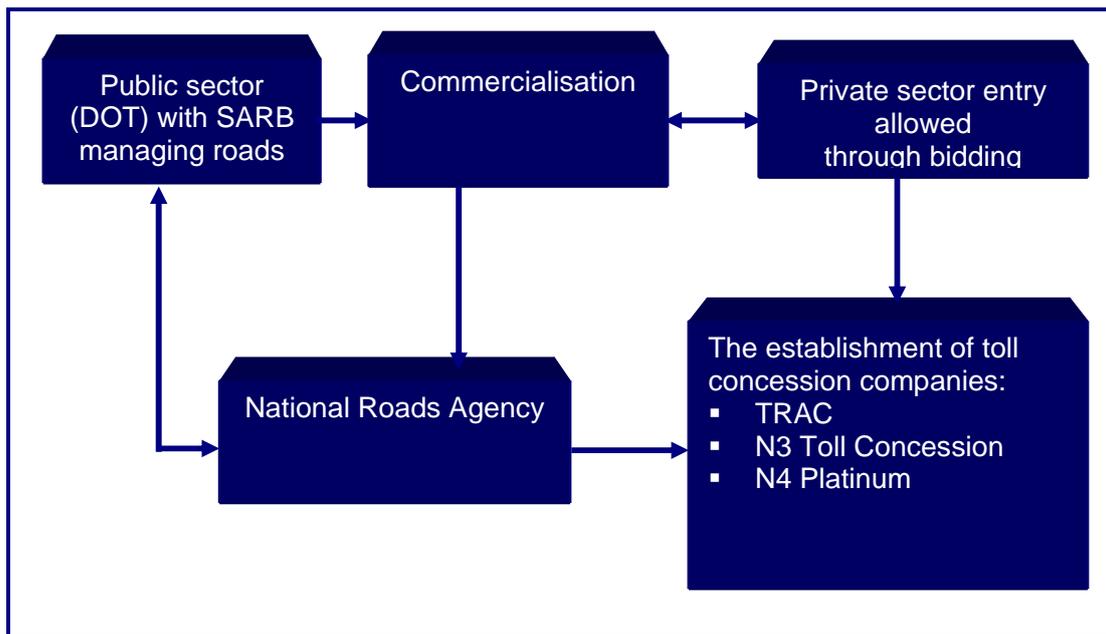


Figure 1.1: Public-Private Partnership process

As a point of departure, this study sees the Public-Private Partnership as a process that requires the intervention of a regulatory body that should focus not only on the toll road network but also on the entire transport infrastructure in South Africa. Accordingly, Geddes (2005:42) states that the private sector consists of a number of individual businesses, some of which are unlikely to want to commit scarce resources to partnership schemes, unless there is a direct benefit to them. It is important but also imperative for this study to ascertain whether the private sector is actually getting what is legally and legitimately due to it or not in terms of the above arrangement. This is so because citizens are often getting the short end of the deal by being exploited.

1.2 WHY PUBLIC-PRIVATE PARTNERSHIPS?

According to the National Treasury (2001:3), correctly used Public-Private-Partnerships could be a useful service delivery option and could have a number of benefits, such as operational gains and strategic clarity. This should be seen in the light of the need to reduce the state subsidy to the public sector. Hence, it is important to note that, according to the South African Reserve Bank's September Quarterly Bulletin (2005:27) South Africa's outstanding foreign debt rose substantially in the first quarter of 2005. In total, the country's debt increased by US\$3,1 billion from US\$42,3 billion at the end of 2004 to US\$45,4 billion in the first quarter of 2005. Clearly, these figures show that substantial amounts of funds are needed which government alone cannot generate, thus there is a great need for the private sector for assistance.

It should be stressed that it is the intention of government to strive increasingly at attempts to lower the public sector's borrowing tendencies, because the repayments of such debts become obstacles in its desire to meet such burning commitments as those of a social and educational nature. For ease of reference, the Budget Review (2005:19) summarises the debt trends and borrowing costs in Table 1.1, which simultaneously indicates a summary of the anticipated trends in total debt and state debt costs. No doubt, a Public-Private Partnership is a way to go if progress is to be achieved in the transport industry in South Africa.

Table 1.1: The total debt and state debt costs

R billion	2004/05	2005 / 06	Projected figures	
			2006 / 07	2007 / 08
Net loan debt (end of year)	481,7	540,5	603,9	666,4
% of GDP	34,3%	35,4%	36,1%	36,1%
Domestic debt	412,5	455,7	507,2	559,4
Foreign debt	69,2%	84,8%	96,7%	107,0%
State debt costs	48,9	53,1	56,6	59,4
% of expenditure	13,2%	12,7%	12,4%	12,0%
% of GDP	3,5%	3,5%	3,4%	3,2%

Source: Budget Review 2005:19

Public-Private Partnerships may form a means of attracting investment that would eventually improve the country's economic outlook. In the light of Table 1.1 total government debt as a percentage of GDP is projected to increase from 34,3 percent at the end of March 2005 to 36,1 percent by the end of the 2007/08 (Budget Review, 2005:19). In order to attract investments, Treasury has reviewed its treasury operations, implying that restructuring efforts are now focused on increasing the investment capabilities of major state enterprises, particularly in transport infrastructure. The Department of Public Enterprises also ensures that state-owned enterprises attract more foreign direct investment so as to provide access to new technology and thus contributing positively to South Africa's industrial competitiveness (Policy Framework for Accelerated Agenda for Restructuring, 2000:4).

The South African government also aims to promote wider private ownership and participation in the economy, improving service delivery in terms of cost, quality and access, and to promote human resources development, including the development of management skills for state-owned enterprises. Comparative assessment of the restructuring of state-owned enterprises and Public-Private Partnership initiatives shows short-term job losses in some sectors, either from existing over-employment or from new challenges facing these enterprises (Policy Framework for Accelerated Agenda for Restructuring, 2000:6).

According to the Department of Finance's Growth, Employment and Redistribution Strategy (1996), as quoted in the Accelerated Agenda Towards the Restructuring of State Owned Enterprises Policy Framework (2000:13), the macro-economic perspective of South Africa is changing rapidly. This is confirmed by South Africa at a glance (2006/2007) which states that "economic policy will continue to focus on increasing economic growth and investment in order to create employment". There are indicators signalling a change in the economic outlook of the country. For instance, Table 1.2 shows the main economic indicators in the form of the real GDP growth on a year-to-year basis and population growth trend dating back from 1999 up to the projected year 2004.

As all things change over time, within the context of this study, this should be looked at in relation to the reintegration of the South African economy into the world economy. Accordingly, many opportunities unfold as a result of the modernisation of South Africa's transport infrastructure. The State President, Mr. Thabo Mbeki, stressed that, in order to service the broad range of requirements, there has to be investment in infrastructure development in the form of Public-Private Partnerships (Mbeki Speech: The African Renaissance, South Africa and the World).

Table 1.2: Economic indicators

	1999	2000	2001	2002	2003	2004
Real GDP growth (%y-o-y)	2,12	3,36	2,22	2,70	3,40	3,70
Population (m)	43,0	43,8	44,7	45,1	45,5	45,9

Source: Business Monitor International, Q4 2002:13.

In addition to the change in the real GDP as reflected in Table 1.2, the Accelerated Agenda Towards the Restructuring of State Owned Enterprises Policy Framework (South Africa 2000:155) states that “state owned enterprises ownership can be broadened through the National Empowerment Fund in ways that address the problems in existing empowerment related financial engineering”. The new approaches would provide a range of equity schemes for those previously excluded from the mainstream economic participation”. In the toll roads industry, the issue of empowerment of the historically disadvantaged enterprises or individuals is imperative and forms part of the concession contract (N3 Project Information Memorandum, 1998).

The process of ensuring small, micro and medium enterprise (SMME). participation in the Public-Private Partnership setting is not confined to the road sector alone but open to all sectors of the economy. It should be mentioned that government has embarked on a restructuring process of the parastatals like ESKOM, Transnet and Telkom (Accelerated Agenda Towards the Restructuring of State Owned Enterprises Policy Framework, 2000:131–147). These parastatals are in the process of restructuring with the aim of eventually achieving a workable and viable Public-Private Partnership arrangement. Such

type of arrangement or agreement ensures that the private sector also shares in the newly formed enterprise. In the long run, this is aimed at attending to the macro-economic needs in which investment is promoted, public sector debt is reduced, and social concerns such as employment losses and improving service delivery are addressed (Accelerated Agenda Towards the Restructuring of State Owned Enterprises Policy Framework, 2000:13).

1.2.1 Public-Private Partnership in infrastructure (international perspective)

The general feeling in many parts of the world still holds that Public-Private Partnerships is a way of eradicating poverty, particularly if a country is faced with a depression. In his exploratory research study, Mitchell (1987:6) also argues that when the United Kingdom economy was in a depression, an ambitious Public-Private Partnership programme was developed. The programme involved among other things, the sale to the private sector of major nationalised industries such as British Telecom and Amersham International. The question is if Public-Private Partnerships have become a trend in most parts of the world, in following the trend, what mechanism should be put in place to ensure that the users' of infrastructure are protected? Emanating from global trends, this study intends to make rational suggestions as to what South Africa should do in order to maintain mutual relationship between transport infrastructure providers and the users.

Bradshaw and Smith (2000:104) reveal that "in the United Kingdom Public-Private Partnership arrangements also covered peripheral to major public utilities such as the British Rail Hotels". Both the above research studies maintain the view that for a programme to reach fruition, it needs substantial support from government institutions. In the final analysis, the United Kingdom received the necessary support from the private sector to execute the programme now famously known as the deregulation and liberalisation of the competition policy. From such valuable support, the momentum to deregulate and liberalise the conomy was both gained and maintained.

The United Kingdom's Public-Private Partnership policy, although it appeared to be effective, was severely criticised, and perhaps unnecessarily so when looking at the merits of the policy per se. The criticisms revolved around the fact that there was a substantial shortage of procurement skills required for the improvement of service delivery in the public sector. It was therefore deemed essential to focus on building procurement skills capacity to ensure that value for money was achieved (HM Treasury, 2003:59). To avoid such a pitfall in South Africa, the National Treasury (2001:7) has established a Strategic Framework that has prescriptive powers on how the Public-Private Partnership Supply Chain Management is to operate.

Beesley and Little-Child (quoted by Thomson et al., 1986:57) are in support of Public-Private Partnerships and they stress that: "the concept is desirable particularly based on the fact that it has the potential to yield beneficial results to users in terms of enhanced responsiveness and safety in roads". According to these theorists, the rationale behind Public-Private Partnerships is to improve performance by allowing the market forces to take control of the situation. The pertinent question is whether the market forces without any regulatory body will be sufficient to determine toll tariffs that would be acceptable as viewed by users in the transport industry in South Africa.

It needs to be emphasised that the study seeks to assess the validity of introducing the overarching transport economic regulatory authority as an intervention in the management and operation of the transport infrastructure. Of major importance is that credit must be given to the good work done by the Department of Transport in the strategic management of the road network through its South African National Roads Agency Limited (SANRAL).

It should be taken into consideration that the road network is one of the indivisible public goods that are in the government's asset register and is confirmed by a study conducted by Botha (2005:1). In this respect, Botha (2005:1) specifically states that 'roads mostly exhibit the classic characteristics of

public goods, which requires fiscal intervention'. In addition, Botha stresses the fact that taxes are required to fund public sector infrastructure expenditures, which, in turn, reduce the levels of disposable income of taxpayers throughout the economy.

1.3 THE DEPARTMENT OF TRANSPORT

The Department of Transport, amongst other national bodies, such as the Department of Public Enterprises, which also plays a role in state-owned enterprises, is the most authoritative in respect of the responsibilities for land, sea, and air transport. These include the subsidisation of the rail and bus industries as well as managing airports and international civil aviation. In line with the wisdom of (Flaherty, Bell and Coleman, 1997: 21), the Department has also oversight of road transport which includes vehicle standards and safety. It therefore means that a Public-Private Partnership that comes into being should take serious cognisance of this reality if it is to function within the law of the land.

Naturally, there exists an inseparable relationship between land use and transport, which implies that if the Department of Transport is to achieve its aims and objectives, it needs to interact very closely with the Department of Planning and Development as well as the Department of Environment and Tourism (Flaherty et al., 1997:21). The reason for this interaction is that in the transportation planning process, particularly when taking strategic decisions in the construction of toll roads, the Department of Environment and Tourism has to give authorisation in terms of the environmental impact assessment plan compiled for a particular corridor. In his research studies about the risk profile analysis in Public-Private Partnership projects, Sader (2000:29) discovered that when there is a vacuum between political statements and administrative actions, projects often run into difficulties. It is often primarily due to lack of institutional integration, so that in cases where more than one sector is involved, failures of this nature occur.

In as far as South Africa's transport administration history is concerned; the previous Department of Transport was in charge of, among other things, the planning, implementation and control of road infrastructural strategies. The National Roads Branch of the Department of Transport was responsible for the construction and maintenance of the national roads system. Its funds were derived from the National Road Fund, which also made a contribution of 70 percent towards the cost of construction of special roads by the provinces. The income of the fund was derived mainly from a portion of the duties on liquid fuel apportioned to the fund (Transport Conference, 1980: 205).

This chapter has tried to capture South Africa's transport history and it is included here with a view to understanding the present situation so as to profile the future prospects as derived from the ever-changing role of government. The historical information further states that the construction, maintenance and operation of provincial roads of various classes were under the provincial administrations. The income of provincial administrations was derived from Treasury, with small income sources being vehicle and other licenses and permits, provincial taxes and levies, and the National Road Fund. The annual budget of each province was determined by Treasury on the basis of a formula that took into account the land area, length of the road system, car, tractor, truck population and traffic volume. Treasury allocated to each province the difference between the amount based on this formula and the province's own transport income (Transport Conference, 1980:206).

Lastly, the construction, maintenance and operation of freeways, roads, and streets within the municipal area were the responsibility of each municipality. This excluded certain through roads such as arterial roads or major roads, which were the responsibility of either the provincial administration or the Department of Transport's Roads Branch. Municipal road funds were derived mainly from municipal rates and taxes, with a small contribution from the province. The contribution from the National Roads Fund was mainly to compensate for the cost incurred in respect of maintenance of the freeway systems.

The municipalities channelled a portion of their funds into a consolidated municipal transport fund for use on roads and transport projects in the area. The only user charges, which municipalities levied, were fees for parking in streets and municipal garages (Transport Conference, 1980: 206).

1.4 THE CHANGING ROLE OF GOVERNMENT

The early eighties saw the beginning of a deliberate move on the part of government to adopt a policy of promoting Public-Private Partnerships in the construction and maintenance of the road network industry in the country. This came as a result of a severe economic downturn that was brought about by external forces, particularly the economic depression, which led to hardships that were specifically experienced by most industrialised countries from 1980 to 1982. A need to stimulate the South African economy came earnestly to the fore; however, the scope for economic expansion was constrained by the existing obligation to repay part of its foreign debt. To make things worse, the government expenditure was estimated to increase by 13,9 percent in 1986/87 (South African Reserve Bank, 1986:18).

This situation was so bad that it brought about the establishment of new companies in the transport industry. The new dispensation was well disposed towards the need to diversify resources as a way of expanding the pool of capital and expertise necessary for providing adequate skills essential to improve transport services the Department of Transport is expected to deliver. In other words, the reason for the establishment of the concession companies was viewed as an approach by the Department to express its interest in Public-Private Partnerships in the road construction industry through concession agreements. The main problem was and still is financial resources necessary to pay for the design, construction, maintenance and operation of certain roads and the capacity to collect tolls to defray some of the costs (Mitchell, 1987:2).

In pursuing the above objectives, the Department of Transport has gone even further by way of instituting a commission to investigate the possibility of awarding concessions to a consortium of private institutions that consists of

construction companies, banks, consulting engineers and toll operators. It is important to note that the need for increased private sector participation in the road sector was already a worldwide phenomenon as indicated in the previous paragraphs and therefore not limited to the South African context (Mitchell 1987:2).

To effect the necessary adaptations, the Department of Transport had to undergo profound changes since 1996 mainly due to financial needs and constraints plus the requirements of the new political dispensation. One of these important changes is the establishment of the National Roads Agency in 1998. Presently, rather than the Department of Transport being made responsible for doing road construction works, a Roads Agency is now charged with the responsibility of implementing tendering work ordered by the Department of Transport (SANRAL, 2002:56). In other words, while the formulation of policies and regulations falls directly under the Department of Transport, the financial risk has been apportioned to the party best able to deal with it. The current strategy is that a concession company or a consortium of companies is awarded a contract to fully manage the road infrastructure (DOT Business Plan, 1999-2000:53).

In trying to avert financial risk in the construction of roads, the government is no longer required to act as a financial guarantor in any of the concession agreements. For example, the concessionaire of the N4, Trans Africa Concession (or referred to as TRAC) has agreed to carry the full financial costs of building a R2 billion road between Witbank in Mpumalanga (South Africa) and Maputo in Mozambique. This venture has heralded a new era for road financing. It is definitely a first in what promises to be a dynamic programme of toll-road concession contracts in South Africa. Hence, under the envisaged Public-Private Partnership contract, the risk of designing, building, financing and operating the road is transferred to the private sector (DOT Business Plan, 1999-2000:53).

1.4.1 Commercialisation

The concept of commercialisation can be seen as a financial break-even based on commercial principles for public enterprises. It is also a process leading towards privatisation and should not be seen as a means of creating measures by which monopolies are artificially created through protective legislation. As already pointed out, this should be seen as a worldwide phenomenon with enormous challenges and opportunities that should be accepted by the South African public sector because it offers greater business potential.

Perhaps it is now appropriate to advance reasons why public institutions deem it prudent to pursue the commercialisation route in the strategic management of their organisations of late. The main reason is that it is now a requirement of the South African law that every state developmental institution should ensure that civil society is adequately represented on the board of public corporations. Against this background, public institutions are further required to be transparent and open in both structure and decision-making processes. This means that they should act within the framework of public policy and that they should be duty bound to inform the general public as well as to account to parliament (Republic of South Africa, 1994:128). The commercialisation of public institutions is purposefully designed to fulfil these requirements as contained in the Reconstruction and Development Programme.

In the previous sections, the concept Public-Private Partnership has been defined, however, more clarity of the term is necessary in order to put into context the macro-economic processes that distinguish clearly between public and private goods. According to Basanes, Uribe and Willig (1999:17), private goods are those that allow rivalry and exclusion, and public goods are those that exhibit non-rivalry and non-exclusion. Theoretically speaking, the commercialised roads which in principle are under the management of the private sector, are classified as private goods and therefore would allow rivalry and thus need to be subjected to a regulatory authority to control the pricing structure in the market

place. Governments throughout the world, including many poor African and South Asian countries, are commercialising their public operations to cut costs, improve user orientation, and increase sector-specific revenue (Estache and De Rus, 2000:236). In these countries, those of South Asia in particular, specialised technical agencies have been introduced to manage utilities such as potable water, electricity or housing for the poor. In the South African situation, technical agencies like the South African National Roads Agency Ltd (SANRAL) that serve as regulatory authorities overseeing the strategic management of national roads were established. It is therefore theoretically correct for the South African National Roads Agency Ltd to be autonomous as supported by Estache (1995:9), where he points out that "the Agencies are usually autonomous or responsible to a government minister and are empowered to override local authorities".

However, practically this is not attainable. Sader (2000:57) points out that "it is evident that practically, governments tend to be very hesitant to grant these newly established regulators sufficient autonomy to become a truly technical authority". On the contrary it is found that political objectives are frequently introduced, resulting in the imposition of the criteria and conditions that do not accommodate investor concerns.

In South Africa, the commercialisation challenges have led to new national objectives being formulated as embodied in the Reconstruction and Development Programme. The responsibilities of different levels of Governments have changed; hence the tolling of roads has shifted from the Department of Transport to the National Roads Agency. This came as a result of the national Roads Act, Act No 7 of 1998, that allowed for the tolling of national roads (Republic of South Africa, 1998c:34).

Commercialisation could also be viewed as the first step towards the free market system. The free market system suggests that the service delivery system should be removed from the public budget and placed separately on its own, with its closed profit and loss account. According to the New Zealand experience as

contained in Heggie (1995:1), this transition from a government enterprise to a private concern could be categorised into four stages. Firstly, the area of no-centralised control, then the area of central government control (bureaucratic), followed by that of central government control (commercial) and lastly the area of free market or privatisation control.

1.4.1.1 Stage 1: No centralised control

This stage is largely categorised by an uncoordinated development of local routes that are meant to service only local needs by means of the most rudimentary types of routes and pavements that appear to have little or no ownership to take care of them.

1.4.1.2 Stage 2: Central government control (bureaucratic)

In this stage, government's responsibility is more focused on networks and funding provision or assistance for local roads. This is often characterised by a mix of government ministries or bodies having some responsibilities in this respect. These bodies are usually working with mixed objectives and sometimes function between policy and service delivery often with social objectives also being taken into consideration.

1.4.1.3 Stage 3: Central government control (commercial)

At stage three, government is solely responsible for the legislative framework and also for setting up appropriate bodies or structures with clear objectives and a clear split between policy and service delivery. This stage is often characterised by significant competitive input from the private sector in the service delivery sphere. Figure 1.2 gives an illustration of the government's role at national level and the subsequent formation of service delivery bodies such as the South African National Roads Agency Limited.

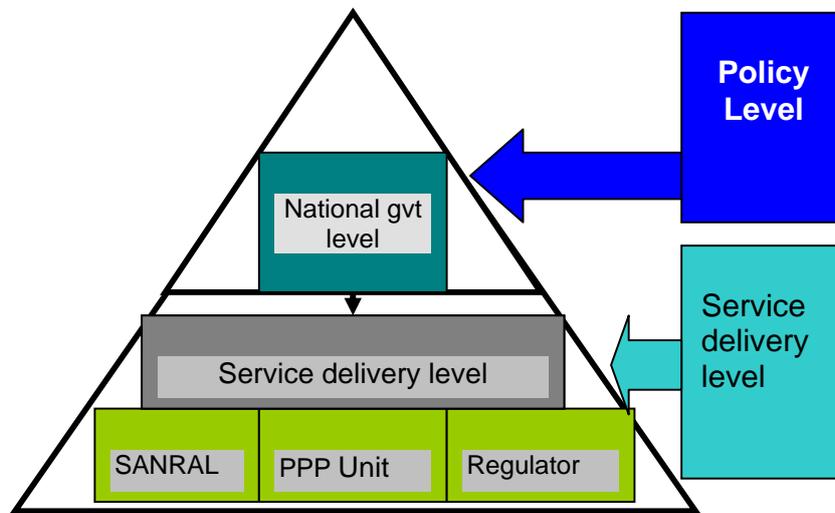


Figure 1.2. Central Government Control

(a) Policy Level

Figure 1.2 above is meant to clearly demonstrate the role played by government at national level with respect to the formulation of legislative frameworks and policy guidelines that steer the efficient management of the transport system in South Africa. For example, at the Department of Transport level, a National Land Transport Strategic Framework was drafted to guide the nine provinces on how to deal with land transport planning.

(b) Service delivery level

Within the spirit of cooperative governance, the Department of Transport established the South African National Roads Agency Limited in 1998 to deal with among other things, the concessioning of toll roads. Subsequent to that, the Department of Finance established a Public-Private Partnership Unit at the National Treasury level. The unit gives guidance to Public-Private Partnership projects at all spheres of government in South Africa. The joint effort of the South African National Roads Agency Limited and the Public-Private Partnership Unit could enhance the quality of service delivery in South Africa. A point under

investigation in this study is the possible establishment of a transport economic regulatory authority that would serve as an intervention in the transport infrastructure.

1.4.1 4 Stage 4: Free market or privatisation control

In stage four, we find that whilst some aspects of the road facilities fall into this category such as toll roads, there are very few countries that operate in this category. Ownership and responsibility for transport performance is transferred or sold to the private sector where market forces dictate the level of service and investment in these transport facilities. However, currently the trend is to move from stage 1 to other stages but it seems unlikely that stage 4 will be reached in its entirety (Wilcox, 1995:1-2). The reason for this is that government's intervention is still needed in ensuring that safety and law enforcement are executed and ownership of land is left in the hands of government.

Presently, South Africa exhibits the characteristics of stage 3, which means that the National Roads Agency has taken the responsibility of executing policies while service delivery is left in the hands of the private sector. A move of this nature should be in the interest of the citizens and should also support the economic development of the country. If a commercialised public enterprise cannot make it in a competitive free market in the long run then it has no right to be maintained (Gildenhuys, 1993:34).

Furthermore, the financial muscle of the private sector is of crucial importance because South Africa is currently experiencing a critical need for the construction of roads in order to enhance accessibility and mobility in the country (Moving South Africa, 1999:33). Against this dire need, the major problem is that government does not have adequate finance and is looking for ways and means of alleviating fiscal constraints (Republic of South Africa, 1996c:15). This led to government launching various spatial development initiatives such as the Maputo Corridor and the N3 TC, which are based on concession agreements.

Such a step was undertaken with a view to exploring ways of managing and financing roads in South Africa. After a thorough evaluation of the various privatisation alternatives that were meant to privatise the state-owned assets one could only hope that a control measure was put into place to monitor the entire process. Such a conclusion is also supported by Kohlberg and Fitzsimons (1985:6), who argue that there should be a mechanism in place that would ensure that a stable flow of funds and the success of the commercialisation of roads as a rational option are sustained by government.

Kohlberg and Fitzsimons (1985:4) are of the opinion that before anything could be done a feasibility study of road investment should be conducted by international concession consultants contracted by the Department of Transport so as to look into the possibility of embarking on a Public-Private Partnership. The partnership should be solely for the improvement of the road network in South Africa. The main aim should be to explore ways and means of lessening government expenditure.

After government had commissioned such a study, its findings of the road investment study revealed that the system of investing in roads could be applied in South Africa. To this end, Kohlberg and Fitzsimons (1985:4) further point out that a consortium of private organisations consisting of bankers, contractors and consulting engineers be formed. This was an important step in that for the first time a practical beginning was made that resulted in introducing the process of Public-Private Partnership in the road network industry in the country.

1.4.2 The establishment of the National Roads Agency in South Africa

The term *agency* is defined by Hattingh (1986:95) as "the formal authorisation by higher governmental body to a lower body to perform tasks or render services on its behalf, and the costs of such duties or services are borne by the higher authority". Despite the fact that Hattingh lays much emphasis on the relationship between governmental bodies, the same principles could also apply to private enterprises. An agency's role is also seen as that of serving as a representative

for its principal and ensuring that proper channels are followed in the event of a principal entering into a contractual agreement with other parties (Nagel, 1997:71).

In 1998, the Department of Transport as a higher governmental body or principal, established the South African National Roads Agency Ltd (SANRAL or NRA) as its representative. In terms of the Department of Transport's Strategic Plan (Department of Transport, 2005/06:13), there are agencies that have been established as indicated in Figure 1.3. These agencies serve as intermediaries of the Department of Transport, and the purpose of the South African National Roads Agency is discussed in this study because it plays a significant role in the process of concessioning of toll roads.

1.4.3 Purpose and role of an agency

The Department of Transport's Strategic Plan (2005/06) outlines the purpose of the South African National Roads Agency Limited (SANRAL) as that of maintaining and developing South Africa's 7 200 km national road network. In terms of the 2005 monetary value, the agency also manages assets with an estimated value of more than R135 billion. The agency is a company registered in terms of the Companies Act, with the following principal tasks:

- strategically plan, design, construct, operate, rehabilitate and maintain the national roads;
- deliver and maintain a world-class primary road network;
- generate revenues from the development and management of assets;
- undertake research and development to enhance the quality of roads;
- advise the Minister of Transport on matters relating to roads; and
- upon request from the Minister of Transport and in agreement with a foreign country, the agency can finance, plan, construct, acquire, provide, operate and maintain roads in this country.

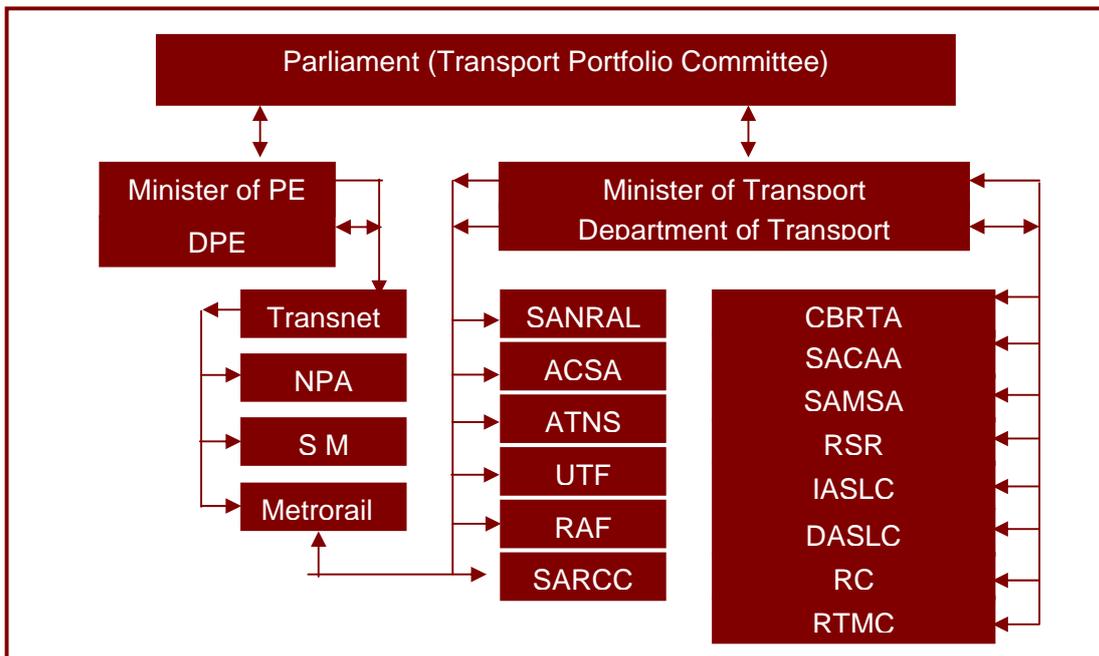


Figure 1.3: The Department of Transport and how it establishes its agencies

Source: Department of Transport 2005/2006:13.

The following abbreviations have been used in the figure above:

ACSA:	Airports Company of South Africa
ATNS:	Air Traffic and Navigation Services
CBRTA:	Cross-Border Road Transport Agency
DASLC:	Domestic Air Services Licensing Council
DEPE:	Department of Public Enterprises
IASLC:	International Air Services Licensing Council
NPA:	National Port Authority
PE:	Public Enterprises
RAF:	Road Accident Fund
RC:	Regulatory Committee
RSR:	Rail Safety Regulator
RTMC	Road Traffic Management Corporation

SACAA:	South African Civil Aviation Authority
SAMSA:	South African Maritime Safety Authority
SANRAL:	South African National Roads Agency Limited
SARCC:	South African Rail Commuter Corporation
SM:	Shosholoza Meyl
UTF:	Urban Transport Fund

1.4.4 Agencies and trading companies

As indicated in Figure 1.3, the Department of Transport's Strategic Plan (2005/06:13) lists six trading companies operating under the Minister of Transport. These are the South African National Roads Agency, Airports Company of South Africa, Air Traffic and Navigation Services, Road Accident Fund, Urban Transport Fund and the South African Rail Commuter Corporation.

There are other agencies that were formed subsequent to the establishment of the South African National Roads Agency. The Strategic Plan further outlines a host of agencies falling under the Minister of Transport. These are inter alia the Cross-Border Road Transport Agency (CBRTA), the South African Maritime Safety Authority (SAMSA) and the Civil Aviation Authority.

The South African Rail Commuter Corporation, as shown in Figure 1.3, had since been established during the transformation of the then South African Transport Services. It came into being as a fully commercially viable legal body in terms of the legal succession to the South African Transport Services Act, 1989 (Act No.9 of 1989) (Maluleke, 1998:1). The mandate of the SARCC to ensure that at the request of the national Department of Transport or any local body designated as a transport authority, rail commuter services be provided in the public interest (Department of Transport Business Plan, 1999:7).

The establishment of the National Roads Agency, just like other agencies, was seen as a product of transformation of a public service that has been attained by government. The agency was established through an Act of Parliament as an

independent statutory company with the Minister of Transport as the sole shareholder (Government Gazette No.18798, 1998). The current study seeks also to investigate this kind of arrangement to find out whether it should remain as it is in the context of the South African road transport infrastructure.

There are three golden rules that should be kept in mind in the management of an agency. Firstly, representation is based upon a tri-partite relationship, which simply means that there will be more than two parties concerned. Secondly, the agency should have the consent or authority of its principal to act and should act in accordance with such authority or mandate. Thirdly, only the principal and the third party acquire rights and duties in terms of the contract, even though the contract was concluded by the representative and the third party (Nagel, 1997:71).

Since the commencement of the NRA Act, all national roads and the responsibility of the national roads vest in the NRA. In addition, the NRA is given the power to perform all strategic planning with regard to the South African national roads system. This also includes the design, construction, operation management, control maintenance and rehabilitation of roads for South Africa. The agency should see to it that all these functions are financed in accordance with its business and financial plan. This is to ensure that government's goals and objectives concerning national roads are met.

The NRA may, at the request of the Premier of a province, and with the Minister's approval, perform any work in connection with any road, whether on the national, provincial or municipal level. The SANRAL, with the power vested in it of a road authority, may charge a fee for any service rendered. It is within the agency's discretion to appoint any private person, institution or body to perform the work on its behalf. The provision, establishment, erection and maintenance of facilities on national roads for the convenience and safety of road users can be done through the recommendation of the agency (Government Gazette No.18798, 1998). If the agency is vested with the power of charging fees as defined above,

it cannot therefore regulate itself in terms of ensuring that the fees are justifiable. The examination into whether an independent transport economic regulatory authority need to be established becomes imperative as it is supposed to ensure that the toll fees charged by toll road concessionaires are just and fair.

In the bidding process for the management of toll roads by private entities, guidelines and criteria are set to enable prospective bidders to comply with tender requirements. The requirements to be complied with in respect of private sector involvement in the roads sector is that of ensuring that small, medium and micro enterprises are fully engaged in various projects. A range of projects available for the emerging entrepreneurs pertains to the construction and consulting work. Based on the criteria set, the process of public-private partnership in the national roads is perceived as a catalyst for the creation of work in road construction (N3 Project Information Memorandum, 1998). There is therefore a need to ensure that the regulation of entrepreneurial and socio-economic compliance by concession companies is discharged by an autonomous regulatory body.

1.5 CATEGORIES OF ROADS

According to Flaherty et al. (1997:2), the establishment of permanent settlements and the domestication of animals some 9 000 years ago left trails that were deliberately chosen by the people and their animals. These trails were the forerunner of the first recognised travel ways which, in turn, evolved into today's streets, roads and highways. This may be regarded as the starting point for the categorisation of roads as we find it today.

Roads and streets play a vital role in the circulation of people and commerce among and within centres of habitation (Jacobson and Tarr, 1994:5). In an attempt to move everyone or almost everything economically to everywhere in any country around the world, an integration of various categories of roads, rail, air and sea routes is an absolute necessity. Roads that need to be considered in effecting an integrated transport system can be categorised into the

following: local, arterial and national roads. The attention in this study is to explore Public-Private Partnership initiatives as applicable to toll roads in South Africa. However, a brief discussion of local and arterial roads is necessary to put these in perspective with regard to the national roads. This is done solely to enhance the reader's understanding of transport issues in the Republic of South Africa.

1.5.1 Local roads

According to Shaw (1982:10), local roads are a group of great diversity, primarily serving as feeder or distributor network for the arterial roads, and providing property access. Private ownership of local roads is a common phenomenon in St Louis (Missouri) and in commercial and residential new developments. Streets in shopping centres in the United States are often owned by private developers. Many rural access roads in Sweden are privately owned by property owners' associations. This strategy may not be appropriate in South Africa, as the ownership of infrastructure needs to remain with the state.

Shaw (1982:10) further states that the main issues with local streets are maintenance rather than new construction. In South Africa as in the United States, private contractors can be engaged in maintenance. Since the South African government strives to engage the private sector by all possible means, embarking on a similar strategy could reflect a considerable move towards Public-Private Partnerships within the local government.

1.5.2 Arterial roads

Arterial roads may be defined as the denser backup feeder or distribution network for the national highways. These roads provide the main means of intra- and inter-regional travel and are typically used by traffic having lower than average journey lengths than journeys on the national highway (Shaw, 1982:12). From Argentina to Thailand, Australia to Canada, major arterial roads are being built under the toll road concession schemes. In many of these countries,

governments are increasingly finding it difficult to finance the costs up-front, they are therefore giving the private sector concession to construct and operate these urban roads for specified period of time (Estache and De Rus, 2000:236).

Practically and commonly, one could argue that, based on the experience gathered from these countries in respect of the commercial management of arterial roads, the same strategy could be considered in South Africa as a Public-Private Partnership initiative.

1.5.3 National roads other than highways

There are also national roads that are neither highways nor toll roads and for these, the National Roads Agency receives a variable annual allocation from the National Treasury. The non-toll network constitutes 74 percent of the national road network of 7 200 km (Department of Transport, 2001b:9).

1.5.4 National highways

National highways may be defined as principal roads linking the major centres of the population and industry. They have two or more lanes for the exclusive use of the through traffic in each direction and full control of access and exit. These roads comprise three different kinds of components, namely, basic freeway segments, weaving areas and rump junction. Of all non-urban roads, these roads are usually the most heavily used with the longest average journey lengths and highest volume capacities (Shaw, 1982:11).

National highways are the most important and costly form of transportation infrastructure in both developed and developing countries. In the majority of the developed countries, most of the domestic passengers and freight traffic are being transported on arterial roads. Almost everywhere highway traffic is therefore increasing faster than other elements of the transport system (Gomez-Ibanez and Meyer, 1993:97). National roads are the responsibility of the national government in respect of the financing, development and maintenance. The South African government has its road authority that undertakes the

management of the road system within its borders.

In transport economics terms, roads constitute the supply side of the economic system and are viewed as public commodities used by the travelling public. It is therefore imperative that the state still intervenes through various means such as safety regulations. The safety of the travelling public is reliant on effective law enforcement. This means that safety regulations are still essential even though economic deregulation is seen to be one of the preferred options during the Public-Private Partnership process (Shaw, 1982:1).

1.5.5 Toll roads

Toll roads refer to the roads with high capacity access control and grade-separated expressway systems. These roads represent a high proportion of the high traffic highway systems (Estache and De Rus, 2000: 236). It is a requirement in many countries that when a toll road is opened there should be a parallel un-tolled route. Such an alternative is made available to motorists who have no willingness and/or ability to pay for the toll road. The alternative route need not necessarily be built to toll road standards (Gomez-Ibanez and Meyer, 1993:98).

In the broader sense, a toll road can be viewed as a mechanism that provides a public facility to the general public at significant capital outlay. Every attempt is made to recoup the capital and other operating expenditure by imposing a charge for the use of such a facility. In contrast with the provision of public infrastructure from general taxes, a toll road is based on the principle of user charging which is a more equitable form of taxation.

1.6 A HISTORICAL OVERVIEW OF TOLL ROADS IN SOUTH AFRICA

The concept of toll roads is not new in South Africa. These types of roads have existed since the 1880s. An example of such a road is the Garcia Pass, which stretches approximately 20 km in length. It is found between Riversdale and Ladysmith in the Cape and it became operational since then up to the 1930s.

The old tollhouse is still there and has been declared a national monument. The tariff at the time was three pennies for a complete wagon and one penny for a bicycle. The tollhouse also had "uitspan" facilities.

While toll roads in specific settings seem to be in demand, the problems that many of this first generation of road concession had, have already been experienced by Mexico and Thailand, and this has given toll projects a poor reputation. It should however be stated that the process of tolling of roads is not received positively by the public because it is often seen as being insensitive to the needs of the poor who cannot afford to pay for these costly services. Estache (2000:237) argues that one can design a project in many ways to get the private sector involved without having to toll the road.

Public-Private Partnerships should serve as a means by which private entrepreneurs and other economic subjects can free themselves and therefore be in an advantageous position to develop their own economic welfare and prosperity. Presently, the system is offered to companies such as the N3TC, TRAC and Bakwena in this country, and perhaps it is time for its efficacy needs to be assessed. Nevertheless, this arrangement aims at ensuring that entrepreneurs would be fully involved in economic activities and thus contribute to development of a stronger economy. The approach proposed was that of ensuring that the full participation in projects should precipitate the enrichment of skills and eventually such skilled individuals should be able to sustain themselves financially. Despite the above trend, subsequently, a number of toll roads such as the Tsitsikamma, Marianhill and Kranskop are established and operated by the Department of Transport and are not based on the above-mentioned principles (N3 Project Information Memorandum, 1998).

1.6.1 The provision of toll roads in selected countries

International experience shows that toll road projects had been established with each having its own design and investment demands and political and organisational arrangements. Furthermore, it appears that Toll roads

were also been negotiated loosely and have often been the outcome of informal agreements between governments and construction companies. This way of making fundamental and critical deals need to be examined and corrected if found wanting.

What follows is an exposition on what is happening in other sample countries and it is primarily intended to enhance the reader's understanding of the issues involved in road tolling. Thus, on the basis of the information derived from Estache and De Rus (2000), Table 1.3: has been developed to summarise the scope of toll roads provision in selected countries. While toll roads are typically only a small part of the total road network, they tend to be located in the most densely travelled corridors and thus have the potential to play a major role in the transport network. Toll roads comprise a dominant share of the national road network and thus may play particularly important roles in urban areas and the intercity trade.

Table 1.3: Toll road provision in selected countries (km)

Country	Total road network	Total national road network	Tolled roads	Tolled roads (percent of total)	Tolled roads (percent of national roads)
Argentina	500 000	10 400	9 800	1,96	94
Brazil	1 980 000	-	856	0,04	-
Chile	79 800	-	3	0,00	-
France	966 000	14 886	6 305	0,65	42
Hungary	158 600	435	57	0,04	13
Indonesia	260 000	530	530	0,20	100
Italy	314 360	6 444	5 550	1,77	86
Japan	1 144 360	15 079	9 219	0,81	61
Korea	77 000	1 880	1 880	2,44	100
Rep of Malaysia	94 000	1 702	1 127	1,20	66
Mexico	303 262	5 683	5 683	1,87	100
South Africa	525 000	1 440	825	0,16	57
Spain	343 200	7 194	2 255	0.66	31

Source: Estache and De Rus (2000)

According to Celasun (2001:40), Public-Private Partnership programmes have been overly ambitious internationally as indicated by countries such as Hungary. In support of Celasun's statement, Sader (2000:140) confirms that the Hungarian government established the Bureau for Motorways Concessions under the Ministry of Transport and this aimed at finding private financing solutions.

Sader (2000:140) stresses the importance of strategic planning in the execution of toll road projects. In the South African situation, toll roads need to support the aims and objectives of the Reconstruction and Development Programme and this is a fundamental consideration underlying the National Roads Agency's strategic planning process (Department of Transport, 2001b:16). Government, through its agency and private sector involvement, should accept the challenge of expanding and maintaining a state-of-the-art road network with limited financial resources in a manner that is consistent with the socio-economic aims of government (Department of Transport, 2001:16).

1.6.2 Non-toll parallel roads as a requirement

International experience suggests that while the idea of having competition between roads is good in principle, the evidence gathered so far suggests that traffic levels in most developing countries cannot sustain duplication from free alternative routes. Toll road traffic in such cases has generally fallen well below projections. The Mexican toll road programme illustrates the challenges imposed by parallel roads launched in 1985. This programme introduced a toll road development plan with a range of conditions, one of which was the provision of a free alternative parallel route (Estache and De Rus, 2000).

The provision of non-toll parallel roads, although it was initially applicable in South Africa, is currently not applicable. The best argument in favour of free parallel roads is one of social equity, to ensure that the poor can still have access to roads. One way of enabling the poor to get access to toll roads could be by way of introducing a tariff differentiation strategy.

According to the Road Infrastructure Strategic Framework for South Africa (Department of Transport, 2002:98), the Minister of Transport has become increasingly concerned about the impact of road tolls on poorer communities. The Minister thus requested a critical re-examination of the tolling strategy. Furthermore, the Minister is also concerned about the principle, now legislated, of toll roads not being required to offer alternate routes and the placing of toll plazas at points where there are no alternative routes available. The Minister has enquired as to the possibility of a mechanism to exempt certain categories of users from the payment of tolls.

1.7 STRATEGIC MANAGEMENT APPROACH IN THE TOLL ROAD INDUSTRY

There is as much in management outside the business environment as there is in the business itself (Drucker, 1986:168). This simply shows the importance of strategic management; and Hunger (1989:10) defines it as a process that involves four basic elements, namely environmental scanning, strategy formulation, strategy implementation, evaluation and control. Figure 1.4 shows how the strategic management process can be applicable to the road network industry.

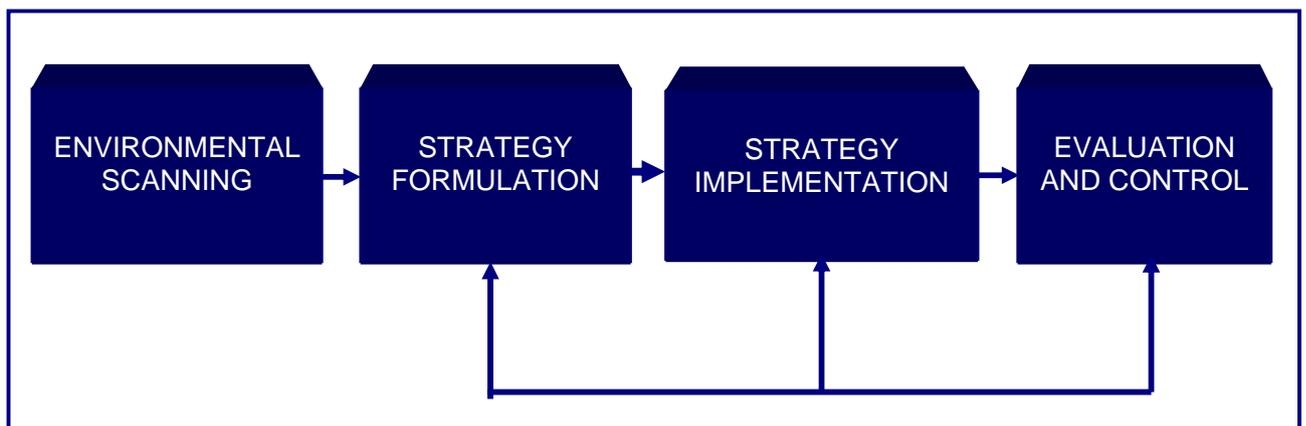


Figure 1.4: Strategic management process

Hunger, 1989:12

This model might be of use to augment the current strategic management of

national roads in South Africa. Managing the external environment has become critically important in almost every organisation precisely because of the drastic rate of change in macro-environmental factors. One of the critical factors to be taken into consideration in the toll road industry as derived from the interview with the N3TC Management (2005), is the Consumer Price Index as it is used as a determining factor in the adjustment of toll tariffs and the correct ratio between users in terms of using or damaging the toll road. The critical challenge in the management of road network is to ensure that the expectations of three parties are satisfied and these are the government, concessionaires and users.

In as far as government's aspirations are concerned, the road network project needs to play a role in the socio-economic development of South Africa. For example, the creation of work is to be seen as part of what the project should provide to the community residing along the corridor. The expectations of concessionaire on the other hand, are those of ensuring that the concession company is managed profitably. It is natural that the users of roads would expect a high quality road network that would provide comfort and convenience.

1.7.1 Environmental scanning

Environmental scanning has to do with intelligence gathering on the general environment or industry (Miller, 1998:91). When environmental scanning is to be applied in the toll roads industry; then it is advisable that the focus should be directed at variables that would potentially affect the operation. The variables to be given attention are stakeholders; government at all levels, communities along the transport corridor, road users, special interest groups such as the automobile and road freight associations. These variables pose a substantial challenge to the management of the concession companies. Figure 1.5 shows an outline of the variables.

On the external environment, there are forces, which constantly exert pressure on both the toll road industry and the individual concession company. These are

Socio-cultural, Political-legal, Economic, Technological and Physical forces. See Figure 1.5.

According to the Treasury guidelines on PPP (2000), the process entails assessing the potential for engaging the private sector. This is called pre-feasibility, and it is followed by a full feasibility assessment. In strategic management language, this is referred to as environmental scanning (Hunger, 1989:12). This phase is characterised by searching for Public-Private Partnership opportunities by government as evidenced by the Gauteng Department of Public Transport Roads and Works. In the late 1990s, a delegation from the Gauteng Provincial Government visited Germany and France with the intention of exploring Public-Private Partnership opportunities in the rail industry (Gautrain Technical Team 2004).

In the event where the Public-Private Partnership opportunities have been identified by government, consultants are commissioned to do a full feasibility study (Gautrain Technical Reports, 2000). This phase entails various aspects such as assessing whether the project will be feasible with due consideration to the environmental sensitivity as well as technical, financial and economic aspects.

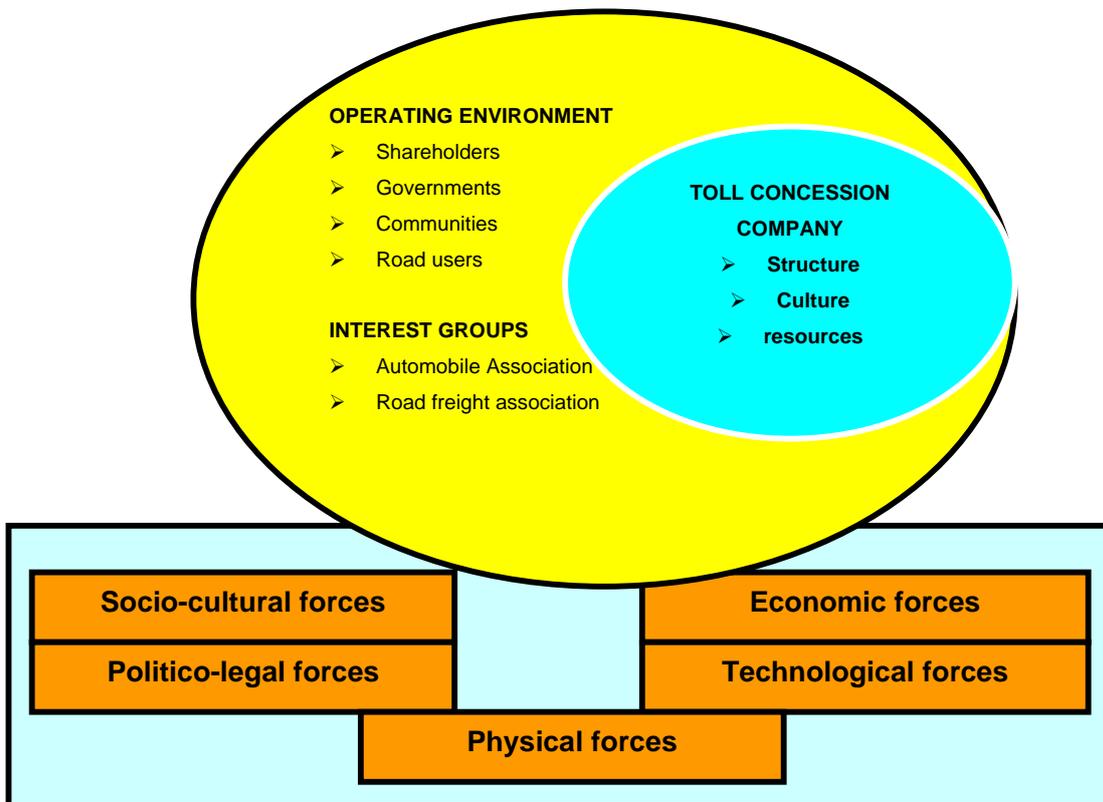


Figure 1.5: Environmental variables

Source: Adapted from Hunger 1989:13

The major task in intelligence information gathering is to ensure that such information is correctly interpreted to inform the strategists and to guide the process of strategy formulation. The application of Intelligent Transportation Systems can help in the collection of relevant data for Toll Concession companies. Miller (1998:97) is of the opinion that “the forecasting of future economic developments in the competitive environment forms the cornerstone in the planning of concessioning of toll roads”, and this is what needs to be adopted by concession companies.

1.7.2 Strategy formulation

Strategy formulation is a process of developing long-range plans for the effective management of environmental opportunities and threats in the light of

corporate strengths and weaknesses (Hunger, 1989:14). After a company has developed a mission and vision which set out the company's purpose and values, and having undertaken a review of the current position in the industry, it is crucial to ensure that the right strategy is set in place. According to Cook (1994:59), the right strategy should be responsive and flexible and able to address the structure and size of the organisation. This is an advice to be heeded if South Africa is to avoid similar pitfalls that were experienced elsewhere.

Among the strategies to be considered in a Public-Private Partnership arrangement are issues of strategic partnership, joint venture and growth strategies. Accordingly, Geddes (2005:124) points out that "strategic partners in the consortium should have precise objectives". This means that there should be a clear idea of the outcomes that the consortium hopes to achieve. Such outcomes have to be understood and supported by all the partners if their commitment is to be secured. In South Africa, strategic partnership is mainly done by bidding companies, particularly during the request for proposals phase. This phase is also referred to by Basanes et al. (1999) as "competition for the market". This is discussed in detail in Chapter 4 of this study.

During the strategy formulation phase, strategic partners should also adopt an appropriate strategy to enable them to function in the event of becoming successful bidders. Various strategies, such as joint venture and growth strategies, are considered for execution during the operation phase.

1.7.3 Strategy implementation

Strategy implementation is the process by which strategies and policies are put into action through the development of programmes, budgets, and procedures (Hunger, 1989:15). The first rule in the implementation of any strategy is to know the industry, the market, and the competitors being attacked. If the weak points of the competitors are known and their likely reactions can be predicted, then the attacker is more likely to arrive at a successful strategy. In the rational analysis of

possible outcomes, one needs to evaluate the rewards of success and outweigh such rewards against the costs to be incurred. If the chances of success are high enough to justify the move, then the strategy should be implemented (Hussey and Jenster, 2000:29).

The implementation of a strategy means that the hard work of planning is set in action. It is during the implementation phase when the actual bidding is done that the construction work is executed in the case of where the bidder wins the bid. The execution of various labour-based models are done with due consideration to the regulatory requirements such as the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003 (Republic of South Africa, 2003).

1.7.4 Evaluation and control

Evaluation and control is the process during which corporate activities and performance results are monitored so that actual performance can be compared with desired performance (Hunger, 1989:17). For evaluation and control to be effective in the toll roads industry, toll concession companies need to give unbiased feedback to the shareholders as well as to role players like road users. This involves inter alia compiling reports about the statistics of traffic flow and the number of incidents within a specific time period. It is important to note that the evaluation function can best be done by means of an independent regulatory authority as it would give an unbiased judgement in dealing with socio-economic related issues.

1.8 RATIONALE FOR THE STUDY

An effective transport system is vital for South Africa in order to provide mobility to all people and to stimulate economic growth and development in the Southern African region. The introduction of Public-Private Partnerships in the road network has come as a part of South Africa's procurement landscape. This development consists of complex arrangements and long-term contracts that require private finance to succeed if their contribution is to be realised because

such contracts indeed have the potential to yield useful service delivery from both an operational and a strategic perspective (Department of Finance, 2000:2).

Entering into a Public-Private Partnership agreement in the construction of toll roads should precipitate benefits to stakeholders like the general public, state and the road users. The general public perceives Public-Private Partnerships as a means devised to promote goals such as social equity, economic empowerment, efficient utilisation of scarce resources, and protection of the environment. For the state, however, the concept should mean the realisation of a mechanism that would make it possible to achieve accessibility, relevancy, viability and a beneficial service delivery option plus possible international investment. For the users of services, Public-Private Partnerships should preferably result in accessible, affordable and safe services that meet acceptable quality standards (Department of Finance 2000:2).

The introduction of toll roads virtually affects the lives of all residents in the relevant country. Toll roads affect road users directly in their daily journeys and also affect all residents of the country indirectly by means of an influence on the economic activity and prosperity of the country. It is therefore imperative to ensure that public consultation and participation are carried out in any project that might be contemplated or is seen as a requirement in terms of the National Land Transport Transition Act No. 22 of 2000. It goes without saying that an environmental impact assessment is an indispensable requirement to ensure that the developments of an effective transport system become a reality. From the government point of view, toll roads should be put where there is high commercial traffic. This is done with a view to promote the use of this mode of public transport.

The biggest challenge is to find ways and means of achieving a sustainable platform of funding for the existing national roads network. The problem that arises is that the development and maintenance of roads is a costly exercise that needs a substantial amount of investment. Since investment in national

infrastructure expresses the economic, social, political and cultural vision of a nation, this calls for a critical evaluation of different investment alternatives, and the current study intends, among other things, to strive towards proposing a rational model for the selection of investment alternatives.

The successful exploitation of opportunities available in this dynamic industry requires a concerted effort from those who manage the toll roads, in other words, a strategic management model is required to ensure that transport matters are well managed. The White Paper on National Transport Policy (Republic of South Africa, 1996c:12) states "as part of the overall long-term vision for the South African transport system, transport infrastructure will be put in place to enable South Africa to be the hub of transport within the Southern African Development Community region. The system should be structured in such a way that public transport and freight are encouraged and allow for seamless inter-modalism. It should be financed through a combination of user charges and public private sector investments".

In his research, Botha (2005:2) referred to the recently published State of Logistics Survey for South Africa, conducted by the Council for Scientific and Industrial Research, which states, "South Africa's transport problems are far worse than expected". Successive Ministers of Transport have referred to the performance of South Africa's transport system as "poor" and various official documents have warned about the negative effects that inadequate transport infrastructure exert on the country's ability to generate sustained and high economic growth.

Basanes et al. (1999:16) point out that there is a need for regulatory institutions to protect users whose services are provided by a natural monopoly. The view Basanes et al. hold is in support of the White Paper on National Transport Policy (Republic of South Africa, 1996c:16), where it is explicitly stated that "regulatory structures will be established where they are appropriate but do not exist, infrastructure will be regulated where monopoly situations could occur". The

setting up of a regulatory authority is therefore backed by the White Paper on National Transport Policy.

In support of this argument by Basanes et al., the independent regulatory institutions are now compelled by law to guarantee that the public-private partnership commitments would definitely protect the various stakeholders, such as road users and residents associations, as these are often subjected to unilateral expropriation. Finally, what matters most is that whatever the circumstances, a transport economic regulatory authority should ensure that it succeeds in guaranteeing the long-term financial sustainability of private investment in the transport infrastructure.

1.9 PROBLEM STATEMENT

As already indicated in the previous paragraphs, the Minister of Transport is highly involved in strategic policy decisions related to transportation. Hence, he has shown an increasing interest and concern about the impact of road tolls on poorer communities and has requested that a critical re-examination of the tolling strategy be done because the existing ones seem to be insensitive to the social situation in the country. This is in the context of the fact that toll roads are no longer required to offer alternate routes, which has heightened the Minister's concern, hence the need to investigate prevailing and potential problems around the provision of toll roads.

On the basis of these concerns, the problem central to this study is that there is a need to explore various regulatory regimes that would serve as an intervention. The intervention of such regulatory authority is the result of the concerns of legitimate toll road users who cannot see any value for the money they pay for the use of toll roads. The ultimate adoption of a particular regulatory authority would require it to exercise its oversight role to various modes of transport.

1.10 MAIN OBJECTIVES

The main objective of the study is to assess the validity of introducing the overarching transport economic regulatory authority as an intervention in the management and operation of the transport infrastructure. When viewed from the perspective of the road infrastructure, such a transport economic regulatory authority should be able to promote the interest of government, the toll road industry and of the road users at large.

1.10.1 Secondary objectives

The study firstly wants to examine the effects of the ongoing rollout processes of Public-Private Partnerships in South Africa and in other countries. This is done in order to be in a position to analyse and to assess the kind of model that will best suit the South African situation after the necessary adaptations had been made.

In the second place the study will examine the efficacy of the concept of competition for and in the market should it be ultimately adopted for application in the toll roads industry and will furthermore assess how the regulatory intervention mechanism would operate in the entire transport infrastructure.

1.11 RESEARCH METHODOLOGY

The research methods used in this study are empirical by nature and derive their authority from various books, articles, newspapers, theses, dissertations, dictionaries, encyclopedias, circulars and reports issued by the National Roads Agency. This is also coupled with experiences gained from other countries visited for the purposes of attending conferences, workshops, research studies and reading of papers. Finally, data was collected through interviews with various directors from the National Roads Agency, members of the existing toll concession companies in South Africa, namely N3 Toll Concession (Pty) Ltd and Trans African Concession (TRAC). In conclusion, the researcher has pilot tested many strategies, models and paradigms to empirically determine their

effectiveness. Annexure 2 is attached to serve as evidence of pilot studies conducted to explore the type of regulatory authorities formed during the unfolding of Public-Private Partnership projects in other countries. This will afford the researcher the opportunity to make reliable recommendations at the appropriate time.

1.12 CHAPTER LAYOUT

The layout of the chapters is as follows:

Chapter one gives a comprehensive background to the study. Furthermore, it provides fundamental principles and values underpinning the processes necessary for the establishment of Public-Private Partnerships in the provision of road infrastructure. This presentation covers, amongst other things, definitions of the concept commercialisation and the examination of strategic management approaches needed to enhance transport delivery in a competitive environment.

Chapter two deals at length with the creation of awareness regarding the role the different role players are expected to execute in the context of public-private partnerships with respect to the South African national roads and also with regard to foreign countries.

Chapter three examines the effects of macro-environmental factors on issues that necessitate the development of toll roads.

Chapter four handles matters dealing with competition in the toll road infrastructure. This chapter covers issues of how to prepare for the bidding process through to the stage when the concession contract is awarded to a successful bidder.

Chapter five deals with matters that are involved with issues that usually arise after the award of a bid has taken place, and this is sometime referred to as competition in the market. The chapter ends with an argument that favours the establishment of an economic regulatory authority.

Chapter six assesses the validity of various regulatory interventions in a Public-Private Partnership arrangement.

Chapter seven concludes by suggesting a number of recommendations on how to manage the Public-Private Partnership agreements effectively and efficiently through the adoption of a transport economic regulatory authority established for such agreements.

CHAPTER 2

ANALYSIS OF THE CONCEPT OF PUBLIC-PRIVATE PARTNERSHIPS

2.1 INTRODUCTION

The concept of Public-Private Partnerships was defined in Chapter one as a process whereby the state entrusts certain functions or activities to the private sector to perform at their own risk. However, when examined within the South African context, it seems appropriate to define it as referring to "a contractual arrangement between a public sector entity and a private sector entity whereby the private sector performs a departmental function in accordance with output-based specifications for a specified significant period of time in return for a benefit which is normally in the form of a financial remuneration" (Republic of South Africa: National Treasury, 2002:3).

In the same context, "It furthermore involves a substantial transfer of all forms of project life cycle risk to the private sector. The public sector retains a significant role in the partnership project either as the main purchaser of the services provided or as the main enabler of the project" (Republic of South Africa: National Treasury, 2002:3). Having said the above, care should be exercised because the provision of service by a private business concern or non-governmental organisation may fail to fulfil the requirements of a Public-Private Partnership (PPP).

Seen as such, Chapter two now aims to advance reasons for a rationale for the establishment of Public-Private Partnerships and also to suggest a workable and viable procedure that would form a transition path through which Public-Private Partnerships could be brought into being. In addition, the chapter aims to cover the different forms of Public-Private Partnerships as well as opportunities that may accrue to potential investors.

2.2 RATIONALE FOR PUBLIC-PRIVATE PARTNERSHIPS

This section investigates in detail the rationale for the establishment of Public-Private Partnerships in South Africa, particularly in the road infrastructure because the study is undertaken within the discipline of transport economics of which road infrastructure constitutes an element of the road transport system. As already mentioned in Chapter one, this chapter draws lessons from the research done in other countries and on the basis of that it rigorously assesses the appropriateness of the ability and capacity of such approaches to assist in designing as well as structuring Public-Private Partnerships that are user-friendly but also economically viable as phenomena to be applied across the board.

2.2.1 The rationale

To handle this topic reasonably it makes sense to quote Ramanadham (1988:19) who advances the rationale that argues the fact that "government needs capital injection and this circumstance has repeated itself in many countries". Stacey (1997:41) supports this by pointing out that "the driving force behind the establishment of a Public-Private Partnership is partly based on the conception that the public sector tends not to be efficient and effective when it delivers alone". This view is indirectly also confirmed by Birch and Haar (2000:2), who maintain that "much of the faith in the salutary effect of Public-Private Partnership derives from a belief that private ownership of assets and the removal of government from business decision-making results in efficiency gains". In other words, what is submitted here is the view that says government often lacks the necessary resources or new technological innovations to improve the delivery of services.

Again, Birch and Haar (2000:2) argue in favour of the public sector when they state that "more often than not, when government delivers a service alone, it is more likely to pursue multiple objectives in its management of public sector enterprises". This is evident when government strives simultaneously at

accomplishing more than one objective by attempting to create employment while also trying to provide services to areas that are not commercially profitable. This has the potential to create a series of disincentives that in the end may reduce the efficiency and therefore the profitability of the enterprise.

Importantly, in their critical review of public enterprise performance in developing countries, Birch and Haar (2000:3) point out that "Bureaucrats typically perform poorly in business not because they are incompetent, but because they face contradictory goals and pervasive incentives that can distract and discourage even very able and dedicated public servants". This advice is very crucial and needs to be borne in mind at all critical times when the public sector is expected to deliver services, and fails to do so. In this respect, there is no doubt that the Public-Private Partnership initiatives can do much better by far than government when it comes to service delivery albeit on the basis of a different motive. Therefore it makes sense to establish Public-Private Partnerships to develop the infrastructure that is necessary for bringing about the needed economic development essential to create employment and bring about service delivery.

Public-Private Partnerships should be seen as a means to acquire resources or technological skills from the private sector in order to assist in the implementation of strategies for the accomplishment of the national objectives in general and those of the transport sector in particular. For the purposes of exposing the workings of the Public-Private Partnerships in concrete terms, it is advisable to take a look at an approach that is presently applied by the South African toll road industry. In this situation, the public sector has invited the private sector by giving it flexibility in the acquisition of technological innovations, such as the introduction of an electronic toll collection system for the benefit of the transport industry in particular and the country in general.

In addition, Ramanadham (1988:19) is of the opinion that "failing to let in private capital participation would amount to perpetuating the inefficiency of the public sector enterprise and thus destroying its opportunities for expansion". To make

the establishment of Public-Private Partnership attractive government has persuaded some countries to formulate joint ventures or management contracts in which the private sector is enticed by lucrative concessions. This may be clear in the joint venture agreement formed by construction companies such as Murray and Roberts, Grinaker LTA and Infra Africa (N3TC Project Information Memorandum, 1999).

The engagement of Public-Private Partnership entities should offer quality service in the sense of practising the dictum of value for money while at the same time providing services at an affordable cost. However, the other important issue to bear in mind is that the private sector should be assisted in the event of there being limited experience when it comes to issues that involve purely Public-Private Partnership arrangements. In trying to ensure that value for money is achieved, the Department of Finance's National Treasury has drafted a framework for the purposes of guiding the process involving the supply chain management that needs to be followed by Public-Private Partnership operations. In other words, supply chain management has to be run in accordance with the requirements as contained in Section 78 of the Public Finance Management Act, Act No. 1 of 1999. The focus of the framework is to give guidelines on optimum monitoring so as to ensure that the private party is achieving the outcome specified in the contract. The SA National Roads Agency Limited (SANRAL) already had its own guidelines with regard to the concessioning of toll roads by the time National Treasury prepared comprehensive guidelines on concessioning. It needs, however, to be stated that all concession contracts are expected to fall within the ambit of the National Treasury guidelines.

In his research, Stacey (1997:10) discovered that for many years, road infrastructure provision and public service delivery in South Africa had been the preserve of the public sector. The reason had been the perceived strategic importance of road infrastructure and land use to the economy. Until recently, the delivery of infrastructure by government was and is still based on political, social and economic responsibilities and particular constellation of ideas leading

to particular social impact. Infrastructure providers, as part of their social responsibility, are required to undertake several obligations, such as creating work opportunities for the local residents where the project is being carried out.

Part of what would prompt public authorities to adopt a Public-Private Partnership arrangement is to break the monopoly model that had been known for many years in the public sector. The model is known for its operational inefficiency and poor response to technology and consumer needs and preferences (Stacey, 1997). As stated in a strategy for broad-based black economic empowerment Act No. 53 (2003:4), government's objective is to achieve the vision of an adaptive economy characterised by growth, employment and equity by 2014. The monopoly model that excluded the vast majority of South Africans should be transformed. However, this monopoly should not be replaced by a private monopoly.

In the opinion of Davids, Theron and Maphunye (2005:61), South Africa is in the era of the Batho Pele principles, which means that the needs of people comes first. Therefore a model that does not respond to the needs of the people is not appropriate as it does not accord with the principles of "batho pele". To this end Stacey (1997:11) points out that "public monopolists are often characterised by low productivity of labour, weak incentive structures and lack of sufficient links between demands and supply". To avoid these shortcomings it is crucial that a concerted effort be undertaken to make sure that the needs of the people are met. This important step could be realised simply by introducing an appropriate regulatory authority designed to guard specifically against any possible emergence of a private monopoly.

2.3 THE TRANSITION PATH IN PUBLIC-PRIVATE PARTNERSHIPS

The whole move towards the establishment of Public-Private Partnership arrangements is not a new phenomenon. Kessides (2004:183-184) confirms this trend by asserting that "after airlines, trucking, and freight railroads were

deregulated in the United States in the late 1970s and early 1980s, many other industrial countries reviewed their transportation policies and liberalised their transportation systems". Many developing and transition economies, facing huge fiscal pressures and poorly performing state enterprises, have also introduced wide-ranging policy reforms aimed at rearranging and also restructuring the roles of the private and public sectors in the area of transportation.

Furthermore, Kessides (2004:199) states that "in the United Kingdom, monolithic, vertically integrated state owned entities had become outdated and were no longer the preferred option for government". This offered a good lesson to South Africa; hence the country has crafted a different approach, which ensures that services such as the management of toll roads are provided by a private sector in partnership with public authorities in the form of the National Road Agency.

To do justice to the transport industry it is imperative to describe the concept of Public-Private Partnerships by way of a rigorous analysis because the concept is invariably found to have different meanings to different people. The problem seems to be exacerbated by the fact that the concept covers a range of different policy options that inter alia involves the relationship between government and private sectors. To compound the problem even further, Kessides (2004:262) makes the suggestion that "there is no sufficient evidence that in a given utility, a certain structural configuration is more likely to attract long term private investment and improve performance".

As a form of advice, Kessides (2004:262) remarks that "if the relationship between structural reform and industry performance are to be correlated, there should be an analysis prior and after the restructuring process". Lindback (1996:46) affirms this by giving us a model that would guide the introduction of Public-Private Partnerships arrangements, see Figure 2.1 and it shows clearly the transition paths to follow in order to realise effective Public-Private Partnerships. The figure comprises of three paths, namely the unbundling and deregulation path, the divestiture path plus the private entry path and the profile

of what needs to be done from the start to the end.

The figure shows a move by means of arrows or paths from the public policy-owned monopoly to a point where competitive or contestable private infrastructure provision is reached. According to Lindback (1996:46), this can still be approached in different ways, for example Path 1 intends to enable the policy-owned monopoly or state-owned enterprise (referred to in this text as SOE) to un-bundle and to deregulate after which private entities would be allowed to join as partners. Kessides (2004:5) maintains that unbundling creates a platform for the promotion of competition and ensures that firms provide their services at efficient prices.

Having said the above, it is worthy to note that different situations and circumstances call for different approaches, methods, models, paradigms, policy frameworks and philosophical justifications as to why things are done the way they are done. South Africa is unique, and therefore whatever works in other countries may not necessarily address the problems we have in South Africa. This implies that South Africa should borrow selectively from other countries if the country does not want to embarrass itself. It often happens that underdeveloped and developing countries simply rush into copying models in operation in the developed countries without first determining or even finding out what would suit their conditions and circumstances. Hopefully, South Africa will not make the same mistake.

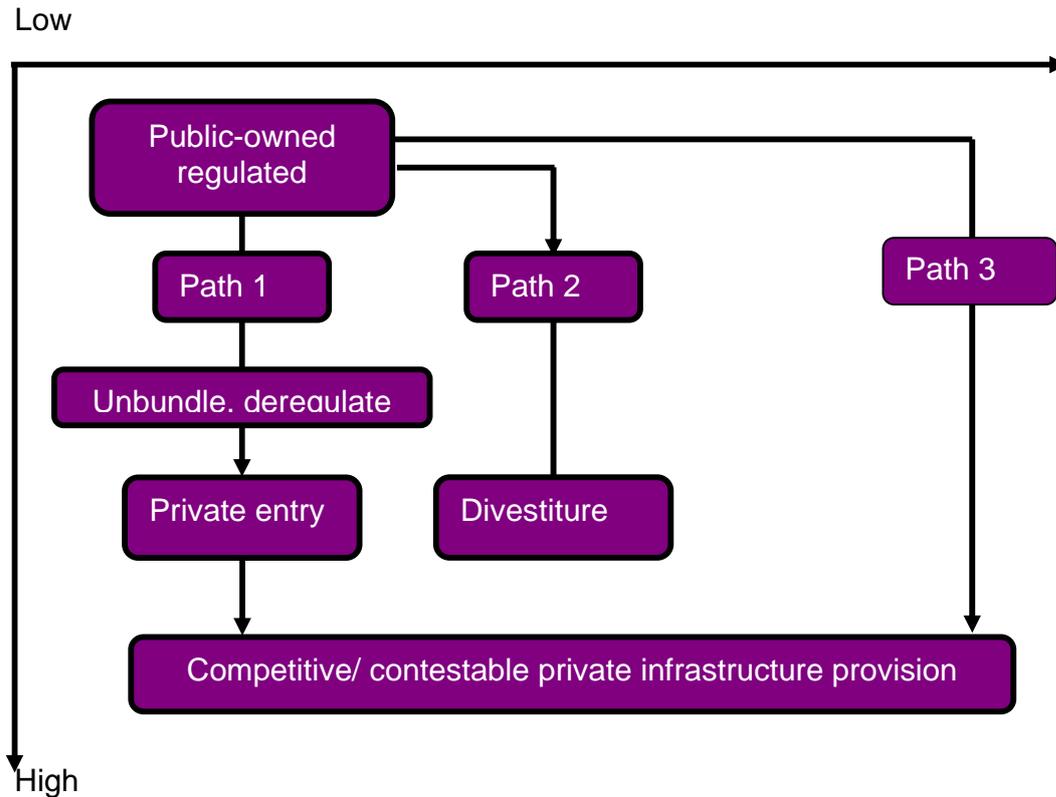


Figure 2.1: The transition path in the process of Public-Private Partnership
 Adapted from Lindback 1996:46

2.3.1 Unbundling and deregulation (Path 1)

The three paths pointed out by Lindback, as mentioned above, are further discussed in this section with the goal of determining their validity and relevancy in involving the private sector in a public owned regulated entity. A closer look at the figure shows that the path dealing with issues of unbundling and deregulation is, according to Lawther (2000:38), a time to request for proposals from the private sector. In other words, private companies are invited to submit their bids. Sader (2000:30) maintains that prior to following private entry, project preparation should be done and this entails:

- establishing whether and under which circumstances a project has potential

for job creation;

- identifying the relevant applicable procedures to shepherd a project through the approval process;
- conducting economic, legal, financial, and engineering studies;
- assembling the consortium; and
- negotiating with lenders, insurers, and contractors.

It needs to be pointed out that when a project is successfully implemented and reaches financial closure, it is important to realise that the project development costs would form part of the project costs. The implication is that the final user should pay for this work through tariffs and user charges that need to be determined. Sader (2000:30-31) is of the opinion that a laborious approval process would result in a more expensive project at the end.

2.3.2 Divestiture (Path 2)

The second path suggests that a state-owned enterprise adopts a divestiture strategy without undergoing an unbundling route. Gildenhuis (1993:47) defines divestiture *strategy* as “the sale of public enterprises with a view to reducing public spending and thus allocating limited resources more productively”. In this regard, Kessides (2004:104) proposes that during the restructuring of public sector entities, ownership be transferred to the private sector through outright divestiture. Wheelen and Hunger (2004:150) are however of the opinion that a divestiture strategy could be followed when a corporation or a division has a low growth. Miller (1998:254) concurs and emphasises the fact that organisations divest their businesses, not merely based on poor performance, but also as their assets have more value in some other applications.

In a quest to increase the range of options, Birch and Haar (2000:116) suggest various ways in which a divestiture strategy could be crafted and eventually implemented. Firstly, it is suggested that services that were traditionally provided

by government could be contracted out to the private sector. Secondly, worker-owned enterprises could also be established, either through the employee share ownership programmes or companies formed by government employees to purchase the public sector enterprise. Lastly, an entire public sector enterprise or parts of it could be leased to the private sector, or the government could enter into a joint venture with private sector partners or with workers as partners. This would simply result in giving an opportunity to the private sector to get involved in the provision of infrastructure and the development of various processes for land use along the road transport corridor.

2.3.3 Private entry from the project's onset (Path 3)

Path 3 shows how a state-owned enterprise could be transferred directly to the private sector without undergoing the unbundling route. This process is mainly characterised by activities that are directly involved with the provision of infrastructure, such as roads. The level at which Public-Private Partnerships take place is denoted by *Low* where a state-owned enterprise is dominant and *High* where the private sector is fully operational.

2.3.4 Provisions offered by the competitive/contestable sector

The last block discusses the competitive/contestable private sector role in the provision of the essential infrastructure. It is at this phase that the role of the concept Public-Private Partnership should be clarified because among other things this phase should also explain how measures that involve the expansion or decentralisation of decision-making should be extended to individual entrepreneurs as opposed to political bureaucratic control. The arrow that shows a direct line from the government-owned regulated monopoly to the private sector indicates how the private sector is granted the right by government to utilise assets, like roads.

In their analysis, Ibanez and Meyer (1993:1) came to the conclusion that the concept of Public-Private Partnerships signifies "a system of tendering or the

sub-contracting of public provision to private firms". This study prefers to define the concept of Public-Private Partnerships as the management of the transport infrastructure by a private firm or consortium of private firms in partnership with the public sector (National Roads Agency) for a period of thirty years. However, Fayard (1999:20) warns that "Public-Private Partnership should not be seen as a magical recipe for the creation of resources and markets. It should rather be seen as a means of achieving an overall optimum result by striking a balance between competition and cooperation and also by providing not only construction but maintenance and operation as well".

The area in Figure 2.1 that indicates Path 1 represents the unbundling processes that should correctly lead to the entry of the private sector into sectors that were formally controlled by the public sector. In practical terms this process could be likened to the unbundling phase that took place in South Africa during the transformation of the Department of Transport when the South African National Roads Agency was formed. The private sector entry phase shows the entry of private companies into public sectors like the N3TC, TRAC and Bakwena who were awarded concessions to serve as concessionaires.

2.4 ANALYTICAL APPROACH

The analytical approach is used to interrogate and clarify the concept of Public-Private Partnership further, because services that do not fall within the spectrum of partnership are often confused in the daily spoken language. For example, the delivery of service by a corporative entity such as the South African National Roads Agency Limited within the Department of Transport would not be regarded as a Public-Private Partnership arrangement even though such an agency has some characteristics of the private sector. This is so despite the fact that a corporative agency is an agency that behaves like a business entity because it has acquired an independent status that subjects it to the same legal regime as private firms. Therefore, its provision of service in partnership with national government falls outside the context of Public-Private Partnerships. This

relationship could rather be described as Public-Public Partnership where the South African National Roads Agency is regarded as a public entity in this study.

An effective partnership should ensure that both sectors (public and private) are fully involved in service delivery based on each party's distinctive competency in the area of involvement. For example, in the management of toll roads, the concessionaire should ensure that the maintenance of the road is done in accordance with the specifications as laid down by the Department of Transport. This should be done by way of appointment of an independent engineer by the National Roads Agency to perform an oversight on a variety of issues and processes. In other words, the engineer would serve as an ombudsman to ensure that each party delivers as per specifications contained in the concession contract. Accordingly, Stacey (1997:8) points out that "every party to the partnership must perform its part". This simply shows the importance of each party's involvement in a Public-Private Partnership arrangement and could perform better if well monitored.

A feature that is worth remembering in a Public-Private Partnership arrangement, particularly in the development of infrastructure, is that a private firm should be allowed an opportunity to invest its own resources. In as far as South Africa is concerned, private parties are responsible for ensuring that the project is sustainable by identifying more business opportunities within the given road network reserve. In addition, it should also be noted that in a partnership arrangement, the risk factor pertaining to the management of a project becomes the central theme of discussion before any commencement can take place (Gautrain Project Team, 2005).

Fayard (1999:8) is of the opinion that the risks entailed in a given project vary according to how far the project has advanced, and as a rule, such risks become smaller over time. Fayard also maintains that all the risks entailed in a project should be analysed as closely as possible before the project is started. The dictates of efficiency and fairness require that the risk be allocated to those who

would benefit most from the operation. The bidding partner who is best able to manage a particular form of risk should therefore be elected as a partner.

2.4.1 Elements to be considered

There are various elements to be considered if a partnership is to be managed successfully. These elements consist of the intention to genuinely participate in the project, the desire to strive towards the attainment of a common objective, the ability to design an appropriate organisational structure, the capacity to demonstrate sensitivity to issues and the ability to assess environmental factors (Fayard, 1999:8).

2.4.1.1 The theory of genuine participation

There should be genuine participation by both the public and the private sectors in the project in order to ensure progress and success. Gildenhuis and Knipe (2000:84) emphasise the need for genuine participation by saying "the capacity of new employees to undertake the relevant tasks must be built to create competency". Genuine participation is important in the sense that it forms one of the fundamental pillars of motive forces that makes sure that the transport infrastructure project guarantees the creation of employment opportunities. Striving towards the attainment of economic development forms another pillar of ground motive forces that should ensure that the transport infrastructure project becomes a success.

2.4.1.2 Theory of striving towards a common set of primary objectives

According to this theory, partners are expected above all else to strive purposefully towards the accomplishment of a common set of primary objectives. In the case of South Africa, the prevailing primary set of common goals is embodied in the theory of Accelerated and Shared Growth Initiative of South Africa (ASGISA). This theory is currently implemented under the stewardship of the Deputy President (P.M Nqcuca). The philosophy of ASGISA is contained in these words, "to halve unemployment and poverty by the year 2014"

(Parliamentary Speech delivered by Deputy President P.M Nqcuca, 2006.02.06). The implication is that any contracted private sector, for example the concessionaire dealing with a road project such as the N3 toll road, should strive purposefully and deliberately at maximising employment opportunities during the construction and operation phase of the project.

2.4.1.3 The designing of an appropriate organisational structure

The design of an appropriate organisational structure philosophy is based on the rationale that says, “irrespective of whether it is in the public or private sector, the organisation providing the service should be accountable to the people who are being served. Mechanisms that enhance accountability to the end user should be developed” (Gildenhuys and Knipe 2000:84). Accordingly, it is the strong view of the Department of the Environment, Transport and the Regions (1998:27) that an appropriate organisational structure should be put in place prior to the commencement of a Public-Private Partnership project that indicates clearly who is to be responsible for what type of risk, should the project become stuck.

2.4.1.4 The need to demonstrate sensitivity

With respect to experience gained from Hungary, Szabo (1999:11) points out, “when a Public-Private Partnership project is implemented on an existing motorway section, one has to treat it with the utmost sensitivity and should deal with it in an acceptable fashion”. This actually means that there has to be a massive public information campaign well in advance of starting toll collection to gauge the public mood. The main reason is to sell the idea so as to gauge or to minimise any potential resistance to the project as it unfolds. Gildenhuys and Knipe (2000:85) support this approach by arguing that “the steps to engage the private sector should be taken in such a way that all the stakeholders are aware of how it is being done and why. Most importantly, they need to be aware of how it is being done and what the benefits will be”. South Africa has applied this approach when it executed the N3 Toll Concession as a Public-Private

Partnership project (N3TC Technical Report, 1999:13).

2.4.1.5 The process of environmental impact assessment

In this context, Szabo (1999:11) points out that "there has to be reliable environmental impact studies if a road infrastructure project is to be successfully executed". To this end, South Africa adopted the Hungarian approach that regards "the environmental impact assessment study as being absolutely essential and a project may not commence if that is not done". However, to do this rationally and sensitively, it requires an integrated approach by different departments so that they all could positively contribute to the successful management of the project as pointed out by Flaherty et al. (1997:21).

Following the adoption of the Hungarian model, South Africa, through the provincial government of Gauteng made use of this method when executing "the environmental impact assessment (EIA) of the R21 billion 80 km Gautrain rapid rail project". This project forms part of the Gauteng provincial government's ambitious Blue IQ initiative and had to be approved by the Gauteng Department of Agriculture, Conservation, Environment and Land Affairs (GDACEL) (Media Monitoring Service, 2003).

In Hungary, the local governments are involved from the early phase of a project, and South Africa went on to make this legal requirements that are prescribed in the National Land Transport Transition Act, Act No. 22 of 2000. Section 10 (13) (e) of this Act requires, subject to legislation applicable to local government, that transport authorities or governmental structures dealing with transport projects "encourage, promote and facilitate public consultation, participation or involvement through hearings, seminars and workshops and any other means that are appropriate to ensure effective communication with customers, communities, organised labour and transport operators". The Minister may even prescribe requirements and procedures in this regard whereby the private party is compelled to involve various stakeholders in the execution of projects.

2.4.2 Difference in emphasis

Stacey (1997) outlines the significant difference in emphasis between public and the private sector business in respect of the achievement of their primary goals. The primary goal of the public authority is to provide services while that of the private sector is maximisation of profitability in the long term. It is essential that partnership arrangements manage these two conflicting primary goals so that business stands a chance of making a profit while the public sector discharges its service delivery obligations. If a partnership is to be effective, the objectives of both the private sector and public authority need to be integrated. This may be made possible by providing an excellent quality service at an affordable cost that is also able to generate favourable returns on investment.

In their research regarding public versus private sector enterprises, Bishop, Kay and Meyer, (1994:35-39) advance a theoretical case in this fashion. They actually argue that in as far as ownership is concerned, a public sector enterprise has traditionally rested on considerations of allocative efficiency while the private sector basis its objectives on profit-making tactics. This dichotomy indicates how resources are allocated by the two sectors in the economy as a whole. Furthermore, what makes sense is the fact that, by contrast, the case for private sector ownership rests on the incentives and constraints that the market provides to promote efficiency within the firm. This type of efficiency, which is known as “technical” or “productive” efficiency, is synonymous with cost minimisation for a given level of output.

Bishop et al. (1994:36) maintain that the traditional approach to public sector economics has tacitly assumed that the productive efficiency would be satisfied irrespective of the conditions of ownership or competition. Whether this assumption actually holds in practice is of crucial importance for two reasons. First, allocative efficiency would automatically be violated in the absence of productive efficiency. In other words, the latter is a necessary condition for the former, whereas the converse is not the case. Second, much of the impetus for

Public-Private Partnerships has come from a perception that the public assumes that enterprises do not behave in a cost-minimising manner.

This perception has not been researched in South Africa, thus it would be unwise to make conclusive generalisations on it. Some of the reasons suggested by Bishop et al. (1994:36-37) as to why a public-sector enterprise might not behave in a way which is consistent with cost minimisation are the following:

- Firstly, there is an absence of a clear-cut profit objective which is the overriding goal of private sector enterprise; and
- Secondly, profit maximisation implies cost minimisation and in the absence of the former objective the incentives to pursue the latter will be severely blunted.

While the research conducted by Bishop et al. (1994:83) carries some truth with regard to the behaviour of public sector enterprises, particularly as regards failure to adhere to cost minimisation, it needs to be pointed out that South Africa has taken a giant step in ensuring that public institutions are more efficient and effective in minimising the input costs. In terms of the White Paper on Human Resource Management in the Public Sector (1997:14), “every employee’s performance should be assessed at least once annually against mutually agreed objectives. The assessment process should be aimed at identifying strengths and weaknesses, in order to recognise and reward good performance, and manage poor performance”. This simply shows the narrowing of a gap between the public and private sector enterprises in terms of their values and ethics (Department of Public Service and Administration, 1997:11).

2.5 FORMS OF PUBLIC-PRIVATE PARTNERSHIPS

2.5.1 Introduction

There are several ways and means by which the private sector could be engaged in the public service. In the process of engaging the private sector in any public service, the first logical step followed in South Africa was to form the South African National Roads Agency Limited. This body was intended as an intermediary between the Department of Transport and the Concession Company. It should be noted that the public service in this context should not be commercialised as a way of freeing it from public accountability and control by the legislature. In fact, the public service should remain under control and be subjected to public accountability until it can prove itself as a suitable partner to enter into Public-Private Partnership agreements within the competitive world of the open market system (Gildenhuys, 1993:44).

2.5.2 Liberalisation and concession agreements

Control and regulations such as economic regulations (barrier to entry in the infrastructure provisioning by the private sector) are adapted or liberalised so as to permit more private sector participation. Concession refers to a right granted to a contractor for the supply of a public service on behalf of government at a fixed price as specified by government in the bidding process (Gildenhuys, 1993:604). The World Bank (2002:95), defines a concession as “the granting of an exclusive right to provide a service without payment by the authority”. The authority referred to in this regard is the South African National Roads Agency Ltd (SANRAL) that is currently dealing with making conditions like those of fixing tariffs or imposing minimum service requirements.

However, for the purposes of achieving the main objective of this study, the authority sought for dealing with aspects such as tariffs and other service requirements should ideally be an economic regulatory authority. In a concession, the private firm or concessionaire assumes overall responsibility for

service delivery in the form of; inter alia, operation, maintenance, management and capital investment for infrastructural extension. The fixed assets associated with the service are entrusted to the concessionaire, but remain the property of the public authority and have to be returned to it in the same condition at the end of a concession period (Stacey 1997:19). This view is supported by the Horizon Twenty Ten Strategy (Department of Transport, 1999:26) which states “during the concession period the roads are both built and maintained at no cost to the State and at the end of the concession period, the State is therefore left with an improved asset that is not only of greater value, but also entirely debt free”.

Concession contracts make provision for concessionaires to be technologically innovative as they place more emphasis on output specifications than on input. Adding value into the concession contract value chain during the implementation phase would mean added benefits or a bonus on the part of the concessionaire. Concession contracts usually run for twenty to thirty years (Sader, 2000:21). The duration partly depends on the level of investment as well as the payback period for the private firm to recoup its investment capital and to make profit on its invested money.

A project such as the Gautrain would have a longer payback period due to its considerable size compared to a Public-Private Partnership prison project in Louis Trichardt. At the end of a contract, when all works and equipment are returned to the public authority, any expense that exceeds income ought to be viewed as losses to be incurred by the concessionaire. Penalties in the form of fines are imposed if a contractor fails to meet the targets for service coverage or quality in the contract. Penalties should be explicitly linked to their causes, and should escalate as the breach of contract becomes more serious. Generally, penalties are paid not to the public authority but to a regulatory agency, which may then use them to redress the deficiencies in question (Gautrain Project Team, 2005).

According to the Road Infrastructure Strategic Framework for South Africa,

(Department of Transport, 2002), there has been an effort to transfer some of the public risk in road infrastructure development to the private sector. A variety of concession contracts are designed in such a way that the risk is eventually transferred to the private sector. Such concession contracts involve the Build Own Operate (BOO), Build Operate Transfer (BOT), Build Transfer Operate (BTO), Rehabilitate Operate Transfer (ROT) and Build Own Operate Transfer (BOOT) arrangements or agreements.

2.5.2.1 Build Own Operate (BOO)

According to this concession contract, the concessionaire is required to build, own and operate the infrastructure. Such concessions typically are on a fixed term basis, after which the operating rights can be transferred to other private service providers (Sader, (2000:3). The build own operate does not involve the transfer of assets back to government (World Bank, 1997:21). This means that the assets remain private and this may give investors more protection and facilitate the financing of the concession by making these assets available as collateral (World Bank, 1997:22)

In monopolistic sectors, BOOs do not in any way imply permanence. The private company has indefinite ownership rights to the assets. To be allowed to provide service, it typically needs an operating license, which the government may withdraw, revoke or not renew at any time. When a license is terminated, ten year's notice is given to the license holder. A license can be revoked at any time for non-compliance (World Bank, 1997:22).

2.5.2.2 Build Operate and Transfer (BOT)

Yescombe (2007:8) asserts that the concept of Build Operate and Transfer contract was first developed in Turkey. Under this contract, private investors finance and build roads at their own risk, operate them for an agreed period, and then transfer ownership to the public sector (Hakim, Seidenstat and Bowman, 1996). According to Sader (2000:3), Build Operate and Transfer (BOT) contracts

are the most common form of private greenfield investments in infrastructure. Under such an arrangement, a private company or consortium typically forms a project company based on the right to build or rebuild a facility and to operate it for a fixed time period. This view is confirmed by Delmon, (2005) whose opinion is that the concessionaire enters into a contract with a construction entity to construct and operate the infrastructure. Estache and De Rus (2000:253) stresses that the public sector retains legal ownership and regulatory oversight of the concession contract. Based on Estache and De Rus's thinking, it would be justified to have a transport economic regulatory authority to have regulatory oversight on concession contracts.

According to the view of Binnington (1998:36) as noted in *Construction World*, February 1998, the Build Operate Transfer projects are currently fashionable in South Africa, and an added dimension is government's drive to develop previously disadvantaged individuals (PDI). Binnington further mentions that public sector departments are increasingly awarding contracts to companies that have a PDI component in an attempt to expose this sector to public income. The system offers an opportunity for entrepreneurs to get involved in the infrastructure growth of the country.

An appropriate example where BOT is applied is the N3 corridor where the Toll Concession Company, that is N3TC, has signed a 30-year concession contract with the South African National Roads Agency Ltd. The contractual agreement allows the concessionaire to build, operate and transfer the road infrastructure back to government after a period of 30 years (N3 Project Information Memorandum, 1998). A concession agreement that applies the Build Operate and Transfer appears to be the right option to be applied in South Africa, simply because it is long term and would have the potential to attract long-term investors. When the infrastructure is transferred back to government after a period of 30 years, it shall have appreciated and would reflect favourably on government's asset register.

The expected condition of the project assets on expiry of the Public-Private Partnership agreement must be agreed with the private party and provided for in the agreement. Should the public sector require using the project assets even after the expiry of the contract then provision should be made for transfer of possession. At the signature date, the parties should agree which project assets will be required by the agency at the end of the project term. If the project assets are to be transferred to the Agency on the expiry date, they should be in a condition where they have some remaining useful life. This is intended to enable the Agency to provide the services. The assets therefore should have some residual value at the expiry date.

Residual value refers to the market value of the project assets or the duration for which those assets can still be used after expiry date of the agreement. The residual value required will vary from project to project. It is also often not feasible or practical to have one standard that applies to all the project assets as a result of their varying nature and purpose.

The PPP agreement should accordingly provide for a procedure to be followed prior to the expiry date in order to determine the condition of the project assets and to establish whether the private party has complied with the obligations in relation to the condition of the assets. A procedure has to be agreed upon whereby a survey is conducted to examine the assets.

2.5.2.3 Build Transfer and Operate (BTO)

According to Sader (2000:3), a new facility is built on a turnkey basis with private capital, and the ownership title is transferred to the host government after completion of construction. The private contractor operates the facility for a fixed term under a separate agreement. A build Transfer Operate (BTO) is used in California, where its aim is to reduce the risk to private operators of public liability claims. Under BTO, the state takes formal title to the privately built facility and then leases it back for private sector operation.

2.5.2.4 Rehabilitate Operate and Transfer (ROT)

This is the same contractual arrangement as a BOT, but is used for the rehabilitation of an existing facility rather than the construction of a new one (Sader, 2000:4). A Rehabilitate Operate and Transfer (ROT) require a contractor to repair and operate a public owned facility, which is transferred back to the public sector (Stacey, 1997: 20). It is sometimes used to describe concessions in which investment entail primarily rehabilitation rather than construction (World Bank, 1997:21).

2.5.2.5 Build Own Operate and Transfer (BOOT)

Sader (2000:3) argues that Build Own Operate Transfer (BOOT) provides that a project company finances the building of an infrastructure facility and operates it for a fixed period, after which the ownership of the assets is transferred to the host government. Stacey (1997:2) is of the view that BOOT entails a comparatively long period of ownership before transfer. In all these cases, the duration of the contract is almost exactly the period needed to retire the debts that the contract incurs, and to provide a return to quality investors.

2.5.3 Lease contracts

A lease is a contract that provides a right to the use of the assets, legally owned by the lessor, in exchange for a specified rental paid by the lessee (Correia, Flynn, Uliana and Wormald, 1993:663). According to Stacey (1997:18), a lessee rents state-owned facilities for a period, and is responsible for its own expense for the operation, maintenance and management functions associated with such functions. The lessee derives its revenue from the tariffs, which is also charged with the collecting, and apart from contractually specified maintenance commitments, has no obligation to invest in the infrastructure. The public authority, who remains the sole owner of the assets, is responsible for capital expenditure for a new project, replacement of major works, any debts servicing, as well as setting tariffs and cost recovery policies. The lease and operator

contracts are shorter than the greenfield BOTs or concessions. The government reserves the right to terminate the contract before the end of its normal term (World Bank, 1997:22).

The problem with the lease contract is that while they confer responsibilities for the operation and maintenance on the one hand, and for investment on the other, on different entities. These responsibilities are sometimes hard to distinguish (Sader, 2000:3). Difficulties may therefore arise in co-coordinating investment decisions and operating needs, prompting a fractious relationship between lessee and public authorities over performance problems. To mitigate these problems, lessees should be involved as much as possible in planning capital expenditure. Furthermore, such involvement is necessary, because budget cuts can lead to deterioration in the quality of infrastructure, with implications for the performance efficiency for the operator.

Lease contracts usually entail public authority commitment to a tariff structure that least covers the cost of operation and maintenance, and private sector consent to a rental fee sufficient to service debts and finance part of investment programmes. Lease contracts usually provide automatic periodic revisions of rental, but with a certain price index formula to protect consumers.

Lease contracts can be medium or long-term lasting from five to twenty years. These contracts also set penalties for poor performance. Contractors put up security deposits that the public authority can call in if performance is unacceptable. Apart from this, private firms assume quite limited risk under lease contracts. As a low risk option, leases often attract stiff competition from interested partners, which benefit the public authority (Stacey, 1997).

Kerf et al., (1998:17) argue that in a lease, as we use the term, the concessionaire is paid no fee by the government. The concessionaire's profits depend directly on the operating profits of the firm. Operating risk is thus fully transferred to the concessionaire. The government still maintains responsibility

for investment and thus bears investment risk. Based on Kerf's argument, a lease agreement could be the right contractual agreement to be applied in South Africa in the sense that it encourages the concessionaire to adopt an entrepreneurial approach in the management of toll roads. This is evidenced by the fact that government does not pay any concession fee and the operating risk is completely transferred to the concessionaire. The implementation of this strategy in the toll roads industry would need government to build capacity in the field of entrepreneurship so as to enable concessionaires to manage all types of risks.

2.6 OPPORTUNITIES IN PUBLIC-PRIVATE PARTNERSHIPS

According to Sader (2000), the South African government, just like any other government, is showing increasing interest in concessions or build operate and transfer mechanisms in the national road network. The aim is that this could give rise to opportunities particularly where the National Roads Agency plans a route, which would then be offered to a construction or financing group to do the construction and operation. The experience learned from other countries such as Rwanda is that it becomes advantageous to government if the initial project cost is being funded completely from revenue subsequently generated by tolls applied to the roads (World Bank, 2005:16). This confirms the research study conducted by Noulton (1999:4), who asserts that the concessionaire needs to repay his/her costs, achieve his/her allowed profit and hand the project over to the public sector six years before the end of the concession period. By so doing, the government thus gains income that would be spent on motorway improvements.

The main thrust of triggering opportunities in the Public-Private Partnership arrangement involves what may be termed the sharing of productive resources between the public and private sectors. Currently, South Africa has a variety of activities falling under the public sector on all three levels of government. This refers to activities, such as law enforcement, which could be done better if members of the community along the road infrastructure corridor are involved. If

combating crimes, such as fighting against car hijackers, could be shared by both public and private sectors, then there is no doubt that government could gradually reduce the negative publicity that is currently marring the image of the toll roads.

2.7 POTENTIAL INVESTORS' EXPECTATIONS

Investors are keen to know what entities are responsible for providing approvals and against which criteria. This knowledge is essential for effective co-ordination within government, but it is also important to guide and give confidence to potential investors (Kerf et al., 1998:24) In his research, Sader (2000:24), identified potential investors' expectations in terms of operating profitably, finding reliable partners, diversifying risk, reducing uncertainty, existence of a stable legal framework and avoiding contingent liabilities.

2.7.1 Operating profitably

The main sponsors of private sector infrastructure projects are typically large consortia of companies with proven experience in the operation of such projects. The primary goal of the consortium is to establish an infrastructure operation that will allow such a consortium to generate profit by providing services in a reasonably predictable environment. If conditions appear to be favourable, then potential investors would be quite willing to invest. Driven by commercial principles, they have a strong incentive to provide the agreed upon services as efficiently as possible (Sader, 2000:24-25).

2.7.2 Finding reliable partners

Infrastructure projects tend to be too big to be financed by one investing firm alone. In addition, because of the unique political nature and technical complexity of such projects, investors typically want to share the risk rather than carry it alone. The main sponsor will have to identify partners who can furnish additional technical expertise and support for financing, construction and maintenance.

Project completion and future operation are critically dependent on the reliability of all partners involved. Rules that impose limitations on the types of potential partners, such as a requirement to find a domestic partner or to integrate a state-owned enterprise, are often a matter of concern to sponsors and can damage the viability of the project (Sader, 2000:25).

2.7.3 Diversifying risk

Infrastructure projects present unusual risks. Commercial risks include the timely construction and technical performance of the facilities, as well as the quantity and quality of the service provided. Political risks may result from decisions taken by public authorities that shape the business environment. Sponsors are keen on distributing these risks to the parties best equipped to deal with them. Sponsors want to insulate themselves from risks that are independent of their own performance and beyond their control (Sader, 2000:25). Based on the experience learned from the concessioning process underwent by the N3TC, it is evident that lenders want to be comfortable that any potential risk that would face shareholders need to be diversified if possible.

2.7.4 Reducing uncertainty

The profitability of a project is critically dependent upon the future environment for the private enterprise. Uncertainty about entry or market rights will affect sponsor expectations about profitability. In some cases, investors will want specific exclusivity periods that will allow them to recoup their initial investment, and the government will have to determine whether such an extraordinary measure is warranted. Similarly, the pricing of services is a key issue, particularly when service provisions involve retail customers or where direct competition is not feasible. Investors are looking for a clear and sensible regulatory and contractual framework, with specific rules on adjusting tariff rates (Sader, 2000:25). According to Kessides (2004:3), investors demand cost-reflective tariffs before they will commit their capital in a toll road project.

In trying to meet the demands of investors, the N3TC had to change its toll strategy by moving away from the concept of a fixed rate per kilometre and a fixed ratio between vehicle classes to the concept of toll rates based upon the perceived benefit of using the toll road. According to this strategy, a toll rate or tariff is set for each vehicle class at each toll plaza based upon the perceived benefit which takes into account the cost savings.

2.7.5 The existence of a stable legal framework

A legal framework is referred by Yescombe (2007:31) as a specific law relating to the project or to concessions in general and would allow a private sector company to charge and collect revenues from users for providing a public-sector service. This framework is essential because the private infrastructure projects are too contract-intensive, and the long term horizon of most of these projects increases the danger of contractual disputes. Sponsors want to be reasonably confident that any such dispute can be solved fairly, whether through the domestic judicial system or by means of arbitration (Sader, 2000:26). With regard to the N3 toll concession contract, the lenders had to make sure that there is sufficient comfort regarding the existence of a legal framework pertaining to the monitoring of overloading. It was therefore a requirement that the concessionaire provide a plan for providing weigh-in motion stations or roving weigh stations along the highway at locations to be agreed with the National Roads Agency.

According to Fayard (2001:6), Public-Private Partnership initiatives in countries such as Austria, Spain, France and Italy have made investors to assess various alternatives before coming with a well thought rational decision of choice. Sader (2000) argues that it is important for investors to assess their government's attitude in terms of real commitment for promoting the philosophy of Public-Private Partnerships. French Public-Private Partnerships are in support of the fact that government still retains control after the asset had been sold.

2.8 PRINCIPLES FOR ROAD CONCESSION IN SOUTH AFRICA

Kerf et al. (1998:21) argue that the interface between government and the private sector is the key to the success of private infrastructure arrangements. Governments need to perform numerous tasks when planning, designing, implementing and regulating concessions. Guiding principles for improved operations in a concession arrangement are outlined by Kerf et al. (1998:21), as transparency in government processes. It is strongly felt that lack of transparency would increase uncertainty for investors and developers and thus multiply costs or stop projects from going ahead.

Governments should try to implement the following principles in order to improve the way they manage concessions.

- Effective co-ordination of relevant government policies and approvals. For example, there should be effective inter and intra-governmental communication. The road project should involve all affected provinces and municipalities;
- Clarification of roles and responsibilities with respect to private investors. It is important to make sure that the private sector is given explicit terms of reference regarding their responsibilities to be executed; and
- Acquiring access to the expertise needed to design and implement complex transactions. It is advantageous to ensure that access to innovative skills is unhindered throughout the concession period. An interview with National Roads Agency officials in 2002 revealed that there is a critical need to engage diverse skills in the road infrastructure strategic management.

The design and implementation of concessions require the co-ordination of several governmental actors precisely because the necessary approval or the granting of guarantees is required before the project could proceed. When government does not co-ordinate all relevant factors effectively, it risks sending mixed signals to private investors and causing delays, either of which can deter

investors or increase development costs substantially. Investors are naturally expected to want to know what entities are responsible for providing approvals and against which criteria. This knowledge is essential for effective co-ordination within government, but it is also important to guide and give confidence to potential investors. In addition, it is a prerequisite for transparent approval and bidding procedures.

Governments need expertise in a range of new areas to design and implement concessions. In addition to the technical engineering requirements of particular projects, new skills need to be acquired in the areas of financing, regulating, and marketing to potential investors and consumers. Inadequate expertise in these areas can prevent the establishment of mutually beneficial and sustainable private infrastructure arrangements.

In most cases, private ownership may be expected to produce better performance than the public ownership of a commercialised entity. Private ownership would be likely to provide more effective monitoring and commercial incentive for the firm because its operations are based on the principles of efficiency and effectiveness as a means of making profit.

European countries such as Spain, Australia, Portugal, France, Norway, and Italy consider it impossible and inappropriate to provide a motorway expansion without the involvement of the private sector. The private sector was sought in the area of financing, construction and operation. During the search for an appropriate method of financing, design, construction and maintenance, certain basic principles had to be formulated for use in a quest to realise Public-Private Partnership participation eventually. The committee of ministers responsible for the introduction of Public-Private Partnerships into the South African economic milieu formulated the following principles (Kerf et al., 1998:22).

- i) The National Roads Agency needs to receive a request before awarding the actual concession to the winning private entrepreneurs. Such a concession should cover a specific section of a national road to do

activities such as the following:

- financing;
 - construction;
 - maintenance;
 - rehabilitation; and
 - operation.
- ii) The concessionaires' rewards for the financing, construction, maintenance, rehabilitation and operation of the road should be in the form of the right to collect toll fees on these roads.
- iii) The concession should be granted a period of 25 years, renewable for a period of 25 years following the original period by way of negotiation and the payment of a certain fee determined according to a formula.
- iv) The state should use its expropriation right in order to secure for the concessionaire free access to and right over the land and the air space above it. Free access may be required to enable the concessionaire to discharge its obligation and to exploit its right fully as contemplated in the agreement between the parties.
- v) The state should continue to provide social services such as ambulance, fire and police services. The concessionaire should provide assistance with regard to the implementation of all traffic laws and regulations and should make available proper facilities to police and traffic officers required for implementing such laws and regulations.
- vi) The state should undertake that no new major alternative roads are constructed that would adversely affect the toll revenue of the road or any section thereof unless the need for such roads arises and the concessionaire is unable to satisfy such need.

- vii) In addition to the financing, construction, maintenance, rehabilitation and operation of the road, the concessionaire should also provide reasonable amenities such as filling stations, breakdown services, means of communication such as telephones, rest of service areas and restaurants and other facilities that are required for the operation of the road.
- viii) The toll levied on the road concern should be calculated by way of a formula to be stipulated in the agreement between the two parties.
- ix) The state should permit the deduction from the income of the company, of certain allowances (Kerf et al., 1998:23).

2.9 ROLES AND RESPONSIBILITIES IN THE MANAGEMENT OF ROADS

In terms of the roles and responsibilities pertaining to the strategic management of the roads infrastructure in South Africa, Figure 2.2 has been designed to give a brief illustration. It is clear from Figure 2.2 that the policy formulation, planning and ownership of infrastructure fall under the public sector. However, where a Public-Private Partnership arrangement is agreed upon, the maintenance, funding and operation of the road infrastructure fall under the private sector.

2.9.1 Policy formulation

In the policy formulation process pertaining to road infrastructure, it is important to note that the Department of Transport, through its South African National Roads Agency, takes the responsibility. In compliance with the National Land Transport Transition Act, Act No 22 of 2000 (Republic of South Africa, 2000), the Department of Transport involves stakeholders such as the Department of Provincial and Local Government, the provincial and municipal roads departments (Department of Transport, 2002:7).

	Public sector			Private sector	
	DOT SANRAL	Prov. DOT	Municipal government	Private sector	Community
Policy-making	◆	←.....			
Planning	◆	→			
Maintenance				◆	
Ownership	◆	←- - - - -			
Funding				◆	
Operation				◆	

Figure 2.2: Roles and responsibilities in the management of road infrastructure
Adapted from the World Bank, 2005:17

- ◆ Area of responsibility
- ←..... Input from stakeholders
- Area of influence
- ←- - - - - Returning infrastructure to government

The policy on toll roads has evolved over an extended period without an opportunity for an independent review of its appropriateness and effectiveness in the current socio-economic circumstances in South Africa. It is opportune to re-examine the approach to toll roads, particularly the balance between agency-managed toll roads and concessioned toll roads (Department of Transport, 2002:98). This model is intended for application in the transport infrastructure and the rationale is to make a distinction of responsibilities assigned to various

parties in respect of policy formulation, planning, maintenance, ownership, funding and operations.

2.9.2 Planning

Prior to the establishment of the National Roads Agency in 1998, the Department of Transport's Road Board had direct responsibility in the maintenance of main roads. Under the government's decentralisation policy, the responsibility for maintaining the national road network has been transferred from the Department of Transport to the National Roads Agency. The strategic planning of toll roads is done by the National Roads Agency with substantial input from various stakeholders, such as the community, private sector, municipal government and provincial authorities. (See Figure 2.2).

2.9.3 Maintenance

According to the Road Infrastructure Strategic Framework for South Africa, (Department of Transport, 2002:12), there has been an effort to transfer some of the public risk in road infrastructure development to the private sector, as evidenced by trends such as Build Operate and Transfer and Design Construct and Maintain. In South Africa, maintenance work is outsourced under similar contracts.

Based on the research study conducted by the World Bank (2005:16), the maintenance of paved roads in Rwanda is now carried out by the private sector under national competitive tender arrangements. Local communities undertake simple paved road maintenance activities, such as clearing verges and drains, under the supervision of the Directorate of Roads.

Figure 2.2 shows that road maintenance in South Africa is done by the private sector and this should be seen as encompassing members of the community to ensure that they benefit from road infrastructure projects. This would also benefit the public sector as such community structures would take moral ownership of

the project and co-operate in the strategic management of future events.

2.9.4 Ownership

According to the World Bank (2005:16), the entire road network in Rwanda is state-owned. In the case of South Africa, the ownership of road networks also rests with the public sector, i.e. South African National Roads Agency Ltd. The private sector only acquires the right to utilise the infrastructure for a specific period of time in the form of concession contracts. Concession contracts are done on a Build Operate and Transfer basis and this is shown in Figure 2.2 by means of arrows pointing towards the public sector side.

2.9.5 Funding

In Rwanda, funding for road maintenance is provided through that country's Roads Maintenance Fund (RMF), which was established as a road fund. Income to the fund is derived from a charge on fuel, a toll on foreign vehicles, an axle-load charge, penalties for vehicle overloading, and road damage compensation respectively, plus, in principle, a government contribution (World Bank, 2005:17).

In the case of South Africa, particularly with respect to toll roads, the principle is that of providing a road with a superior level of service for users willing to pay more for that service. From a user perspective, the normal road user charges (i.e. fuel levy, registration and licensing fees, etc) are argued as being for the use of non-toll primary and secondary roads. The additional toll fee is said to be for the additional level of service provided by the toll road (Department of Transport, 2002:99).

2.9.6 Operations

The re-organisation of government in 1994 has resulted in a greater distinction being drawn between policy formulation, planning and operation. The general consensus is that operation or service delivery is best provided by the private sector, partly in response to governmental reforms and demands

for greater cost effectiveness (Department of Transport, 2002:12). From Figure 2.2, it can be deduced that operation is the exclusive domain of the private sector, which characterises the current South African situation.

2.10 GENERAL POINTS IN CONCESSION AGREEMENTS

According to the N3 Project Information Memorandum (1997), a concession is defined in contractual terms as an agreement, which specifies the responsibility and rights of the concessionaire. It generally comprises the following points:

- motorway construction programme;
- duration of the concession;
- technical characteristics of the motorway, such as design, speed, cross section, longitudinal slope, minimum horizontal and vertical radii, road signs and markings
- criteria for the design, construction maintenance and operation of the motorway;
- procedure by which the state can control the performance of the concessionaire in all phases of the concession period; and
- toll rates and criteria at all phases of the concession, always taking cognisance of the initially approved financial plan.

The agreement should further provide for the creation of a State Supervisory Board, which will have the responsibility of controlling the correct implementation of the agreement, and to whom the management of the concessionaire would in future present the financial accounts at pre-agreed intervals. Policy decisions would be subjected to the approval of such an established control board. The board should be constituted in such a way that it would have at least one representative from the concessionaire and three or four representatives from government departments.

2.11 INTERNATIONAL EXPERIENCE IN PUBLIC-PRIVATE PARTNERSHIPS

The role of the public sector is paramount in ensuring that basic and essential services are accessible to the consumers. Access to essential services represents one of the basic fundamental conditions of what is generally regarded as a decent life founded on the principle of the respect for the environment. Essential services could include inter alia daily public transportation services (La Lettre de l'isted 2003:2). However, when taking into consideration the international historical experience regarding the issue of toll roads, it is evident that toll roads remain the basic infrastructure for the facilitation of daily transportation services. Therefore it is reasonable to demand that the system of Public-Private Partnerships be introduced and encouraged in the form that is usually referred to as turnpike, because it is effective in ensuring high quality service.

Two variations of toll roads exist and these are mainline toll plaza and entry/exit tolls. On a mainline toll system, all vehicles stop at various locations along the highway to pay a toll. While this may save money from the lack of need to construct tolls at every exit, it can also cause traffic congestions, and drivers could evade tolls by going around them. With entry/exit tolls, vehicles collect a ticket when entering the highway, which displays the fares it will pay when it exits. Upon exit, the driver pays the amount listed for the given exit. Should the ticket be lost en-route, the driver would then pay the maximum amount possible for travel on the particular highway. Modern toll roads often use the combination of the two, with various entry and exit tolls supplemented by occasional mainline tolls.

The term *turnpiking* is an English word derived from the concept stretched spike or spear, implying that when constructing roads of this type, one should ensure that such roads are efficiently managed so as to satisfy the users willing to pay for them. The concept has been used in various countries such as the United States of America, Italy, Spain, France, the United Kingdom, Singapore, Japan

and Mexico. This in a way proves its popularity, and hopefully South Africa would take a closer look into it with the objective of adopting it.

In as far as the regulatory environment is concerned, it needs to be outlined that in any Public-Private Partnership, it becomes imperative that the legal environment under which the concessions are granted be clearly structured. This may require general enabling legislation or can be achieved through specific concession arrangements. Whichever approach is selected, the arrangements must make responsibilities of the different parties clear and that is why it is important that regulatory intervention be considered. The focus of the study in this Public-Private Partnership arrangement is to unearth whether the regulatory authority needs to exercise its authority and responsibilities over prices, competition rules as well as rules pertaining to concession contract specifications. Annexure 2 has been specifically formulated to show how different countries went on in the execution of Public –Private Partnerships.

2.11.1 United States of America

Kerf et al. (1998:12) are of the view that most of the public transit systems built in the late nineteenth century were privately owned as were many roads. The privately owned and operated roads supported by user fees came into being during the early decades of the nineteenth century. Many roads were built and maintained by state-chartered turnpike companies partly as a result of competition from canals and railroads.

The most traditional means of managing toll roads in the United States is through semi-autonomous public authorities. New York, Massachusetts, New Hampshire, New Jersey, Ohio, Pennsylvania, Kansas, Oklahoma, and West Virginia manage their toll roads in this manner. While most of the toll roads in California, Delaware, Florida, Texas, and Virginia are operating under the BOT arrangement, a few of the older toll roads in these states are still operated by the public authorities.

Bell and Head (1994:99) in their discussion, state that "in 1980, the United States of America (USA) had already begun with the restructuring of its transport sector". This entailed the reduction of the public sector in operational issues as well as the deregulation of the transport industry. In as far as the transport industry is concerned, the USA has a strong tradition that road users should pay for the use of the roads. Hence, as far back as the 1980s, it was deemed essential by the USA government under President Reagan that all the revenues from the road user charges should be dedicated to the improvement of the roads.

The history of the highway system in the United States is characterised by a steady flow of research and technological development that derives from and also supports the national and local highway needs since the 19th century. With such research activity taking place on an ongoing basis, the concept of Public-Private Partnerships was propounded and eventually adopted by the government of the United States of America, a century after Great Britain had already commenced.

Presently, there are more or less 88 turnpikes owned and operated by state or local authorities as self-financing entities. The critical point is that the turnpike system does not allow government to collect tolls but only allows the private sector to do so because it is the private sector that carries out the construction, maintenance and operation of toll roads. The private sector does so with its own staff and also pays and equips state police seconded to the toll authority.

Parallel to the concept of Public-Private Partnership gaining momentum in the road infrastructure and thus becoming popular, we find that the passenger rail sector too was busy making good strides in enticing Public-Private Partnerships to its businesses. In this context, an American rail company known as Amtrak was able to receive over half of a billion dollars per year in subsidies. Although things appeared to become stable at first, Amtrak later on however became embroiled in difficulties due to obsolete equipment, strong union opposition, and

difficulties in contracting out services (Hakim et al., 1996:20-21).

Despite the above shortcomings, it should however be emphasised that it would be folly if not outright naïve to expect Public-Private Partnerships to operate without problems. Even in developed countries such as the USA, there have been instances of failure, such as the Dulles Greenway in the USA (Hakim et al., 1996:21). Based on this experience, South Africa should be wise when designing its own Public-Private Partnership arrangements. Any arrangement agreed upon should ensure that the financial risk should at all costs be apportioned to the party suited to bear such risk. Currently in South Africa as matters stand, the concession agreements are based on traffic forecasts over the project's life and are rationalised on a scenario of long-term growth.

While it appears that the majority is always optimistic about future projections, the impact of AIDS on population growth as well as exogenous political events on the economy most likely cast a shadow of doubt in some instances. Projections are not very reliable to give an absolute future scenario because of their fluidity, which sometime may result in harsher terms being adopted in order to compensate for perceived higher risk (Department of Transport, 2002:98-99).

When taking the Latin American situation into consideration, it has been discovered that regulatory reform has not only implied a new set of rules but an in-depth review of the way government traditionally think about regulation. Thus the reform effort appears to have not been an easy task because of the fact that the traditional role of governments in the area of the provision of infrastructure gave ministries and public officials a full discretionary and active role in setting regulations.

Be it as it may, it is still found that regulation is limited to enacting administrative and legal rules and procedures, and is viewed as an administrative endeavour involving discretion and political will. It implies that the long-term sustainability of private sector arrangements would depend on our ability to successfully build

new and appropriate regulatory institutions. Importantly, we should be reminded that institutional reform does not exclude nor substitute the most important task of allowing the markets to promote and preserve competition.

Consequently, the extent of regulatory risk and the impact of regulatory practices in terms of sustainable private involvement in infrastructure should be made to revolve around and depend on the modalities of the chosen contractual arrangement. In this regard, the structure of the specific sector and the possible role the market competition would play should be remembered, as this would also influence the choice of regulatory regime, the instruments to be adopted and finally the appropriate form of regulatory intervention (Basanes et al., 1999:25).

In the final analysis, what is remarkable about the United States of America is that regulatory agencies are much more independent from policy-makers and cover all sectors and have their own sources of funding. They also rely on this funding to sub-contract activities for which skills are required that they do not have in-house.

2.11.2 Italy

There are twenty-two concession-holding companies, all of which are majority-owned by public bodies or local authorities. The largest of these is Austostrada, which manages 52 percent of toll freeways. The concession scheme adopted by companies is that of Build Operate and Transfer and is valid for a period of 30-35 years. The loan is guaranteed by the state and the road is handed back to the state at the end of the concession period (Nankani, 1993:44). In the opinion of Fayard (2001:3), "Italy uses a direct payment system, whereby the user pays for using the road in the form of a toll".

Estache and De Rus (2000:245) point out that in Italy more than 20 concessionaires have built more than 5,000 kilometers of toll roads. The largest of the Italian concessionaires, Autostrade, operates most of the highway network.

A similar toll system like the one in France is in place in Italy. An all inclusive fee can be made at the start of the journey or section tolls can be paid at points along the way.

In his study of Public-Private Partnership, Nankani (1993:46) discovered that the Institute for Industrial Reconstruction was set up in Italy during the 1930s. The Institute became one of the major holding companies for state-owned enterprises and controlled more or less 500 companies. It employed 500 000 people representing 4 percent of total employment in Italy at the time. Findings from Nankani's study show that Public-Private Partnerships have the potential to be used as catalysts to generate employment in South Africa.

2.11.3 France

At the International Symposium on Road Pricing held in Florida in 2003, Lecoffre outlined that France covers a total area of 550,000 square kilometres and has a total population of 60 million. The country has more than 50 years of toll road concession experience. This is confirmed by Yescombe (2007:43) who alludes to the fact that in France, concessions for public infrastructure dates back from the middle of the 17th century. Through their research studies, Kerf et al. (1998:11) indicate that the transport infrastructure is a private sector's responsibility and it is therefore concerned with the construction and operation of national roads in France. Furthermore, in this research study, it was found that as early as the seventeenth century the king concessioned roads, bridges and canals. The approach followed with respect to the concessioning of utilities such as rail and electricity had to be preceded by the development of Concession frameworks (Yescombe, 2007:43). The entrepreneurs building such roads, bridges and canals had to bear the market risk and they were tasked with the collection of tolls in return for maintaining the routes.

In 1955, a law was passed in France authorising the creation of state owned toll road companies and the right to levy tolls to finance the construction, maintenance and operation of highways. Public control was maintained by

granting concessions only to local public organisations, the then chamber of commerce or a mixed company in which a public interest held a majority of shares. Borrowing from the French experience, South Africa has also drafted a legal framework on infrastructure that would serve as a frame of reference in issues related to expropriation. In terms of the organisational profile of the bidding consortia, it would be advisable to ensure that various stakeholders, such as the National Federation Chamber of Commerce (NAFCOC), are taken on board.

When analysing Public-Private Partnerships within the South African context, after having analysed the French approach, it is evident that the concessionaire has to bear the market risk. The toll income collected from road users should be used to maintain such toll roads so that there would be value accruing to the road user in terms of a better quality road infrastructure.

2.11.3.1 The National Roads Agency (French Experience)

The French experience shows that there has to be the setting up of an agency to facilitate a concession contract with the concessionaire. The main agencies involved in France were the Road and Highway Administration under the Department of Transportation and Budget and Treasury Administrations under the Department of Finance. The role of the French government evolves from shareholder to regulatory authority. The French government has an important role in setting toll rates. In 2003, the French government had 5,000 miles of toll roads concessions and 4,500 miles were operated by 6 mainly publicly owned companies while 500 miles were operated by a private company known as Cofiroute (International Symposium on Road Pricing 2003). What needs noting is that the creation of an agency responsible for acting as a road network operator makes it impossible to identify cost and income and to increase efficiency. This is done by passing bureaucratic rules and regulations and stimulating a degree of competition (Transportation Research Board, 1993:13).

The provision of public services by an independent body either public or

private rather than the government authority offers a number of advantages such as the following:

- it becomes possible to increase the funds available for investment in highways by having access to private capital markets;
- a government policy for toll roads could also use capital markets by issuing bonds backed by toll income;
- it becomes more effective in the event of where a specialised agency is used; and
- the company does not need to be a private company in order to be effective.

The analysis of the French approach to Public-Private Partnership is that both the publicly owned and private companies are able to access funds from the private capital market. Concessioning has proved itself to be the best means for allocating resources, not only for construction but also for maintenance of highways. It provides an organisational framework that guarantees highway maintenance and operation. The establishment of an agency allows for benchmarking. This refers to a comparison of performance across different concessionaire firms. This benchmarking process has been implemented in France for concessionaires operating in partnership with an agency (Transportation Research Board, 1997:13).

2.11.4 United Kingdom

When examined closely, the United Kingdom is found to be an urban society with around 90 percent of the population living in urban areas. From this perspective, rural residents are minority transport users with little consequences on the usage of toll roads. From the mid-nineteenth century until the First World War, railways continued to dominate the transport scene in Britain although the first motorised bus appeared on British roads in 1898. It was not until the First World War that

transport began to make a major contribution to the national transport system (Barke, 1986:65).

Barke (1986) goes further to say roads began as trails running from high ground to fordable points on river or seaports. The Roman occupation of Britain resulted in the construction of four main roads, principally for military communication, and numerous minor roads were constructed. In the nineteenth century, toll roads were abandoned mainly because of the rioting and burning down of tollgates. Subsequently, toll financing, until very recently, has been confined to large bridges and tunnels. The construction of these structures was funded from government loans and subsidies, as well as capital market loans obtained by local authorities.

According to Fayard (2001:3), in the financing of toll roads, payment could be made by the public authority under the name "shadow toll" or Design Build, Finance and Operate (DBFO). According to this system, government remunerates the company that has concession rights. This is principally done on the basis of the traffic realised on the motorway. Portugal and Greece are also considering the utilisation of this system.

In terms of the Road Infrastructure Strategic Framework for South Africa, (Department of Transport, 2002:17), roads in the United Kingdom are categorised as national or local roads. The national and trunk roads are funded by central government (Department of Environment, Transport and the Regions, (DETR). The central department is not involved in operations and its responsibilities include setting policies and objectives and developing performance indicators. The National Roads Policy Directorate (NRPD) provides an overview of policy options for the national roads policy and acts as a client for the Highways Agency. A Technical Advisors Group provides technical services to local and central governments and to the agencies.

While the above is the case in the United Kingdom, in England, which forms part of the United Kingdom, the Highways Agency (HA) which is an executive agency

of the DETR, manages, maintains and improves the national road network on behalf of the secretary of state. This Agency works closely with local authorities in order to integrate the trunk road network with other roads. In the case of South Africa, the National Roads Agency is responsible for the overall strategic management but does not maintain the road network itself. This Agency, however, works closely with the municipal government as part of stakeholder involvement in the strategic planning process.

When roads are being financed in the United Kingdom, the Highway Agency takes the lead. This is the policy of Executive Agency of the Department of Transport that was established in 1996. The Highway Agency examines the way the procurement process is being done as well as the value for money likely to be obtained from the contracts.

According to the agreement between the Highway Agency and the private sector, the private sector has to agree to build roads meeting the Highways Agency's technical requirements. Such roads need to be operated and maintained together with some existing roads for a period of 30 years. In return, the Agency is required to pay the private sector builder/operator according to the number of vehicle kilometres driven on the road. The Highway Agency therefore opens doors for the concessionaire to come with innovative ideas. Most importantly, the contracts provide for the Agency's safety plus indicating those environmental requirements that need to be met in full. Initially, the Department of Transport and the Highway Agency incurred costs for internal advice in awarding contracts.

2.11.5 Japan

According to Hakim et al. (1996), Japan only began with toll financing in the mid 1950s when a public highway was created to establish a network of freeways, which was financed from private loan capital and government borrowings. Initially, the criteria were stipulated for toll rates. This meant that the road had to cover all costs and still remain equitable relative to the user's ability to pay and most importantly, they should not exceed the benefit of using the toll road. Japan

has more than 6 000 kilometres of toll roads. Remarkably, in 1986, at an International Bridge, Tunnel and Turnpike Association conference, it was stated that Japan's toll exceeded the combined income from toll roads in the rest of the world.

It is important to note that Japan applies a combination of the franchise and BOT system in the management of toll roads. This means that private companies build the roads and are given limited franchise. Ownership is transferred to the government when the franchise expires and this type of arrangement should perhaps be considered in South Africa.

2.11.6 Mexico

Estache and de Rus (2000:246) assert that Mexico launched the most ambitious program of building more than 5,000 kilometers of new roads between 1989 and 1994. Kerf et al. (1998:29) stress the fact that Mexico uses a relatively decentralised approach to support its infrastructure through that country's Public-Private Partnership programme. Sectoral ministries primarily design and implement the projects, while the cabinet, supported by an inter-ministerial commission, does the high level policy co-ordination processes. The secretariat to the inter-ministerial commission, located in the Ministry of Finance, is not directly involved with specific concessions but is used as a channel for managing concession loans or donor support to the programme. The approach followed by Mexico is similar to that adopted by South Africa in the sense that the National Treasury has now established a Public-Private Partnership management unit that is now in charge of co-coordinating Public-Private Partnership projects. This unit is used as a channel for managing PPP projects of various institutions.

Mexico began with road tolling in 1952, and by 1986 there were 940 kilometres of toll roads. In 1963, a toll authority was established by government, which however stopped operating in the mid 1980s. In his research studies on Public-Private Partnerships in toll roads, Sader (2000:38) discovered that in 1989 the

Mexican government introduced a policy whose goal was the construction of about 6 000 kilometres of toll roads. By the end of 1994 the country's government had granted a total of 52 concessions in a quest to achieve its goal. Thirty of these concessions went to the private sector on a BOT basis for the construction of a total of 3 500 kilometres. However, the majority of these road projects experienced serious difficulties and required substantial restructuring.

For political reasons, the Mexican government decided to tender these concession projects on the basis of the shortest concession period rather than the lowest toll rate, with the objective of taking control of these assets as fast as possible. The tender documents were based on government specifications for the design of the road, including cost estimate, as well as government traffic projections. The result was that all concessions were awarded to domestic construction companies, which were primarily interested in the construction project and less in the operational viability of the toll roads. When completed, these roads showed an average cost overrun of 50 percent. At the same time, tolls were so high that users preferred the parallel free roads even at the expense of longer travel time. This situation offers a living proof of problems associated with the tolling of roads.

In 1997, the Mexican government designed a rescue package to avoid bankruptcy for the worst cases. It took over 23 of the private concessions and assumed about US\$ 7,7 billion in debt. Overall, construction companies seem to have suffered the least from this programme, as their returns on the construction alone are estimated to lie between 35 and 45 percent, compared to an average equity contribution of about 25 percent. The Mexican government now intends to privatise these roads again. It now wants to do this because it is influenced by the lowered toll structure but also wants to do so on the basis of operation and maintenance contracts (Sader, 2000:38-39). Interestingly, the Road Infrastructure Strategic Framework in South Africa (Department of Transport, 2002:98) has acknowledged the fact that the application of Public-Private Partnerships in toll roads in Mexico was flawed. This very problem has resulted

in the collapse of several companies in that country and the eventual intervention by government.

Through their research, Estache and De Rus (2000:259) found that in 1999, a major factor in the restructuring of Mexico's toll road program was the pressure on regulators to cut tolls. This simply shows the importance of regulatory intervention in order to bring about solutions with respect to the fairness of toll rates. It must be stressed that regulators need to have rules to follow and should be independent enough to be able to enforce such rules.

2.11.7 Austria

In the early 1980s, Austria went through a change of government that led to policies that promoted new ways of doing business in the public sector. This movement intensified during the 1990s when the concept of Public-Private Partnerships was introduced to the national telecommunication carrier called Telstra (Prefontaine, 2000:18). This was followed by a reform policy that encouraged decentralisation, the transfer of power from the state to the ministries, thus fostering greater autonomy among ministries and other public agencies.

Government organisations were encouraged to take charge of their affairs and to compare their performance with those of the private sector. These organisations quickly adopted strategic management principles and charters to define the services delivered to citizens whom they now perceived as "clients". The government then planned to introduce the concept of accountability when it comes to evaluating public servants, which helped promote the efficiency of projects generated by the public sector. It needs to be emphasised that efforts aimed at diversifying public service delivery in Austria are numerous and the country is rated as one of the innovators in the area of Public-Private Partnerships (Prefontaine et al, 2000:18).

The Federal Ministry of Transport Innovation and Technology takes the

responsibility of all infrastructure projects in Austria. For some time Austria had been working on basic plans for the introduction of a use-oriented system that will see users of the country's high-level roads assuming a share of road costs. The main motivation behind the decision to introduce a road charging system was primarily the aspect to involve as much as possible those drivers using the network's toll roads in a fair cost coverage system. The Federal Highway Financing Act of 1996 and several amending statutes pertaining to it provide the legal basis for the collection of tolls on motorways and similar roads such as expressways.

The introduction of a kilometer-based electronic toll system in Austria is a significant step towards achieving a more just distribution of costs in the road transport sector. In addition, the electronics used for the toll system may allow Austria to improve traffic information and provide more effective traffic management in the future.

2.11.8 Canada

Canada's experience in terms of collaboration with public service delivery, which is often referred to as Alternative Service Delivery or ASD, is seen as recent when compared to collaboration methods used in other countries. The Canadian government officially confirmed its determination to undertake a programme to change the management of its activities in 1997. Some of Canada's toll roads are managed under the BOT system. This means that private companies build the roads and are given the opportunity to operate and then transfer ownership to the government when the franchise expires.

Canada has opened one of its first open access all electronic toll highways called 407 Express Toll Route (ETR). The road runs east west just north of Toronto and was constructed for the Ontario Provincial Government by Raytheon. Raytheon also operated the road for the government during its initial operation from October 1997 to 1999.

(i) Roadside assistance and safety

According to www.roadtraffic-technology.com/projects accessed on 2008/01/14, in Canada, the Roadside Motorist Assistance team patrols the highway from 05:00 to 21:00 weekdays and during peak traffic times on weekends. The Highway Operations Control Centre monitors and records activities on the highway, 24 hours a day, and constantly monitors information from Environment Canada to anticipate road conditions and surface temperatures as well as moisture and chemical conditions. There are 24 state of the art salt spreaders and 23 snow plough trucks stationed at four locations along the highway. If a car breaks down when traveling on 407 ETR the free Road Assistance Patrol will provide a boost, tire change, free 5 litre of fuel or call a tow truck.

In its action for the years 1999 to 2002, the Canadian Treasury Board Secretariat (TBS) indicated that promoting innovation at the service level was one of its priorities. To achieve this goal, the TBS planned to diversify service delivery methods and to integrate approaches to service delivery, including partnerships with other ministries and levels of government or between the public, private and community sectors. In addition to motivations linked to its difficult financial situation, the Canadian government recognises the need to develop collaboration as a means of allowing its foothold on the global market scene. This collaboration strategy forms an important lesson for South Africa as it makes service delivery visible to the community.

Prefontaine et al. (2000:26) are of the opinion that even though citizens may be somewhat satisfied with public service delivery in general, market liberalisation and further development of new technologies are exerting growing pressure on the public to demand change. Moreover, e-commerce, which is in full-scale expansion in the private sector, is also likely to influence the way of doing things in government. With regard to the South African situation, the Department of Transport has recently announced its intention to introduce an intelligent

transport system on the Ben Schoeman Highway.

The rationale behind this strategy is "to deal with the growing congestion on South Africa's urban roads and drastically improve public transport ahead of the 2010 Soccer World Cup" (Business Report, 2004.12.10). This serves as an opportunity for the private sector to invest in the road infrastructure through the introduction of new technology.

2.11.9 The Philippines

In Kerf et al. (1998:29), opinion, "the government of the Philippines created a novel institutional structure to support the country's large infrastructure programme". Each sectoral agency has a specialist BOT unit responsible for coordinating the design and implementation of its projects. National, provincial and municipal authorities select and award the project under the framework that the country's government has created. The authorities prepare a list of priority projects, which must be approved by either the Investment Coordination Committee (ICC) of the National Economic Development Authority (NEDA), the NEDA Board, or by local or regional councils, depending on the conceding jurisdiction and the cost of proposed projects, as specified in the Implementing Regulations to the law. Projects undertaken on a Build Own Operate (BOO) basis, or through contractual arrangements other than those defined under the law, require presidential approval.

As part of its programmes, the Philippine government created a BOT centre. The centre has about 14 professional staff members and performs the following tasks:

- keeping an updated national inventory of all nominated projects that are eligible for development under the BOT framework;
- providing general advice to foreign investors doing business in the Philippines;

- developing infrastructure projects;
- providing technical assistance and training to central and local government officials on the design and implementation of projects; and
- spearheading promotional activities for the Philippine BOT programme.

Initially, the Centre was mainly involved in marketing the BOT concept to private investors. As the concept became better known, most marketing and similar tasks have been devolved to the BOT units in each sectoral agency. The BOT Centre now spends more time training national and local government officials and the implementation of this arrangement is prevalent throughout the Philippines.

According to the World Bank as accessed from www.worldbank.org/transport accessed on 2008/01/14, projects in the Philippine may be proposed by the Toll Regulatory Board, Philippines National Construction Company or the Department of Public Works. In as far as regulatory intervention is concerned, it can thus be concluded that concession contracts may be regulated by any of the above mentioned bodies.

2.11.10 The Australian state of Victoria

State governments in Australia have the main responsibility for controlling most infrastructure sectors. In the state of Victoria, for instance, individual government departments are ultimately responsible for the design of concessions and the processes according to which projects are eventually awarded. In each case, project responsibility is assigned to a single minister. This minister is then responsible for facilitating consultation with the other government departments involved in the project. The minister is also expected to work with the Department of Treasury and Finance. In order to provide guidance and to promote consistency in issues pertaining to matters of analysis and procedures, the Victorian government has formulated an investment policy described in a publication dated June 1994 by the Department of Treasury and Finance.

Interestingly, the law also demands that the department acts as a reference centre when guidance is required by other government entities (Kerf et al., 1998:30).

In terms of the study that was undertaken by the Road Infrastructure Strategic Framework for South Africa (Department of Transport, 2002:16), Australia was found to have three spheres of government, namely, the federal government, the state government and the local government. Accordingly, the federal government owns the National Highway System while the state and the local governments take care of state and local roads respectively. Some government-owned utilities have been transformed into Government Business Enterprises (GBEs) that operate as businesses and are subject to the national competition policy.

The norm in Australia is for each state to have a road agency with statutory authority to be in charge of managing, planning and maintaining the state road network. Each state's road agency or authority is also responsible for the maintenance and development of the national highway network within its boundaries with funding from the federal government. It is customary for the agency to contract out or to outsource construction and maintenance of the infrastructure. The BOT appears to be the main Public-Private Partnership arrangement currently executed in Australia. A number of road infrastructure projects that have been executed in Australia are shown overleaf.

Table 2.1: Australian Road Infrastructure Public-Private Partnership Projects

Type of PPP Project	Project Name	Year Executed
Road infrastructure	Sydney Harbour Tunnel	1986
Road infrastructure	M4 Motorway	1988
Road infrastructure	M5 Motorway	1991
Road infrastructure	M2 Motorway	1994
Road infrastructure	Melbourne City Link	1996
Road infrastructure	M1 Eastern Distributor	2000
Road infrastructure	M7 Westlink (Western Sydney Orbital)	2002
Road infrastructure	Cross City Tunnel	2002
Road infrastructure	Lane Cove Tunnel	2003
Road infrastructure	Eastlink (Mitcham-Frankston Freeway)	2004

Source: Adapted from Yescombe 2007:42.

According to Yescombe (2007:41), Australia's Public-Private Partnership projects are primarily run by the states rather than the Commonwealth. Although Sydney Harbour Bridge opened away back in 1932, it was funded with tolls as a public sector project. Tolls were not widely used in Australia until private sector toll road

projects began with Sydney Harbour Tunnel in 1988. Later toll roads have transferred traffic risk more fully to the private sector. Australian toll roads are typically urban motorways with a high construction cost and sophisticated operation.

Yescombe (2007:43) asserts that Victoria's Department of Treasury and Finance had to set up the Partnership Victoria unit in 2000 as a centre of expertise within the Department. Partnerships Victoria has produced a comprehensive set of guidance documents for Public-Private Partnerships which have largely been adopted as a standard by the other states.

2.11.11 New Zealand

New Zealand has two levels of government, namely, the national and the local spheres of government. The national government owns the National Highway System and has contracted its management out to Transit New Zealand, a government-owned entity, which is a business concern. Ownership and maintenance of all other public roads in the country rest with the respective local governments. Local governments are at liberty to contract roads out for construction and maintenance. Almost 97 percent of the local road construction and maintenance is delivered by the private sector or by Local Authority Trading Enterprises (LATEs). Funding for both the national highways and local roads is provided by Transfund, an entity contracted to distribute and prioritise road expenditures from the national government's road funds (Department of Transport, 2002:17).

The arrangement with respect to the creation of a special entity dedicated to distribute and prioritise road expenditure appears to be sound and attractive. However, it is incumbent upon this study to scrutinise this arrangement closely in order to ascertain whether indeed it serves the intended purpose. Again it is imperative for this study to determine how selective borrowing has assisted South Africa in designing or in handling its own road authorities.

New Zealand has significant public enterprise sectors in terms of its share of the total workforce employed. The performance of the public enterprises in the early part of the 1980s has been poor with low rates of return relative to that in the private sector. In the mid-1980s, New Zealand experienced large fiscal deficits and has been constrained in its policies by high public debt to gross national product ratios (Convery and McDowel, 1990:60).

2.11.11.1 Corporatisation in New Zealand

Convery and McDowell (1990:60) interestingly reveal that "in the late 1985, the New Zealand government embarked on a major effort to rationalise and strengthen the operation of its public enterprise sector". The goal was to achieve significant improvements and efficiency in the area of production and the allocation of resources. Policy interventions were predicated on the belief that such improvements would occur only if the public enterprise sector was more fully exposed to the forces of competition and that enterprise managers operate within a commercial mandate and subject to commercial constraints and adequate financial accountability.

The principles underpinning the policy of intervention were outlined in 1985 by the New Zealand Minister of Finance as:

- Responsibility for non-commercial functions should be separated from responsibility for commercial functions.
- Managers of a public sector should be required, as their principal objective, to run the public sector as a successful business enterprise.
- Public sector managers should have responsibility for decisions on the use of inputs, on pricing and on the marketing of their output, within the performance targets.
- Individual public sector enterprises should be reconstituted on a case-by-case basis in a form appropriate for their commercial purposes under the guidance of boards, comprising generally members appointed from the

private sector.

After analysing how New Zealand went about in dealing with the processes that lead to the involvement of the private sector, it is evident that South Africa has adopted the same route as indicated in Figure 1.1 of this study. When the South African Roads Board was reconstituted to become the South African National Roads Agency Limited, and had to comprise of members from the private sector, it was done precisely on the principles outlined in the research done by Convery and McDowell (1990:60) which stresses a case by case basis in the reconstitution of public sector enterprises.

2.11.12 Hungary

In the early 1990s, the Hungarian government recognised that demand for new road transport capacity could not be met from budgetary resources. It therefore established the Bureau for Motorway Concessions under the Ministry of Transport, Communication and Water Management. This was meant to find solutions for over 500 kilometres of highways and bridges. The government also passed a law that stipulated that a strong legal framework for the control of privately financed infrastructure projects be formed.

This requirement has to date implied that toll roads had to require strong measures that support arrangements designed to make projects commercially viable and affordable (Sader, 2000:140). South Africa has also opted for situations where, for example, a toll concession company like the N3TC requires the strong support of government to ensure that projects are commercially viable and affordable.

In Hungary, the financing structure was mainly based on the highest possible involvement of international working capital that passes on as much as possible of the risks of the project to the private sector. The initial toll rates were defined by vehicle categories and automatically increased without any prior consent of the government on the basis of the domestic consumer price index and the

exchange rate differential in proportion of the currencies of the loans. In the case of South Africa, it is a requirement that a public participation process be implemented before toll tariffs can be finalised in terms of the National Land Transport Transition Act, Act 22 of 2000 (Department of Transport, 2000).

With the introduction of electronic tolling system in Hungary, where the private sector is involved, the concession arrangements allowed for toll variations. On the M5, a whole program of discounts has been introduced with 40 percent reduction for regular users. The regulatory challenge faced by Hungary was that its legal arrangements were not strong enough to prevent a legal challenge to the toll rate (www.worldbank.org/transport accessed 2008/01/14). This legal challenge illustrates the importance of an economic regulatory intervention and it is here cautioned that government must take external advice on the regulatory structure before it could be introduced.

(i) South Africa

By way of borrowing some wisdom from international experience regarding the management of toll roads, a service differentiation strategy adopted by Canada could be considered. A noticeable change that has taken place in South Africa with respect to the provision of road infrastructure is that the country is in the process of moving away from a self-regulated provider of services. A desire has been expressed to create an independent regulatory authority which needs to monitor a significant number of activities delivered by private operators.

(ii) Service differentiation strategy

Toll roads are implemented on national roads in South Africa. The way these toll roads are funded and operated differ mainly focusing whether they are managed as a Public-Private Partnership initiative or solely government owned and managed. A service differentiation strategy can easily be implemented in the Public-Private Partnership managed toll roads. A typical strategy to be considered could be the one similar to that implemented in Canada such as introducing the Roadside Motorist Assistance team patrols on the highway 24

hours a day. The motorists travelling on such toll roads can rest assured of some assistance in the event of any breakdown en-route. A range of services that could be provided by the Roadside Motorist Assistance team could be assisting in changing tires particularly where a motorist had a puncture in the middle of the night. The roadside team could also assist those motorists who got stuck as a result of not being able to reach the nearest filling station for refuelling. In this regard, a free 5 litre of fuel could be provided to a stuck motorist so as to reach the nearest filling station. Alternatively, the roadside team could then assist in calling a tow truck. The above range of services could be considered in Public-Private Partnership managed toll roads in South Africa as it would add value in serving as service differentiators along the road corridors.

2.12 SUMMARY OF OBSERVATIONS BASED ON FOREIGN EXPERIENCE

Numerous interpretations regarding the nature and purpose of the concept Public-Private Partnership come to the surface when the views of the different countries are considered. Seen from a perspective of the experiences of foreign countries, then the overall picture tends to be that monolithic, vertically integrated state-owned entities are becoming obsolete and appear to be no longer the preferred option. In summing up, the concept has taken many forms, for example, it starts with a simple form of commercialisation to a point where the private sector becomes the actual dominant party.

Therefore, of fundamental importance is that for the partnership to be sustainable, there should be a long-term agreement between the public and private sectors in the provision and operation of the transport infrastructure or services. In other words, there should be a sharing of responsibility and risk by the public and private partners because the transport system operates in a turbulent macro environment. An environment that is fraught with a great deal of challenges is brought about by dynamic circumstances, which reflect the complexity of the system within which highways operates. Many disciplines such as engineering, environmental science, the social sciences, and law, to name a

few, should be involved in finding solutions to the transport problems.

It is also important to note that there are differences in emphasis between the public and private sectors in any kind of transaction they undertake. The public authority's primary goal is to provide services whilst that of the private sector is to maximise profitability either in the short, medium or long term. While a distinction between public and private sectors is worth noting, care should be taken that some services do not by their nature allow themselves to fall within the spectrum of Public-Private Partnerships. For example, a corporatised entity such as the South African National Roads Agency Limited working in partnership with the Department of Transport is a case in point. This conclusion is arrived at because it is based on the knowledge of each party's distinctive competency in its area of involvement.

Furthermore, it is important to bear in mind that to all intents and purposes tokenism as an involvement in any project is inadequate to qualify a venture as a genuine partnership. To prevent this from taking place, there should be an instrument in place that would dictate the terms of efficiency and fairness to be adhered to. This should be based strictly on the dictum that the risk should be allocated to those who would benefit most from the project.

After all is said and done, the partners should strive towards the accomplishment of a common primary objective if frustration, misunderstanding, mistrust and conflict are to be avoided. To crown it all, compliance with overall legislative framework should be taken seriously by all as absolutely essential otherwise any effort towards Public-Private Partnerships would be frustrated and may even be defeated.

The rationale for Public-Private Partnerships should above all be based on the premise that government needs a capital injection to fulfil its mandatory obligations adequately and this situation is common to many countries. Therefore, Public-Private Partnerships, as applied in infrastructure development

is seen as a tool to be used in acquiring resources or technological innovations from a private sector for the purposes of assisting in the implementation of strategies for the accomplishment of South Africa's national objectives.

In the final analysis, there are a variety of forms of Public-Private Partnerships today that are applicable in the road infrastructure. There are also various types of contractual agreements that regulate the relationship between the public and the private sectors in whatever arrangement they chose to enter into. These contractual agreements range from the unencumbered contract, the franchising arrangement, the management agreement, the service contract, the liberalisation or the concession contract and lastly the lease contract.

South Africa is showing an increasing interest in the concessions phenomena as its main viable main form of contract and this type of instrument is currently used in what is better known as the Build-Operate-and-Transfer mechanism, which is designed to manage the national road network. Hopefully, this may, if correctly implemented, create the much sought-after job opportunities in the road and transport industry.

It is important to note that there are areas in Public-Private Partnership arrangements that are the exclusive domain of the public sector and then there are those that should be managed by the private sector. Policy-making, planning and ownership of the infrastructure make out the exclusive role of the Department of Transport or the South African National Roads Agency Limited. The maintenance, funding and operation of the road infrastructure would be done better by the private sector.

Regarding international experience on Public-Private Partnerships, it needs to be pointed out that in the 1980s, the restructuring of public sector enterprises took place in countries such as the United States of America, the United Kingdom, France and most of Western Europe in the Pacific Rim. However, it is also significant to note that each restructuring process followed a specific path, and

this depended on the economic, social and political conditions that had been obtained in these different countries. In other words, care should be taken to note that each country is unique. South Africa is not different in this respect for it has its own peculiar aspects, characteristics, conditions and circumstances which need to be taken into consideration when designing agreements involving concessions.

After analysing the approach by the United States of America towards Public-Private Partnerships, it is evident that South Africa follows the same approach in terms of ensuring that the private sector carry out the construction, maintenance and operation of toll roads. Therefore, a study still needs to be undertaken to determine specifically whether this approach works well in South Africa.

In Italy, toll roads came into being as early as 1924, and until at the time of this research, twenty-two concession holding companies have been founded. The concession scheme adopted by these companies is that of Build, Operate and Transfer. This scheme is made valid for a period of 30-35 years. In contrast with this approach, the South African approach allows the concession companies to be completely private sector-driven and similarities in the two approaches are that of the adoption of the Build Operate and Transfer type of concession.

In France we find that the French king had concessioned roads, bridges and canals as early as the seventeenth century. The entrepreneurs who built these roads, bridges and canals had to bear the market risk and were tasked with the collection of tolls in return for maintaining the routes. To achieve success the French established a National Roads Agency that they effectively used as an instrument most suited for managing concession agreements. After studying the French model, it is evident that South Africa to a large extent followed the route proposed and adopted by the French in terms of the establishment of a roads agency to deal with the overall strategic management of national routes.

In the United Kingdom, roads are categorised as national and local roads. The

national roads are funded by central government. The central department is not involved in operations and its responsibilities include setting policies and objectives and developing performance indicators. The approach followed by the United Kingdom is similar to that followed by South Africa. The difference is that while South Africa has national, provincial and local roads, the United Kingdom has national and local roads.

Japan began with toll financing in the 1950s and the toll rates were fixed in such a way that they become equitable relative to the user's ability to pay. Japan's approach is market-oriented but the aspect of ensuring that the user's ability to pay is taken into account is unfortunately not being followed by most of the concession companies.

Mexico uses a centralised approach in dealing with the road infrastructure involving a Public-Private Partnership arrangement. Thus, in awarding concession contracts, Mexico gives preference to domestic construction companies. Seen as such, South Africa's approach of giving preference to local companies is therefore in line with countries such as Mexico.

In Austria, government institutions were encouraged to take charge of their affairs and to compare their performance with that of the private sector. The Austrian approach gave birth to various principles of the marketing concept, which may be compared to the Batho Pele principle.

On the other hand, Canada's approach to Public-Private Partnerships is that even though citizens may be satisfied with the service delivered in general, market liberalisation and further development of new technologies are allowed space to exert the necessary demand for change. From the lessons learned in Canada, South Africa has currently embarked on the process of introducing new technology in the road infrastructure.

From the Philippines, the country's government created an institutional structure to support its large infrastructure programme. Its Build Operate and Transfer

projects are being managed by the investment co-ordination committee. It is quite clear from relevant studies that the Philippine government takes Public-Private Partnerships seriously, hence special agencies have been formed to deal with matters related to infrastructural projects.

Australia has three spheres of government, namely federal, state and local. The federal government owns the National Highway System and the state and local governments take care of state and local roads respectively. When compared with the South African situation, it is clear that there are a lot of similarities with regard to different spheres of government and the roles of these governments with regard to the management of infrastructure.

New Zealand has two levels of government, i.e. national and local. It is important to note that New Zealand embarked on the restructuring process, which led to the establishment of agencies. This is an approach followed by South Africa when the National Roads Agency was established in 1998.

The Hungarian government recognised that demand for new road transport capacity could not be met by way of budgetary resources. It therefore established the Bureau for Motorway Concessions under the Ministry of Transport. The approach followed by Hungary is similar to that of South Africa except that it has an agency headed by the Chief Executive Officer. In brief, Annexure 2 serves as evidence that South Africa applies a mixture of approaches as applied from countries such as New Zealand, Australia, France and the United Kingdom.

CHAPTER 3

STRATEGIC OPTIONS

AS DERIVED FROM THE ANALYSIS OF THE ENVIRONMENT

3.1 INTRODUCTION

This chapter is a critique of the reciprocal relationship that exists between the environment in which toll roads operate and that constituted by the surrounding macro-environmental factors. In this respect, ecological economists like Common and Stagl (2005:21) neatly describe the important role played by the concept of reciprocal relationships as follows, "the economy and the natural environment are interdependent systems". Thus from a strategic management point of view, a transportation industry, just like any other industry, needs to focus on the broader environment, which is also referred to as a general environment (Miller, 1998:72).

Invariably, environments are found to form a potential means of welfare improvement, and as such need to be handled with the care that they deserve. Hence, Hayashi et al. (1999:261) are of the opinion that emanating from this general environment is a host of amenities that come indirectly through the production of goods and services.

Wheelen and Hunger (2006:73) refer to an industry in which an organisation operates as the task environment and it includes those elements or groups that directly affect an organisation and, in turn, are affected by it. Truly, it is in the task or operating environment that the needs of the transport industry have brought about a forced move towards the increased involvement of both the public and private sectors in the provision of financial resources for the construction of transport infrastructure and particularly the road network. This is confirmed by the Budget Review (Republic of South Africa, 2006:34), which states that the construction sector expanded by nearly 10 percent in the first nine months of

2005 compared with the same period in 2004. Generally speaking, the transport infrastructure is constantly affected by what Pearce and Robinson (1997:62) refer to as "a remote environment that consists of factors such as technology, physical, political, economic, social and regulatory". It is therefore important that these environmental factors be taken into consideration when road networks are undertaken.

This chapter seeks to educate both the public and the private sectors about those environmental factors that exert an influence on the way government takes a decision regarding the direction to follow in the provision of road networks. In the final analysis, government is also expected to provide the organisational structure and internal processes it intends to apply, and this is reflected in the Horizon Twenty Ten Strategic Plan for 1999 (Department of Transport, 2002:7). Furthermore, it is also clearly stated, "the National Roads Agency operates in clusters that are the constituents of a combination of talent and skills so that expertise, vision and experience are harnessed into a holistic, multi-disciplined approach to our core experience".

This chapter examines the entire remote environment as well as the way it impacts on the Department of Transport, especially with regard to the role of the emerging commercialised entities, such as the National Roads Agency. It goes without saying that if an organisation wants to achieve a sustainable competitive edge, then it has to analyse the entire remote environment. Figure 3.1 suggests a model of how to involve the Department of Transport and the macro-environmental factors as well as the commercialised entities such as the National Roads Agency in an interrelationship that works harmoniously and effectively.

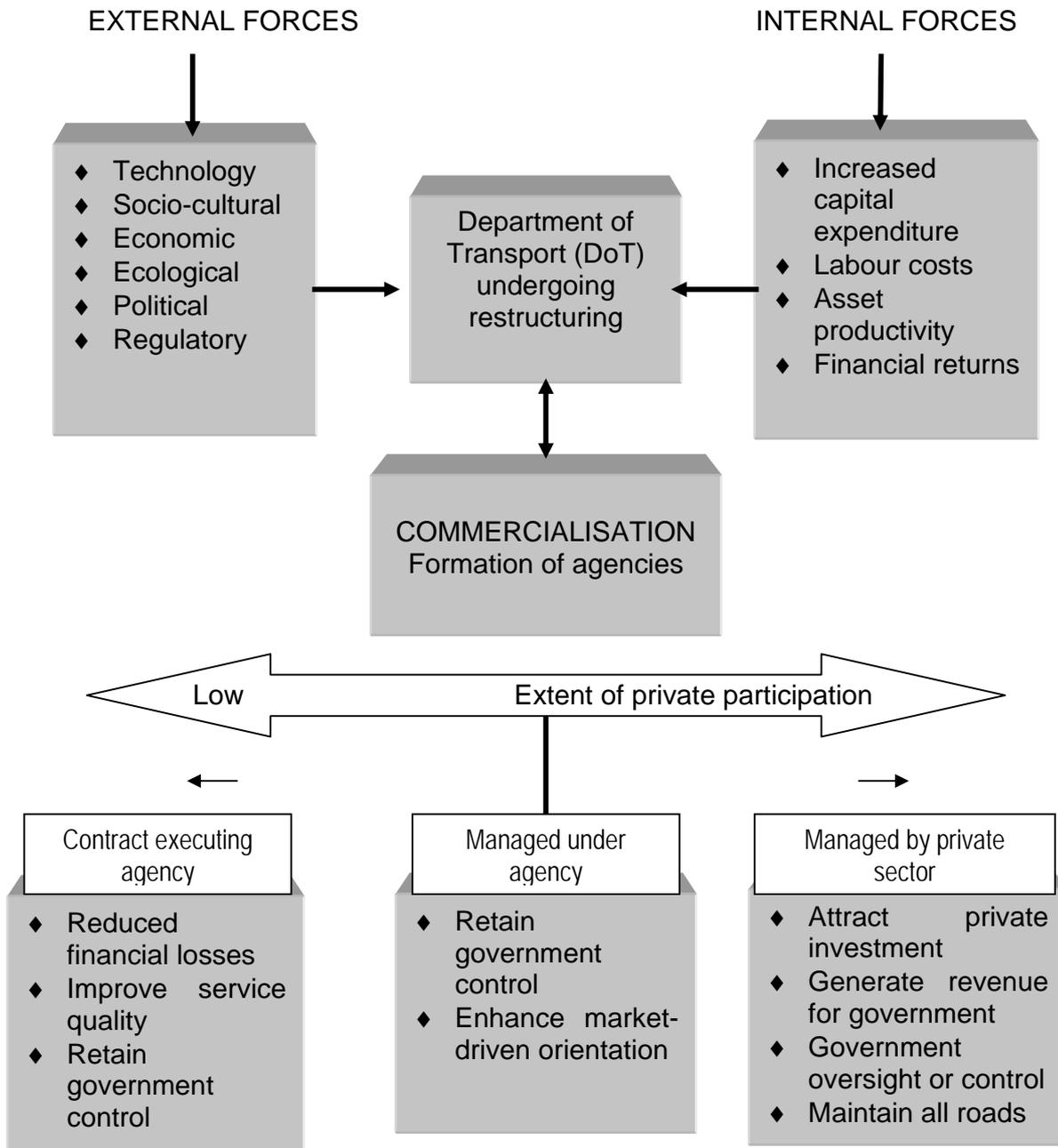


Figure 3.1: The interrelationship between the DoT and the macro-environment

Source: Adapted from Freeman and Jamet, 1998:954.

3.2 THE ROLE OF THE DEPARTMENT OF TRANSPORT WITHIN THE MACRO-ENVIRONMENT

According to Haq (1997:13), the relationship between transport and the environment is reciprocal in the sense that the transport sector uses a wide variety of the earth's resources. At the same time, the mobilisation, manufacturing and refinement of these resources impact differently on the various components of the environment. This submission concurs with the interpretation made by Common and Stagl (2005:4) with respect to the growing importance of both Environmental Economics and Natural Resource Economics as important disciplines to be applied in the Public-Private Partnership projects. It is worth noting that relationships by their very nature create an equation consisting of a dependent and an independent variable, and that these two are mutually interdependent for their existence.

As a point of departure, we are reminded that Environmental Economics concerns itself with the insertions of the economy into the environment, and with problems of environmental pollution, whereas Natural Resource Economics concerns itself with extractions by the economy's extractions from the environment, and with problems associated with the use of natural resources. In support, Vuchic (1999:23) asserts, "when the environment is impacted upon by various means such as the transport system, it in turn influences the way such a transport system is operated". To explicate what actually happens, Vuchic cites the example of "the growth and changes in cities and metropolitan areas which required further development of the transportation systems".

As indicated by the macro-environmental factors and their potential impact on the Department of Transport and other authorities in South Africa are now outlined below in a step-by-step fashion that promotes easy reading and understanding.

3.2.1 Technological factors

Technology is perceived as a process by which the basic resources like water is converted into valuable and usable items like, for example, electricity. Bannock (1992:419), defines technology as an integrated wealth of knowledge, of the means and methods of producing goods and services. However, the mistake should not be made of regarding it as merely an applied science, precisely because it is often done ahead of science. In this respect, Bannock (1992:420) further argues that things are often done without precise knowledge of how or why they are done except that they are effective. Links (2006:52) however, draws a distinction between science and technology and refers to the former as focusing on the understanding of knowledge whilst the latter focuses on the application of knowledge.

For enterprises to avoid obsolescence, they need to be aware of technological changes in the macro-environment, because failure to do so renders an enterprise archaic and ultimately incompetent. Science and technology are like theory and practice, the one without the other is hopeless just like the dependent and the independent variables that are mutually interdependent aspects of an equation.

It is worth to note that technology unfolds in phases and its history in the transportation arena dates back to the medieval era when Christopher Columbus went on to sail westward from the Canary Islands in 1492. Thirty-three days later, he made landfall in the Bahamas. Remarkably, a journey of 15 km was a major undertaking which, when compared to contemporary transportation technology, would be equivalent to an inter-continental trip (Barke, 1986:52). This historical account teaches us that; within the context of Public-Private Partnership arrangements, the Department of Transport should make sure that it takes serious note of the impact of technological changes. To this end, Pearce and Robinson (1997:66) contribute by stating, "creative technological adaptations can

suggest possibilities for how new or existing services can be better provided".

According to the Budget Review (Republic of South Africa, 2006:114),

... economic growth requires that South African businesses identify production techniques in which they can achieve comparative advantage in global markets. It also requires a favourable investment environment and sound regulatory arrangements and the development of a more systematic industrial policy.

Fortunately, relevant and salient technological developments are today noticeable in the toll road industry due to advances in information and communications as evidenced by initiatives of the effort by Zimele Enterprise to introduce smart cards to operate on the toll roads (Zimele Technical Report, 2005). Certainly, this move has resulted in creating opportunities that have ushered in significant improvements in the way highways are performing at present. It follows therefore that technologies can enhance toll road efficiency. This could also apply to sectors like global positioning systems, the operation of cellular telephones, telecommunications, and geographic information systems.

Technology has greatly contributed to the establishment and development of the field of intelligent transportation systems (ITS) that are nowadays driving various efforts intended to secure safety on our roads through, amongst others, the dissemination of information about the road network that allow authorities to take pro-active action in advance. According to the Business Report (2004.12.10), the Department of Transport is propagating the application of an intelligent transportation system because it is an effective tool that has the ability to do many tasks at once. Hence, in his response to questions from the national assembly, the Minister of Transport, Mr Radebe, stated, "a pilot intelligent transportation system would start trials on the N1 Ben Schoeman Highway between Tshwane and Johannesburg". The world over intelligent transportation systems are playing a significant role in the development of onboard navigation systems-wide operations that give more efficient traffic control and better

communication with users and thus adding value to the enhancement of safety

In terms of the Strategic Highway Research (2001:20), if transportation agencies could be allowed to manage the road network without the involvement of the private sector, then these agencies would run the risk of paying for the expenses of acquiring and maintaining the necessary technology alone. Again, they would be faced with the difficulty of attracting or training or retaining technically skilled staff to operate the new technology they have acquired so expensively. In this respect, the Budget Review (Republic of South Africa, 2006:61) explicitly states the importance of Public-Private Partnerships as an additional mechanism to exploit in the quest to provide public goods, services and infrastructure in South Africa.

3.2.1.1 The electronic toll collection system

Electronic toll collection is an adaptation of military technology which aims to eliminate the delay on toll roads. In terms of the new toll collection system that has been introduced in South Africa, particularly on the N4 Platinum highway, a car is able to pass through a toll plaza without coming to a standstill (N3 TC Technical Report, 2005). The secret of the system is that for it to function effectively it requires that each car be installed with a tag. This tag is installed in such a way that it communicates with a computer located at the tollbooth to read the required information for the purposes of processing it. To do this, the roadside computer identifies the vehicle and debits the amount of the toll from the monetary balance on the tag. The system has the advantage of reducing or eliminating long lines of motorists who use the toll road on a daily basis (N3 TC Technical Report, 2005).

Presently, a much more advanced technology also exists in the toll road industry, called the automatic vehicle identification, or simply AVI. This technology works by means of wireless communication between a small tag having a transponder mounted on a vehicle and a sensor located at the roadside or in the toll lane. The sensors are able to read information that is found within the tag while the vehicle

is stationary or while it is moving at high speed.

What is of paramount significance here is the fact that toll collection methods have an influence on the degree of acceptability of the toll by the users because these methods have the potential to interfere detrimentally with the flow of traffic to the dismay of motorists. Regarding electronic toll collection, Fayard (2001:10) suggests that care should be taken to ensure that the user recognises the service provided by the electronic collection system and that the cost of the toll and the technology applied do not create difficulties. Tolls may vary according to the distance travelled, the building and maintenance costs of the motorway and the type of vehicle.

3.2.1.2 Potential positive results for using electronic toll collection system

Norway has been the world's pioneer in the widespread implementation of the electronic toll collection system. In 1991, Trondheim introduced the world's first use of 100% full speed unaided electronic tolling. The United States is another country with widespread use of electronic toll collection in several states, but always maintains the option of manual collection.

According to the Department of Transport Annual Transport Statistics (Department of Transport, 2001a:40), many of the national roads are currently densified, for example, the Ben Schoeman highway carries more or less 150 000 vehicles per day (Gautrain Technical Information). In 2002, the number of "live" vehicles in the Republic of South Africa stood at 7 000 316. Unfortunately, this state of affair appears to be getting out of control for it is now even beginning to threaten mobility on most of our roads. In order to normalise this situation, it would be ideal to execute an ETC concept along the Ben Schoeman highway as this would serve as a technology that would determine whether the cars passing are enrolled in the program and would also electronically debit the accounts of registered cars car owners without requiring them to stop.

At the same time, building roads is becoming financially and environmentally more difficult (Department of Transport, 1999:54). To make matters worse, many

of the major roadways being tolled in South Africa are the existing ones and this situation denies motorists alternative options. This approach of doing things is suited to a kind of arrangement or contract commonly known as the Build Operate and Transfer concession and the private sector can be invited to operate.

3.2.1.3 The impact of technology on transportation agencies

Brown and Ulijn (2004:15) contend that advances in technology lead to many innovations and new enterprises. As proof of this, we see the emergence of transport agencies in South Africa that serve as confirmation of this view. Thus, based on the study conducted by the Transportation Research Board (2001:1), new technological innovations were introduced that had a profound impact on the transport authorities in general. The effects of the newly introduced technological innovations are particularly observable at the organisation level. In other words, the rapid introduction and diffusion of these innovative technologies has created far-reaching effects on organisational structure and culture in various government departments.

With the proliferation of information and expertise, it is expected that technology would become so dominant that it would be in a position to exert great influence in the road industry, especially on those road managers who are expected to guide the transportation agencies towards a successful future. For example, with the introduction of an Intelligent Transportation System in South Africa, it is expected that the road authorities would acquire personnel equipped with the essential expertise to be able to manage the process adequately.

According to Zimele Enterprise Technical Report (2005), a need was felt to introduce technology in the management of the N3 route, and this need actually prompted the subsidiary of the N3 Toll Concession Company, called Zimele Enterprises (Pty) Ltd, to introduce a new technology that uses the smart cards in the road industry as a way of collecting toll fees in an advanced and efficient manner. This way, job opportunities were created for the private sector to exploit. The only precaution that need to be exercised in this respect is that transactions

facilitated through smart cards need to be regulated, hence this study strives to assess as whether the intervention of a transport economic regulatory authority would be a viable option.

3.2.2 The ecological factors

The term *ecology* is defined by Common and Stagl (2005:1) to mean the study of the relations of animals and plants to their organic and inorganic environments. Pearce and Robinson (1997:67) give a contextual warning when cautioning, "threats to life-supporting ecology are caused principally by human activities in an industrial society which are commonly referred to as pollution. In support, Barke (1986:16) had long expressed his view by saying transport has environmental consequences in the form of noise, air pollution, land use, and other possible barriers to human life. To curb this negative trend government has prescribed various pieces of legislation to ensure that a harmonious relationship is maintained between human activities and the surrounding environment.

In developing road infrastructure, care should be taken when making a choice of strategies suited to achieve the desired objective/s in the sense that whatever strategy is selected it has to be applied within an integrated environmental management paradigm, commonly referred to as "environmental impact management". The purpose here is to take proactive steps intended to either mitigate or resolve any negative impacts that are likely to occur. This step has potential to enhance achievement because it promotes the positive aspects of the development proposals as it is done by identifying the most acceptable aspects of a proposal without imposing undue environmental costs on other parties (Department of Transport, 2002:220).

The environment, as it is broadly understood, can also include cultural, historic, and social components. Historically, the impact of highways on all these components of the environment has not been given sufficient consideration in either research or practice. Simply put, there is a need for research to be done in this respect. Going back to the issue under discussion, we find that, lately

however, the environmental issues have taken centre-stage by becoming a significant focal point that generates regulation after regulation.

Consequently, in response to securing and also protecting environmental concerns, the highway controlling authority has resorted to legal and regulatory actions. For example, in dealing with the toll road strategy in Gauteng, the PWV Consortium had to have a Provincial Road Infrastructure Framework in place to guide the tolling process through appropriate laws. Equally so, a transport economic regulatory framework would be a requirement to deal with economic-related issues in the tolling process.

3.2.2.1 Externalities and the environmental requirements

Mohr and Fourie (1998:454) define *externalities* as costs or benefits of a transaction or activity that are borne or enjoyed by parties not directly involved in the transaction or activity. Common and Stagl (2005:327) however, assert, "externalities are said to exist when the actions of one agent have an unintended effect on some other agent or agents". It means that it should become a great concern for the road authorities, the public, environmentalists and the health sector to strive at protecting the environment in order to maintain a healthy quality air for ensuring a high standard of living for all organisms.

To say the least, everybody should be concerned by the hazards that are mainly brought about by these various externalities in the form of pollutants. For instance, it is reported that air pollution is particularly a concern in urban areas, and its effect on human health has been increasing (Transportation Research Board, 1996:93).

According to the National Environmental Management Act (NEMA) (Republic of South Africa, 1998b), the concessionaire is expected to bear all the risks and costs with respect to environmental damage caused by the project during the concession period, including claims to environmental damage directly resulting from use of the site for the expansion, construction or operation of the highway. In other words, it is the concessionaire's obligation to ensure that the physical,

social and socio-economic impact is given due consideration during the lifespan of the concession period.

To this end, the concessionaire should procure the services of a specialist to undertake environmental studies in compliance with the NEMA (Republic of South Africa, 1998). This Act has replaced the Environment Conservation Act, 1989 (Republic of South Africa, 1989), and it provides for the control of identified activities, which may have a detrimental effect on the environment (Department of Transport, 2002:20). Of interest here, is the fact that while the National Environmental Management Act deals with environmental issues, the quantification or costing of externalities would probably need the intervention of a "transport economic regulatory authority".

3.2.2.2 An environmental policy

From the wisdom they have gained from their studies, Common and Stagl (2005:402-404) advocate the view that environmental policy instruments are vital for avoiding or reducing environmental damage. Choosing from the array of possible policy instruments is a challenging task because governments typically have multiple goals. With this in mind, it could be safely argued that in any concessioning process, be it in South Africa or anywhere, the concessionaire should be required to draw up an environmental policy in compliance with relevant environmental laws. An environmental policy document prepared by the concessionaire should include critical aspects such as the following:

- the concessionaire's mission, vision, core values and beliefs;
- a commitment to comply with all relevant existing and future environmental legislation in the Republic of South Africa;
- guiding principles, illustrating the spirit and philosophy of the principles of sustainable development contained in Section 2 of the NEMA (Republic of South Africa, 1998);
- the requirement to communicate with interested and affected parties;

- the need to work towards continual improvement of environmental management;
- the obligation to manage the prevention of pollution and ecological degradation, as well as the degradation of heritage and cultural resources; a commitment to take cognisance of and to realise, wherever possible, the needs and concerns of communities during the design, construction, operation and maintenance phases of the project; and
- most importantly, the concessionaire should demonstrate the undertaking to comply with environmental standards, to mitigate negative impacts that are unavoidable, and to minimise impacts on affected communities wherever possible and reasonable.

In effect, it is important to note that the concessionaire needs the vigilant eye of government to ensure that contractual obligations are adhered to. This means that environmental safety plus economic compliance need to be monitored.

3.2.2.3 Noise pollution

As a point of departure, it makes sense to quote Haq (1997:18), who defines *noise* as any acoustical phenomenon producing a sensation perceived by an individual or a group as disagreeable or disturbing. Noise has many other effects on human health that are undesirable, like interfering with someone's sleep, which can influence one's mood and in so doing reduce the performance of the cardio-vascular system, as well as affecting intellectual and mechanical tasks. Long-term exposure to noise can also cause deafness and lower auditory acuity, with noise annoyance resulting in stress and psychological and physiological effects.

Haq (1997:18) goes on to say –

... “in Transport Economics theory, noise costs are measured by a number of techniques, each of which can be used to value the cost to

noise in different contexts. It is however, not easy to devise a formula of charging for noise pollution”.

In theory, one could wish for a charge related to the marginal damage caused by the sound emissions from a vehicle, but a wish is only a wish and not reality. Research for an answer to the question of noise pollution caused by vehicles by day and by night still needs attention.

Having exposed the noise problem, it might be an opportune time to establish an economic regulatory authority, which would be tasked with the responsibility of determining the direct means of limiting noise pollution by prescribing regulations governing the manufacturing of vehicles.

3.2.2.4 Air pollution

To quote Common and Stagl (2005:98), "air pollution is any chemical or physical change in the environment that occurs due to waste emissions that are harmful to any living organism". According to the study conducted by the Transportation Research Board (1997:16),

... “when transport was at its infancy stage in America, many United States cities were facing formidable refuse and sanitation problems created by horse drawn traffic. The clouds of dust raised by the first motor vehicles were becoming a source of great public concern and annoyance”.

By the 1940s, motor vehicle exhaust was found to be a source of urban smog and agricultural crop damage. In his analysis of the current situation with regard to air pollution Haq (1997:17) revealed, "mainly in urban areas, motor vehicles are responsible for a number of primary pollutants, which are emitted into the atmosphere. Exhaust emissions from petrol and diesel engines contain carbon monoxide, which is a health hazard to human life". What remains now is to decide what to do with culprits in this situation because without punishment a

crime/transgression is no offence.

Be that as it may, of major importance however is, to what extent a polluter should be made to pay and based on which rule. In other words, which law should be applicable in relation to the protection of biodiversity issues? In this respect, the Johannesburg Municipality has undertaken to clamp down on vehicles emitting excessive smoke. The move is in line with the Atmospheric Pollution Prevention Act, (Republic of South Africa, 1965) which is aimed at reducing excessive emissions from diesel vehicles (The Business Day 2004.05.20:5).

Due to the adverse effect brought about by exhaust emissions in the operation of motor vehicles, it is imperative that an environmental impact assessment be conducted before a road can be constructed by any Public-Private Partnership arrangement. This is a requirement demanded by the National Environmental Management Act (Republic of South Africa, 1998). Any envisaged environmental impact assessment study should be linked to various other envisaged developments that would take place along the road corridor.

To ease the problem, Section 24 of the Constitution (Republic of South Africa, 1996a) states,

... everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation (Department of Transport, 2002:219).

For this to happen, a function of an authoritative structure whose role would be to determine tariffs that need to be charged to polluters is required. According to the Freight and Trading Weekly of June (2005:4), the South African Automotive Industry came out in support of a decision by government to approve the introduction of cleaner fuels from January 2006. The plan is to have unleaded

petrol, low sulphur diesel and thus aligning the South African fuel standards with international fuel specifications and vehicle technology requirements. The main goal is to improve air quality and ultimately create a healthier environment. If air quality is improved and a healthier environment is maintained, the result would be that a positive economic climate would come into being.

3.2.2.5 Congestion costs

The term congestion is defined by Nijkamp, Vleugel, Maggi and Masser (1994:165) as the result of too many vehicles using the same road network at the same moment. It is caused by vehicle traffic measured in passenger car equivalent per hour. Each vehicle's passenger car equivalent is determined by the amount of road space the vehicle effectively takes up, including the space between vehicles required for safety, compared with that of an average car. A truck or bus typically has two to five passenger car equivalents, depending on the type of road and terrain (Small, Winston and Evans, 1989:12).

Congestion costs vary not only from road to road, but also according to the time of day. This crucial feature further complicates the implementation of user charges, and this has already led to considerable studies, new technology, and some experimentation. It is possible to estimate a congestion charge based on an average of costs of many different roads and at many different times. Small et al. (1989:13) point out that congestion pricing should be more targeted on congested roads at peak hours only. Meanwhile, Barke (1986:37) asserts that it is in terms of motor transport that the most severe problems of congestion occur. Congestion problems generally and commonly occur at peak times and this imposes additional costs in time, frustration and pollution. Such costs are imposed not only on the car users but frequently on pedestrians as well, and especially on those who use public transport in the form of buses.

As a form of intervention, it would be advisable to provide additional capacity by expanding the existing road network in order to alleviate congestion. This could be done in the form of establishing a Public-Private Partnership

arrangement that is deliberately aimed at making motorists pay for the exclusive use of certain dedicated lanes. Such a concept had been proposed before in the form of the construction of a superhighway in Gauteng with the purpose of alleviating congestion on the Ben Schoeman highway.

Apart from this arrangement, one option could be to use technology in the form of technologically advanced equipment such as electronic tags and smart cards that can be installed at the toll plazas, particularly if the private sector can be given more opportunities to bring in the requisite innovations.

3.2.2.6 Accidents

According to the Budget Review (2006:118),

... on average, 30-35 people die on South African roads each day, another 20 are permanently disabled and 100 are seriously injured. In 2005, there were 11 616 fatal accidents, a 10,9 percent increase on the 2004 total. The CSIR has estimated that road accidents have an overall annual cost equivalent to R38 billion.

In 2004/05 the Road Accident Fund spent R5,5 billion in settling the claims of road accident victims, and the accumulated claims backlog rose to an estimated R24 billion (Budget Review, 2006:119).

Driver behaviour and vehicle fitness contributes to most road accidents, and these factors can only be mitigated through consistent and rigorous road traffic management. These statistics paint a very ugly and horrifying picture indeed and no doubt something needs to be done to arrest the carnage on our roads (Budget Review, 2006:119).

The introduction and implementation of road traffic management measures are initiatives largely left with the provinces and municipalities as mandated by the National Road Traffic Amendment Act (Republic of South Africa, 1999b). To this end, the national government's role is to support road traffic management and

safety by setting policy and legislation, developing road traffic information systems and promoting innovative road traffic practices and innovative technologies.

The Budget Review (2006:118) further states, "the Department of Transport has established the Road Traffic Management Corporation and the Road Traffic Infringement Agency, which are mandated to support and coordinate road traffic management". The Road Traffic Management Corporation began operating in 2005, and its immediate priorities include coordinated and targeted campaigns to reduce accidents, better training for traffic officers, improving accident and traffic information, and better regulation of drivers' licenses and vehicle roadworthiness.

Most transport accidents occur on roads, and this information is contained in the Department of Transport's annual transport statistics 2002, and they categorically reveal,

South Africa has a high mortality rate relative to its level of development and the government is justifiably concerned. It needs to be pointed out that fatal road accidents contribute to the life threatening risks faced by the South African population.

Table 3.1 shows that fatal road accidents have increased and it is therefore justifiable to budget more money for safety awareness campaigns to ensure that accidents are minimised. The intervention of the private sector with innovative ways of making safety a reality is absolutely essential in this regard.

Table 3.1 ROAD ACCIDENT STATISTICS

YEAR	Gauteng	KwaZulu-Natal	Western Cape	Eastern Cape	Free State	Mpumalanga	North West	Limpopo	N Cape	RSA
1998	1 728	1 169	1 064	704	615	798	537	409	236	7 260
1999	2 067	1 181	1 169	549	589	608	545	382	252	7 342
2000	1 429	1 330	709	491	463	453	439	328	206	5 848
2001	2 182	1 960	1 211	596	775	843	551	427	209	8 754
2002	2 334	2 149	1 238	729	754	948	811	672	283	9 918

Source: Annual Transport Statistics (Department of Transport, 2002:76)

On the basis of Table 3.1 it can be said that the travelling public are killed in great numbers and this calls for some drastic measures for intervention in order to arrest the problem before it spirals out of control. Surely, this terrible situation should be addressed if lives are to be saved on our roads. Although it is not enough, we have lately seen some interventions being proposed that involve the private sector in trying to reduce the number of accidents through a public and passenger liability insurance. This arrangement is not a form of punishment but a measure that aims at introducing insurance packages by private sector entities to cover those vehicles that are involved in public transport services (Department of Public Transport Roads and Works, 2003).

According to Van Miert and Eekhof (2004:146), if the overall efficiency of the infrastructure provision is to be improved thereby levelling the playing field, toll fees should include external costs such as noise pollution, air pollution, congestion and accidents. The internalisation of these costs could be done by means of engaging the private sector or toll concession companies that would include external costs in their toll fees. Other stakeholders apart from the private

sector that could be involved could be the motor industry that needs to be fitted with the latest technology so as to lower fuel consumption. The internalisation of external costs would, according to Van Miert and Eekhof (2004:146) significantly enhance the efficiency of the individual modes of transport and result in a considerable reduction of environmental pollution.

According to the Road Infrastructure Strategic Framework for South Africa (Department of Transport, 2002:217), no study has as yet been undertaken to quantify the externality costs in the South African transport sector. These externalities include accidents, hazardous load spillages, traffic congestion, noise and air pollution plus a lack of reliable services. Without question, the need for a research study in this area is long overdue.

To this end, the Department of Transport's vision states that a transport system should provide

... "a safe, reliable, effective and fully integrated transport operation and infrastructure that will best meet the needs of freight and passenger customers at improving levels of service and costs in a fashion, which supports government strategies for economic and social development whilst being environmentally and economically sustainable".(National Transport Policy 1996).

3.2.2.7 The need for the regulatory authority as based on environmental considerations.

Estache and De Rus (2000:288) are of the view that environmental issues first emerge in contract design and must take into account geography, construction techniques, and the facility's operating practices. Initially, mitigation measures could include adapting designs with respect to alignments, materials used, and standards for construction. During construction, the concession should specify particular investments required to improve environmental aspects, including noise barriers and other remedial measures such as relocation and resettlement

issues if they do arise.

The need for an economic regulatory authority is necessitated by the fact that when the power of eminent domain is exercised, for the relocation of the community during the expropriation of land for the construction of roads, a body with economic expertise need to quantify the costs incurred by the affected community. On the basis of these environmental factors, an independent body should intervene to determine a total compensation package to be awarded to the affected parties.

3.2.2.8 Environmental externalities and the role of a regulatory authority

Arnold (2008:372) maintains that one way to deal with externalities is for government to apply regulations directly to the activities that generate the externalities. Infrastructure projects have severe permanent effects on the environment and are therefore likely to require some form of environmental assessment. In a Public-Private Partnership project, the winning bidder normally undertakes much of this but environmental advisors may be needed in the initial stages to establish minimum environmental standards for bidders. In a road infrastructure Public-Private Partnership project, the concerned externalities may relate to air quality levels looking particularly at the emission of carbon monoxide from vehicles. In dealing with the above externalities, it will require economic regulatory authorities to create capacity in environmental economics. An economic regulatory body should be able to determine prices after having considered the negative effects of variables such as carbon monoxide emission.

The role of the regulatory authority in this case is that after the Public-Private Partnership contract has been signed and thus giving the private sector the responsibility to deliver the services, the government needs to intervene to ensure that competition works as well as checking on environmental concerns. The government's intervention by means of an economic regulatory institution becomes legitimate mainly if the concessioned body to be regulated is a natural monopoly. The role of the regulator in this case will be among other things, ensuring that the risk of abusive pricing by concessionaires are minimised. An economic regulatory body will also ensure that road users bear the full

cost of their travel directly, by pricing the externalities which also requires continued tolling.

3.2.3 Socio-cultural factors

3.2.3.1 Social aspects

The Reconstruction and Development Programme (Republic of South Africa, 1994:131) states that every effort must be made to extend organisations into marginalised communities. This is precisely what the N3 Toll Concession Company is doing in terms of ensuring that its social responsibilities are exercised along the road corridor in compliance with the law. When dealing with the concessioning process of the N3 toll road, a specialist dealing with biophysical and social aspects was appointed to do a comprehensive environmental investigative study. According to the requirements of the South African Environmental Authorities a detailed report with significant specialists' input needs to be submitted for authorisation.

In an interview with National Roads Agency Officials (2002), it was strongly emphasised that the Agency strives to strike a sound balance between addressing the social and economic interest in road provision. The reason why South Africa is currently involving a range of disciplines in road projects is precisely because the country intends to address issues pertaining to social and economic interests. Traditionally, road planning and provisioning was too compartmentalised with little effort directed at integrated and needs-responsive approaches.

It follows that roads authorities such as the National Roads Agency should be tasked with developing appropriate policies that would encourage the delivery of national roads infrastructure. The infrastructure should bring about economic and social benefits implemented through spatial programmes and developments on a national scale. While the National Roads Agency focuses on a national scale, the Provincial Roads Authority should take the process a step further and ensure that locally important spatial developments are linked to both the primary network

and the local spatial development network.

The National Roads Agency thus promotes the concept that each and every roads authority should see its role in terms of the needs that have to be addressed rather than in terms of a class of roads that needs to be managed. By so doing, road authorities will be given a stronger hand to source in private sector involvement.

It should also be pointed out that government or its agencies cannot manage transportation projects as tools to aid developments as it used to do prior to 1994. During the previous dispensation, projects were implemented in the cheapest way possible without taking into consideration the interested and affected parties. According to Cohn and McVoy (1982:1), a philosophy of this nature would currently lead to problems in terms of unexpected impacts, unplanned growth inducement and therefore public opposition.

The Department of Transport is experiencing significant changes in the nature and focus of its work. It is increasingly becoming more customer-oriented in the way it conceives of its mission. Moreover, it is gradually shifting from a focus on projects, facilities and construction to a more programmatic, system-wide operations perspective. According to the Horizon Twenty Ten (Department of Transport, 2002:41), in Public-Private Partnership projects, concessionaires taking socio-economic development to heart have successfully created meaningful employment opportunities.

During the implementation of Public-Private Partnership programmes, most state-owned enterprises have suffered from the reduction in the size of the workforce and from retirement of large numbers of experienced personnel. A decline in the enrolment in highway-related fields, such as civil engineering, means a reduced supply of new talent. At the same time, the workload of the Department of Transport is supposed to increase significantly as a result of new responsibilities and the accountability of officials.

The officials need to ensure that the contractual arrangements between the agencies and the private sector are kept intact. Based on the experience drawn from the Gautrain Project, a larger and more complex workload during the transition towards Public-Private Partnerships tends to be handled by hand-picked specialist human resources. This is confirmed by the report by Strategic Highway Research (2001:18), where it is stressed that for government institutions to be managed successfully, they need creative and skilled personnel to strive towards the accomplishment of their vision and mission.

As part of its commitment, the N3 Toll Concession Company strives to create work opportunities along the corridor as a means of alleviating poverty. In his research studies, Botha (2005:6) postulates that public sector expenditure in the area of capital formation is particularly relevant for a country like South Africa. In most developing countries, the record of success in the adequate and cost-efficient provision of infrastructure is closely related to government's capacity to establish, finance and operate infrastructure projects such as roads. Botha's findings were that: "the worsening poverty is a direct result of infrastructure expansion lagging behind population growth". Although public sector capacity constraints in the area of infrastructure provision may be countered by Public-Private Partnerships, the responsibility for the facilitation and fiscal provision of socio-economic infrastructure remains in the hands of government.

According to the Gautrain Technical Report (2003), the social aspect is essential to the extent that if a new road has to be constructed, the aspects that are to be covered in the investigation should firstly be to determine the level and extent of air quality change from exhaust emissions. Secondly, the extent of noise pollution and the hygienic impact the project will have on the downstream water users will have to be established. This is the reason why an environmental impact assessment study prior to the commencement of a project is essential.

3.2.3.2 Cultural aspects

Starling (1984:142) refers to *culture*; as a way of organising a particular,

coherent view of society and enables people to orient themselves to a complicated and confusing world. Common and Stagl (2005:67) define *culture* from an ecological economics point of view as a social interaction between individuals and its consequences in terms of technologies, institutions, customs and is based on the ability to use symbols for communication. In another vein, Brown and Ulijn (2004:51) define the term *culture* as meaning the set of values, guiding beliefs, understanding and ways of thinking that is shared by members of an organisation and conveyed to new members as an accepted code of practice.

In dealing with feasibility studies of Public-Private Partnerships, it is imperative to acknowledge culture from both the ecological economics and strategic management points of view. According to the National Heritage Resource Act (Republic of South Africa, 1999a), it is a requirement that an environmental study should cover any cultural heritage that may exist and through which the road will pass. Persons to be affected by the project are very important role players who should be consulted prior to the commencement of the project.

The above constitutes one critical requirement for public participation to take place as required by the prescriptions laid down by the National Land Transport Transition Act (Republic of South Africa, 2000b). Prior to any commencement of construction, the preferred bidder is required to compile a Heritage Management Plan. In other words, any proposed management plan should be in the form of a plan that is developed by the preferred bidder showing clearly how he/she intends to manage and mitigate the impacts emanating from the construction, operation and maintenance of the road project on the heritage resources as defined in the National heritage Resources Act 25 of 1999 (Gautrain Technical Report, 2003).

3.2.4 Economic factors

According to the Budget Review (2006:21) the South African economy is expected to grow by about 5 percent a year over the next three years. The

Budget goes on to state that expenditure on infrastructure investment aims to ensure that economic growth benefits all South Africans. In their research on innovation entrepreneurship and culture, Brown and Ulijn (2004:20) had the view that economic growth can be a source of foreign direct investment and the development of a country's infrastructure. According to Kambhampati (2004:18), economic growth is measured as the rate of change in Gross Domestic Product (GDP) of a country over a specified time period. The GDP is the total quantity of goods and services produced in an economy in a given period of time, usually one year. Kambhampati also refers to *development* as progress in a range of areas. This could mean economic progress and should also involve social and political progress as well as the fulfilment of basic human needs.

According to Hagget, Johnston, Taylor and Watts (1995:76), if the operation of the economy and society is to be accelerated, transport infrastructure is of great interest and vitally necessary in overcoming the friction of distance. As the economy grows, so does the provision of transport infrastructure or facilities and this is positively correlated with the level of economic development. Hagget et al's school of thought is supported by the Budget Review (2006:21), which states that the accelerated and shared growth initiative aims to introduce further reforms to relieve constraints to economic expansion and improve the competitiveness of certain sectors.

The importance of transport infrastructure to the economy is recognised by the Transportation Research Board (1996:99) as an indispensable component of any economy and society. Transport is said to be reaching into every phase of man's existence and takes place because of uneven distributions of natural and human resources on the surface of the earth and in space. Transport facilitates the creation of utilities when goods are moved quickly and efficiently to places where such utilities are needed.

The Budget Review (2006:22) further states that government spending on infrastructure is expected to broaden economic activities while providing an expanded platform for industrial growth. Public sector infrastructure

projects will be developed and should refurbish major transportation links, expand the road network and build houses. Government's efforts to broaden and deepen the skills base will be strengthened by the extension of the learnership programme to boost youth employment.

It should however, be pointed out that there are prospects for spending more on infrastructure. The world's infrastructure index was launched recently by the Australian banking group Macquarie, and this index indicated that there has been a growing tendency in the investment community to pursue infrastructure linked opportunities in the form of bonds, equity and other instruments (Engineering News, 2005:1).

3.2.5 Political factors

Political factors define the legal and regulatory parameters within which enterprises have to operate (Pearce and Robinson, 1997:65). Government intervention in transport dates back to times when the current science of economics was at its infancy (Verhoef, 1996:3). The inevitable transition through which South Africa moved is that of a new political dispensation, which gave rise to a new constitution, new economic policy, social policy and urbanisation.

According to Delmon (2005:51), every Public-Private Partnership arrangement involves a political context and would be influenced by the relevant political party in question. Delmon's interpretation of political context is not confined to legislative or governmental entities but covers an array of influences and organisations such as social groupings. Satisfying political requirements is an essential ingredient of the project's success and prospective investors and lenders have a particular interest in this regard as it gives them the risk profile status quo. Failure to comply with political concerns upfront can derail the success of a Public-Private Partnership project. This is supported by the World Bank's PPI Tool Kit (2004:47) where it is stated, "cabinet should endorse the major policy decision and enabling legislation prior to the commencement of a

PPP project".

3.2.6 Regulatory environment

According to Neslund and Neslund (2004:249), government controls certain dimensions of the economy through regulations. Government's intervention in the toll roads industry would therefore be justified as it is said to be pervading the lives of people. Black, Lodge and Thatcher (2005:3) are of the opinion that a regulatory environment requires innovations as this would refine the technologies of regulation and search for better tools of governance. In this transformation era, there are various pieces of legislation that impact on the development of infrastructure and Public-Private Partnership projects in particular. Legislation includes the Constitution (Act No. 108 of 1996), the White Paper on National Transport Policy (RSA, 1996c), the National Land Transport Transition Act (Act 22 of 2000), the National Environmental Management Act (Act No. 107 of 1998), the National Roads Act (Act No. 41 of 1998), the Property and Land Use Rights, Competition Policy and Law, legal impediments, corporate governance and the Broad-Based Black Economic Empowerment Act (Act No. 53 of 2003).

According to Rossi (2005:3), any established transport regulatory authority should be subjected to various regulatory restrictions, including price regulations and quality of service requirements. However, the regulated firm in return needs to receive protected franchise rights in its protected territory and its investors need to be allowed an opportunity to earn revenues subject to a rate of return constraint. Rossi further warns that without the expectation of earning a competitive rate of return, investors would not be willing to commit funds for establishing and operating the utility.

3.2.6.1 The Constitution

According to Cloete and Thornhill (2004:19-20), the Constitution of the Republic of South Africa Act of 1996 (Act No. 108 of 1996) is the supreme law of the

country and provides the necessary directives. The obligation imposed by the Constitution must be fulfilled, and it follows therefore that any law that is inconsistent with the Constitution is rendered invalid. Section 24 of the Constitution states,

...”Everyone has the right to an environment that is not harmful to their health or well-being, and to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation, promote conservation and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development”.

It is evident that this Section of the Constitution indicates how Public-Private Partnership projects in roads infrastructure need to be carried out, particularly in respect of compliance with various pieces of legislation that are designed to guide the concessioning process. In guiding transportation planning, more specifically the execution of Public-Private Partnership projects, policies and various pieces of legislation play a fundamental role, hence a brief discussion of each follows below.

3.2.6.2 National Transport Policy

Freeman and Jamet (1998:6) state, "the new White Paper on National Transport Policy was formulated and approved in 1996". What is of relevance here is that the new White Paper on National Transport Policy (Republic of South Africa, 1996c) has a chapter dealing with land transport policy, which is intended to ... “address a wide range of issues, including institutional structures, the proposed framework for the provision of services, funding, land use and spatial development in support of land passenger transport, and the need for comprehensive integrated planning”.

The White Paper on National Transport Policy (Republic of South Africa,

1996c:12) clearly points out that

... “as part of the overall long-term vision for the South African transport system, transport infrastructure will be in place for South Africa to be a hub of transport within the SADC region. It must serve as a catalyst for private investment. It should be financed through a combination of user charges and private public sector investments. It needs to incorporate technological advances which promote and enhance the role of transport in the economy and development”.

On the basis of what is contained in the National Transport Policy, it is evident that an enabling framework has been laid down for Public-Private Partnerships to take place in earnest.

3.2.6.3 The National Land Transport Transition Act (Act 22 of 2000)

The National Land Transport Transition Act (NLTTA) (Republic of South Africa, 2000b) came into effect in December 2000. The Act was passed in order to address a number of challenges that are inherent in the land transport system in South Africa. Given the historical fragmentations, inefficiencies and poor service quality of land transport, the passing of the NLTTA came as an essential intervention. Section 4(1)(l) of the NLTTA states that

... “the participation of all interested and affected parties, including vulnerable and disadvantaged persons, in transport planning must be promoted, taking into account that people must have the opportunity to develop the understanding, skills and capacity necessary to achieve equitable and effective participation”.

To achieve all the above, important progress is crucial to realise the required expertise with the skills and capacity to bring about the desired changes and developments.

In terms of the Horizon Twenty Ten (Department of Transport, 2002:53) stipulations, the South African National Roads Agency is expected to

comply fully with the requirements as laid down in the NLTTA which demand that cognisance be taken of the importance of engaging various stakeholders in the process of executing Public-Private Partnership projects. An agency is expected to recognise a need to introduce education programmes that are strongly unbiased towards Mathematics and Science on intermediary levels of education. This is so, because Mathematics and Science are critical in the development of skills required by the road industry.

3.2.6.4 National Environmental Management Act

Section 2 of the National Environmental Management Act of 1998 (Republic of South Africa, 1998b) states,

...”Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably, development must be socially, environmentally and economically sustainable, and the costs of the remedying pollution, environmental degradation and consequent adverse health effects must be paid for by those responsible for harming the environment”.

The relevance of the Environmental Management Act (Republic of South Africa, 1989) in the execution of Public-Private Partnership projects is based purely on anticipated construction work whose end results are not supposed to have a detrimental impact on the environment. The Act should therefore be observed by all those involved in Public-Private Partnership projects so as not to be accused by the citizens for harming the environment.

3.2.6.5 National Roads Act No. 41 of 1998

According to the Department of Transport’s Annual Report (2003/04:45), the South African National Roads Agency was established in terms of the Companies Act, Act No. 61 of 1973 with the following principal tasks:

- strategically plan, design, construct, operate, rehabilitate and maintain the national roads;
- deliver and maintain a world-class primary road network;
- generate revenues from the development and management of assets;
- undertake research and development to enhance the quality of roads;
- advise the Minister of Transport on matters relating to roads; and
- upon request from the Minister of Transport and in agreement with a foreign country, finance, plan, construct, acquire, provide, operate and maintain roads in the country.

3.2.6.6 Property and land use rights

To attract private investment at a reasonable cost, governments have to make credible decisions that would lead to a firm commitment to the observation of the rules that are established to safeguard property rights. Investors need adequate protection against unwarranted government expropriation and want to know that the land rights they hold can be exercised and also be protected (Kerf et al., 1998:31).

According to the Constitution (Republic of South Africa, 1996a:11), the public sector reserves the right to expropriate property for public purposes or in public interest. However, this should be done subject to compensation, and the amount of such compensation has to be agreed upon by those affected. The compensation should be just and equitable, reflecting an equitable balance between public interest and the interests of those affected.

3.2.6.7 Competition policy and law

The promulgation of the Competition Act (Republic of South Africa, 1998a), marks a milestone in South Africa's public policy transformation processes intended to change the landscape, as we know it from its present apartheid form,

into one of a democratic and open society. Thus the Act puts into place a system that is meant to contribute to economic growth and global competitiveness. The Act seeks to promote the social and economic welfare of citizens and open ownership and participation in the economy to previously disadvantaged groups. The Act also strives to promote economic efficiency and consumer welfare as part of economic development.

(i) The purpose of the Competition Act

The purpose of the Competition Act (Republic of South Africa, 1998a) is summarised below as:

- to provide consumers with competitive prices and product choices;
- to promote employment and to advance the social and economic welfare of South Africans;
- to expand opportunities for South African participation in world markets and to recognise the role of foreign competition in South Africa;
- to ensure that small and medium-sized enterprises have an equitable opportunity to participate in the economy; and
- to promote a greater spread of ownership stakes of historically disadvantaged persons.

(ii) Participation by foreign investors

As a means of encouraging the promotion of direct investment in South Africa, measures have been put into place that consists of the Tax Holiday Scheme amongst others. The scheme was launched in 1996 and is open to firms making new investments which exceed R3 million. Foreign companies are encouraged to bring new industrial equipment by offering them a sizeable investment grant (Competition Policy and Law in South Africa, 2002:18).

(iii) Legal impediments hampering private participation

According to Kerf et al. (1998:31), governments should remove

impediments that prohibit private participation in infrastructure. Two of the most detrimental obstacles regarding concessions are the lack of enabling laws and regulations that would facilitate equity ownership and which would also facilitate the way concession companies are to operate, thereby striving towards encouraging foreign investment in infrastructure projects. In line with the research by Kerf et al. (1998) concerning the participation of foreign investors in infrastructure, South Africa has introduced basic conditions with which potential foreign investors should comply prior to them being awarded a concession contract. Some of the conditions set in place are those dealing with compliance with the Broad-Based Black Economic Empowerment Act, Act No. 53 of 2003 (Gautrain Technical Report 2005). Therefore, it is important that prospective investors be made aware of these conditions, as failure to fulfil the conditions may severely limit the scope of private and particularly foreign investor involvement.

(iv) Corporate governance

In the opinion of Tirole (2006:16), corporate governance relates to ways in which suppliers of finance to corporations assure themselves of getting a return on their investment. According to the Horizon Twenty Ten document (Department of Transport, 2002:50), the concept of corporate governance is instilled within the South African National Roads Agency Limited to demonstrate the significance the agency attaches to fair public procurement practices.

As a matter of concern, the Agency and its directors should be made to commit themselves fully to the principles of transparency and accountability. The Agency should be convinced to have a strong and clear commitment to good corporate governance through sound management practices. The embracement of such values and ethics in the Agency's vision, mission and core values should ideally result in the Agency becoming more efficient and effective (Department of Transport, 2002:50).

In further outlining the profile of corporate governance, the National Department

of Transport's Annual Report (2002/2003:53-55) gives details on how the National Roads Agency is governed. The report further explains, "the Agency is controlled by a Board of Directors consisting of eight members, of whom the Minister of Transport must appoint seven. The eighth member (ex officio) is the Chief Executive Officer". The Business, Financial and Strategic Plan are annually approved by the Minister of Transport, as is the Annual Report. A memorandum of understanding governs the relationship between the Minister and the Agency, and the Chief Executive Officer is accountable to the Minister in terms of a performance agreement stipulating the outcomes, performance and management standards required of the Agency.

3.2.6.8 Broad-Based Black Economic Empowerment Act

The Broad-Based Black Economic Empowerment Act (Republic of South Africa, 2003) and the Black Economic Empowerment (BEE) Strategy aim to address inequalities resulting from the systematic exclusion of the majority of South Africans from meaningful participation in the economy. Government's strategy for broad-based black economic empowerment looks beyond the redress of past inequalities and aims to position BEE as a tool to broaden the country's economic base and accelerate growth, job creation and poverty eradication (Department of Trade and Industry, 2004:4). In any Public-Private Partnership project, compliance with broad-based black economic empowerment remains an absolutely essential requirement.

3.3 INTERNAL ENVIRONMENTAL PROFILE ANALYSIS

According to Wheelen and Hunger (2006:106), scanning and analysing of the external opportunities and threats are not enough to provide an organisation with a competitive advantage. Therefore, environmental analysts should also look within the organisation itself to identify internal strategic factors that may be regarded as critical strengths and weaknesses likely to determine whether a firm will be able to take advantage of opportunities while avoiding threats. Internal environmental profile analysis is often referred to as *organisational analysis* and

this is concerned with identifying and developing the organisation's resources and competencies.

3.3.1 Increased capital expenditure

According to the Budget Review (2006:108), government's expanded public works and employment programmes aim to create 1 million work opportunities for the unskilled, marginalised unemployed over five years. At least 40 percent of jobs are targeted for women, 30 percent for youth and 2 percent for disabled workers. In its first year, a total of 3 734 projects were registered for the expanded public works programme, involving expenditure of R3,24 billion and the creation of 176 000 net work opportunities (i.e. additional jobs over and above those that would have been created if the projects had been undertaken through machine-intensive methods). Expanded public works and employment programmes cover four priority sectors:

- infrastructure project funds are allocated through the municipal infrastructure grant and the provincial infrastructure grants. Activities include maintenance of low-volume roads, trenching, storm-water drains and sidewalks;
- environmental programme initiatives include the Working for Water and Working on Fire projects, and a wide range of local environmental improvement efforts;
- social service programmes-projects include partnerships with non-governmental organisations for home-based community care and early childhood development,
- expanded employment of community health workers through local clinics and hospitals.

Funds for these programmes are from national departments, provinces and municipalities through the normal budgeting process, with support for labour-

intensive methods and appropriate technical and administrative oversight.

3.3.2 Labour cost

According to the Budget Review (2006:102), the main driving force of government is to strengthen education and to improve performance of the labour market. Investing in people and ensuring that skills development complements employment creation are critical platforms on which to build future prosperity. This is evidenced by the R4 272 000 training expenditure incurred by the Department of Transport as reflected in the Annual Report (2003/04:26). Apart from the costs incurred in respect of skills development, the other cost component is that of salaries, which amounted to R40 382 000 for the 2003/04 financial year (Department of Transport, 2003:27).

The implication of the above cost structure is that, if the management of toll roads is concessioned out to the private sector, then the costs incurred in respect of salaries would be absorbed by such private sector entities. The absolute position of whether the South African National Roads Agency should be both a concession-granting authority and economic regulatory authority will receive attention in Chapter 5 of this study.

3.3.3 Asset productivity analysis

Delmon (2005:449) describes an *asset* as “a tangible and intangible property of an organisation”. Wheelen and Hunger (2006:106), however, hold that, “an organisation’s assets are the basic building blocks which include physical assets such as equipment and human assets or employees and their skills”. Commonly speaking, an organisation's assets could also mean aspects such as culture and reputation because these too add value to the wellbeing of an organisation in similar ways that tangible assets do.

In another vein, Neslund and Neslund (2004:321) remark, “an organisation operates by employing its assets in productive endeavours and could also lease such assets”. This means that the Department of Transport has an option of operating through the employment of its own assets or it could even consider

leasing some depending on the prevailing situation.

According to the Centre for Development Enterprise (2005:199), state revenue could be boosted if state assets, such as toll roads, are managed by the private sector. In addition, this would draw foreign direct investment into the country. On the basis of the above reasoning, if the Public-Private Partnership initiatives are taken seriously in South Africa, then they could constitute an instrument by means of which productivity may be enhanced, thereby improving state assets, which in this case are represented by the toll roads.

3.3.4 Financial return analysis

If the South African National Roads Agency Limited (SANRAL) were to maintain the status quo in terms of managing the non-tolled roads, then it would mean that the agency has to depend on government grants for its survival. The same would have to apply to the toll roads as well, for the reality is that the toll roads are managed by the National Roads Agency. To prove this, in the years 1999, 2000 and 2001, government grants received by the National Roads Agency amounted to R259,6 R599,0 and R516,7 million respectively. However, Pearce and Robinson (1997:194) remark that if other sources of funds could serve as a financial lever for an organisation, then, the National Roads Agency can not be an exception in this respect. Thus, should the National Roads Agency be financially leveraged, then it would mean that it would have to use capital with a fixed interest charge that could amplify either financial returns or losses in relation to the equity of the shareholders and in this case, government.

Seen as such, should a situation arise and a transport economic regulatory authority be established, then it would, in addition to the setting of tariffs of concessionaires, take decisions on how such tariffs would be regulated. Options for regulating prices range from rate of return regulation to price cap regulation. Under rate of return regulation, the regulatory authority places a limit on the returns earned by invested capital and may also place restrictions on the

dividends payable to shareholders. Under price cap regulation, the regulator limits price increases, often by a certain amount below inflation over a regulatory period (PPI Toolkit, 2004:29).

3.4 PRIVATE SECTOR INVESTMENT OPTIONS

According to Wheelen and Hunger (2006:138), this phase is about "finding a strategic fit between external opportunities and internal strengths while working around external threats and internal weaknesses". The analysis of the macro environment reveals that technology, ecology, socio-cultural circumstances, the economy and politics constitute strategic factors in the toll roads industry and need to be responded to through the utilisation of particular capabilities and resources.

In the opinion of Wheelen and Hunger (2006:139), the essence of a strategy is determined by opportunity divided by capacity. However, an opportunity on its own has no real value unless an organisation has the capacity or resources to take advantage of that opportunity. This is important and should therefore be taken into serious consideration when opportunities are to be exploited in the road transport industry.

As shown in Section 3.2.1.3, technology has an impact on transportation agencies in more than one way. For instance, the introduction of smart cards by private sector companies in the toll roads industry has necessitated the establishment of the transport regulatory agency to regulate smart card transactions to the satisfaction of road users, investors and government as important stakeholders that deserve to be respected.

Based on Section 3.2.2, the ecological factors are of strategic importance in the toll roads industry, because the movement of vehicles tend to give rise to externalities such as air and noise pollution. These externalities need to be taken into consideration when establishing an economic regulatory authority. This is done in order to comply fully with the environmental requirements as contained in

the National Management Act (NEMA) (Republic of South Africa, 1998b). To this end, the proposed economic regulatory authority should maintain at all costs a functional working relationship with the Department of Tourism and Environment, as failure to do so would spell certain disaster.

Section 3.2.3 deals with social factors and shows how these factors are concerned with, inter alia, the creation of employment opportunities. Therefore, a concessionaire is compelled by the terms of agreement to compile a matrix showing how employment would be maximised by the formation of a Public-Private Partnership project. The establishment of an economic regulatory authority is expected to strive for ensuring that there is strict adherence to the concession contract by the concessionaire.

In this context, cultural aspects are regarded as an important strategic factor to which project leaders in any road construction project should adhere strictly in order to comply fully with the National Heritage Resource Act (Republic of South Africa, 1999a). It follows therefore that in dealing with Public-Private Partnership projects, the Department of Arts and Culture should form part of the major stakeholders of such a project. This is so, because government has to exercise oversight through its departments in terms of how the project unfolds and develops.

Furthermore, the results of the present analysis point to the fact that those economic factors such as inflation and consumer price index are central to a successful toll road project that involves a Public-Private Partnership arrangement. To this end, it was also found that the establishment of a transport economic regulator should be a product derived from the marriage between the Department of Transport and the Department of Trade and Industry because both departments are highly influenced by transport matters and also exert counter-influence on transport issues. An investment decision taken with respect to the establishment of an economic regulatory authority needs to be adopted

and also controlled by the above-mentioned two departments.

Political factors, as stated in Section 3.2.5, constitute a strategic factor, which means that when commencing with a PPP project it will be prudent to identify first the actual political organisations and social groupings that have the necessary political influence in the affected community. The best strategy to use in such situations is to ensure that a structure had been established to deal with political organisations and social groupings that are influential in decision-making regarding political issues of the community. In other words, there has to be the necessary buy-in by various groupings on the project and such groupings should be given the platform to express their dissatisfaction before the commencement of the project. This view is advocated by the PPI Toolkit (2004:47), which clearly states that “Public-Private Partnership requires processes to resolve conflicts over project objectives and there has to be a balanced adequate political control with rapid decision making”.

Consequently, major Public-Private Partnership projects, such as the N3 Toll road project, have warranted a cabinet consideration to approve their establishment. In a way, this could serve as a blueprint according to which other PPP projects may be established. To this end, the PPI Toolkit (2004:47) is of great assistance because it states that “cabinet needs to consider and endorse the major policy decision that initiates the project and legislation to support such a project”.

Palmiter (2005:41) asserts, "investment options in toll roads can be of cash or non-cash consideration and is expected to produce income or profit and most importantly, the investor is not buying a consumable commodity or service". An ideal key feature of government's strategy could be in the form of seeing to it that development in this arrangement is led by private sector investment. The reason being that the private sector should be considered the main driving force behind growth and development. Any new development strategy should aim at creating an enabling environment for firms to invest individually and collectively in the construction of particular road infrastructures. Within the context of

this study, an *investor* refers to an entity or individual participating in the equity of a project company that is specifically established to implement projects (PPI Toolkit 2004:32).

According to Estache and De Rus (2000:238), there are three models applied by road agencies in this contracting out or outsourcing process. Firstly, contracting out can be done by transferring the planning and management of selected roads to consultants and contractors. Secondly, the entire road networks can be contracted out to the private sector but should operate under the jurisdiction of a selected agency. Lastly, the agency can set up a contract-executing agency tasked with the execution of donor-financed infrastructure projects.

3.4.1 Contracting out management to contractors

Delmon (2005:191) points out that a contractor is allocated the task of designing and constructing a toll road by the concessionaire. According to Hodge and Greve (2005:99), contracting out the obligations for building and operating the road service to the private partners has two benefits. The first benefit is that private partners could absorb the risks at each stage of the project. As the contract would run for 25 to 30 years, private actors could experiment with new ways to build and operate roads. The second benefit is that this would promote a private sector road maintenance industry, which scarcely existed in the past.

3.4.2 Private sector managing under toll road agency

This model involves the contracting out of the management function for the whole network to the private sector. The private sector does the work under the jurisdiction of a selected road agency. This model is mainly applied in many industrialised countries and it has proved itself to be efficient. It is also applied in developing countries but there it is mainly done to ensure that a competent body that remains answerable to the local district council manages small urban and district roads. Some small municipalities at the county council in the United States and at the district level in the United Kingdom use this model. Zambia also

uses it for both urban and rural district councils. These arrangements offer great potential for road networks (Estache and De Rus, 2000:238).

3.4.3 Setting up a contract-executing toll road agency

This model is similar to a private sector project implementation unit. It is specially set up to implement donor-financed infrastructure projects. The agency normally comprises of a board composed of prominent persons from the community and does not include government representatives. It has a general manager who is appointed by the board, and he/she in turn appoints other line managers. The staff members are hired under private sector terms and conditions of service and are paid competitive salaries (Estache and De Rus, 2000:238).

The agency is set up as a private, non-profit association and pays no taxes. It works on behalf of local authorities who delegate certain functions to the agency. The local government usually reserves the right to select the projects and the agency then recruits consultants to carry out detailed engineering. It also invites bids and awards contracts for supervision and works, manages the contracts and pays the contractors directly from a special account opened in its own name. The agency is subject to bimonthly management and financial audits and an annual technical audit (Estache and De Rus, 2000:238).

Previous studies on Public-Private Partnerships proved that contracting out all over the world usually saves between 20 and 40 percent of the costs of government services. American scholars in California have found that for the maintenance of traffic lights, the government costs 56 percent more than private companies. For paving roads, the government costs almost twice as much as the private sector (Markman and Vorhies 1990:83).

3.5 EVALUATION OF INVESTMENT OPTIONS IN TOLL ROADS

In their research studies, Kerf and Smith (1996:5) found that in response to a growing appreciation of the problems of the traditional public enterprise model,

many governments world-wide have attempted to improve the performance of state organisations through performance contracts. Performing under public ownership becomes more preferable and tends to yield benefits particularly where political commitment and administrative capacity are reasonably strong. Botswana has proved the validity of this statement as it managed for most of its Water Utility Corporation's existence to carry out its operations without interference from political authorities.

Although Botswana has succeeded in managing its institutions under public ownership, problems started to crop up when its water utility could not adjust its rates to respond to the user needs as required. This happens where government is forced to play the role of owner, regulator and operator simultaneously because such an arrangement is dominated by problems of conflict of interest, which are inherent in a situation of this nature. This is viewed as a poor institutional structure for attempting to operate on commercial principles (Kerf and Smith,1996:5).

In the evaluation of the three investment models, it is important to consider the Department of Transport's standpoint with regard to its long-term objectives. Public-Private Partnerships is a strategic must and one has to evaluate an efficient and effective model that can be implemented. Firstly, the first model is ideal for South Africa as it is being applied on the N3 Toll Concession Company. The second model is a big improvement on the first one as it makes provision for other spheres of government to apply a Public-Private Partnership in the delivery of roads. The third option creates room for the private sector to be more autonomous as the entire strategic direction is steered by the private sector.

Figure 3.2 is an adapted model derived from the Road Infrastructure Strategic Framework for South Africa (Republic of South Africa, 2002a:30). The model is in support of both options and goes further to show stakeholders' involvement at the strategic level. For example, the first level shows the involvement of the three spheres of government in determining the strategic direction of the road network

in South Africa.

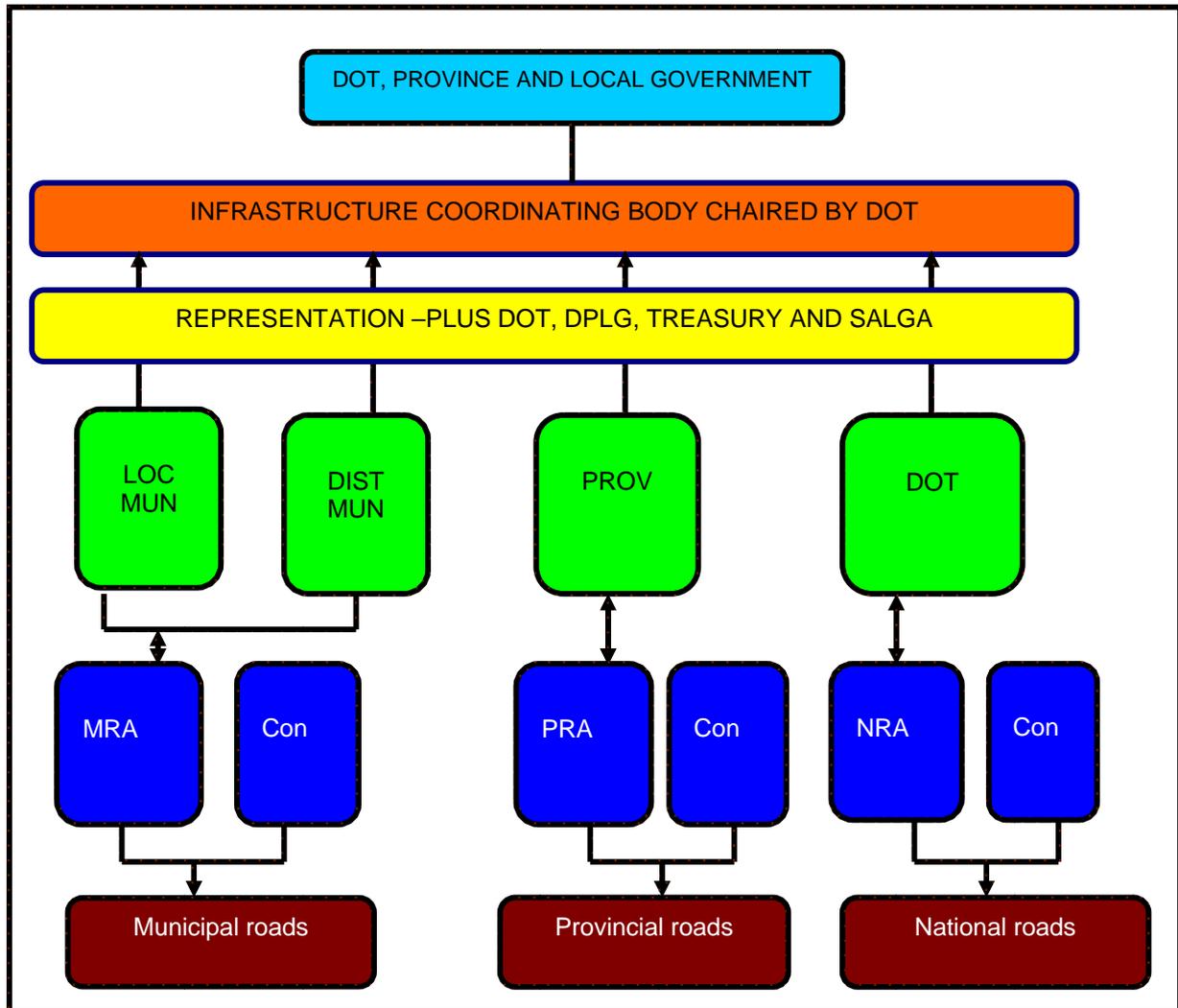


Figure 3.2: Investment options model

Source: Adapted from Road Infrastructure Strategic Framework for South Africa (RSA, 2002a:30)

- DOT Department of Transport
- DPLG Department of Provincial and Local Government
- SALGA South African Local Government Association
- LOC MUN Local municipality
- PROV Province
- MRA Municipal Roads Agency

PRA Provincial Roads Agency
Con Concessionaire

The second level shows a proposed body that is to be tasked with policy formulation at a strategic level. This body should be formed by representatives from the three spheres of government and other stakeholders such as the National Treasury and the South African Local Government Association. Of major importance is the fact that each sphere of government is encouraged to establish a service delivery unit or a roads agency to run its roads affairs. A practical example in this respect is agencies such as the National Roads Agency that attends to national roads. On the provincial level, the Limpopo Roads Agency Limited was established to take over the responsibility for all aspects related to provincial roads in the province (Department of Transport, 2002a:23).

The validity of the proposed model can easily be seen in the context of the White Paper on Local Government published in March 1998, which states,:

... “achieving the Reconstruction and Development Programme objectives within a reasonable time frame requires municipalities, the public sector, the private sector, the community and non-governmental organisations to be a key option to be considered by municipalities in their effort to rectify infrastructure deficits and disparities”.

The proposed model creates room for innovations to take place because involvement by stakeholders is encouraged throughout the three spheres of government. It is important to note that the model encourages government control and this is critical precisely because government should play a role in ensuring that toll tariffs are controlled. This is so because of the mere fact that, if roads are to be managed by concessionaires, the likely result is that there will be more room to apply marketing strategies to ensure that the business is sustainable.

3.6 SUMMARY

In this chapter, various environmental factors were discussed and also analysed because these factors were found to have exerted considerable influence on the Department of Transport. The influence exerted by these factors had brought about various outcomes and achievements like, the coming into being of the National Roads Agency. Of particular importance with respect to the introduction of technology was the increasing use of the electronic toll collection system in the operation of toll roads.

As far as ecological factors are concerned, negative externalities such as noise, air pollution, congestion costs and accidents were extensively discussed and analysed. The impact of such externalities on the entire transport system received attention and it is evident that these factors also influence one another. Importantly too, the economic side was also found to have such a large degree of influence that it could be reasonably concluded that a healthy economic growth stands a much better chance of improving living conditions in the coming decades than before. However, it should be noted that economic growth, like population growth, is not evenly distributed and it does not necessarily follow the same characteristics at all times as it unfolds. This has implications for the transportation industry in practically every region.

In the same vein, freight movement too is increasingly placing particular importance on inter-modal connections that go on to involve highways as a vital component in the creation and development of the road network on the one side, and on the other side the creation of job opportunities. In this regard, the role that is played by the public and the private sectors as partners is of cardinal importance in creating jobs and also in creating a safe road network.

Again, electronic commerce is expected to have a significant impact on transportation, although it is not yet clear exactly what these impacts would be. Tourism too is increasingly becoming an important part of the growing economy and consumers need places of leisure to travel to in order to relax and to become

revitalised. The transport industry plays an important role in terms of travel time, and travel patterns and the road infrastructure required by the travellers are expected to vary according to the prevailing circumstances.

In the final analysis, the Department of Transport has to evaluate a range of options available in order to satisfy the needs of road users. So for instance, the Department of Transport needs to analyse whether it is the best option to contract out the management of national roads to contractors or not. The second option would be whether the outsourcing of the management of roads to the private sector, while under the control of the Agency, would be the best alternative. Currently, South Africa is using different options that still need to be tested for their effectiveness. Having said the above, the study sees the last option as that of setting up a contract-executing agency, which should consist of board members from the community other than government representatives.

CHAPTER 4

THE INTRODUCTION OF COMPETITION

IN THE PROVISION OF TRANSPORT INFRASTRUCTURE

4.1 INTRODUCTION

In the past, South Africa's transport infrastructure was protected from competition through specific policies and laws designed for that purpose. This chapter examines this traditional practice and strives at suggesting recommendations appropriate for managing the present transport infrastructure, which, on account of the application of the latest technology, has become so sophisticated that it logically calls for the intervention of a transport economic regulatory authority, as happens in the case of other entities in the market place. Black et al. (2005:4) also instructively argue that regulatory innovation is theoretically seen as a strategic adaptive response by a system or organisation to its environment.

To put issues into context, the 1996 Constitution (Republic of South Africa, 1996a) allows for, among other things, the right of people to choose the mode of transport they prefer. In emphasising the importance of this right, the present chapter wishes to draw our attention, *inter alia*, to road users' rights as contained in the South African Constitution and other literary sources related to consumerism. To give expression to the rights of the people, this chapter explores various regulatory regimes and examines the extent to which the operation of toll roads in South Africa could be made to respect and honour the right of choice of people.

It should however, be borne in mind that in attempting to establish a transport economic regulatory authority there would of necessity be a myriad of obstacles that would have to be overcome before everything can operate smoothly in the transportation sector. This is bound to happen because of various factors, such as the different fiscal regimes applicable in countries where the road transport corridor operates.

To design a relevant and appropriate regulatory authority, the first step should be that of analysing the concept of competition policy, particularly focusing on its application to the transport infrastructure. For the purposes of this study, the concept of competition is divided into two phases, namely competition *for* the market and competition *in* the market. Competition *for* the market, on the one hand, is defined by Delmon (2005:327) as competition amongst bidders and is intended to reduce the ultimate price to be paid for the procurement of services. Competition *in* the market, on the other hand, refers to a phase where the bidder has been awarded a tender and would now provide the service with a sustainable competitive advantage in mind. This will be dealt with comprehensively in Chapter 5.

4.1.1 Micro-economic theory of competition

Arnold (2008:273) is of the view that the natural monopoly may be regulated through price, profit, or output regulation. This study puts emphasis on the regulation of prices and an independent economic regulatory authority is sought to deal with price structures of various concession companies. In considering the role to be played by the regulatory authority, the capture theory of regulation warns that no matter what the motive is for the initial regulation and the establishment of the regulatory agency, the agency may find itself being controlled by the special interests of the industry being regulated.

Arnold (2008:273) further warns that the regulated industry may make a point of getting to know members of the regulatory agency. These groups may talk frequently about business matters and also socialize to an extent that the relationship grows stronger over time and may have an impact on regulatory measures.

Based on Arnold's piece of advice, it is imperative that South Africa takes precautionary measures to ensure that members of the economic regulatory authorities are not falling into the same trap. In order to avoid this from happening, an industry service level agreement need to be drafted pointing out all regulatory principles to be adhered to during its contract with the economic

regulatory authority.

4.1.2 Why the regulatory authority is needed

The reason why the regulatory authority is needed could be justified by means of advancing the benefits of regulation as stated by Arnold (2008:276) where he gives an example of a business firm that pollutes the air with smoke from its factories. The government could pass an environmental regulation requiring such firms to purchase antipollution devices that reduce the smoke emitted into the air.

The benefits accruing out of the execution of this kind of regulation is undoubtedly cleaner air. But cleaner air can lead to other benefits such as people having fewer medical problems in the future. In some parts of the country, pollution from cars and factories causes people to cough, feel tired, and experience eye discomfort. More importantly, some people have chronic medical problems from constantly breathing dirty air. Government regulation that reduces the amount of pollution in the air clearly helps these people. This validates the fact that in order to deal with environmental externalities, it would be ideal for an economic regulatory authority to work hand in hand with an agency that deals with environmental pollution. Alternatively, the responsibilities of an economic regulatory authority could be expanded to encompass environmental externalities.

4.2 TOLL ROADS AS PRODUCTS OF A NEW TRANSPORT DISPENSATION

Koch (1994:47) is of the view that

... “a monopoly is a market structure where all conditions for perfect competition hold except that there is only one seller and also that there are barriers to entry to that market. If there were no barriers to entry, an efficient monopolist would not be a monopolist for long”.

In addition, Koch (1994:47) also maintains that “the monopolist has market power and can manipulate the price of its product without buyers abandoning it

in favour of a substitute”. It can therefore be concluded that Koch’s definition of a monopoly implies that, if the users have no option in the form of a substitute or alternative route, then a toll road is justified to be called a monopoly and would therefore require regulatory interventions to control its pricing power.

The rationale for regulating natural monopolies is intended to control the prevailing monopoly power from coming out with ridiculous prices that could lead to unnecessarily large profits as happened in public utilities in the United States of America (Sawyer and O’Donnell, 1999:36). The major problem with this regulatory model is however that it constrains public utilities from realising maximum rates of return on assets, and it was for this reason that the United Kingdom rejected such a model. In the circumstances, it is advisable that South Africa considers the various economic regulatory models that are presently in use in other countries and only then develop a model that would serve the country’s interests better. The section below deals with the issue of the natural monopolist’s tendency to abuse its power of dominance.

4.2.1 The natural monopolists’ abuse of power of dominance

According to Hwang and Chen (2004:174), “monopolistic enterprises have great market power which when abused, can have negative impact on competition”. In exposing this view, Hwang and Chen cite the Taiwanese episode where no monopolistic enterprises are allowed either directly or indirectly, which is a way of preventing any other enterprises from monopolising the market place. South Africa would do well to emulate this strategy through the Competition Act, Act No. 89 of 1998 (Republic of South Africa, 1998a), which was designed to guard against enterprises abusing their dominant positions. In this regard, the Competition Act defines a firm in a dominant position as one that has 45 percent of the market share and is likely to conduct its business without taking the needs of customers into consideration (Competition Commission, 2003:20).

In terms of honouring and respecting the people’s rights as enshrined in the

Constitution, South Africa should ensure that monopolies are regulated by independent, impartial regulatory bodies with in-depth technical expertise. The main reason for this is that, in order to honour and respect the people's rights, South Africa should not allow dominant firms to use their monopolistic position to increase their profits at the cost of users. Presently, South Africa regulates through the Competition Commission to correct the past traditions that culminated in the abuse of monopolistic power by the dominant enterprises. To this end, the Minister of Trade and Industry is formulating policy that is aiming to encourage and support the prosecution of firms on account of anti-competitive practices. The Competition Commission further monitors dominant firms as such firms would likely lead to the eradication of efficiencies and cause significant loss to consumer welfare (Competition Commission, 2003:21).

The above attempts should be viewed in the light that "roads are the backbone of the country's economy and further the government's goals to improve the quality of life of all citizens" (Department of Transport, 2004a:5). Seen against these contexts then, if intervention by the regulatory authority in these issues is non-existent, this would simply mean that the improvement of the quality of life as aimed for by the South African National Roads Agency Limited would never be realised. By implication, this means that there should be a deliberate effort aimed at increasing competition in the various sectors of the economy as well as ensuring consistency and coherence in the application of competition principles in key economic policy areas. This is supported by Sawyer and O'Donnell (1999:39) who regard competition as the most effective means of protection against monopoly. Below is an exposition of the meaning of the concept of competition as defined by various scholars in the field of transport economics.

4.3 THE CONCEPT OF COMPETITION POLICY IN THE TRANSPORT INDUSTRY

Fishwick (1993:1) describes *competition policy* as a term used to describe intervention by public authorities to ensure competition in the markets for goods

and services. The definition goes even further because it also covers such important issues as the prevention or control of agreements between firms not to limit competition and to have control over monopoly power and its abuse. In support, Amicorum and Plompen (2005:21) point out that competition forces companies in a market with a given technology to offer the best quality products at the lowest prices.

Fishwick (1993:15) avers, "the purpose of competition policy is to promote and maintain a process of effective competition so as to achieve a more efficient allocation of resources". The implication is that competition is a necessary condition for the efficient allocation of resources through the market mechanism, and Amicorum and Plompen (2005:25) view this as not an end in itself but the end goal is to increase consumer welfare.

To actualise the above scenario, would mean that within the context of Public-Private Partnerships, bidders need to comply with competition policy during the bidding process. Hence, Delmon (2005:327) points out that

... "the impact of competition on the bidding process is in its essence quite simple in the sense that bidders know that there are other bidders in contention and are made aware of the presence of those bidders. Each bidder would of necessity be forced to reduce its price as much as possible and improve the technical and financial basis of its bid in an effort to win the project".

Against this, Fishwick (1993:16) is of the opinion that the main goal of competition policy is to diffuse the economic power and protect the individual's freedom within society. Cvitkovic (1993:1) concurs and says, "competition is recognised as one of the strongest societal forces of our time". Seen in this context, business competition has become the undisputed global source for fast and dependable economic progress. It is argued that if economic progress is to be achieved in South Africa, competition laws need to apply to all companies, regardless of their classification. This should also apply to concessionaires that

are engaged in the commercial or economic activities like the collection of toll fees.

Above all, competition enables each individual to make full potential use of skills and to optimise the combination of working time. In support, Delmon (2005:328) points out that competition should not only focus on price, but bidders should seek more efficient technical and commercial solutions and need to apply other resources available to them to improve their bid. Thus, private companies such as toll roads operators should not be left to serve their own interest only but should be monitored positively and constructively. One way to improve the situation is to develop corporate governance principles and to increase transparency.

4.3.1 Pre-requisites for competition in the transport industry

In order for competition to work more efficiently, it would need a positive and conducive commercial atmospheric culture coupled with an appropriate policy framework that is set up by government. The framework should include laws that establish rights to the possession of tangible and intellectual property. Furthermore, government should create an environment that promotes the undertaking of transactions at reasonable costs. In other words, laws so created should be capable of protecting consumers and employees from fraud. Such laws should furthermore inspire officials to exercise due care and truthful dealings and should not only be aimed at promoting litigation.

Sawyer and O'Donnell (1999:39) argue for the promotion of “a regulatory intervention as an appropriate measure for the evolution of competition from the monopoly position to the privatised utility”. To placate any tendency of the toll road industry from operating as a monopoly, it is advisable if not outright ideal to put into place an appropriate interventionary policy framework that would ensure that the rights of all concerned and / or involved are protected. Pre-requisites have the ability to determine the type of procedure to be used in solving

particular problems, and failure to observe proper procedure renders an action futile or invalid.

4.3.2 The role played by the Competition Commission in the transport industry

In order to prevent malpractices taking place in the business environment, the South African Department of Trade and Industry was advised to set up a Competition Commission with clearly articulated guidelines and directions that are easy to follow. To understand the role of the Competition Commission better it is important to deal with the function of the antitrust enforcement agency first. This agency strives after changing industrial structure and conduct as an indirect means for improving performance (Petersen, 1981:81).

Presently however, the function of the Competition Commission is among others that of observing the implementation of the competition policy, which includes exercising powers in the newly formed concession companies. This study is of the view that this seems to be the correct way to protect the rights of consumers and to shield consumers against possible exploitation and abuse. On the other hand, the Commission is also given the right to administer matters around the issuing of exemptions to would-be contractors or concessionaires. This too would do away with the past monopolistic tendencies that had existed in the past. Furthermore, the Commission's mandate is given as that of dealing with what would otherwise be anti-competitive behaviour by businesses while the aim should not be to disadvantage the consumers but to protect them from exploitation.

It is worth mentioning that the Commission has also been given significant powers of legislation, which it may use to create a series of exemptions that could ensure that consumers benefit maximally from business dealings involving the transport industry. The Commission is also given strong investigative powers, which allow it to investigate businesses to assess their compliance with competition law. The Commission is furthermore given the power to impose large

finer for infringement of the competition law. In some cases where a business becomes too powerful, the Commission could even order the divestment of assets.

4.3.3 Reason for transport economic regulatory intervention

A proper way in which government could reassert its power over concession companies is simply to establish an appropriate economic regulatory authority that is also given the power to issue new regulations that are designed to govern the behaviour of companies both in the private and public sectors. To this end, this study suggests that an economic regulatory authority is the body to equal out the position. In his research findings, Weidenbaum (1995:19) states that the use of regulatory power has grown in the United States mainly because this type of governmental intervention is seen as a means of ensuring that both the private and public sectors behave reasonably in the market place. This view is supported by Hahn (2005:1) who asserts that “in the United States, the regulatory oversight Agency uses cost benefit analysis to both improve regulatory proposals and stimulate new regulatory measures where the benefits exceed the costs”.

Furthermore, Weidenbaum (1990:19) argues that “when private property is devoted to a public use, it must be subjected to public regulations”. In support, Kerf et al. (1998:30) state that “one of the first things investors will want to know before becoming involved in a concession is whether the country’s legal and regulatory environment is favourable to concession operations”. The main reason here is that a concession holder cannot unilaterally modify or override the provision of a law or a country’s constitution. It would therefore be incorrect to assume that all issues or problems involved in concession contracts could be handled within the boundaries of a concession agreement, and the study consequently explores the possibility of establishing an economic regulatory authority.

Consequently, in order to create a legal environment that is conducive to

concession arrangements, government should amend or repeal some laws and regulations that have thus far promoted and perpetuated the present undesirable state of affairs. In other words, an opportune time has presented itself for the creation of new legal provisions that are geared towards allowing for the establishment of an economic regulatory authority that would not only grant specific rights in certain special circumstances but would actually be designed to regulate the entire transport industry.

As a consequence of the above, the whole transport legal framework should be reviewed, because it would be pointless, in the context of a specific concession, to try and document what is before the contracting parties while also attempting at the same time to remedy all the shortcomings in a country's legal framework. It is needless to say that in such circumstances efforts should be focused only on those core aspects of the legal framework that have to be in place for the concession programme to succeed.

4.3.4 Competition policy as a means of regulating the transport industry

In this context, what needs to be remembered is that monopolists more often than not would like to raise prices in pursuit of profit, realising that the consumers they lose at the margin are probably worthless to them compared to the consumers they keep but overcharge. The result is that the allocation of resources in the economy is distorted because relative prices faced by consumers no longer reflect relative costs. Consequently, there is an overall welfare loss for society because some consumers are forced out of the market or are otherwise forced to consume less.

Another problem posed by inadequate competition is that monopolists often use inefficient and costly methods of production to meet consumer demands. However, what is important is that if competition is vigorous, a firm that fails to minimise costs would be driven out of business by more efficient firms. Monopolists may produce any level of output at higher cost than is necessary

because they face no challenge to do so cheaply (Fingleton et al., 1995:5). From the above exposition, it becomes very easy for one to see the importance of competition in the market place. To this end, Sawyer and O'Donnell (1999:31) are of the opinion that "where competition has been introduced, there would be a need for continuing regulation for charges made to access the network". Since the Public-Private Partnership phenomenon has been introduced in South Africa to afford private sector entities the opportunity to compete for the market, the establishment of a transport economic regulatory authority would be ideal in order to regulate economic aspects.

According to McNutt (2005:14), "regulatory authorities are established to police anticompetitive behaviour and ensuring that prices converge to a competitive price". This too, justifies the importance of establishing an economic regulatory authority as it would inter alia ensure that toll fees are adjusted to competitive rates.

4.4 COMPETITION FOR THE MARKET IN THE TRANSPORT INDUSTRY

Traditionally, the approach that was used in the transport industry was one of protecting the existing transport industries because "existing firms were always under threat from entry into the market by outsiders" (Demsetz, 1989:86). The emphasis was on placing barriers to entry in the market place by new companies. Now there are new aspects that play a major role in determining the success or otherwise of companies in the market place, and certain factors play a significant role, namely economies of scale, advertising, and other factors such as production and distribution. Seen in this light, competition for the market is often referred to as the winner takes it all.

Competition is thus regarded as a brutal struggle for survival with the consequence that one strong competitor defeats all other participants and forces them to leave the market so that the winner takes over the total market. Nobody cares about the defeated competitors or whether or not they lose their assets and their future source of income. Basanes et al. (1999:195) are of the opinion that

when introducing competition in the market to provide road infrastructure, there is a particularly pressing need to ensure effective competition for the market. This means that the tendering process should be organised in such a way that it attracts a significant number of well-qualified bidders.

Competition is a very effective tool for allocating economic resources and for making optimal use of such resources. The successful bidder has to satisfy the technical evaluation, and the financial proposal should provide best value for money. This means that, in the case of a Build Operate and Transfer arrangement, the proposed schedule of government payments to the private party should result in the lowest discounted net present value (Department of Finance, 2000:25). To this end, the Partnership UK (2001:23) strongly argues that public sector bodies wishing to embark on a Public-Private Partnership arrangement should not regard competition as a barrier.

It is advisable that, in the case of South Africa, the aim of the Department of Trade and Industry should be to increase competition in the market and not to prohibit it, as was the case in the past. Private sector companies managing their business in the form of concession agreements should be obliged to abide by the competition legislation.

4.4.1 Competing through the tender process

The National Treasury defines the tender process as

... “a process by which the institution requests tenders from any parties interested in entering into a New Public-Private Partnership Agreement, evaluates the responses from those interested parties and negotiates the conclusion of a new PPP Agreement with a New Private Party, in accordance with the set procedures”.

When competing through the tender process, which Pauw, Woods, Van der Linde, Fourie and Visser (2005:234) describe as “competitive tendering in which bidders offer the optimal value for money within the specifications and

conditions that the tender documents lay down” then; a specific procedure needs to be followed. In this case, the normal procedure to be followed when a road is to be put on tender is that the Department of Transport, through its Roads Agency, should advertise the tender for the purposes of securing through competition the best contract. This should be advertised through the tender bulletin.

Before the tender can be advertised, a background information together with the pre-qualification requirements for the project also need to be published so that interested parties could get the necessary information in order to be able to make informed decisions (Department of the Environment, Transport and the Regions, 1998:7).

According to the South African National Roads Agency (1999:54), the Agency is keen to receive even unsolicited proposals for the construction or maintenance of road infrastructure because it now sees this move as but another strategy to fast track the process of service delivery in the transport sector. To this end, the Agency has laid down procedures to be followed in the submission of unsolicited proposals. As pointed out, this is intended to stimulate a competitive environment that would allow interested parties to compete for employment opportunities in a manner as transparent as possible in order to offer the public protection from the possibility of monopolistic practices and exploitation.

The South African National Roads Agency (1999:54) further states that, “in order to succeed, proposals should in practice reflect conformance with governmental aims, be in the public interest, avoid the creation of monopolistic practices, not seek to place onerous conditions upon government”. In support, Basanes et al. (1999:195) state, “the objective of the tendering process should be to attract bidders to the competition and the private participation should be well suited to local circumstances and subject to risk mitigation”. The meaning is clearly that the terms of reference should be specific and precise. Furthermore, it implies that adequate time for the presentation of proposals should be allowed, and this

should be followed by a transparent process for qualifying and evaluating the bids. Delmon (2005:321) stresses that “tendering procedures are meant to achieve efficiency, manage costs, maintain quality, uphold expediency and maximise value for money”.

Having stated the above, it is worth noting that there are key stages in the procurement process that leads to the construction and development of the road infrastructure in the country, namely:

- the consultation phase;
- the deadline phase for expression of interest;
- the stage involving the tendering period;
- the negotiation phase (which ends with a short list of prospective bidders);
- the analysis phase in which the best and final offers are identified; and
- the last phase in which the selection of preferred bidders is made and which ends with the final technical requirements and contract terms being concluded as well.

A diagrammatic representation of the procurement process is shown in Figure 4.1.

1	<p>Consultation phase</p> <p>Adverts to appear in the Government Gazette</p>
2	<p>Deadline for expressions of interest</p> <p>Pre-qualification of bidders</p>
3	<p>Tender period</p> <p>Tender evaluation to select short list</p>
4	<p>Negotiation with short-listed bidders</p> <p>Receipt of best and final offers</p>
5	<p>Analysis of best and final offers and selection of preferred bidders</p> <p>Completion with preferred bidders</p>
6	<p>Finalising technical requirements and contract terms</p> <p>Contract award</p>

Figure 4.1: Tender process

Source: Adapted from Department of the Environment, Transport and the Regions (1998:8)

In broad terms, Pauw et al. (2005:234) categorise the tender process into three phases, namely, calling for tenders, assessing received tenders and awarding tenders. The tender process in the construction of road infrastructure is by no means a simple task. Experience from the United Kingdom (Department of the

Environment, Transport and the Regions, 1998:8) also gives evidence of the fact that the tender process moves through a series of critical phases that are basically three in number but can be expanded into six steps as indicated in Figure 4.1.

4.4.1.1 Call for tenders

Pauw et al. (2005:235) state that the “tender process begins with a government organisation establishing a future need for a high value good or service”. The logical methodology to be applied here is to define the need, to cost it and to include it in the next budget. Once the budget is approved and introduced, the organisation may call for tenders. It does this through the appropriate tender board or under its own steam, depending on the size and nature of the contract.

In calling for tenders, the organisation publicises the sought-after goods or services in the Government Gazette (see Figure 4.1). This is done in the State Tender Bulletin or the press whereby potential suppliers are invited to submit their offers by completing the necessary tender documents. This phase of the process is also known as a *request for bids* and details of the required products, necessary specifications accompany the tender documents. Bovis (2005:54) maintains that “at the phase of selecting and qualifying the tenderers, contracting authorities should inspect all responses received and determine the suitability of candidates according to objectively defined criteria that aim at eliminating arbitrariness and discrimination”.

The Treasury guideline (2000) explicitly states that the bid documents or request for proposals (RFP) should clearly stipulate the bid requirements. The documents should establish the rules of bidding and should follow the conventions of public sector procurement. A copy of the draft contract should be included to facilitate the early identification of key contract issue. Pauw et al. (2005:235) further state that, “there is always a closing time and date for the submission of tenders and under no circumstances should organisations accept any late submissions”. This

is done as a way of stopping any possible confusion and accusation.

When bids in the road infrastructure industry are invited, bidders should be compelled to demonstrate their willingness to assume sufficient risk and responsibility. This should be done as vital measure that would allow the projects to proceed as planned. Otherwise it remains a big risk to design, build, finance and operate, and to accept responsibility for design, construction, maintenance and financing of a road infrastructure without having doubts and being fearful. According to Lawther (2000:46), government should be prepared to cancel the Request for Proposal (RFP) if there are no sufficient bidders. Similarly, a contract should not be awarded if there is doubt concerning the potential contractor's capabilities.

4.4.1.2 The assessment of received tenders

In an ideal situation, tenders should be opened in public, and all those who submitted proposals for tendering should be invited to be present. Carrying out this requirement should pose no problem because there is a public area at the offices of the State Tender Board in Pretoria from where people could have a clear view from behind glass as the tender proposals are being opened (Pauw et al., 2005:236). From there on, suitably competent officials from either the departmental tender committee or the Tender Board could proceed to evaluate the tenders. These officials should take into account the quality, suitability and the abilities of the outstanding bidder/s and these factors together with the price quoted by the best bidder/s should be considered when the winning bidder/supplier is chosen.

In case none of the bids presented on the appointed day satisfies the criterion that is popularly known as the value-for-money criterion, then all the bids on offer should be rejected. However, in the case where bids are of an acceptable quality, they should be ranked so that the second-ranked bidder could be considered in case a satisfactory contract cannot be concluded with the first-ranked bidder. In the technical and financial evaluation process, the National Treasury (2000:25) recommends that the following issues be taken into consideration when handling

the selection of bidders.

4.4.1.3 Technical examination of bids

The technical proposal should be suitable for local needs. This means that the bidder may not, inter alia, use a high-technology solution where a low-technology solution would suffice. It would also be advisable for the bidder to avoid over-designed facilities at all costs. Consideration should be given to the capacity of government to take over operation at the end of the Public-Private Partnership contract:

- the proposed technology should be reliable, easy to maintain, with logistical arrangements for maintenance and support;
- the sub-contracting plan should contain the number, nature and quality of sub-contractors, and assurances should be given by the prime contractor for ensuring sub-contractor quality and performance;
- the empowerment process and affirmative action plus the SMME plans should be designed in a substantive, detailed and credible way;
- the scope and extent of training programmes for relevant staff should be outlined in detail;
- the plan for the utilisation, redeployment or redundancy of the existing labour force, including re-organisation of work patterns, should be made abundantly clear in the proposal; and
- arrangements for the transfer or reversion of the project facilities and the staff should be made, which clearly indicate how all these would be returned to the government at the end of the contract period.

4.4.1.4 The financial evaluation of bids

According to the Treasury guidelines (2000), the financial evaluation should consider the following criteria:

- The financial flows used in the bid document should be consistent with the minimum technical design and performance standards and with specifications in the bid documents.
- The financial flows of all bids should be evaluated over the concession period specified in the bid documents.
- The rand should be used as the currency of bid comparison; and bids should be examined carefully to ensure that reasonable provisions have been made for staffing positions and costs, operating and maintenance costs, adequate working capital, replacement and renewal of equipment during the evaluation period, as well as income and other taxes;
- The examination needs to ensure that the demand projections and growth rates underlying the analysis are reasonable and broadly consistent with the demand projections included in the feasibility study and/or bid documents
- Tariff assumptions should be consistent with those in the bid documents.
- The implementation schedule of the project should be properly indicated and accounted for in the financial proposal.
- The project-cost estimates should be complete and should account for all construction and operation costs. Any gaps or uncertainties in the cost estimates are grounds for rejecting a bid.
- The financial plan should also be examined for completeness, and financial arrangements, interest and amortisation of debt should be properly indicated and accounted for in the financial proposal.

4.4.1.5 Negotiations with the preferred bidder

According to Delmon (2005:326), the Agency should

“...elect one or two of the bidders as the preferred bidder/s and then undertake detailed negotiations with the preferred bidder/s, agreeing and signing project contracts, finance agreements and any other documentation required for the project. Where the Agency is not able

to agree compliant documentation with the preferred bidder/s, the bidder will be replaced with the second-place bidder. However, replacement of the preferred bidder is not common as the process is time-consuming and expensive. The negotiation is based on inter alia, confirmation of the bidder's commitment and determining the affordability gap".

Bidding parties, including debt-funders, should provide sufficient evidence of their commitment to the terms of the bid. Departments should not demand unconditional commitment. The commitment of debt financiers, for example, will mostly be subject to due diligence assessments after the preferred bidder has been selected. Departments should, as far as possible, enable bidding parties and their associates to commit themselves to the project.

As the commercial details become clearer during negotiations, an upward pressure on price may emerge. This will force the department to reduce some costs to keep the project affordable, for instance by interrogating the bidders' pricing assumptions or by adjusting the risk allocation.

4.4.1.6 Awarding tenders

This confirmation is necessary in the selection and awarding of all public contracts. It greatly reduces the possibility of tenderers contesting the award. There has long been a tendency for losing bidders to believe that their offers have been unfairly judged, and such bidders then want to contest the final choice.

Bovis (2005:67) is of the opinion that the selection of tenderers is a process, which is based on an exhaustive list of technical and financial requirements that are expressly stipulated in the relevant directives, implying that any insertion of contract compliance that is used as a selection and qualification requirement should thus be considered as ultra vires. To placate any gossip or rumour, managers should immediately make public the winners of tenders. After this action, managers may then go ahead and draw up a contract with the successful

tenderer, indicating clear terms and conditions to be met, although this is not actually necessary. Contracts should have penalty clauses covering any possible failure on the part of the successful bidder to meet the terms of the tender.

One major factor to take into consideration is that during the bidding process, it is crucial to guard against collusive tendering because such tendering has negative tendencies. For instance, collusive tendering is a restrictive practice, which in its simplest form involves an agreement among a number of suppliers in the sense that these suppliers decide to form a group and to submit identical bids in response to an invitation to tender. Simply put, this is nothing but a risky ploy of trying to restrict competition, for should this succeed, then it means that the received bids should be sealed to the exclusion of the genuine ones. However, when bids are evaluated, it will be obvious to the firm inviting the tenders that there must have been collusion. Bovis (2005:67) concludes by saying that “this type of arrangement tends to encourage cheating by one or more of the tenderers and as such should be discouraged at all costs”.

Experience elsewhere has taught us that in a process of evaluating the merits of a concession proposal, the responsible government departments are often confronted with many problems. One central problem that faces government is that of ensuring that the award of a tender to a successful bidder does not create destructive monopolies. The ideal situation is to request interested parties to submit tenders as this ensures competition. The second step is that of ensuring that the requirement that bidders reflect toll rates in their proposal for a particular period of time, which is normally ten years, is complied with to the letter.

The European experience teaches us that the awarding of a concession to a prospective concessionaire should be based on the concessionaire’s financial strength in respect of his/her ability to access both the internal and the international capital market. Finally, it is worth noting that in the eyes of the selectors, the bidders’ expertise in managing toll roads and their technological experience coupled with a reliable back-up support system plus a proven know-

how record constitute some of the major considerations that count in favour of prospective bidders prior to the final selection of the successful bidder (N3 Project Information Memorandum, 1997). This information is vitally important when it comes to the awarding of contracts in the road transport infrastructural industry.

Another important factor to be taken into consideration is that there should be a comprehensive business plan in place that allows for the making of an acceptable rate of profit for private entrepreneurs, which is commensurate with the various risks factors that are involved in the contract. Such a business plan should spell out how the public interest would be protected from a tariff viewpoint and should also indicate how other considerations, involving issues of accountability for public resources, would be dealt with.

Finally, there should be some control measures in place that would safeguard the interest of stakeholders and the general public throughout the duration of the concession period. In other words, there should be regulation in place to ensure that the basic tenets of Public-Private Partnerships are not hindered or obstructed when executing the contract. Briefly, this simply means that the policy of free competition should not only be entrenched but should also be promoted by those contracts that the Department of Transport gives to the Public-Private Partnership entities (N3 Project Information Memorandum, 1997). Having stated the above, it is worth pointing out that the withdrawal of an alternative non-toll route contradicts the principle of free competition.

In the previous paragraphs, the concept of collusion was touched upon just casually, and it is perhaps time to elaborate on what it could mean to the transport industry as it has the ability to offer alternative options to avoid the prescribed tendering procedures. The collusion option is a more sophisticated form of tendering and could be used, in particular, by those parties involved in the tendering process, and they could do this by simply agreeing among themselves on who would submit the lowest bid, and further agreeing on who

would only bid for the business of certain customers. Again, they might also agree to have a rotation system to ensure that each party/firm in turn is a successful bidder. Furthermore, they may agree to lower their bids by a certain percentage in order to keep a vigorous and efficient competitor out of the market. This way parties could use the collusion option to frustrate all the efforts the transport department has put into place in an attempt to regulate the transport industry.

4.4.1.7 The rationale for awarding concessions

Theoretically, Farrell (1994:27) argues that there is a great degree of importance in the assessment of benefits when awarding concessions for infrastructure projects. The principal justifications for government to award concessions are:

- firstly, to introduce the benefits of private sector management and control techniques in the construction and operational phases of the project;
- secondly, to promote private entrepreneurial initiative in infrastructure projects that could lead to effective Public-Private Partnerships;
- thirdly and finally, to increase the range of financial resources that might be available to fund such projects.

South Africa can make great strides if it could use experiences it has gathered from other countries to generate its own regulations to run the Public-Private Partnership contracts in the transport industry. To achieve progress, not only new equity finance support programmes for young high-technology companies need to be launched in South Africa but new regulations need to be introduced as well. To this end, regulations giving support through subsidies need to be in place so as to promote the realisation of a harmonious relationship between, on the one hand, equity finance arrangements that involve state-owned institutions as partners, and on the other hand, with the private sector. All these factors should be based on a supplementary and non-competitive relationship between

government finance and private sources of funds as determined by the key principles governing such arrangements.

There should be a contractual and administrative setup as adapted to the needs of private market requirements as well as a flexible pricing mechanism as institutionalised through the influence of government agents and adapted to suit certain basic parameters that are in accordance with market needs. Finally, exit decisions of public agents and their eventual replacement by private agents in the late phases of the transaction are needed to act as an underlying principle of ensuring harmony and progress.

There is however an alternative model that is managed by the state-owned Bank for Reconstruction and this arrangement involves re-finance arrangements for private lead investors. These private institutions then go on to provide equity finance for start-up firms, which then become responsible for ownership and management of contracts.

4.5 COMPETITION AS KEY TO UNLOCKING THE FREEDOM OF CHOICE

The perception here is that government should implement policies designed to improve competition because competition is seen as a key to unlocking the people's right to freedom of choice in the transport industry. In other words, transport policies should be created to increase competition in the transport industry or to produce competitive results. According to Petersen (1981:9), the primary mechanism for improving competition in the United States was the application of antitrust laws. These laws gave government the power to alter existing or proposed market structures and to impose civil or criminal penalties for certain types of business conduct deemed not to be in the public interest.

In the current study, competition is seen as a key to empowering the users to exercise their right of the freedom of choice. Competition in the transport market will be discussed exhaustively in Chapter 5 section 5.3 titled "The emergence of post award regulation".

4.5.1 Consumerism as precursor for introducing a transport economic regulatory authority

To begin with, Springer (1970:1) states that as society grows increasingly complex, and the technique of business becomes increasingly sophisticated, it becomes obvious that the consumer as an individual lacks the resources to participate effectively in the buyer-seller relationship on anything approaching a basis of equality. Hence it is not surprising that consumers in the United States of America have organised themselves into groups and are plainly saying it is time to redress the balance or resort to consumerism.

In addition, Bloom and Smith (1986:3) are of the opinion that consumerism has become an element of our social fabric and is engrained in our national consciousness. Seen in this light, it could undoubtedly be said that the balance of efforts to improve the wellbeing of consumers would change as the future unfolds, as would other conditions in our society that influence the way we think and live. Such change would in turn help to shape future social conditions in which consumerism would gain ascendancy until achieving a position of preponderance. In South Africa, consumerism has found expression in such bodies as the Road Freight Association, which constitutes a major force in opposition of the construction of the toll roads in the country.

It is interesting to discover that the Institute for Global Dialogue (2002:38) brings to our attention bodies such as the National Consumer Forum, which had been formed to represent consumers and to comment on issues that impact negatively on such consumers. The forum not only emphasises the need for consumer awareness in South Africa but it also highlights the positive impact an organised consumer movement can have on an organisation as shown by the experience gained in the pharmaceutical industry.

To forestall the advent of a strong consumerism movement in the South African transport industry, a pro-active stance is needed to deal with the delicate issues that pivot around the irrational way in which toll roads are being provided

around the country without giving the public alternative options. The issue of providing toll roads has rapidly become an all-important point and it is currently very topical in that it has become a hot potato politically, economically, commercially and strategically. Should the present trend hold, consumerism in South Africa would in future undoubtedly become the driving force for the establishment of a transport economic regulatory authority with its main function being to protect the needs and interests of road users, operators and the public sector at large.

For South Africa to begin to make a positive move in the direction of finding a lasting solution, it would be advisable to encourage the existing concessionaires to establish a forum consisting of all affected stakeholders in an attempt to provide a platform for regular communication, consultation, negotiation and the resolution of problems.

4.6 ROAD USERS' RIGHTS, RESPONSIBILITIES AND POWER OF REDRESS

Wheelen and Hunger (2006:67) assert that "human beings have certain fundamental rights that should be respected in all decisions. A particular decision or behaviour should be avoided if it interferes with the rights of others". The rights of the road users have been deliberately violated by road authorities, as they took the view that most road users are not aware of their rights. Unfortunately, this view seems to be true in that most road users appear not to be aware of their rights. Eckert (1974:34) however is of the opinion that "road users are supposed to know both their rights and what to do when these rights are being violated".

History tells us that President J F Kennedy was the first to proclaim consumer rights formally. These rights, laid down in 1962, included:

- the right to make meaningful choices;
- the right to be heard;

- the right to safety; and
- the right to be informed.

Here too it is important to state that most of the support came in the form of consumer rights legislation as a consequence of the changed conditions and circumstances and the new ways of thinking that characterised the technological generation. South Africa still needs to witness more of this trend because the characteristics of the South African road infrastructure network have become so complex that they now possess a high degree of potential influence on the road users' behaviour to the extent that any form of rebellion to challenge the traditional protective practices is a possibility these days. In view of this, the basic rights, responsibilities, and methods of redress need to be revisited by all stakeholders in the road industry.

Fortunately, the Gauteng provincial government has proactively seen it fit to allocate R11,8 million for the education of consumers with respect to their rights. While it is appreciated that Gauteng Province has taken the lead by initiating an effective and appropriate educative consumer programme, it should be evaluated as whether a transport economic regulatory authority should take consumer matters provincially or on a national scale.

4.6.1 The road users' freedom of choice as enshrined in the Constitution

The concept of freedom of choice presupposes that when a road user makes a decision to make use of a road, he or she is buying a service. Accordingly, Wish, Steely and Tritten (1978:8) argue that "buying a product or service involves getting something you need and also making some sacrifices to get these features". However, the current position is that the Toll Road Concession companies now provide road transport infrastructure to road users on a monopolistic basis, leading to a lack of competitiveness. This move is counter-productive in that it brings back the old monopolistic tendencies that the introduction of the policy of competition intended to eradicate.

Viewed from a different angle, it could be argued without fear of contradiction that an optimised use of the existing road infrastructure would make the building of new infrastructure acceptable for the public and interesting for private funding. This would have the effect of promoting the right of freedom of choice for road users. No doubt the construction of new roads by the private sector would unburden governments by providing resources required for the development of a transport infrastructure. Government in this respect should play a key role in ensuring that there are fair terms of access to and use of the infrastructure, and it should also set up safety measures and acceptable environmental standards (Van Miert and Eekhof, 2004:129).

Fingleton et al. (1995:12) furthermore point out that

..."competition is required as it is expected to facilitate consumer choice. Consumers should be able to exercise choice, not merely because this will enable them to obtain the services they prefer but also because they no longer wish to be told how to live".

Allowing inadequate competition would therefore threaten the ability of citizens to exercise their autonomy as represented by their right of choice. No doubt that this step would also threaten consumers' standard of living directly and in many ways. Consequently, the need to absolve certain groups of toll road users from paying toll fees because of their poverty no doubt would be contrary to the principles on which toll roads are based.

To avoid any potential contradictions, it was generally required in the past that road authorities should provide and maintain an alternative route, albeit to a lower standard. Subsequent amendment to the legislation has however removed this requirement and we now encounter cases in which road users between certain origins and destinations have no choice but to use a toll road and to pay the additional fee for a superior level of service they do not require (Road Infrastructure Strategic Framework for South Africa, 2002a:99).

Another contentious issue is that of an existing road being declared a toll

road. This adversely affects long-standing users who now have to pay an additional fee for the use of the same facility. These road users are now left without their right of freedom of choice as regards road use. From whatever angle we look at this, it would be logical to arrive at the conclusion that such a move would constitute the main cause of public resentment as users are denied their freedom to use the road the way they were used to, as it was initially available without toll fees. A case can thus be made for exemption from toll fees for users who, not by choice of desiring a superior level of service, are forced to use a toll road where no alternative exists, and especially where such people have been using an existing non-toll road previously.

Lastly, it is typical for road users to locate their places of residence in relation to their work and other destinations on the basis of there being no toll. The case becomes so much stronger when road users are poor, or where road users' places of residence were dictated by previous apartheid policies that forced them to commute for long distances to their places of work (Road Infrastructure Strategic Framework for South Africa, 2002:99). Be it as it may, we have in South Africa a special case from which a lesson can be drawn, namely that of low-income road users who have made representations regarding their transport problems and were fortunate to receive a sympathetic hearing. This resulted in changes during the design stage of the Grasmere plaza in Gauteng to provide an alternative route for Orange Farm commuters.

4.6.1.1 User choice and sovereignty

If the user has the freedom to decide what to buy, then there is a certain level of user choice. Fingleton et al. (1995:12) aver by saying, "as long as the user is presented with a variety of options then, there is a degree of choice". On the other hand, user sovereignty implies that users are the ones to determine what those options are and this is defined by Common and Stagl (2005:324) as "an idea that individuals should get in terms of what they want and that the proper measure of economic performance is the preference of individuals as expressed in their willingness to pay".

Ideally, this should mean that in the toll roads industry, road users ought to be presented with a range of route options. No one should force road users to make use of toll roads. Using a toll road should be of an individual's own choice and on account of his / her willingness to pay. If road users are required to make use of a toll road due to lack of alternative road, then there is no option and they are therefore denied a certain level of choice and sovereignty. It is therefore imperative that there should be an alternative road that would allow road users to make a rational decision and choice.

Artis and Miller (1981:82) are of the opinion that “even if user choice exists, there are a number of things that individuals are forced by law to buy”. For example, in Gauteng, if an individual owns a taxi, such an individual would be obliged by law to purchase a public and passenger liability insurance. The individual has therefore no choice when it comes to purchasing the liability insurance. It may also be said that individuals in such circumstances could exercise their right to choose not to own a taxi if they construe a passenger liability insurance as a burden.

The establishment of an economic regulatory authority could serve as a possible solution to deal with aspects related to user choices and sovereignty. The regulatory authority would therefore exercise its powers as an independent body ensuring that the needs of users, operator and public sectors are addressed.

4.6.2 The right to be heard as enshrined in the Constitution

The right to be heard simply means that citizens should be afforded the opportunity to complain if they are not satisfied with the quality of the toll road service they get. In support, Lawther (2000:173) argues that “customers, who wish to complain, compliment, or comment should be given a form to fill at each toll booth”. There should be a register where road users could register their complaints on site. To make this possible, the Environmental Management Plan (2003:13) states that “the register shall contain all contact details of the person

who made the complaint and information regarding the complaint itself”.

The complaints register must be kept in accordance with the record-keeping and documentation control requirements as set out in the Environmental Management Plan. The concessionaire has to ensure that all complaints received are reported to the Environmental Monitoring Committee and should respond to all complaints received from any third party in a prompt, courteous and efficient manner. In addition, there should also be a toll-free telephone number for those who wish to respond vocally. The concessionaire’s Director of Quality Management should respond to each written complaint or call (Gautrain Technical Report, 2005).

To strive for even better results, it is advisable to establish an ombudsman’s office as a way of maintaining communication between government, the public and the concessionaire. Referring to the office of the ombudsman, Steele (1997:136) points out that “the office’s staffing and resource levels are small, but its role in relation to the provision of information is huge”. The ombudsman’s role is important because his/her office disseminates information related to the performance of state agencies and distributes information pertaining to the functions of departments and the way departments account for their actions. Lastly, the ombudsman’s office is expected to play the role of enabling citizens to seek redress for their complaints.

In Ireland, the office of the ombudsman has been successfully implemented. Unfortunately, the South African situation is different and can be best served by a transport economic regulatory authority. Hence, the current study assesses the feasibility of having a transport economic regulatory authority as an intervention to bring about solutions to problems affecting good communication between government, the public and the concessionaire.

4.6.3 The right to be informed as enshrined in the Constitution

In their research studies, Jelly and Herrmann (1973:7) came to the conclusion that “consumers have a need for information and knowledge”. Furthermore, these authors stress the view that learning to be a wise consumer was not only important but also essential in enabling an individual to discharge his or her duties as a citizen. Consumers are, according to Steele (1997:7), “users of public services and regulations, they therefore need information to exercise choice and control over their personal situations”.

Jelly and Herrmann (1973:15) advocate the view that “there should be additional information concerning the use and care of products at the disposal of the public or road users so that they can be in a position to make informed decisions and/or choices”. On this basis, it is reasonable to expect toll concession companies to provide a strategy that would ensure that every piece of information about the route is disseminated at each toll plaza. This could be achieved by amongst others the provision of brochures that inform road users about the entire route. Such a step could also assist in the realisation of the currently proposed Intelligent Transportation System (ITS), which is aimed at keeping the road user informed about the road network.

In a nutshell, road users need route information in order to meet their social and convenience needs. Concession companies should be made to provide information to market their range of services en route if they intend to stay in business. This marketing strategy is supported by Wish et al. (1978:38-39) who stress that “the seller must produce a usable product, distribute the product to potential consumers, price the product so that consumers will be able to buy it, and promote the product so that consumers will want to buy it”. With this in mind, the Gautrain project has established a policy that compels the concessionaire to be responsible for providing a website which shall keep the public informed of the development of the project. The website needs to include details of the organisational structure, roles and responsibilities (Environmental Management

Plan 2003:12).

In other words, the concessionaire is required to ensure that throughout the design and construction phase, a person is nominated whose duties include the responsibility for providing information about the project to the public. Such a person or persons should also liaise directly with each affected community on an ongoing basis. The concessionaire shall comply with all statutory requirements for public consultation, including those contained in the South African Constitution (Act 108 of 1996) and the National Environmental Management Act (Act 107 of 1998) (Gautrain Technical Report, 2005).

Finally, it is argued that; during the construction phase of the road infrastructure, the concessionaire should take the responsibility of erecting information boards, in the position, quantity, design and dimensions specified by the Independent Environmental Control Person (IECP). The information board shall contain background information for the construction activity and the relevant contact details to assist anyone who wish to submit complaints. If an economic regulatory authority is established in South Africa, it could probably deal with the regulation of information between the concessionaire, the public and government.

4.6.4 The right to safety as enshrined in the Constitution

The concept of safety is fundamental to the survival of living organisms as we know them. Thus, if the right to safety is to be given undivided attention, then an office of the Independent Environmental Control authority needs to be established to deal with issues of safety. In addition, an independent person needs to be appointed with the authority to impose spot fines on the concessionaire for failure to comply with environmental specifications contained in the Environmental Management Plan. Among the transgressions to be monitored by the Independent Environmental Control Authority is littering on site, vehicles driven in excess of designated speed limits and excess dust or excess noise or vibration emanating from the site, etc (Environmental Management Plan, 2003:13).

Seeing that South African roads are notorious for the dangers posed to drivers and pedestrians alike, particularly as a result of inadequate technical specifications (such as being too narrow) and deterioration (such as potholes), the Independent Environmental Control Authority would have to play a major role in ensuring that road safety is given thorough attention during the construction phase of a concessioned road infrastructure. South African roads are ranked number 23 internationally with regard to the prevalence of vehicle accidents accompanied by injury, and number 21 with regard to the number of deaths on roads. It stands to reason that any significant improvement in the quality of roads would be accompanied by a lower prevalence of accidents, injuries and fatalities (Botha, 2005:5).

By the look of things, it is evident that environmental regulation is an area that has not been given enough attention in the developing countries. In their research, Basanes et al. (1999:80) found that most countries are just beginning to allocate responsibilities for environmental aspects to specific institutions. It is time for South Africa to establish appropriate regulatory authorities in order to deal with aspects of safety, environmental aspects and economics in nature with diligence. It is worth noting that the responsibilities of the current Rail Safety Regulator are extended to regulate other modes of transport or be brought under one roof with other safety regulatory authorities.

4.6.5 The need to have rights included in concession contracts

Basanes et al. (1999:21) point out that it is of major importance in Public-Private-Partnership contracts that there should be a balance between the two parties in the contractual agreement, including a balanced resolution of disputes or disagreements over the performance of the contract and its interpretation. The two contracting parties should have the same rights and status before the law and the courts. By contrast, in a concession agreement, the government as signatory party should reserve for itself certain powers to which the private party

is not entitled.

It has to be emphasised that government plays an active role in planning, coordinating and monitoring the construction of infrastructure. This active role is also extended to the cost-recovery stages, since investment recovery is usually highly dependent on the level of traffic and congestion. A combination of diverse fiscal resources is necessary to finance the costly infrastructure. Basanes et al. (1999:2) further caution that government's use of unilateral powers in contractual agreements could become a major source of instability and risk thereby compromising sustainable Public-Private Partnership and increasing the cost of private involvement.

4.7 THE PRINCIPLES ON WHICH TOLL ROADS ARE TO BE OPERATED

The Road Infrastructure Strategic Framework for South Africa (2002a:99) states that the principle on which toll roads are based is that of

... "providing a road with a superior level of service for users who are willing to pay more for that service. From a user point of view, the normal road user charges are argued as being for the use of non-toll primary and secondary roads, and the additional toll fees as being for the additional level of service provided by the toll road".

The toll road authority is justified, both by legislation and by business principles, in charging full fees to all users of the toll road, since the superior level of service the authority provides is identical for all users. Any decision to alleviate the cost burden for certain user groups is one based on social equity, and is the responsibility of government, not that of the toll road authority. In the case of the state toll roads operated by SANRAL, such a decision can be made by the Minister of Transport as the shareholder of SANRAL acting through the SANRAL Board. In the case of toll roads operated by concessionaires in terms of a PPP agreement, such alleviation would have to be negotiated between the Minister, SANRAL and the concessionaire. In both instances, the toll road authority might be justified in seeking compensation from government for the loss of

income resulting from the reduced fees. Alternatively, it might decide to absorb some of the loss of income under its social responsibility programme (Road Infrastructure Strategic Framework for South Africa, 2002a:100).

4.7.1 The need to review policy on construction and operation of toll roads

According to the Road Infrastructure Strategic Framework for South Africa (2002a:100), a detailed examination should be made of which types of low-income users should be eligible for reductions or exemptions when using the existing toll system. For that matter, principles should be established for negotiating similar arrangements in future when toll facilities are to be provided.

The following are mere suggestions of how the above problems could be resolved in future. These suggestions include various possible means of how to make provision for users whom the government decides should not pay the full toll fee.

- Provision of a viable alternative non-toll route;
- use of the toll route at a reduced fee or no fee at all by providing dedicated on and off ramps to a particular community, for the use of that community only;
- use of the toll route at a reduced fee or no fee at all by identifying users qualifying for such use by means of an identification card, or by means of advanced technology such as a smart card or transponder fitted to the vehicle; and
- use of the toll route at a reduced fee or no fee at all by public transport vehicles conveying passengers whom government decides should not be subject to toll fees by means of advanced technology such as a smart card or transponder fitted to the vehicle.

If such special provisions are made, precautions should be required to ensure that abuse by other non-intended users is prevented at all costs. It is suggested

that an independent review panel be established whose mandate should be to examine the existing relationship between the toll fees, the risk factors and ultimately the structure of the concession agreements so as to formulate appropriate principles and guidelines for the control of future proposals as well as formalising the present precarious position of the country's toll roads.

4.8 REGULATION AS A MEANS OF PROMOTING COMPETITION

Van Miert and Eekhof (2004:144) are of the opinion that "road transport policies should focus on the safety of the users and on specific environmental effects as emanating from such factors, such as the performance of vehicles, excise duties and taxation matters". In other words, there should be effective pricing instruments in place that are able to prevent excessive congestion, accident rates and pollution if the use of toll roads is to attain any acceptable degree of success. Pricing policies therefore should be used as tools to control the negative side effects of transport by-products or off-shots. The research by Van Miert and Eekhof (2004) on the state of current pricing strategies conducted in the European Union, suggests that these strategies are unable to make it possible for victims to recoup the external costs of transport. This means that these external costs are not fully included in the price of transport.

Van Miert and Eekhof (2004:145) further highlighted fundamental flaws that result from the non-allocation of costs. The first flaw is that government sometimes accepts inefficiency to gain other benefits such as the stimulation of employment. The second flaw relates to the application of different policies of member states for charging the use of infrastructure in the form of different taxes. These flaws give rise to distortion of price signals in the market and so distort the industry's transport choices. In their concluding remarks, Van Miert and Eekhof (2004) further accept the difficulties involved in measuring and allocating the external costs caused by transport to the user. They advise that failure to acknowledge such costs might result in excessive use of certain goods or

services.

4.8.1 The role of a regulatory authority in the transport industry

According to the Budget Review (2006), the Department of Transport aims to increase investment in transport infrastructure, both through public investment in road and rail infrastructure and through Public-Private Partnerships. There is therefore a critical need to have regulation in place that will encourage sustained private investment in infrastructure. This would help to serve more than the interests of investors. It would also promote competition and would increase access to basic services. Regulations are expected to be clear and credible, ensuring investors that regulators are committed to fair, consistent, and sustainable policies and procedures (Kessides, 2004:101).

Kessides (2004:101) further says that infrastructural industries are essential for the development of both the public sector and the economy in general. Thus, care should be exercised in that, when the price of the infrastructural services is based on costs, the price may end up eating a large portion of household budgets. This implies that some measure of protection should be put into place to avoid this from happening. In another important vein, Bailey (1987:5) contends that an economic regulator could serve as an appropriate intervention for dealing with externalities such as the control of pollution.

In this context, therefore, the Department of Transport's decision to establish a transport economic regulatory authority to ensure that prices imposed on users are regulated, should be commended. Otherwise, there is no doubt that the price changes could have a considerable impact on the level and distribution of real income if not checked in time.

4.8.2 Creating regulation through administrative procedures

In some countries, utility regulation is based on well-defined administrative procedures. These procedures determine how regulatory agencies make substantive decisions and define mechanisms for executing such decisions by

way of specifying the institutional environment for decision-making. O'Malley (1998:29) argues that "where full competition was not possible from the outset, regulators have a duty to encourage the development of competition in their industry".

The reason that regulators need to be established stems from the need to eradicate the abuse of power by the existing monopolies who fail to meet deadlines and also rigidly enforce rules even when the results are irrational, or even fail to respond to requests to relax rules in such circumstances. The need to establish regulators is further underscored by the fact that controversies are inevitable even under the most enlightened circumstances. Moreover, it is difficult to determine the merits of any complaint especially when conflicting problems are strongly asserted by opposing parties (Kessides, 2004:104).

To deal amicably with the above situation, then, the services of an independent consultant to conduct management audits of current regulatory agencies and to examine the claims of excessive rigidity is a sine qua non. Another suggestion is to create an ombudsperson for each regulatory agency or for all regulatory agencies. Ombudspersons could combine the objectivity needed for prompt accountability and impartiality (Kessides, 2004:104).

4.8.3 Generating regulation through concession contracts

Generally speaking, not all regulation is legislated, but it often happens that common sense and precedent also give rise to regulation as well. Indirectly, Delmon (2005:109) points out that in certain circumstances "the regulatory structures intended to monitor and manage certain sectors or utilities may provide a particularly salient example of an administrative function that would be key to the viability of a project". It is precisely on the basis of this contention that a transport economic regulatory authority be established with significant power and authority over the concessionaire's operation.

The Department of Transport's standpoint should be that of developing a regulatory system and should give it the capacity to ensure that operators in the

transport sector meet the required safety and security standards (Budget Review 2005/2006). We should be mindful of the fact that a concession contract grants a private company, typically through competitive bidding, the exclusive right to provide a service for a specified period by using existing facilities and developing new ones. In other words, a concession agreement only transfers assets to the private sector on a temporary basis. Thus, at the end of the concession period, the assets are transferred back to the public authority. In a way, continuing government ownership of infrastructure assets could be perceived as providing some assurance that social obligations would be met and that, if the service is inadequate, government would intervene (Kessides, 2004:105).

Regulation of concession agreement is complex because governments often retain for themselves contradictory functions that can create conflicts of interest or even exacerbate the regulatory risk involved in the implementation of the concession agreement (Basanes et al., 1999:26-27). A concession contract typically defines the concessionaire's obligations in terms of service coverage and performance standards, rights, incentives and risks, including pricing arrangements.

By establishing an explicit contractual relationship, concessions limit government's discretionary powers and can reduce the risk of political expropriation. Contracts that contain certain guidelines say for revising tariffs and settling disputes can help minimise regulatory discretion and opportunism. Moreover, concessions granted through competitive bidding contribute to allocative and productive efficiency by resulting in average cost pricing and the selection of the most efficient firm. In addition, periodic re-bidding of concessions creates competition for the market, potentially solving the problem of natural monopoly (Kessides, 2004:105).

4.8.4 Adopting regulation through substantive economic restraints

Government discretion can be limited by having regulatory authorities publicly articulate the basic economic principles that guide their policy decisions. Before

private investments are made, regulatory authorities should commit to the transparent application of these principles to reach decisions and resolve disputes (Kessides, 2004:108).

To enhance government credibility, these principles should be embedded in concession contracts. Alternatively, they could be contained in an overarching statute and so have the force of law. They would not, however, rigidly micromanage the terms of Public-Private Partnership. Instead these principles would allow space for regulation to adapt to changing market conditions and require regulators to:

- refrain from unilaterally imposing policy or rule changes that undercut promised investment value;
- refrain from intervening in activities of regulated firms that relate to competitive markets, or at least markets not identified as protected natural monopolies;
- avoid expanding regulatory interventions without demonstrating that the benefits outweigh the costs;
- ensure competitive service quality and prices by avoiding Public-Private Partnership deals that result in higher prices than necessary, allowing consumers to challenge deals that result in higher prices in return for higher government revenue, using price cap mechanisms to control regulated monopoly prices, and allowing consumers to seek rate adjustments if service quality falls far short of that promised in a Public-Private Partnership agreement;
- provide consumers, suppliers of complementary and substitute services, suppliers of inputs, and investors with signals and incentives for efficient actions by ensuring that prices reflect the value and marginal costs of services and by giving providers pricing flexibility; and require infrastructure monopolists to give rivals open access to their bottleneck facilities at prices

with the same mark-ups as the competing services sold by these monopolists (Kessides, 2004:108-109).

4.8.5 Getting the economics right through transport economic regulation

In order to protect the interests of customers, all forms of private sector participation require some measure of economic regulation and O'Malley (1998:15) avers by pointing out that "regulation protects the consumer for as long as the utility company retains a near monopoly in the provision of services". In addition, Basanes et al. (1999:180) are also of the opinion that "economic regulation may be carried out either by establishing a regulatory body with specific responsibility for the activity or through the specific terms of the contract itself". In other words, an economic regulatory authority of some kind is needed to see to the smooth running of affairs, and this is presently not the case.

In support, Kessides (2004:110) is of the opinion that "effective regulation requires more than just building institutions and ensuring regulatory independence". Therefore, to create an attractive investment environment, policymakers are challenged in addition to create institutions whose key function would be to regulate both procedural and substantive issues involved in the transport industry. On the other hand, care should be taken because even the pricing policy might make it impossible to attract private investment if not well managed. Similarly, regulation that forbids flexible prices or which imposes social service obligations on only some competitors could hinder the promotion of efficient investment even if institutional mechanisms provide a credible commitment to stable policies.

Furthermore it is worth noting that to achieve success revenues have to be adequate if they are to enable a firm to maintain, replace, modernise, and expand facilities and services. On the contrary, "if revenues are lower, services would deteriorate and utilities would have a harder time obtaining new capital because the market for funds simply offers no room to those who cannot face

competition from others seeking capital” (Kessides, 2004:111). For prices to make sense economically, they have to be compatible with the prevailing level of earnings.

However, it is again important to note that no prices can guarantee that regulated utilities would earn adequate returns overall. In other words, if demand for utility services is insufficient, their operations are conducted wastefully, or their services are poor, even appropriate prices cannot be expected to lead to profitable operations.

On the contrary, once utilities are permitted to charge appropriate prices in a competitive environment this would lead to regulatory impediments to the elimination of financial viability. It is then up to the utilities to take advantage of this opportunity through efficient operations, high-quality services and effective marketing (Kessides, 2004:112). According to Santos (2004:17), “road pricing has become important as it contributes towards travel time saving. Time has become a significant cost component of any trip and its value is therefore of fundamental importance”.

4.9 SUMMARY

This chapter focused on the introduction of competition in the provision of infrastructure. It gave a historical background of transport infrastructure in South Africa and strived to examine this traditional practice and made suggestions for managing the contemporary infrastructure with efficiency and effectiveness in mind. In this turbulent business environment, transport infrastructure requires the intervention of a transport economic regulatory authority, as happens in countries such as Australia and the United Kingdom, to name but a few.

The main emphasis in this chapter was road users’ rights as contained in the South African Constitution and other literary sources related to consumerism. The chapter further explored various regulatory regimes and examined the extent to which the operation of toll roads in South Africa could be made to respect the

fundamental consumer rights of road users in terms of the toll roads industry. The chapter went further to caution that in an attempt to establish a transport economic regulatory authority there would of necessity be a myriad of obstacles that would have to be overcome before everything can operate smoothly in the transportation sector.

Central to the discussion of this chapter was the concept of competition policy, which focused particularly on its application in the transport infrastructure. Competition for the market is defined in this context as competition amongst bidders and is intended to reduce the ultimate price to be paid for the procurement of services. Competition in the market however refers to the case where a bidder has been awarded a tender and would now provide the service with a sustainable competitive advantage in mind.

Attention was also focused on toll roads as products of a new transport dispensation and that such roads are not supposed to be operated as monopolies. The chapter further highlighted the fact that if the users have no option in the form of a substitute or alternative route, then a monopolistic situation exists. A toll road is justified to be called a monopoly when there is no alternative route available for road users, which would therefore require regulatory interventions to control the pricing power of toll roads. Hence, a need for the introduction of a transport economic regulatory authority was emphasised throughout this chapter.

The pre-requisites for competition in the transport industry received attention and the chapter pointed out that, in order for competition to work more efficiently, it would need a positive and conducive commercial atmospheric culture coupled with an appropriate policy framework instituted by government. It is worth mentioning that the competition commission has been given significant powers of legislation, which it may use to create a series of exemptions that would ensure that the consumers benefit maximally from business dealings involving the transport industry. The commission is also given strong investigative powers, which allow it to investigate businesses to assess their compliance

with competition law. The commission is further given the power to impose large fines for infringement of the competition law. In some cases where a business becomes too powerful, the commission could even order the divestment of assets.

The principles on which toll roads are to be operated received attention, and in principle, the toll road industry is supposed to provide a road with a superior level of service for users who are willing to pay more for that service. There is therefore a need to review policy on the construction and operation of toll roads. The rationale is to determine the whole question of road users' ability and willingness to pay.

In terms of the role of a transport economic regulatory authority in the transport industry, the Department of Transport's decision to establish a transport economic regulatory authority to ensure that prices imposed on users are regulated, should be commended. The reason for regulators to be established stems from the need to eradicate the abuse of power by the existing monopolies who fail to meet deadlines and who rigidly enforce rules even when the results are irrational or fail to respond to requests to relax rules in such circumstances.

CHAPTER 5

TRANSPORT ECONOMIC REGULATORY REGIMES

IN THE TRANSPORT INDUSTRY

5.1 INTRODUCTION

The present chapter investigates the different types of transport economic regulatory regimes that are in use in other countries. The aim is to determine which regulatory framework or approach, after the necessary modification, would best suit the management and regulation of the transport industry in South Africa. In examining the different regimes, the purpose is to afford the researcher an opportunity to compare and contrast the structure, function, aim and purpose of the various transport economic regulatory regimes that are available and to enable him to assess the one that would be suitable for the South African situation. To begin with, the words of Delmon (2005:128) who states that “in the transport industry the process is often regulated by local law and may be influenced by the rules set out by multilateral organisations are of direct significance”.

It is important to state from the onset that, according to Delmon (2005:128), the after-award phase is “a phase that involves the preparation of the project before financial closure¹ and includes negotiation of various project documents as well as obtaining debt and equity funding”. However, when taking into consideration the complex nature and the lengthy period of negotiations that take place when the awarding of the Build Operate Transfer project is determined in the transport

¹ The point at which the documentation has been executed and conditions precedent have been satisfied or waived (Delmon, 2005:470).

infrastructure industry, it becomes quite clear that the risk borne during this phase could be considerable.

Thus, in order to render the after-award phase of competition workable and realisable, there should be an appropriate framework with a sound fundamental structure in place. Otherwise, the harm that would attract the public interest if the road networks were turned into monopolies without the essential regulatory interventions would be too ghastly even to contemplate. For example, if not monitored, toll fees of concessionaires would be charged beyond the affordability level of road users. This is not acceptable and should not be encouraged. Common knowledge has furthermore taught that bidders for candidate concessionaires often request some form of legal protection from competition and such a step easily leads to the undesirable situation where monopolies re-emerge. However, to forestall the development of such circumstances protection should only be allowed where such protection supports investments that are advantageous to the consumers.

5.1.1 Micro-economic theory of regulation

Baumol and Blinder (2006:10) define a theory as “a deliberate simplification of relationships used to explain how those relationships work”. When the concept of regulation of industry is explained theoretically, it is then seen as a process established by law that restricts or controls some specified decisions made by the affected firms and it is designed to protect the public from exploitation by firms with monopoly power. It can therefore be said that the establishment of a transport economic regulatory authority is theoretically valid as it would be designed to protect the transport infrastructure users from exploitation by concession companies.

5.1.2 The role to be played by the regulatory authority

For all practical purposes, the main instrument of a regulatory authority is the concession contract signed between public and private sector or concessionaire. The tough question now is to decide how much discretion to give to the economic regulatory authorities. The larger the degree of discretion desired, the less

detailed the contract will have to be, as the regulatory decisions will be based on laws or decrees that have to be interpreted by the regulators. The smaller the degree of discretion desired, the more detailed the contract will have to be, thus increasing the relative importance of contracts in the design of the regulatory environment.

For concession performance, an economic regulator must be concerned with among other things, the technical quality of the road which will be discussed below:

The technical quality of roads

Estache and De Rus (2000:285) advise that

...”one needs to consider road quality issues at the outset of concession design and technical specification. Technical matters such as pavement materials, thickness, and construction techniques must be specified from the beginning, because these aspects will help determine the facility’s performance and future maintenance and investment needs. An inventory of the initial state of assets is a minimum requirement for effective economic regulation”.

Based on Estache and De Rus’s advice, it can be seen that the role of a transport economic regulator commences from the time when technical specifications are designed and progresses during the award of a tender and becomes more crucial during the operation phase of the concessionaire. Figure 5.1 on page 210 gives a broad illustration of what a transport economic regulator is expected to do particularly with regard to a road transport infrastructure Public-Private Partnership project.

5.1.3 Institutional arrangements

In practice, when regulatory authorities are being introduced, they may face two risks. The first risk is having the regulators controlled by the concession companies and become lenient in the case of conflict. The second risk is that of having the regulator controlled by the users of the transport infrastructure and imposing demands not covered by the contract. What needs to be emphasized here is to have a regulatory authority with competent personnel who should act independently and impartial when dealing with both concessionaires and users of the transport infrastructure.

The dilemma faced by the United Kingdom when it established its rail economic regulator as it was an additional agency to work hand in hand with the safety regulator. At this stage the United Kingdom is in the process of merging these two agencies as a way of easing the coordination of regulatory decisions. In the United States of America, regulatory agencies are much more independent from policy-makers and cover all sectors and have their own sources of funding. They also rely on this funding to sub-contract activities for which skills are required that they do not have in-house. In trying to endure good coordination between the competing agency and the transport regulator, one of the members of the Transport Regulation Board is also a member of the Competition Commission.

5.2 CONCEPTUAL FRAMEWORK OF PUBLIC-PRIVATE PARTNERSHIPS

Hodge and Greve (2005:213) assert that the bidding process in a Public-Private Partnership project is a lengthy process that could take up to two years. After the bidders had been pre-qualified, the agency should prepare the bid evaluation criteria and the pre-qualified bidders should be asked to resubmit their bid after adjusting the bid and complying with the set criteria. The winning bidder should be announced at this stage and a project company or what is referred to as an *interim concession company* should be established. The purpose of establishing this company is to start entering into negotiations for developing a concession contract with the agency. This phase of the project is depicted in Figure 5.1 titled conceptual framework model of Public-Private Partnership.

According to Figure 5.1, other stakeholders need to be given attention in a BOT project. These stakeholders are the granting authority or agency, the interim concession company and the Department of Transport. The next step should be that of establishing a concession contractual arrangement, which is to be entered into between the Department of Transport and the concession company through the facilitation of the granting authority or agency.

The above arrangement is in line with the English law of contract as outlined by Stone (2005:157) who states that “there should be three parties involved in the contract and these are the Principal, Agency and Third party”. When this arrangement is adopted into the South African situation, then the role of the principal becomes assumed by the Department of Transport while that of the agency becomes assumed by the South African National Roads Agency Limited and the position of the third party becomes assumed by the interim concession company. This is what was obtained in England, and as indicated, this chapter examines the various transport economic regulatory regimes in different countries in order to ascertain which one could be adopted with some necessary modifications into the South African situation.

Consequently, after a project has been awarded, an interim concession company needs to be established in order to go into contractual agreements with critical stakeholders such as input suppliers, lenders, construction contractor, operator and the shareholders. Activities of this nature form part of the negotiations that end when financial closure is reached. Figure 5.1 outlines all the essential steps that are necessary for the proper negotiation of a contractual arrangement to take place in the transport industry in a country like England. This figure is presented here as an option to be considered for adoption with modifications or for comparison purposes.

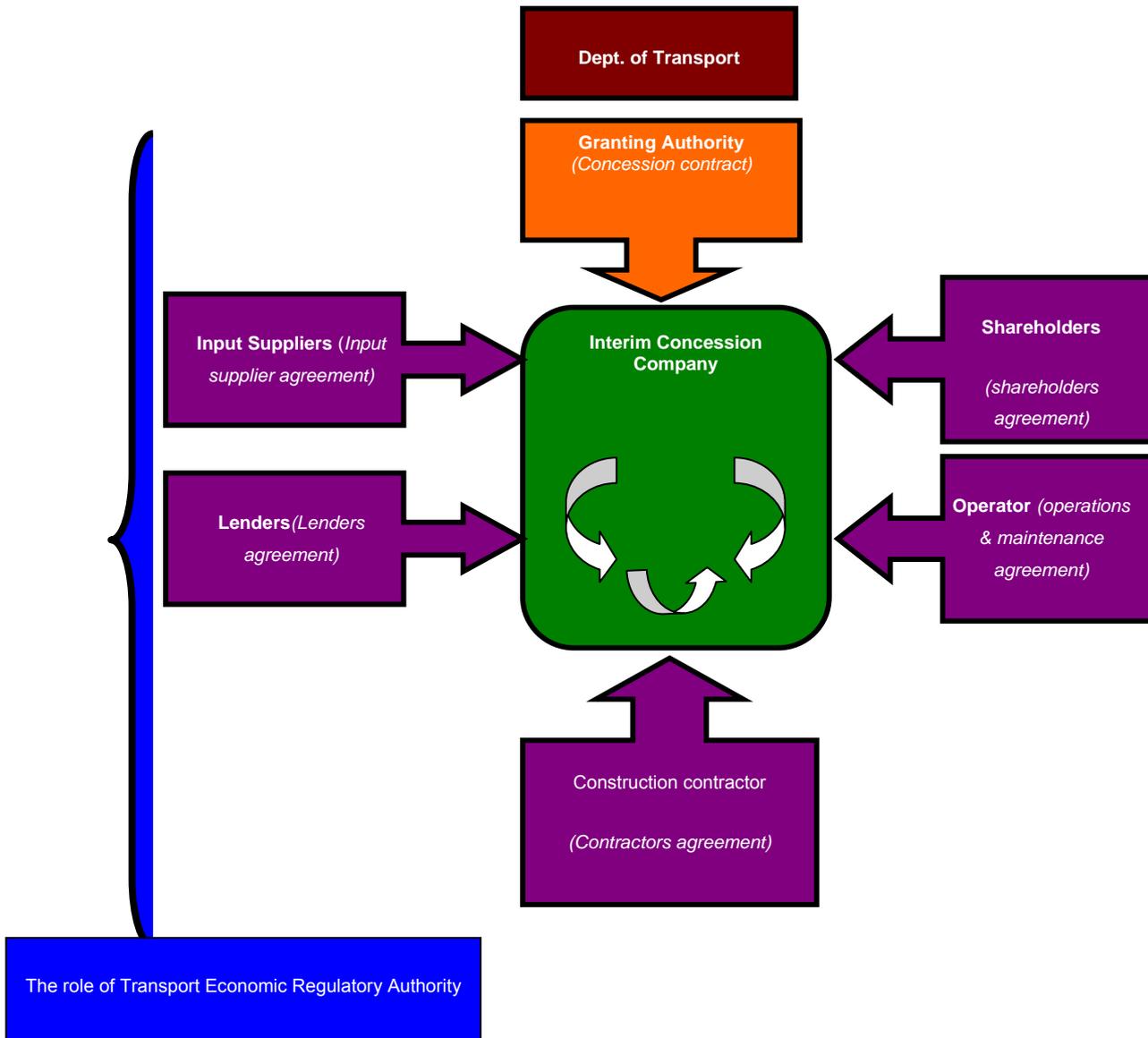


Figure5.1: Conceptual framework model of Public-Private Partnerships

5.2.1 Concession company

Yescombe (2007:108) views the position of a concession company as that of the centre of all the contractual and financial relationships in a Public-Private Partnership project. During its formation process, Delmon (2005:72), advises that “the sponsors will identify a project and put together a bid in an effort to be awarded the project. Once awarded or selected as a preferred bidder, an interim

concession company, which is referred to as Special Purpose Vehicle² (SPV) is normally created". Yescombe (2007:109) stresses that an SPV cannot carry out any other business that is not part of the project. The formed SPV must then satisfy the agency regarding its ability to comply with the requirements as specified by the principal. This step is necessary because it ensures that there will be a constant supply of (input) resources to execute the project. To complete the deal, an "input supplier contract" should be drafted. To this end, Hodge and Greve (2005:72) are of the opinion that "the private sector special purpose vehicle may be required to give security to various parties, including to the lenders". In support, Delmon (2005:179) states that "lenders often want the right to step-in³ to be included in a concession agreement so as to be able to continue with operation in the event of a concession company breaching the concession agreement".

Furthermore, Delmon (2005:72) is of the opinion that "the use of a Special Purpose Vehicle is meant to enable the sponsors to finance the project". An interim concession company would generally be required to include shareholder companies that specialise in several of the tasks, which need to be performed under the concession agreement. The agency may require that an interim concession company invite the local investors in order to improve transfer of technology, and provide jobs and training to local personnel.

² An entity created to undertake a project in order to protect the shareholders with limited liability or non-recourse financing (Delmon, 2005:503).

³ The right of a third party to step into the place of one contractual party where that party fails in its obligations under the contract and the other party to the contract has the right to terminate the contract.

5.2.2 Input supplier

Delmon (2005:74) asserts that “the input supplier assumes the supply risk for an input necessary for operation of the project”. The input supply protects the concession company from possible failure in complying with the requirement that it provides resources. The input supplier may also be required to provide infrastructure that is needed to permit the delivery of inputs like cement. The ideal thing to do would be to draft an input supplier contract in order to facilitate the construction of a road project especially where the project that is undertaken requires the supply of such inputs of resources such as cement. With this in mind, the input supplier contract would be ideal for the Gautrain project, as this project will need a constant supply of cement throughout its construction phase, which commenced on 28 September 2006.

5.2.3 Lenders

Delmon (2005:66) points out that the lender group varies from project to project and may include a combination of private sector commercial lenders together with multilateral finance organisations. The lenders usually take on those risks that are measurable and may not engage themselves in the operation-related activities. Normally, the lenders solicit the assistance of an independent engineer to review projects and to give an informed opinion. Again, it is common for the lenders to enter into contractual agreements with project participants that could otherwise be done more efficiently and effectively by a transport economic regulatory authority. Hence, this study strives to assess the validity of introducing a transport economic regulatory authority that would facilitate the construction of contractual agreements in the transport industry.

5.2.4 Construction contractor

According to Delmon (2005:73), the construction contractor forms a link with the project company. The construction contractor would then enter into a construction contract with an interim concession company in order to undertake its obligation to the agency in the form of designing, building, testing and commissioning the project. Presently, this task is generally undertaken on a turnkey⁴ basis, which places completion and performance risk on the construction contractor. The construction contract would be, as far as possible, back to back⁵ with concession agreement, and therefore any construction risk placed on the project company by the concession agreement would, through the construction contract, flow through to the construction contractor. Generally, it also happens that the construction contractor subcontracts certain or all of its construction obligations to other entities in order to share risk and revenues, subject to any restriction imposed by the concession agreement or the construction contract.

5.2.5 Operator and maintenance

Delmon (2005:73) argues that the operator normally “operates and maintains the project from completion of construction until the end of the concession period”. This approach needs management of inputs as supplied and monitoring and testing of the project to ensure that proper operation and maintenance are carried out. In another vein, Delmon (2005:165) is of the opinion that the project shall have depreciated both in value and in operating capacity by the time it is transferred back to the agency. To minimise any damage on the project during the concession period the agency must ensure that the maintenance regime

⁴ The design and construction of a project to completion so that the project is ready to produce cash flow.

⁵ The effort to transfer all project risk to the project participants.

implemented by the project company during the concession period is given sufficient powers to regulate the nature of the work involved.

Another problem to be considered is that incentives, given to the interim concession company to invest funds in maintenance during the final phase of the concession period, may have diminished. This will imply that proper maintenance of programmes no longer result in greater revenue being realised by the project company owing to the imminent transfer of the project to the agency.

5.2.6 Shareholders and shareholders' agreement

Pallister (2003:465) sees a shareholder as an owner of shares in a company. On the other hand, Delmon (2005:501) outlines some of the practical challenges encountered in Public-Private-Partnership projects with respect to shareholding when saying,

... "in the shareholders agreement, an interim Concession company needs to indicate when to distribute revenues to its members. The shareholders will want to distribute revenues as early as possible, while the lenders on the other hand want to delay revenue sharing to ensure that the shareholders remain committed to the operation of the project and to retain control over amounts otherwise available for distribution".

Such a situation is untenable because it often creates financial challenges to small and medium enterprises as the withholding of revenue may affect their long-term performance.

Having said the above, Hodge and Greve (2005:71) come to the rescue by arguing that the obligation to finance the infrastructure is usually satisfied through various shareholders subscription arrangements, subordinated debts arrangements, and senior project financing arrangements. Delmon (2005:64) however states that the shareholders agreement governs the relationship

between the shareholders within an interim concession company. This may lead to the production of several documents such as a sponsor's agreement for the pre-financial closing phase of the project. A joint venture agreement and articles of association should be created for the concession company to run its affairs legally. The shareholder's agreement should cover topics such as the business of the concession company.

5.2.7 Concession agreement

Delmon (2005:165) regards the concession agreement as the backbone of a Build Operate Transfer project because under this agreement, the agency grants a concession to the concession company over which traditionally would be a public sector project for a given period. During that period, the concession company should build and operate the facility according to the terms of the concession as set out in the concession agreement. The concession agreement allows the agency as the "contracting authority", to allocate project risk to the concession company (Bovis 2005:42). According to this arrangement, the agency should then identify those risks, which it is prepared to bear and should subsequently allocate the remaining risks to the concession company. Another option could be that of the agency wishing to define to some extent the sharing of risk among the project participants through the concession agreement. It is therefore not uncommon to find the primary constituent documents defined and described in some detail in the concession agreement.

However, in certain cases, the agency may append drafts of the constituent documents to the concession agreement, to ensure that the terms the agency wants to include are properly set out and form part of the concession itself. When this happens, the sponsors usually resist strongly because such action interferes with the sponsors' commercial relationships with other project participants and increases development cost, particularly where the sponsors are required to negotiate these issues during the tender phase and before they have been selected as preferred bidder (Delmon, 2005:166).

It is important to note that an agency can issue a concession contract by means of a contract or authorisation. A concession issued by means of a contract involves the agency entering into a contract with the private sector project company. Such contract should contain the mutual project obligations. In the case of a concession issued by means of authorisation, the applicable legislation would normally prescribe the form of contract. In countries such as Greece, a concession contract is negotiated, which is then submitted to parliament and ratified as a law (Delmon, 2005:165-168).

5.2.8 Accommodating changes and flexibility

According to Hodge and Greve (2005:73), the social significance of PPP projects affects all contracting parties and their subsequent participation. Flexibility should therefore be made mandatory for projects that involve public assets and a risk-sharing relationship over a period of 25-30 years should be put into place in order to resolve problems, should they arise. In addition, a degree of flexibility needs to be clearly articulated within the terms of project contracts and should not be left to the discretion of each party. Should a need arise then, there should be a regime in place which would allow either party to propose a change.

However, there should be an understanding that any change should, before being introduced, be assessed with respect to its effects on the performance and costs of the project and the respective parties need to meet to discuss and agree on possible solutions.

5.3 THE EMERGENCE OF POST-AWARD REGULATION

According to Kessides (2004:80), the 1980s and 1990s saw a dramatic global reassessment of the state's role in dealing with infrastructure, particularly with respect to those industries that were mainly natural monopolies, such as national roads. When South Africa began restructuring its infrastructure mainly in the 1990s, it looked to the countries that had done so in the recent past, and in this regard, countries like Canada, New Zealand and the United Kingdom appeared

to be the best examples to follow. The abovementioned countries were selected after an extensive and intensive study of many countries' transport infrastructure.

To design an appropriate transport economic regulatory authority is not an easy task, for the challenge becomes clear when it is found that developing economies have few precedents to guide them when designing regulatory mechanisms that suit their countries' needs. Be it as it may, Kessides (2004:81) maintains that transport economic regulatory authorities should be independent of government or insulated from political control. In his opinion, this is a crucial condition if Public-Private Partnerships are to achieve their goals.

For a transport economic regulatory authority to do well in South Africa, it would therefore need the technical assistance of international agencies from countries like Canada, New Zealand and the United Kingdom, as already pointed out. The implication is that transport economic regulatory models from industrial countries should be carefully evaluated and be considered for application in South Africa after a thorough refinement and adaptation. These countries' technical assistance should therefore be sought.

With the above in mind, Button and Swann (1989:3) drew a distinction between internal transport economic regulation and external regulation by pointing out that self regulation involves the parties regulating themselves. External regulation on the other hand, arises when control is exercised by a body which is outside the regulated group. Interestingly, we find that a wide variety of bodies is actually involved in executing the function of external regulation. Sometimes government departments perform this function, but more often it is in the hands of agencies that enjoy some degree of independence from government. These bodies often operate under titles such as *commission*, for example, in the case of South Africa we have the Competition Commission.

In practice, the choice depends to a significant extent on the degree of uncertainty attached to the private sector operation over its lifetime and to the nature of the customer base, which the regulation is designed to protect. The

greater the degree of uncertainty over the future evolution of the private sector service targets, investment needs and operating environment, the greater the need to create a regulatory regime to adapt to changes that cannot adequately be anticipated at the outset (Basanes et al., 1999: 180).

According to Basanes et al. (1999:180), new investment would usually be an ongoing requirement in a concession agreement. Concessions often involve the transfer of existing assets, such as toll roads, to concessionaires and this has a tendency of giving rise to uncertainty over additional investment needs such as the establishment of truck stops and other related amenities within the road corridor. Under these circumstances, it would be difficult to write a contract that would anticipate all possible contingencies. It would be more appropriate to create a transport economic regulatory authority that could respond to new circumstances that surface from time to time.

5.4 NEED FOR TRANSPORT REGULATORY AUTHORITY

Having considered the various strategies that compete in the market place, there is a need to make a case for the introduction of a transport regulatory authority to regulate the behaviour of competing entities in the transport industry. Button and Swan (1989:3) regard regulation as the imposition of controls and restraints and the application of rules. One of the challenges for policy-makers in developing economies is that of managing the shift from state ownership and control of infrastructure operations to more independent regulatory oversight (Kessides, 2004:79). In their research, White and Bhatia (1998:48) discovered that many countries have continued with Public-Private-Partnership programmes with the least effort to develop a regulatory framework. Regulation is a requirement to ensure that the process is conducted within the right legal parameters. Well-managed implementation requires detailed operating policies and procedures covering the routine parts of the programme.

Kessides (2004:88) highlights the fact that

“most regulatory effort have focused on institution building such as

writing enabling legislation, determining administrative procedures and identifying sources of funding. Not enough attention has been paid to identifying issues such as eliminating anti-competitive cross-subsidies, setting prices and re-balancing tariffs”.

In addition, White and Bhatia (1998:43) reason, "the ideal situation in the design of a Public-Private Partnership programme should be to conduct an audit of the public enterprise sector". This is done in order to make sure that the environment in which the Public-Private-Partnership is to take place and the constraints that may be encountered, are noted.

In practice, what happened in many African countries is that the concept of Public-Private Partnerships was implemented without adequate knowledge and understanding, with regard to the initial conditions. As a result, projects that were implemented in many African states failed. Thus, this study has also noted that the extent to which the Public-Private Partnerships were under-performing was not known, and is so because of a lack of appropriate information in respect of the nature of subsidies advanced by government. This aspect too needs closer attention if things are to run smoothly in the transport industry where Public-Private Partnerships are involved.

In terms of the Gautrain project, what South Africa has achieved in Public-Private Partnership terms is that after the announcement of a preferred bidder, both the public and private sectors agreed to the appointment of an Independent Certifier (National Treasury, 2000). This could be in the form of an individual or body that would constantly monitor the progress and impact made by the concessionaire. According to White and Bhatia (1998:43), none of the African countries has come out with a mechanism that measures the impact of the Public-Private-Partnership processes on the performance of the private sector enterprises.

5.4.1 Institutional requirements

Usually, the structure and the processes that underscore any infrastructural

regulation determine how effectively such regulation would support reforms intended to promote efficiency and other social objectives (Kessides, 2004:83). In most of the developing countries, such regulation is at an early stage of implementation. To be up to speed with developments, such developing countries could draw lessons from developed countries' recent findings on how to go about implementing effective regulations on running utilities that have undergone a Public-Private Partnership process. This could include drawing knowledge and appropriate experience on the importance of principles like coherence, independence, accountability, transparency, predictability, and capacity.

5.4.1.1 Coherence

Kessides (2004:83) is of the view that "regulations for each infrastructure sector should be complementary and mutually supportive. The laws guiding regulation must be in agreement and consistent over time". This signifies that new rules should take into account previous ones plus whatever amendments were made to eliminate inconsistencies. Furthermore, Kessides (2004:83) says, "regulatory coherence requires that there should be clearly defined regulatory responsibilities on the national, provincial and municipal governmental level". This implies that a specific agency at a specific level of government should make decisions involving specific aspects of regulation in a consistent manner. Such arrangements should maintain continuity in the people and methods used to arrive at sound decisions and to make adherence to the rule of law more likely.

Based on South Africa's trade relation with neighbouring countries, it is therefore suggested that a transport economic regulatory body be assigned with handling regulatory activities that are cross-border by nature. Such a transport economic regulatory body would then be required to harmonise transport standards in various countries. Kessides cites the example of Argentina, where a privatised telecommunication sector has its regulatory agency that deals with cost reporting and which makes telecommunication tariffs accessible to the users in various

countries.

South Africa could borrow the reasoning by Kessides (2004:85) and introduce "transport economic regulators that publish statements explaining their goals and reasons for decisions on entry, pricing, and other industry behaviour". Doing so would force government to think through its long-term policy objectives and regulatory principles more thoroughly and objectively.

5.4.1.2 Independence

Infrastructure regulators should be free to make decisions within their scope of authority without having to obtain prior approval from other officials or agencies of government. Independence requires effective regulation on the part of an economic regulatory authority in that it must be perceived to be largely free from influence by any specific state department, which means that it should be seen as an authority that is objective, apolitical and an enforcer of policies that are set forth in the statutes. Experience has however taught that complete independence for a transport economic regulatory authority is not practically possible, because regulatory authorities are not insulated from political intervention and as such, the regulatory process may become politicised and decisions discredited.

Consequently, the art of compromise is necessary to ensure that a transport economic regulatory authority is both independent and responsive to issues of the transport industry. Fogli (2006:4) refers to *responsiveness* as "the organisation's willingness to help customers and provide prompt service". This is what is expected of a transport economic regulatory authority. Safeguards that could help achieve such compromise are inter, alia, giving the transport economic regulatory authority a statutory authority, free from ministerial control. This would help the transport economic regulatory authority to exert its authority fully. Members of the transport economic regulatory authority board should be appointed for fixed periods and their removal without clearly defined cause should be prohibited. It would be advisable to stagger the terms of office of a transport economic regulatory authority's board members so that they can be replaced only gradually by successive administrations. Funding operations of

the transport economic regulatory authority with user fees may assist in enhancing the regulatory authority's independence and thus insulating it from political interference through the budget process (Kessides, 2004:86).

5.4.1.3 Accountability

Gildenhuis and Knipe (2000:129) describe the term *accountability* as "one of the principal cornerstones of democracy precisely because each public official should give account in public for her or his activities". In another vein, Pauw et al. (2005:136) see *accountability* as implying that "managers are held responsible for carrying out a defined set of duties or tasks, and for conforming with rules and standards applicable to their posts". In addition, Davids et al. (2005:55) argue, "the public sector should respond by reporting to the public on how money is spent and on the successes and failures of public programmes". Again, Davids et al (2005:55) point out, "democratic governments create and sustain independent public institutions of accountability that are empowered to oversee the government's actions and demand explanations". One of the reasons to have a regulatory authority in place is to ensure that the tenet of accountability is adhered to in the transport industry.

In support of the setting up of a transport economic regulatory authority, Kessides (2004:86) is of the opinion that a regulatory authority should be independent and be reconciled with its accountability. A transport economic regulatory authority should be given power to set prices and quality standards. Checks and balances should be established to ensure that a transport economic regulatory authority does not become corrupt or inefficient. The public should know who makes regulatory decisions and what guides them, and which channels are open to them to voice their concerns. There should be room for affected parties to obtain redress easily and quickly in case a regulatory authority acts incompetently.

5.4.1.4 Transparency

In the opinion of Rouban (1999:16), “an output or performance orientation has been considered a major prerequisite for increasing transparency in public organisations”. Gildenhuis and Knipe (2000:130) assert, “the public has the right to be informed on any matters concerning their relations with the government, meaning that there is a need for transparency”. However, according to Delmon (2005:328), “transparency is required as it is intended to improve competition and reduce the unseen costs associated with unequal treatment amongst bidders”. When setting up a transport economic regulatory authority, it would be advisable to keep transparency in mind as such regulatory authority would protect citizens against corrupt practices.

Importantly, Kessides (2004:87) is of the opinion that “transparency helps induce investment by incumbents and new entrants and avoid costly, time-consuming regulatory disputes”. This view is supported by Delmon (2005:329), who emphasises the fact that in a Public-Private-Partnership, transparency should be increased as it would “attract new forms of investment and thus potentially reducing the cost of the project”. The envisaged transport economic regulatory authority could gain much credibility, mileage and respect if it undertakes its duties and responsibilities in a transparent manner because transparency leads to openness and fairness.

5.4.1.5 Predictability

A predictable service is often referred to as a reliable service, which Fogli (2006:7) refers to as “the ability of the organisation to perform the promised service dependably and accurately”. A transport economic regulatory authority should therefore render a predictable service and observe the rule of law. The rule of law means that all citizens should be equal in the eyes of the law and should be treated equally in terms of the law. The rights and freedom of the individual should therefore be respected (Cloete, 1996:77). If transport economic regulatory decisions are to be predictable, they should therefore be based on

rules and procedures that are certain and durable in the sense that such rules would be good and applicable to future cases unless new information and laws are introduced. Even then, a transport economic regulatory authority should prove that past decisions could be changed. Otherwise, market participants will lack confidence in regulation, undermining the size, scope, and quality of infrastructure and related investments (Kessides, 2004:87).

5.4.1.6 Capacity

In setting up a transport economic regulatory authority, the responsibilities of human resources required to manage the entity should be determined. A comprehensive business plan should reflect the financial resources required to address the human capital requirements. To this end, Kessides (2004:88) maintains that “a transport regulatory authority would require expertise in disciplines such as economics, accounting, transport engineering, and law”.

In trying to overcome the issue of capacity or skills deficiencies, it is advisable that a transport economic regulatory authority at its commencement be given complete freedom to hire specialised staff. While it cannot be denied that the shortage of skills in setting up a transport economic regulatory authority is a concern, it would be of great advantage to ensure that the curricula of academic institutions cover transport economic regulatory aspects so as to bridge the skills gap in various transport disciplines.

5.5 CULTURE OF TRANSPORT ECONOMIC REGULATION

The concept *culture* was defined in Section 3.2.3.2 of this study, by quoting Brown and Ulijn (2004:51), who points out that *culture* refers to "the set of values, guiding beliefs, understanding and ways of thinking that is shared by members of an organisation and conveyed to new members as an accepted code of practice". While the principal task of transport economic regulation is to restrain monopoly power by keeping prices down and ensuring that quality is up, it is equally important to respect investor value in order to maintain incentives for

efficiency and new investment for growth. More importantly, the goal of meeting consumer needs flexibly through the balanced structure and strategy is necessary. Transport economic regulation must accept responsibility for fostering competition in the market place (Basanes et al., 1999).

Basanes et al. (1999) maintain that there should be a distinct function of public utility style regulation that needs to perform with organisational and financial independence from the politicised arms of government. The decision-making processes of transport economic regulation should be insulated from political pressures by means of the culture of administrative bodies. Public utility-style regulation should substitute its influence for the missing disciplinary forces of competition. The forces of competition generally are ruthlessly effective in driving markets to efficiency in ways that soon enough show their benefits to consumers and to the economy as a whole.

5.5.1 Regulation by a specific regulatory body

There are a number of advantages and disadvantages attached to implementing regulation through a specific regulatory body, such as those indicated by Basanes et al. (1999:181), namely:

- Flexibility of the approach, which, using pre-specified principles, allows tariff controls and standards of service regulation to be modified in the light of changing circumstances unforeseen when the private sector contract was put in place;
- Transport economic regulation can be undertaken by an expert body with full understanding of the transport sector economics and operations; and
- Transport economic regulation is clearly separated from responsibilities for service provision, avoiding conflict of interest and making the regulator clearly accountable for its actions.

The disadvantages include:

- In order for the arrangement to be effective, the contract must leave scope for the exercise of discretion by the transport economic regulatory authority. Where there is not a strong tradition of effective independent regulation, potential bidders may perceive this as a source of transport economic regulatory risk, which may lead to a reduction of interest in the scheme; and
- It may be more costly to establish and administer as compared to regulation by contract.

5.5.2 Moving towards practical regulation

Designing an effective transport economic regulation in developing and transition economies is a daunting task for several reasons. Some reasons are endemic to infrastructure regulation everywhere, while others are driven by the complexities of underdevelopment. In the face of scarce technical expertise, severe information problems further weaken accounting and auditing, limited separation of powers, lack of checks and balances, ineffective legal systems, widespread corruption and poor commitment, adopting many aspects of the United Kingdom. In addition, regulatory models of the United States will prove challenging for developing and transition economies. Most developing countries are poorly suited to the complex procedures required by quasi-judicial, command-and-control regulatory techniques (Kessides, 2004:124).

Moreover, transport economic regulatory methods have very different implementation costs. Given the limited expertise in most developing and transition economies, it is crucial for these resources to be allocated efficiently by:

- exploiting all opportunities for competitive restructuring that might reduce the need for regulatory intervention;
- isolating activities that require regulatory oversight from those that should be left to market forces; and

- identifying second or even third-best regulatory instruments that demand less information but are better suited for countries with limited capacity (Kessides, 2004:124).

5.5.3 Multinational regulatory authority

Since South Africa is currently dealing with SADC members, it would be ideal to obtain consensus from all governments in a region for a regional transport economic regulator. In this regard, Kessides (2004:128) points out that it would be problematic due to different attitudes and commitments toward reform, as well as concerns about national sovereignty. It requires considerable cooperation and trust between countries, more than currently exists in most parts of the world. Thus regional transport economic regulatory cooperation might be a more realistic option for alleviating scarce regulatory expertise and resources, especially in low-income countries such as Mozambique.

According to Mushkat (2004:100), tensions among SADC members over economic regulatory standards might be diffused by a structured programme of standard harmonisation. As a first step, regional transport economic regulatory advisers could be established to facilitate information exchange and to offer non-binding advice on procedural issues and matters such as standardisation, interconnection, and pricing and costing methodologies. The establishment of a multinational regulatory authority would, based on the research of Mushkat (2004:100), be ideal to serve as a regional economic integrator as it has worked in the Asia-Pacific Economic Cooperation (APEC).

5.5.4 Separate regulatory authority

Basanes et al.(1999:182) advance a theoretical argument and state that “the creation of separate regulatory institutions yields a degree of independence from political interference. This would also encourage transparency and lend some stability and predictability to the regulatory regime”. In practice, it is hard to achieve complete independence. The study conducted by Basanes et al. (1999:182) in Argentina and Colombia revealed that regulatory institutions have

some degree of political dependency. It was found that members of the regulatory board were either representatives of the central or local government or nominated by politicians.

Of major importance regarding a transport economic regulatory authority is that it should acknowledge the fact that the private sector is the primary mover of economic investment, the public sector attracts, stimulates and encourages private sector economic development efforts (Frank, 2006:82). It therefore implies that a transport economic regulator should be impartial and that it should play a catalytic role in ensuring that the objectives of both the public and private sectors are accomplished in a Public-Private Partnership arrangement.

5.5.5 Concession agreements and regulatory independence

Government, as the owner of assets, has a signatory function. Incentives involved in contract performance could be aligned with those of a private party. The higher the profitability and the expansion in investment the higher the net present value of the assets involved (Basanes et al.1999:27).

Because the public authority surrenders its duties as the main service provider only temporarily, the concession contract usually includes very detailed clauses to account for all the complexities of the services and to anticipate every possible circumstance in the development of the contract. The concession contract becomes the most important instrument available to the authority to guarantee compliance with its duties regarding service provision. Therefore, government is also retaining another important function, namely guaranteeing that the concessionaire or the private contractor complies with operational or managerial requirements.

In the light of the above explanation, it should be noted that contract interpretation and the need to adapt it to changing circumstances are major tasks in the concession performance and could become important sources of creating risks for the two parties involved. However, if the private partner is not in

compliance, government has the right to intervene and declare the contract void. As a contracting party, government is not on equal footing with the private counterpart (Basanes et al., 1999:27). An independent transport economic regulatory authority is essential to manage the concession agreement and to ensure that economic risks are apportioned to the respective parties accordingly.

5.5.6 Regulation in a concession contract

The Latin American governments have shown a preference for concession agreements or some intermediate form of public-private contractual arrangement for certain infrastructure services. From a political perspective, state ownership of infrastructure assets and the provision of services are assumed to guarantee that social obligations will be met. It is also believed that ownership will allow government to intervene whenever it perceives that the service provider is not fulfilling its obligations (Basanes et al., 1999:26).

It must however be stated that the long duration of concession contracts makes them poor candidates for self-regulation. It is ideal that an independent transport economic regulator responsible for the monitoring of the performance of the contract be considered. If the concessionaire does it alone, it will not penalise itself for not achieving the targets of contract requirements as it will be the player and the referee. In fact, as supported by Basanes et al. (1999:26), the concessionaire will not be intrinsically motivated to satisfy the public policy objectives.

5.5.7 Autonomy of an infrastructure regulatory authority

In trying to put the interpretation by Basanes et al. (1999:17) into practice, the transport economic regulatory authority should enjoy independent legal status and should not serve simply as a mouthpiece of government. While it is proper for the relevant ministry, member of the Executive Council or the mayor of a municipality to formulate overall policies for the sector, it is inappropriate for government to enforce these policies on a day-to-day basis under the veil of a

nominally independent regulatory authority. A transport regulatory authority should therefore be truly independent from government and thus free of political interference.

South Africa's standpoint regarding the autonomy of the envisaged transport economic regulator is supported by the National Freight Logistics Strategy (2004), which states:

“It is important that economic and safety regulation be controlled by a regulator who is independent of government's sector responsibility regarding policy and infrastructure provision. The methodology for the application of regulatory powers must also be transparent, with clear powers established by appropriate supporting regulation”.

Even though the question of autonomy is emphasised in the National Freight Logistics Strategy, a complete autonomy may not be possible in the sense that the Department of Transport, as the initiator of the concept of the transport economic regulatory authority, needs to be consulted constantly. This is supported by a survey conducted in Washington where it was found that economic regulatory bodies were frequently required to consult government (in 56 percent of regulated industries) or members of the regulated industries themselves (33 percent). They are required to consult the public in respect of 9 percent of regulated industries (See Figure 5.2).

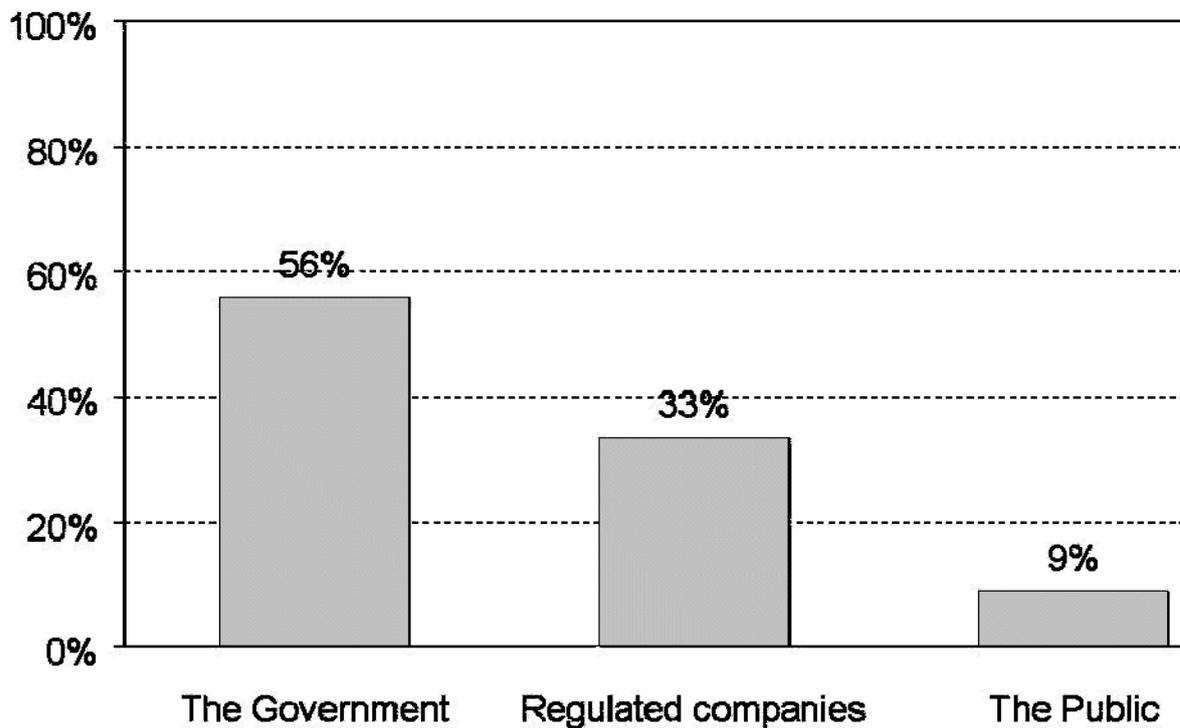


Figure 5.2: Parties to be consulted by regulators

Source: Replies to the INTOSAI survey (1993)

Figure 5.2 indicates that regulators consulted government in 56 percent of cases. This implies that when considering the establishment of a transport economic regulatory authority in South Africa, complete autonomy may not be possible.

5.5.8 Transparent and flexible regulatory process

According to Basanes et al. (1999:165), the transport economic regulatory function should be committed to reaching decisions and resolving disputes through the transparent application of economic principles. This should be publicly articulated before the initial commercial investment is made by the private sector. These principles may be articulated within a concession agreement so that they become part of the contract between the concessionaire and government. According to this hypothesis, these economic principles should be the continuing guidepost for ongoing after award governance. This solution

would provide appropriate limits on the discretionary exercise of regulatory power.

Basanes et al. (1999:165) go further to state that the guiding transport economic regulatory principles would generate efficient solutions to a wide range of potential disputes in the transport industry. This also includes issues that might arise in a regulated road transport infrastructure such as to:

- allow competition to function where it can without distortion;
- weigh the costs of rules against the benefits;
- assure service quality and price levels that offer consumers no less than the competitive standard of comparison; and
- allow open access to bottlenecks on terms that reflect competitive parity.

5.5.9 Granting authority versus regulatory authority

A *granting authority* is described by Delmon (2005:475) as a “party that grants a concession, a license or some other right”. A granting authority would refer to the National Roads Agency, which is in essence involved in the granting of roads concessions. A regulatory authority, however, would ensure that there is compliance with minimum and maximum toll fees charged to the road users. The current state of affairs in South Africa is that the public authority that signs the contract is the party responsible for its performance. Presently, the South African National Roads Agency Limited keeps for itself the final say on tariffs and is the party legally entitled to intervene unilaterally in the contract or to terminate the contract on “public interest” grounds.

Basanes et al. (1999:166) are of the view that government, as a signatory, can approve modifications to the agreed provisions, unless the law explicitly authorises that another regulatory institution may do so. In this setting, the role of the regulator is not clear and many overlaps may occur. Even if by law the contract monitoring and tariff negotiation could be delegated to the transport

economic regulator, the public authority retains crucial duties with respect to the after-award performance of the contract.

In this setting, the transport economic regulatory authority becomes only a delegated party and there is no independent regulator as such. The menace of political interference is always present, adding further risks to this type of institutional arrangement. To complicate matters, in some Central American countries, the National Assembly is responsible for approving any substantial change in the concession agreement during the life of the contract (Basanes, et al. 1999:167).

Thus, in the process of establishing a transport economic regulatory authority, it needs to be made clear that the ultimate entity becomes a regulator and not a granting authority. A granting authority, on the one hand, theoretically deals with aspects such as issuing operating licenses to operators after making sure that there is full compliance with economic requirements such as tariff structures. A regulatory authority, on the other hand, monitors compliance with economic user requirements such as ensuring that the operator does not exceed maximum tariffs charged to the user.

To have a transport economic regulatory authority with granting and regulatory authority may not be appropriate based on the White Paper on National Transport Policy (Republic of South Africa, 1996c:16) which states that it may be undesirable for the role of provider and regulator to be embodied in a single institution. In these instances, ownership and regulation of transport infrastructure should be separated, whether state owned or privatised.

It is worth noting that government's involvement in giving directions should be essential. This was supported by the findings of a study conducted by INTOSAI, (1993) in Washington as reflected in Figure 5.3.

The Working Group examined how regulation operates in practice. Accordingly, the survey asked whether governments could give directions to regulatory bodies

and whether governments have exercised this right in practice. The replies showed that governments have the power to give directions to a regulatory body in 45 percent of regulated industries. In the remaining 55 percent a government minister or ministry may often be the regulatory authority.

The survey also found that government had exercised the right to give directions at least once in 30 percent of all regulated industries. In about two-thirds of those industries where governments have the power to give such directions, they have actually used those powers at least once.

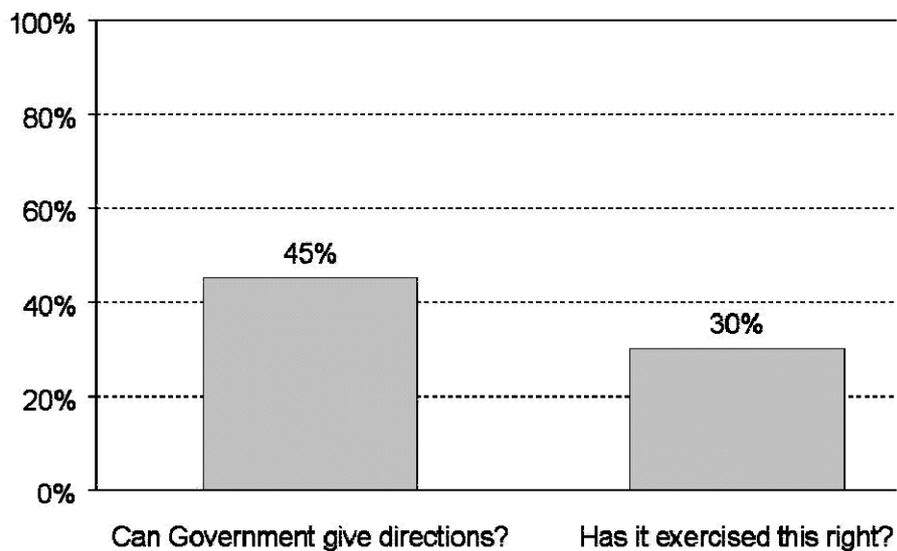


Figure 5.3: Government's right to issue directions to regulators

Source: Replies to INTOSAI survey, (1993).

Figure 5.3 shows that Governments can give directions to regulators in 45 percent of regulated industries and that this right has been exercised at least once in 30 percent of cases. The implication of Figure 5.3 is that if a transport economic regulatory authority is established in South Africa, it should not be divorced or insulated from political intervention and direction because of

initial funding requirements and implications. Thus, it is essential and necessary for government to provide the initial funding and to give its approval for the project to start operating, as this definitely needs political will and direction to succeed.

5.6 REGULATORY INSTITUTIONS (INTERNATIONAL EXPERIENCE)

In the words of Denhardt and Denhardt (2006:41), a variety of independent agencies were created internationally outside the normal cabinet organisation. Some of these agencies are engaged in staff functions in support of other agencies. Agencies such as the Environmental Protection Agency fall outside cabinet level departments and are regarded as independent agencies. The personnel managing these agencies are appointed by the President with the confirmation of Senate. Seen in the above light, it would be ideal that the introduction of the transport economic regulatory authority be established within the Department of Transport for a specific period before becoming completely autonomous so as to be well guided and funded.

Denhardt and Denhardt (2006:41) continue by saying, “regulatory commissions are formed to regulate a particular area of the economy and are structured quite differently. Typically, they are headed by a group of individuals called directors or commissioners appointed by the President and confirmed by the senate”. These commissions are protected in various ways from removal by the President. In some cases, their terms of appointment overlap with presidential terms. Presumably, the regulatory commissions are to perform their tasks independently and objectively, free from undue influence either by the political incumbent or by the affected clientele. The nature of regulatory work makes this task exceedingly difficult.

Public corporations are employed where the objective of the agency is essentially commercial, where the work of the agency requires greater latitude than would be typical, and where the agency acquires at least a portion of its funding in the market place (Denhardt and Denhardt, 2006:41). In this regard, South Africa then

needs a transport economic regulatory authority to regulate such public corporations.

In his research of public enterprise economics conducted in Amsterdam, Bos (1986:34) contends, "if government allows the private sector to operate some of state-owned enterprises; it basically wants to rely on the market for the achievement of welfare optimum and therefore relax some regulation at the end". Bos goes on to say that, if the private sector is given the right to operate a natural monopoly, market forces will not prevent the monopoly from using all means to keep its monopolistic position and to exploit consumers in order to maximise profit. It is for this reason that the current study is suggesting a range of regulatory regimes from which South Africa can choose in order to establish and also implement an overarching transport economic regulatory authority.

5.6.1 Structure of regulatory institutions

Schultz and Alexandroff (1985:2) define *regulation* as follows:

“any constraint imposed upon the normal freedom of individuals by the legitimate activity of government and economic regulation would therefore mean the imposition of rules by government, backed by the use of penalties that are intended specifically to modify the economic behaviour of individuals and firms in the private sector”.

Black et al. ((2005:11) understand *regulation* as “the sustained and focused attempt to alter the behaviour of others according to standards or goals with the intention of producing a broadly identified outcome or outcomes, which may involve mechanisms of standard setting, information gathering and behaviour modification”. Demsetz (1989:75) says, “the basic intellectual arguments for believing that truly effective regulation is desirable have not been challenged”.

Consequently, even those who are inclined to reject government regulation or ownership of public utilities because they believe these alternatives are more undesirable than private monopoly, implicitly accept the intellectual

arguments that underlie regulations”. Kessides (2004:95) is of the opinion that "decisions must be made about the organisation of regulatory governance". The definitions above are quoted in order to assist us in our quest to seek a transport economic regulatory regime that would suit the South African situation. The question that still needs to be answered is whether regulatory institutions such as the Competition Commission should regulate toll roads or whether another institution should be introduced as the study suggests. Alternatively, both institutions should exist side by side with each being assigned specific responsibilities and duties.

Weidenbaum (1995:36) says in terms of the Swedish Competition Authority, competition should take place on equal conditions. There must be rules to prevent undertakings from anti-competitive co-operation and abuse of market power. Rules or regulations are statements that implement, interpret or prescribe a law or policy. Government agencies use two methods to carry out laws, namely rule making and adjudication. Through rule making, agencies issue general policy statements as well as detailed requirements. In terms of adjudication, the agencies would formulate enforceable orders backed by civil or criminal penalties and settle specific factual disputes. Rule making is described as the agencies' legislative function, and adjudication as judicial. On the basis of the above information, it needs to be decided whether the proposed transport economic regulatory authority would have both legislative and adjudication or only judicial function.

5.6.2 Centralised or decentralised regulatory institution

Frank (2006:124) asserts that “planning as a comprehensive, long range, global activity is best done top down in a centralised fashion because the top executive has the best idea while agencies may have better ideas on efficiency”. In another vein, Rouban (1999:18) argues that “decentralised systems are more likely to increase efficiency than centralised systems because individual agencies have more information according to which the operations of the agency can be changed”. Without taking sides, Delmon (2005:109) states that “an efficient and

effective regulator can make every difference in the success of the Project Company and in the realisation of the project's aims". Seen from Delmon's point of view, it is evident that the establishment of a transport economic regulatory authority could make a difference in bringing about successes in the operations that are undertaken by concessionaires in South Africa.

The words of Frank (2006:125) who warns that "centralisation and decentralisation do not necessarily mean a contradiction but can be expressed as two ends of a scale or continuum". To this end, Kessides (2004:96) advises that "designing regulation involves tradeoffs". For example, decentralisation on the one hand makes lower levels of government responsible for regulating utilities and offers advantages such as:

- allowing local conditions and preferences to shape regulation;
- moving regulators closer to services, allowing them to gather better information on users;
- promoting competition among sub-national regulators to attract private investment; and
- improving enforcement of regulatory decisions.

On the other hand, centralisation, however, offers advantages in the sense that:

- a national regulatory structure makes the best use of scarce expertise and minimises the fixed costs of regulation;
- centralisation can also reduce the risks of a regulatory race to the bottom; and
- centralisation may be necessary if jurisdiction is too small to support an efficient scale or scope of operations for certain industries.

The current state of affairs in South Africa appears to be a grey area because the provincial and municipal roads agency are at present given only minimal powers to execute both safety and economic regulations within their areas of

jurisdiction while the national sphere of government still retains all authority regarding the budget, which determines all that needs to be done by both the provincial and local spheres of governments. This is precisely the reason for the need for a transport economic regulatory authority that would operate independently but with the cooperation of all the involved stakeholders, be they governmental or private.

5.6.3 Multiple agencies or just one

Stone (2005:159) argues that an agency can be created in a variety of ways and the three principal ones are express agreement, implied agreement and operation of law. Thus, an agency can be established to enter contracts on behalf of the principal in a range of situations, or to act in connection with one particular project. The need to establish a regulator with the regulatory responsibilities and be assigned to a single tier of government needs to be explored. This would be in order to determine whether government should create an industry-specific regulator, or a single agency with a broader mandate. To this end, Kessides (2004:98) advises,

... “establishing separate agencies may precipitate advantages. A separate Agency would recognize the unique economic and technological characteristics of each infrastructure industry. It also creates an opportunity for the development of deep, industry-specific expertise and thus encouraging innovative responses to regulatory challenges”.

Kessides (2004:99) also supports the use of a single regulator for several industries, which would make it possible to share fixed costs, scarce talent, and other resources. A single regulator leads to the consolidation of expertise in a cross-cutting manner in the sense that it regulates issues like the administration of tariff adjustment rules, the introduction of competition in monopolies, and the management of relationships with stakeholders. In addition, the broader responsibilities of a multi-industry agency reduce its dependence on any one

industry. A multi-industry agency may be better able to resist political interference because its broader constituency gives it greater independence from sector ministers. The establishment of one transport economic regulator that would oversee all modes of transport needs to be evaluated for its validity in South Africa.

It needs to be mentioned that deciding on the breadth or depth of regulatory coverage involves numerous considerations. It is therefore reasonable to accept that no single approach would suit all circumstances. Firstly, it must be acknowledged that in economies with a small base of consumers and limited human and financial resources, there would be a strong argument for merging regulatory responsibilities. For example, multi-industry regulators have been successful in Costa Rica, Jamaica, Panama and Brazil (Kessides, 2004:99). The effectiveness of any system of regulation is, according to Sawyer and O'Donnell (1999:32), dependent upon the regulators, not only in terms of their competence and the information available to them, but also in terms of the objectives and interests that they pursue. In considering the establishment of a transport economic regulatory authority in South Africa, the circumstances and conditions under which it should function must be known and also well understood to ensure that the regulatory authority's objectives are unbiased and focused.

5.7 TRANSPORT ECONOMIC REGULATORY AUTHORITY IN SOUTH AFRICA

During 2005, the Department of Transport developed a National Freight Logistics Strategy, which indicates as part of its challenges that the regulatory frameworks are incapable of resolving problems in the industry and that the vision for the freight logistics system is to respond to problems in institutional and regulatory frameworks; infrastructure; ownership; management; operations; skills; financing structures; and methodologies for the freight system. The strategy states that an economic regulatory authority should manage the relationship between the owner of the infrastructure and the operators of a particular network.

Government's immediate focus seems to be that of increasing economic regulation of the ports, rail and road sectors, with the regulation of access to infrastructure by multiple operators being the responsibility of non-existing transport economic regulatory authority that is at this stage only in the proposal phase. Table 5.1 overleaf depicts the suggested transport economic regulatory authority with its proposed tasks of planning, promotion and integration.

Table 5.1: Proposed transport economic regulatory function

		Regulation of each mode of transport		
		Ports	Rail	Road
Transport economic regulatory functions	PLANNING	▲▲	▲▲	▲▲
	PROMOTION	▲▲	▲▲	▲▲
	INTEGRATION	▲▲	▲▲	▲▲

Source: Adapted from Schultz and Alexandroff (1985:13)

▲▲ Regulatory impact

It needs to be re-emphasised that the concept of a transport economic regulator was proposed by government. This regulator will be introduced over a period of time to encompass all current regulatory entities within the transport sector. According to Schultz and Alexandroff (1985:11), one of the objectives of a transport economic regulator is to ensure that the rates of different modes of transport are just and reasonable. Equally so, the proposed transport economic regulator in South Africa would be ideally positioned to monitor the rates of different modes of transport as indicated in Table 5.1. It is necessary to remember that government at this stage has only gone as far as making tentative suggestions and proposals on the introduction of a transport economic regulatory authority and this study is the evaluation of these proposals.

5.7.1 The planning function of a transport economic regulatory authority

According to the Department of Transport, a transport economic regulatory authority needs to regulate the entire transport industry, which would include inter alia, sea, air, rail and road transport. The National Land Transport Transition Act (NLTTA) states that land transport planning should focus on the most effective and economic way of moving freight and people from one point to another in the system. The envisaged role of the transport economic regulator as contained in Section 1.3.4 of the draft National Rail Transport Policy states:

“the economic regulatory function would include, where applicable: promoting effective planning, managing competition and contractual regimes in railways, subsidy management, performance compliance, and public and consumer protection. It will require sufficient information and reporting from operators, asset owners and transport authorities”.

Currently, the Department of Transport is establishing a rail economic regulator whose role is seen as a transition towards a fully-fledged transport economic regulatory authority and its specific objectives are:

- to introduce and promote competition;
- to promote affordability and financial sustainability of operations;
- to create a balance between service quality and cost;
- to ensure public and consumer protection;
- to facilitate an environment, which would attract private sector investment;
and
- to promote strategic transformation.

5.7.1.1 Ports infrastructure

The present situation is that the seaports are regulated by the National Ports Authority. On the other hand, the White Paper on National Transport Policy (1996c:38) confirms the seaports' strategic role in the facilitation of seaborne trade and the seaports are also seen as strategic assets serving the nation as a whole. Inter-modal transfers and load consolidation occur at a range of locations that are concentrated in urban areas, which are found usually at ports and airports. In order to enable a seamless flow of traffic to overcome operational challenges such as inter-modal planning, a transport economic regulatory authority would be an appropriate remedy to regulate inter-modal operations.

Experience has taught that what usually affects operations is the unwillingness of stakeholders to share information and to coordinate modal processes at inter-modal facilities. Hopefully, a transport economic regulatory authority would contribute positively in bridging this gap if it could be introduced. Hence, based on the contribution derived from Basanes, Kessides and others, it is ideal to establish a transport economic regulatory authority that would run the various affairs of the transport industry in the Republic of South Africa as is already the case in developed countries.

5.7.1.2 Rail infrastructure

In a developing country such as South Africa, the role of a rail infrastructure need not be over-emphasised because it is self-evident in any case, as people and goods need a reliable mode of transport to take them from one point to another and a rail transport is ideal for this activity. A transition towards the establishment of a transport economic regulatory authority in the form of a rail economic regulator would require sufficient information from operators and owners of assets to monitor and benchmark railway performance against strategic national objectives. Finally, the envisaged transport economic regulatory authority needs to manage the relationship between infrastructure owners and operators of a particular network.

5.7.1.3 Road infrastructure

Toll roads have undoubtedly become a reality in South Africa and more and more toll roads are being constructed. These roads are usually constructed on a Build, Operate and Transfer (BOT) concession with the private sector as a partner. The private sector has become a partner that is responsible for the maintenance of the condition of the road over the concession period. The income generated by the tolling of the different classes of vehicles must adequately compensate the private sector so that it can afford to maintain the roads and create shareholder value in terms of return on investment. The success of all operations be it public or private, rests with the income they can generate, in the sense that the more they generate the more they can achieve, and the less they generate the less they can achieve.

5.7.2 The promotional function of a transport economic regulatory authority

The National Freight Logistics Strategy identified key bottlenecks in the logistics system that are inhibiting the introduction of a seamless movement of cargo, as well as decreasing the cost of doing business in South Africa. The National

Freight Logistics Strategy went further and defined a vision for seamless logistics and also identified the necessary key interventions to improve the situation in which these bottlenecks were occurring. The main challenge now is to accelerate the introduction of the strategy to ensure implementation of elements such as economic regulation in the rail and port environments, the improvement of rail infrastructure, rolling stock and operations, the introduction of competition to bring down costs and improve service and the achievement of an appropriate modal split of cargo movement.

5.7.3 Integration function of a transport economic regulatory authority

The 1996 White Paper on National Transport Policy (Republic of South Africa, 1996c) outlines a vision for the transport sector focusing on the objectives of "safety, reliability, efficiency, integration and economic and environmental sustainability". The most relevant policy principles to the economic regulation of transport are to regulate services such as:

- maximum price;
- minimum quality (technical and environmental standards, as well as rules for infrastructure investment and financing); and
- control of monopolistic behaviour.

All these are done to determine the overall characteristics of the functioning of the sector within the broader policy frameworks and objectives of the government.

5.8 POSITIONING OF A TRANSPORT ECONOMIC REGULATORY AUTHORITY

In principle, a transport economic regulatory authority would provide a transport regulatory service while the Department of Transport would formulate transport policies. This separation of policy and regulatory service provision would enable the transport economic regulator to adopt methods analogous to the

private sector particularly that of improving service quality and reducing costs. To this end, a draft proposal of a transport economic regulatory unit and its funding is presented below.

5.8.1 Proposed organisational structure of a transport economic regulatory authority

While it may be accepted that it is difficult to prescribe a rule of thumb for selecting an ideal structure for a transport economic regulatory authority, Macmillan and Tampoe (2000:55) suggest that the ideal structure should resemble that of commercial enterprises with a chief executive and a management board. In essence, the commencement of the unit should reflect a functional structure, which requires people with well-defined skills and areas of specialisation to run it. Wheelen and Hunger (2006:239) advise that each manager should be matched with his/her area of specialization hence the structure below reflects modal specialisation, each headed by a general manager. The structure merely reflects the commencement and has room for additional functions that might arise during the implementation phase.

Pearce and Robinson (1997:342) warn that the strategic challenge presented by the functional structure is often an effective coordination of the functional units. It means therefore that the chief executive officer who is required for this position is expected to deal with the coordination of four modal regulatory areas indicated in Figure 5.4.

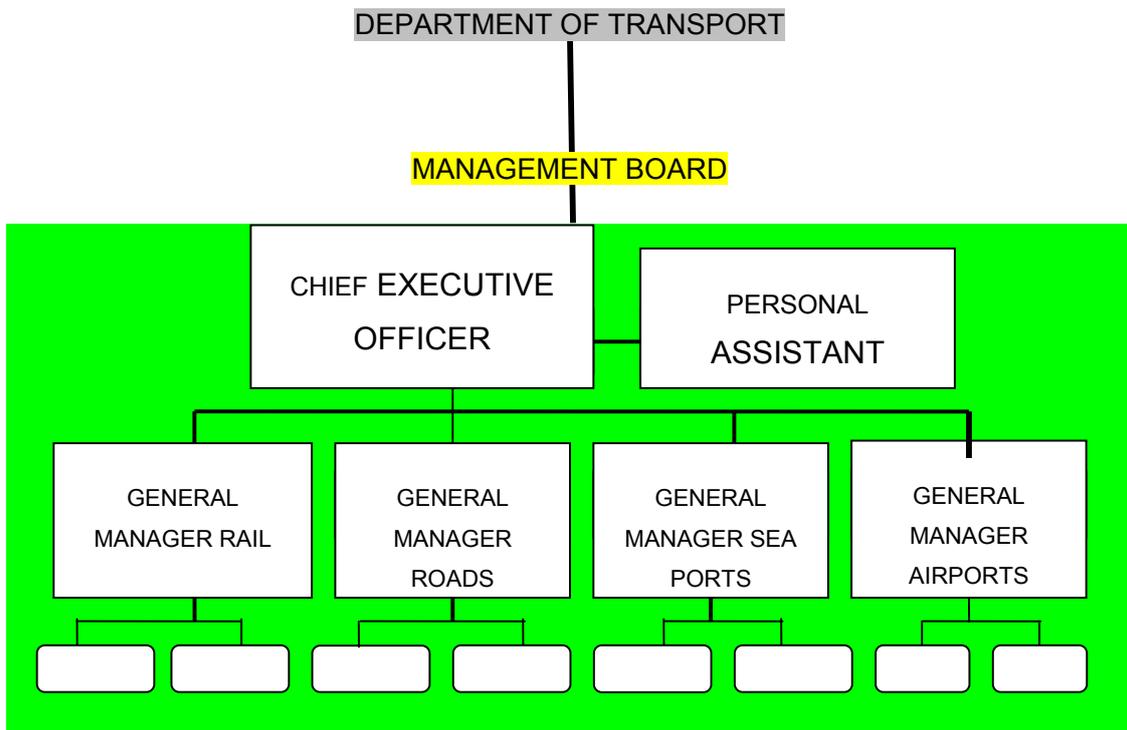


Figure 5.4: Proposed organisational structure of a transport economic regulatory authority

As far as the roads infrastructure is concerned, the existence of a transport economic regulatory authority is without doubt indispensable, as it would serve as an intermediary between road users, toll concession companies and the National Roads Agency. It should be emphasised that road users should be seen as customers, and Fogli (2006:3) refers to a *customer* as "anyone who receives products or services and can be internal or external to the organisation and are the foundation of any business". In the toll roads industry, motorists should be regarded as customers as they are the toll concession companies' main source of revenue.

Within the context of the road infrastructure, a transport economic regulatory authority should take account of the road user's needs, considering among other things how existing needs are changing. Macmillan and Tampoe (2000:66) refer to this as a "market driven approach" which is more than a mere reaction to

customer needs, as it serves as an essential approach to anticipate future needs.

This implies that the transport economic regulatory authority should repeatedly be required to conduct customer satisfaction surveys so as to ensure that regulatory instruments are updated accordingly. This is supported by Lawther (2000:196) who points out that customer satisfaction could be done by transport economic regulatory authorities through inter alia mail or telephone surveys.

5.8.2 Funding

Funding in any company needs no emphasis, thus it is desirable for self-sustainability to be a goal of all economic regulatory entities. The key aim of the transport economic regulatory authority should therefore be to see to it that concession companies are well regulated to forestall corruption. In support, McNutt (2005:186) asserts that it is imperative that its effectiveness be measured by some "in-house" effectiveness index, such as fines, which would constitute a constant source of revenue. McNutt (2005:186) further suggests that a newly established transport economic regulatory authority needs to have a complaint-receipt function with powers to investigate the complaints.

Most importantly, there should be enabling legislation that would enable concession companies and individual citizens to seek legal redress if aggrieved. For example, an aggrieved new entrant or operator wishing to enter the rail operating environment may lodge a complaint to the transport economic regulatory authority. McNutt (2005:186) went further to suggest that fines should not leave a convicted offender with large monopoly gains. The economic objective is to set fines and penalties and probabilities of conviction just high enough to induce optimal choices of behaviour and structure by operating concessionaires in the economy.

5.9 SUMMARY

This chapter dealt with transport economic regulatory regimes in the transport industry. The main focus pivoted on the period after the award of a bid, which is in this context called "competition in the market". The after-award phase

involves the preparation of the project before financial closure and includes negotiation of various project documents as well as obtaining debt and equity funding. It must be re-emphasised that the bidding process in a Public-Private Partnership project is a lengthy process that could take up to two years. After the bidders have been pre-qualified, the agency should prepare the bid evaluation criteria and the pre-qualified bidders should be asked to resubmit their bid after adjusting and complying with the set criteria. The winning bidder should be announced at this stage and an interim concession company should be established which would serve as a special purpose vehicle. The purpose of establishing a special purpose vehicle is to enable the sponsors to finance the project.

Practically speaking, an interim concession company would in essence be required to include shareholder companies that specialise in several of the tasks to be performed under the concession agreement. It has become a norm for an agency to require that an interim concession company invite the local investors in order to improve transfer of technology, and to provide jobs and training to local personnel.

In typical Build Operate and Transfer projects, there is a concept of "input supplier". The input supplier assumes the supply risk for an input necessary for operation of the project and it protects the concession company from possible failure in complying with the requirement that it provides resources. The input supplier may also be required to provide infrastructure that is needed to permit the delivery of inputs like cement. The lender group varies from project to project and may include a combination of private sector commercial lenders together with multilateral finance organisations. The lenders may not engage themselves in the operation of related activities.

Within the Build Operate and Transfer framework, there is also the "construction contractor" which forms a link with the project company and which should enter into a construction contract with an interim concession company in order to

undertake its obligation to the agency in the form of designing, building, testing and commissioning the project. Linked with the concession company, there is also "the operator" who normally operates and maintains the project from completion of construction until the end of the concession period. An important stakeholder in the structure is a shareholder who is an owner of shares in a concession company. The shareholders are governed by the shareholders' agreement, which is normally drafted by an interim concession company indicating when to distribute revenues to its members.

The chapter attempted to motivate the necessity for having the intervention of a transport economic regulatory regime that would navigate the process of Public-Private Partnerships in the road transport infrastructure. Section 5.3 of this study suggested that for a transport economic regulatory authority to do well in South Africa, it would need the technical assistance of international agencies from countries like Canada, New Zealand and the United Kingdom. The implication is that transport economic regulatory models from industrial countries should be carefully evaluated and considered for application in South Africa after thorough refinement and adaptation.

Having evaluated various transport economic regulatory regimes in various countries, the main task is to agree on the specific model to be adopted. The logical step would be to come out with a structure. This is very difficult, as one cannot prescribe a rule of thumb for selecting an ideal structure for a transport economic regulatory authority. It is, however suggested that the ideal structure should resemble that of commercial enterprises with a chief executive and a management board. In essence, the commencement of the unit should reflect a functional structure, which requires persons with well-defined skills and areas of specialisation to run it. In conclusion, the funding of a transport economic regulatory authority needs no emphasis, thus it is desirable that self-sustainability be a goal of the proposed transport economic regulatory authority. It should see to it that transport-operating companies are well regulated to forestall corruption. Most importantly, there should be enabling legislation that would enable

concession companies and individual citizens to seek legal redress if aggrieved.

CHAPTER 6

TRANSPORT ECONOMIC REGULATORY INTERVENTIONS

IN THE TRANSPORT INFRASTRUCTURE

6.1 INTRODUCTION

The previous chapters dealt with various kinds of approaches that examined the concept of Public-Private Partnerships, and this discussion ended in a number of proposals about the need for the establishment of a transport economic regulatory authority. In the transport industry, the process of monitoring and evaluating of Public-Private Partnerships is a very essential aspect to be executed by a transport economic regulatory authority and Royer (2005:68) describes this as a combination of semantically different concepts with different historical antecedents.

This chapter will mainly focus on assessing whether the study has accomplished the main and secondary objectives as outlined in Chapter 1. Having outlined the main objective of the study, it is also necessary to discuss the sub-objectives of this investigation, namely to examine the effects of the ongoing rollout processes of Public-Private Partnerships in South Africa and in other countries and also to find out to what degree experience from other industrialised countries has influenced the South African transport industry.

The study explored this in order to be in a position to analyse and also to assess what kind of model would in the final analysis best suit the South African situation after weighing all available options.

Furthermore, the study examined the efficacy of the concept of competition for and in the market with the ultimate aim of recommending the establishment of a transport economic regulatory authority to regulate among other

things, the toll road industry and also to assess how the regulatory intervention mechanism would operate in the road transport infrastructure.

From the above information, the design of an ideal transport economic regulatory authority is undertaken with the aim of providing a structure that would serve as a strategy to lure investors to invest in the development of the road industry.

The strategy implementation phase focuses on what the transport economic regulatory authority is expected to deliver. The final phase then deals with the evaluation of the transport economic regulatory authority in terms of assessing whether this authority promotes Public-Private Partnerships as a viable strategy to attract investment in the road infrastructure.

6.2 ASSESSMENT OF INTRODUCING AN OVERARCHING TRANSPORT ECONOMIC REGULATORY AUTHORITY

Based on the above main objective of the study, a host of countries' Public-Private Partnership arrangements were analysed. Annexure 2 was created as a list of countries that underwent a Public-Private Partnership process and some ended up establishing regulatory authorities to ensure that controls are imposed on newly formed concession companies.

From the literature findings, the United States of America had to establish a Transport Regulation Board which has the regulatory oversight over all sectors. These regulatory agencies are independent from policy makers. Based on the findings above, it would be valid for South Africa to consider establishing an independent transport economic regulatory authority with a regulatory oversight over all transport sectors.

Derived from the United States of America's experience as stated in section 5.1.3 of this thesis, good coordination between agencies was endured through assigning an agency's board member to other competing agencies. South Africa could consider adopting the same approach by encouraging coordination between the South African National Roads Agency Limited, the Competition Commission and the proposed transport economic regulatory

authority. It is recommended that some of the members of the proposed transport economic regulatory authority also be on the board of the Competition Commission. This would help in alleviating any potential dysfunctional conflict that may arise as a result of possible duplication of roles and responsibilities of each institution.

A wealth of experience gained from the United Kingdom is that a Highways agency was established and was assigned to manage, maintain and improve the national road network. In order to deal with rail transport infrastructure, the Rail Safety and Economic Regulators were subsequently established. Although this tallies with the worldwide trend towards the creation of separate and specialised regulatory entities, the United Kingdom experienced problems with regard to regulatory co-ordination. This led to the government considering the amalgamation of both the rail safety and economic regulator to become one overarching entity. Based on this trend, it appears that South Africa would be taking the right decision in considering establishing an overarching transport economic regulatory authority.

On the basis of the experience gained from Canada, the Canadian Treasury Board was established to facilitate Public-Private Partnership projects. The regulatory function is executed by the Highway Operations Control Centre which works hand in hand with Environment Canada to anticipate road conditions and surface temperatures. What can be deduced from the Canadian regulatory regime is that the economic regulatory authority encompasses environmental issues which position the institution on the overarching level. As a lesson for consideration in South Africa is that the transport economic regulatory authority could consider incorporating environmental issues within its tasks and responsibilities.

The Philippines has established a Sectoral Agency called specialist BOT unit that co-ordinates, design and implement Public-Private Partnership projects. The study indicated that projects may also be proposed by the Toll Regulatory Board, Philippines National Construction Company or the Department of Public Works. The regulation of concession contracts is done by any of the above mentioned

regulatory bodies.

The Hungarian government passed a law for the formation of a strong legal framework for the control of privately financed projects. It thereafter established the Bureau for Motorway Concessions that facilitated Public-Private Partnership projects. The country was faced with regulatory challenges with respect to toll rates regulation. What could be adopted by South Africa from the Hungarian approach is the drafting of a legal framework for the control of privately financed projects. However, it needs to be pointed out that South Africa has made great strides with respect to this aspect as the Public Finance Management Act has been enacted to deal with public financial matters.

6.2.1 Justifying regulatory authority as a valid intervention in the management and operation of transport infrastructure

Section 1.2.1 of this study proposed to make rational suggestions as to what South Africa should do in order to maintain mutual relationship between transport infrastructure providers and the users. It needs to be pointed out that chapter 4 outlined the users' rights as enshrined in the constitution. Regulations are therefore needed to ensure that both the existing and potential road users are protected. A body responsible for the execution of these regulations is needed and it is therefore justified that a transport economic regulatory authority be established. The regulatory authority should be urged to outline the quality of service standards road users are entitled to expect. The lines of communication or access to the regulatory authority to seek redress of grievances should be made explicit and easily accessible to all road users.

The outcome of the literature reveals that where the establishment of a regulatory authority can be justified on public interest grounds, an independent regulatory authority appears to be preferable as compared to regulation by a government department. It should however, be acknowledged that a fully independent economic regulatory authority may not be achievable in the short

term as this would need political will to set it on the ground.

Section 2.11.3 outlines the experience gained from France where the Toll Act was drafted to authorize toll roads operators to levy tolls to finance construction, maintenance and operation of highways. The agency called Highway Administration was formed and it was mainly responsible for the award of concessions as well as the management of the road network. A need for the establishment of regulatory authorities evolved and this was seen as the right intervention in the management of transport infrastructure. It would therefore be a valid intervention for South Africa to consider introducing a regulatory authority as other processes such as establishing a roads agency has been fulfilled.

The Australian experience suggests that each state has its roads agency that is responsible for the maintenance and development of the national highway network within its boundaries. Government owned utilities are being transformed into Government Business Enterprises that operate as businesses. Such businesses are subjected to the national competition policy of the Economic Regulator.

If the Australian approach is followed by South Africa without any modifications, it would mean that the newly formed private sector entities or concessionaires would be subjected to the Competition Commission of the Department of Trade and Industry. This would therefore defeat the objective of establishing a specialized overarching transport economic regulatory authority.

6.2.2 The promotion of the interest of government, toll road industry and road users.

Section 1.2.1 of this study intends to make rational suggestions as to what South Africa should do in order to maintain mutual relationship between transport infrastructure providers and the users. The introduction of a transport economic regulatory authority could serve as a valid intervention as reflected in Section 5.7.1 where it is stated that the function of the transport economic regulatory

authority would include, where applicable, promoting effective planning, managing competition, subsidy management, performance compliance, and public and consumer protection.

It will thus require sufficient information and reporting from operators, asset owners and transport authorities. The transport economic regulatory authority is also expected to promote the issue of affordability and financial sustainability of operations. By so doing, it will be promoting the interest of among other things, the toll road industry.

It is also expected of a transport economic regulatory authority to create a balance between service quality and the cost incurred by road users. In terms of satisfying government's interests, the promotion of strategic transformation and attraction of investment would be seen as some of the critical areas to be addressed by the transport economic regulatory authority. By so doing, the transport economic regulatory authority ensures that the interests of government, industry and road users are protected and thus satisfying the objective of the study as listed above.

With respect to the promotion of the interest of users, Chapter 4 intensively investigated the rights of road users as contained in the Bill of Rights and the Constitution. The researcher has strongly argued that the following rights as propagated by President Kennedy be honoured and these are:

- the right to make meaningful choices;
- the right to be heard;
- the right to safety; and
- the right to be informed.

It is therefore hoped that the proposed transport economic regulatory authority would ensure that the interests of government, the toll road industry and transport users are protected. The immediate establishment of such an authority

is therefore justifiable as the balancing of these interests is critical.

6.2.3 Examination of the effects of the Public-Private Partnership rollout process in other countries

Some of the countries that were researched in the quest to determine the effects of the rollout process of Public-Private Partnerships are, the United States of America, Italy, France, the United Kingdom, Japan, Mexico, Austria, Canada, the Philippines, Australia and New Zealand. The reason behind the selection of the listed countries above is that they had an effect on the thinking that took place in South Africa in the sense that the Public-Private Partnership initiatives undertaken in South Africa have to a large extent elements of resemblance with what is happening in the above countries.

The influence of the experiences gained from the abovementioned countries on the ongoing rollout processes of the Public-Private Partnership in South Africa finds expression in Chapter 2. In Chapter 2 Section 2.11.1, the Public-Private Partnerships that were studied in countries such as the United States of America (USA) are discussed in detail. For instance, the USA has a strong tradition of how road users should pay for the use of roads through road-user charges and all the revenues so generated are dedicated to the improvement of roads. This has ensured that the money so generated contributes positively by way of improvement of the road infrastructure in the United States of America. South Africa could do well in copying this model of generating funds and also utilising them for improving the quality of the road infrastructure.

Section 2.11.2 dealt with the experience gained from Italy where twenty-two concession holding companies are owned by public bodies or local authorities. Reference was made to a concession company such as Austostrada which manages 52 percent of toll freeways successfully, and which may become a model for South Africa. The concession scheme adopted by the Italians is that of Build Operate and Transfer (BOT), which is valid for a period of 30-35 years. The loan is guaranteed by the state and the road is handed back to the state at the end of the concession period. Build Operate and Transfer creates room for

the investors to channel their resources in the development of road infrastructure in the country. In this context, the BOT model was effectively used as a strategy by Italy to attract investment in the road infrastructure.

Section 2.11.3 refers to the French experience regarding the effect of Public-Private-Partnerships where it is stated that in 1955, a French law was passed to allow the toll financing of highways. Public control was maintained by granting concessions only to local public organisations, chambers of commerce or a mixed company in which a public interest held the majority of shares. As a lesson from the French, it is evident that business communities, such as the South African Chamber of Commerce, are strongly encouraged to participate in road infrastructure projects. This has a positive effect as a Public-Private Partnership would take place within a strategy that is appropriate for implementation in South Africa.

Section 2.11.4 states, “When roads are being financed in the United Kingdom, the Highway Agency takes the lead. The Highway Agency examines the way the procurement process is being done as well as the value for money likely to be obtained from the contracts”. In a similar fashion, the South African National Roads Agency is facilitating the process as a granting authority but the study is of the view that it would be ideal to have an independent transport regulatory authority that ensures that the concessioning processes are done in the right way.

Section 2.11.5 deals with the Japanese experience regarding the rollout process of Public-Private Partnerships. The Japanese government established a network of freeways which were financed from private loan capital and government borrowings. The criteria were stipulated for toll rates, implying that the road had to cover all costs and still remain equitable relative to the users' ability to pay and most importantly, rates should not exceed the benefit of using the toll road. The rollout process in South Africa has some similarities with the Japanese process in that there are some toll roads which are operated by the National Roads

Agency and which are financed by the Department of Transport's allocation while the concessioned routes are financed by the private sector. The gradual concessioning of national routes would create a favourable platform for private investors as happened in Japan.

Section 2.11.6 discusses the experience gained in Mexico where the secretariat to the inter-ministerial commission, located within the Ministry of Finance, is used as a channel for managing concession loans or donor support to the Public-Private Partnership programme. The approach followed by South Africa is similar to that adopted by Mexico in the sense that the National Treasury has established a Public-Private Partnership management unit that is in charge of co-ordinating Public-Private Partnership projects in the country. This unit is used as a channel for managing PPP projects of various institutions. The facilitation of these PPP projects would ultimately create opportunities for private investors to participate in the transport infrastructure development as happened in the studied countries.

Section 2.11.7 relates to the experience earned in Austria where government organisations were encouraged to take charge of their affairs and to compare their performance with those of the private sector. The organisations adopted strategic management principles and charters to define the services delivered to citizens whom they now perceive as "clients". By way of borrowing, the concept of charters is now featuring very strongly in South Africa as the country goes about its rollout programmes that involve Public-Private Partnerships as was the case in Austria.

Section 2.11.8 deals with the experience gained from Canada in that the Canadians' experience is based on collaboration with public service delivery, which is often referred to as Alternative Service Delivery or ASD. The experience gained from Canada can be seen in the recent collaboration methods used in South Africa and other countries. Within this model, the Canadian government recognises the need to develop collaboration as a means of allowing its foothold

on the global market scene to endure. Having made this observation, the study is of the opinion that this could have important lessons for South Africa in the sense that collaboration is now encouraged as an alternative service delivery mechanism in municipalities of the studied countries.

Section 2.11.9 discusses the experience gained from the Philippines where the government created a novel institutional structure to support the country's large infrastructure programme. National, provincial and municipal authorities were selected and awarded projects based on a list of priorities which had to be approved by the Investment Coordination Committee. As a lesson for South Africa to attract investors, an Investment Coordination Committee should be established. This committee could provide advice to investors who wish to invest in road infrastructure. Furthermore, the committee could provide technical assistance and training to national, provincial and local government officials on how to design and implement road infrastructure projects.

Section 2.11.10 points out that Australia has three spheres of government, namely, federal, state and local. The federal government owns the National Highway System and the State and local governments take care of state and local roads respectively. Individual government departments are responsible for the design of concessions. Each state has a road agency with statutory authority to manage, plan and maintain the state road network.

Section 2.11.11 handles the experience earned from New Zealand where the New Zealand government has created a two-level tier of governmental structures. In this structure, the national government owns the National Highway System and has contracted its management out to Transit New Zealand, a government owned entity, which is a business concern. Ownership and maintenance of all other public roads in the country however rests with the respective local governments. Local governments are at liberty to contract roads out for construction and maintenance. The same strategy would be ideal for

South Africa to adopt and refine to suit the situation.

Section 2.11.12 relates to the experience gained from Hungary. In the early 1990s, the Hungarian government recognised that demand for new road transport capacity could not be met from budgetary resources. It therefore established the Bureau for Motorway Concessions under the Ministry of Transport, Communication and Water Management. This was meant to find private financing solutions for over 500 kilometres of highways and bridges. The government also passed a law that stipulated that a strong legal framework for the control of privately financed infrastructure projects be formed. It is therefore not surprising that South Africa had to draft an infrastructure legal framework to be able to facilitate the Public-Private Partnership project in Gauteng (South Africa).

6.2.4 Effects of the rollout process of Public-Private Partnerships in South Africa

The effects of the ongoing rollout processes of Public-Private Partnerships in South Africa is summarised in Section 2.2.1 of this study, which states,

..."Public-Private Partnerships should be seen as a means to acquire resources or technological skills from a private sector in order to assist in the implementation of strategies for the accomplishment of the national objectives in general and those of the transport sector in particular".

Specific reference is made to the South African toll road industry where flexibility in the acquisition of technological innovations, such as the introduction of an electronic toll collection system, is granted by the National Roads Agency to the Bakwena Toll Concession Company.

Borrowing from the French experience as stated in Section 2.11.3 of this study regarding the drafting of enabling legislation as a requirement for the rolling out of Public-Private Partnership, the Gauteng Department of Public Transport Roads and Works in South Africa has drafted a legal framework on infrastructure

that serves as a frame of reference on issues related to expropriation. The use of this provincial legal framework has enabled the Gauteng Department of Public Transport to expropriate land with ease for the rollout of the Gautrain Public-Private Partnership project. The researcher therefore recommends that other provinces also develop provincial legal infrastructural frameworks so as to roll out Public-Private Partnerships on a provincial level.

As reflected in the French experience discussed in Section 2.11.3, the toll income collected by concession companies from road users is used to maintain toll roads so that there should be value accruing to the road user in terms of a better quality road infrastructure. In this respect, based on the N3 Toll Concession Company Board of Directors' plan, the company is embarking on the implementation of a strategic marketing strategy. According to this strategy, motorists are supplied with information that gives them a comprehensive history of the areas along the corridor. This serves to differentiate toll routes operated by Public-Private Partnerships from other roads. This would attract more tourists as such a history is vital for the tourists. Annexure 1 gives detailed information about the N3 corridor stretching from Heidelberg in Gauteng to Cedara in KwaZulu-Natal.

According to Section 3.2.2 of this study, the environment can also include cultural, historic and social components. This section further argues that these components have not been given sufficient attention in the past particularly when roads were constructed. The study therefore recommends that in Public-Private Partnership projects that deal with the construction of roads, the impact on all these components should be given sufficient consideration particularly because of the reciprocal nature of transport and its immediate environment.

Section 4.3 of this study argues strongly that, if economic progress is to be achieved in South Africa, competition laws need to apply to all companies, regardless of their classification. The researcher is of the opinion that concession companies should be subjected to competition laws and the ideal situation would

be to establish a transport economic regulatory authority to deal with all technical aspects concerned with the transport systems of all modes.

Section 4.3 also makes a suggestion that there is a need for the development of corporate governance principles to run the road industry in an increasingly transparent manner. This aspect is important because a transport economic regulatory authority should be seen as an ideal body adhering to the principles of corporate governance and ensuring that the rights of road users, the toll road industry and government are honoured.

Section 4.3.4 deals with the Public-Private Partnership phenomenon. The introduction of Public-Private Partnerships in South Africa was aimed at affording private sector entities the opportunity to compete for the market, so that the establishment of a regulatory authority is therefore justifiable in order to regulate the market.

Section 4.6.1.1 points out that the user should be given a choice and sovereignty. The withdrawal of an alternative non-toll route would therefore contradict the principle of free competition. It is therefore recommended that a comprehensive study be conducted testing the concept of road users' freedom of choice and other related rights as contained in the Bill of Rights.

Section 4.8.2 makes a suggestion along the lines of creating an ombudsperson for each regulatory agency or for all regulatory agencies. This suggestion is seen as one way of ensuring that the toll road industry and road users' rights are addressed while waiting for the establishment of a fully-fledged transport economic regulatory authority to be established.

Section 5.2.7 states that an established agency could issue concession contracts by means of a contract or authorisation. A concession issued by means of a contract involves the agency entering into a contract with the private sector project company which contains the mutual project obligations. In the case of a concession, issued by means of authorisation, the applicable legislation would

normally prescribe the form of contract. Given the two approaches of issuing a contract, the researcher argues that the rolling-out of Public-Private Partnership projects would require issuing concession contracts by means of the former approach because there should be a mutual relationship between the two parties and a thirty-year contract as it is already happening in South Africa requires such a relationship.

Section 5.2.8 relates to flexibility in negotiating a concession contract. The study quotes Hodge and Greve (2005:73) who strongly stress that flexibility should be made mandatory for projects that involve public assets and a risk-sharing relationship over a period of 25-30 years. This should be put into place in order to resolve problems if and when they arise. The researcher concurs with these two authors and wishes to add that this aspect be captured within the South African supply chain guidelines so as to guide prospective bidders. All conditions should also be clearly articulated within the terms of the project contracts and should not be left to the discretion of the contracting parties.

6.2.5 Assessment of the model that would suit South Africa

Strategy formulation was defined in Section 1.7.2 of this study as "a process of developing long-range plans for the effective management of environmental opportunities and threats in the light of corporate strengths and weaknesses" (Hunger, 1989:14). The long-range plans for government to exploit investment opportunities in the road infrastructure management effectively received attention through the Public-Private Partnership initiatives that are being implemented every year. Prior to the selection of an appropriate regulatory intervention strategy for the road infrastructure, a model for South Africa is suggested below.

6.2.6 Suggested model for South Africa

After having identified and highlighted the fact that Public-Private Partnership projects are in the growth phase in South Africa, it is opportune to have a better understanding of how the process unfolds as well as the relevance of the

intervention of transport economic regulatory authority. To this end, Figure 3.1 in Chapter 3 of this study gives an overview of the history leading to the establishment of the South African National Roads Agency which then assumed the responsibility of a granting authority. Hence it awarded concession contracts to concessionaires such as the N3 Toll Concession Company. The second model detailing a Public-Private Partnership process is depicted in Chapter 5 (Figure 5.1), which shows the relationship between the South African National Roads Agency Limited as a granting authority, the principal or Department of Transport and the concession company (or the Special Purpose Vehicle, SPV). Flowing from Figures 3.1 and 5.1, a Public-Private Partnership model was designed as depicted in Figure 6.1, which shows various phases such as broad strategies at national government level, the granting authority facilitating competition for the market and the process entering the construction phase where a number of construction management strategies are suggested. The final phase in this regard is operation, which calls for the implementation of competitive operational strategies by concession companies. Such competitive strategies include the pricing and service quality executed in the toll road industry. The challenge here is the implementation of both the construction management and competitive operational strategies that should contribute to realising the broad strategies as set at national government level. The study therefore sees this phase as the right time to ensure the full transport economic regulatory intervention as indicated in the model (see Figure 6.1)

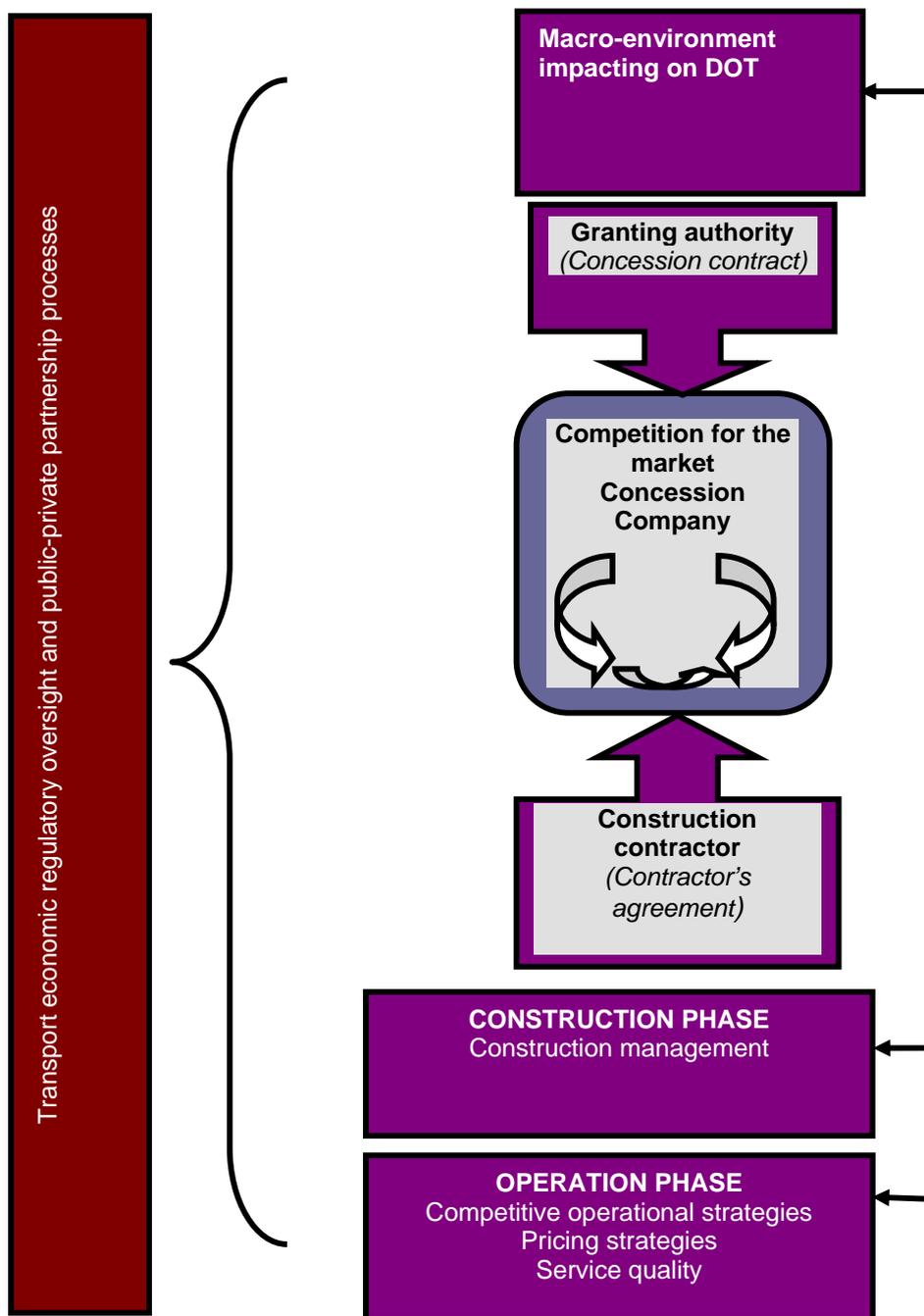


Figure 6.1: Transport economic regulatory oversight and PPP processes

In Section 3.4.1, reference is made to setting up a contract-executing toll road agency which is similar to a private sector project implementation unit and which

is specially set up to implement donor-financed infrastructure projects. In as far as the model's applicability to the South African situation is concerned; it could be applied as a transitional model to ascertain how it can contribute to South Africa's economic developmental objectives such as job creation.

Section 3.4.2 of the study refers to private sector managing under the toll road agency. This model involves the contracting out of the management function for the whole road network to the private sector. The private sector does the work under the jurisdiction of a selected road agency. The critical evaluation of this model indicates that the model does not create room for the private sector to come with investments, and therefore it may not constitute an effective strategy for attracting investments unless it adopts a concession contract which would make provision for investments by the private sector.

6.2.7 Examining the efficacy of the concept of competition for and in the market

Competition for the market was dealt with in Section 4.4.1 during the discussion of those activities that constitute the tendering process. This section went further to discuss various key stages in the procurement process, namely the consultation stage, the deadline phase, the tendering aspect, the negotiation stage, the analysis and selection phase in which the preferred bidder is identified. This process then ends with the technical requirements and contract terms being concluded.

This process is seen as one way of allowing competition in the market to take place; and it is also a significant way of attracting investors from all walks of life as this presents an opportunity for companies to compete for work or projects.

Section 5.6.3 clearly states the importance of introducing competition with a view to nullifying monopolies. In this respect, it is argued that the management of relationships with stakeholders would be achieved if the establishment of a transport economic regulator is meant to oversee all modes of transport.

Competition in the market refers to that type of competition that takes place after the bid has been awarded. This type of competition requires the intervention of a transport economic regulatory authority which would regulate, *inter alia*, the relationship among modes of transport. The study has indicated that a transport economic regulatory authority is essential to regulate competition *for* the market as well as *in* the market.

6.2.8 Assessment of a regulatory intervention mechanism in the transport infrastructure

It is important to emphasise the fact that the main aim of a study of this magnitude and level is to contribute positively in suggesting or recommending an appropriate regulatory intervention mechanism in the transport infrastructure in the country because the existing structures are currently deemed inadequate.

In Chapter 5, a number of regulatory regimes have been suggested. Section 5.5.1 made a suggestion for a type of regulation by a specific regulatory body, which would lead to transport regulation being undertaken by an expert body with full understanding of public sector economics and operations. The researcher is of the opinion that an appropriate strategy should be to create a body of expertise within the Department of Transport to deal with transport infrastructural issues. To do this, proposals or solicitations from people with expertise in public sector economics should be called for. Such a step would create room for other related disciplines required for establishing and sustaining a transport economic regulatory authority to come on board.

Section 5.5.2 outlined the practical challenges of implementing transport economic regulations for such regulations require the services of technical expertise such as accounting, auditing, transport engineering, law and economics. While it is accepted that the above disciplines coupled with appropriate experience are very scarce and indispensable in South Africa, the study nevertheless suggested in Section 5.5.3 the establishment of regional transport regulatory advisors to facilitate information exchange which is

necessary even though it is of a non-binding procedural nature. The calling for proposals for the creation of a database of regional transport regulatory advisors could be a practical strategy for the building of skills capacity in the transport economic regulatory environment.

Section 5.5.3 also looked at the option of establishing a multinational regulatory authority which is motivated by the fact that South Africa requires considerable cooperation from SADC countries. Thus establishing a regional transport economic regulatory authority might be a realistic strategy option but it requires the cooperation of neighbouring countries for its ultimate success. The researcher therefore recommends that the current mandate of the Cross-Border Road Transport Agency be explored particularly with respect to upgrading it in order to be able to deal with transport economic regulatory issues across the South African borders.

Section 5.4 investigates the Gautrain project, which is a Public-Private Partnership initiative in the Province of Gauteng in South Africa. After the announcement of the preferred bidder, both the public and private sectors agreed to the appointment of an independent certifier whose role it is to monitor the progress and the impact made by the concessionaire on the transport industry constantly in terms of the contract.

None of the African countries has ever before come out with a mechanism that measures the impact of the Public-Private Partnership processes on the performance of the private sector enterprises. While the researcher commends the initiative of Gauteng Province in introducing an independent certifier, it would be ideal if the function of an independent certifier could be seen as a transition measure towards the establishment of a fully fledged transport economic regulatory authority.

6.3 OTHER AREAS INVESTIGATED IN THE STUDY

6.3.1 Operation of regulatory intervention mechanism in the road infrastructure

During the operation phase of a Public-Private Partnership project, a transport economic regulatory authority may be required to intervene to ensure that the concessionaire has reserved sufficient funds for maintenance and repair of the assets for the transport economic regulatory authority's area of jurisdiction (see Figure 6.1). This evaluation process needs to be done to ensure that service quality is not compromised, thus ensuring that users derive value for money paid in the form of toll fees.

A transport economic regulatory authority could also intervene to assess whether the parties to the contract have the financial capability throughout the operation phase. This approach is strongly supported by Estache and De Rus, (2000:286) who suggest that the concessionaire should be monitored through reviews and audits. If the concessionaire's performance is below standard, the contract should specify the nature and type of sanctions to be imposed.

6.3.2 Regulating the amount to be recovered by operators through toll systems

If a transport economic regulatory authority has to take social aspects into consideration when determining toll fees, it implies that government must impose a special treatment of some user groups and have their use of the roads financed through subsidies. This requires a special investigation which needs to inform the Department of Transport's National Land Transport Policy direction. An added regulatory challenge deals with how high a toll really could be? It is recommended that a special study be conducted to assess the user's willingness to pay tolls with a view to savings on the travel time.

6.3.3 Assessment of how the regulatory intervention mechanism would operate

Section 5.6.3 argues that the use of a single regulator for several industries, such as the road and rail infrastructure, would be preferable because it would make it possible to share fixed costs, scarce talent, and other resources and thus lead to the consolidation of expertise in a cross-cutting manner. The fact that one transport economic regulatory authority would take responsibility of multiple modes of transport means that fruitful results would in the long term come about because of cross-pollination of skills among different specialists under one roof.

6.3.4 Justification for the establishment of a transport economic regulatory authority

A need for the establishment of a transport economic regulatory authority to protect the needs of users, the transport industry and government was emphasised throughout this study. This has in essence been supported by the White Paper on National Transport Policy (Republic of South Africa, 1996c:16), where it is explicitly stated that "regulatory structures will be established where they are appropriate but do not exist". The White Paper goes on to say that infrastructure will be regulated where monopoly situations could occur. Setting up a transport economic regulatory authority is therefore justified and valid as it would serve as a good intervention. The Department of Transport is urged to prepare a business plan which needs to give a comprehensive total cost structure required to set it in operation.

6.4 SUMMARY

This chapter dealt with various kinds of approaches that examined the concept of Public-Private Partnerships, and a need for the establishment of a transport economic regulatory authority was expressed throughout the study. The process of monitoring and evaluating Public-Private Partnerships is seen as an essential aspect of strategic management, and a transport economic regulatory authority should fulfil the function of monitoring Public-Private Partnership processes.

From the study, it is clear that a transport economic regulatory authority should be able to promote the interest of various stakeholders, such as government, the toll road industry and road users, to name a few. The experiences from a number of industrialised countries were investigated to assess the extent to which they have influenced the South African transport industry. This has culminated in the suggestion of a Public-Private Partnership model, which is believed to be suitable for the South African situation after weighing all available options.

The establishment of a transport economic regulatory authority serves as an ultimate strategy to monitor, evaluate and control Public-Private Partnership processes and issues with transport economic implications. In the assessment of regulatory intervention mechanisms in the road transport infrastructure, this study has suggested regulatory intervention mechanisms such as a regulatory body with full understanding of public sector economics and operations. It is further suggested that a body of expertise within the Department of Transport be created to deal with transport infrastructural issues.

Among the practical challenges identified in implementing transport economic regulations are the scarcity of technical expertise such as accounting, auditing, transport engineering, law and economics. To overcome these challenges, it is suggested that there should be regional transport regulatory advisors to facilitate information exchange. It is further suggested that there should be a call for proposals by the Department of Transport for the creation of a database of regional transport regulatory advisors. The intention is to build skills capacity in the transport economic regulatory environment.

Establishing a multinational regulatory authority might be a possibility as South Africa requires the cooperation of neighbouring countries for its ultimate success. The current mandate of the Cross-Border Road Transport Agency should be explored particularly in order to find out whether it is currently able to deal with transport economic regulatory issues across the South African borders.

The appointment of an independent certifier by the Gauteng Department of Public Transport Roads and Works for the monitoring of the progress and impact made by the concessionaire is commended, but should be seen as a transition measure towards the establishment of a fully fledged transport economic regulatory authority.

It is interesting that during the operation phase of a Public-Private Partnership project, a transport economic regulatory authority is required to intervene because it has to ensure that the concessionaire reserves sufficient funds for maintenance and repair of the assets. Among the tasks to be performed are evaluation and monitoring, which should ensure that service quality is not compromised, thus ensuring that users get value for money. It is also important to assess the concessionaire's financial capability through reviews and audits throughout the operation phase.

With respect to the transport economic regulatory authority's role of promoting the interest of government, the toll road industry and road users, it is suggested that lines of communication be opened to link with consumers, operators, asset owners and transport authorities. It is strongly emphasised that the fundamental rights of users be honoured, namely the right to make meaningful choices, the right to be heard, the right to safety and the right to be informed.

The efficacy of the concept of competition *for* and *in* the market was examined. With regard to competition *for* the market, the study reveals that those activities that constitute the tendering process are crucial as they level the playing field for prospective bidders. The key stages in the procurement process were listed and include the consultation stage, deadline, tendering, negotiation, analysis and the selection phase in which the preferred bidder is identified. This process ends with the technical requirements and contract terms being concluded and is a significant way of attracting investors from all walks of life.

CHAPTER 7

FINDINGS, SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

7.1 INTRODUCTION

This chapter provides a summary of findings that were derived from the extensive analysis of Public-Private Partnerships in different parts of the world. Internationally, the decade of the 1980s reflected a growing trend in the establishment of Public-Private Partnership arrangements. It is expected that Public-Private Partnerships will remain a primary tool in the provision of services and facilities during the twenty-first century. The chapter covers among other things the conclusions and recommendations of the significant role played by Public-Private Partnerships in South Africa, as well as the proposal for the establishment of a transport economic regulatory authority to regulate the competitive behaviour of different modes of transport in South Africa.

7.2 ANALYSIS OF THE CONCEPT OF PUBLIC-PRIVATE PARTNERSHIPS

7.2.1 Findings derived from the study

- Both sectors (private and public) should be fully involved in service delivery based on each party's distinctive competency in the area of involvement;
- there should be a dictate of efficiency and fairness and the risk should be allocated to those who will benefit most from the project;
- the partners should strive towards the accomplishment of a common primary objective; and
- compliance with the overall legislative framework is absolutely essential, otherwise any effort towards a Public-Private Partnership may be defeated.

The study unveiled that in Australia, Government Business Enterprises (GBEs) that operate as businesses are subjected to the national competition

policy and this needs to be investigated by South Africa for the possible adoption and refinement of the policy.

7.2.2 Summary

This chapter dealt with the analysis of the concept of Public-Private Partnerships. The outcome of the analysis unveiled the fact that an agency that is in partnership with any sphere of government may not qualify to be a Public-Private Partnership but rather a Public-Public Partnership. Of fundamental importance in the partnership is that both sectors should be fully involved in service delivery based on each party's distinctive competency in the area of involvement. However, for this to happen as planned, the intervention of the transport economic regulatory authority is needed.

Certain basic elements need to be considered if a partnership is to be managed successfully. These elements consist of the intention to genuinely participate in the project, the desire to strive towards the attainment of a common objective, the ability to design an appropriate organisational structure, the capacity to demonstrate sensitivity to issues and the ability to assess environmental factors.

In terms of the different forms of Public-Private Partnerships, the study unveiled that there are several ways by which the private sector could be engaged in the public service. In the process of engaging the private sector in any public service, the first logical step followed in South Africa was to form the South African National Roads Agency Limited. This was meant to serve as an intermediary between the Department of Transport and concession companies. It should be noted that the public service in this context should not be commercialised as a way of freeing them (public service) from public accountability and control by the legislature. In fact, the public service must remain in control and be subjected to public accountability in any Public-Private Partnership agreement.

The concept of concession was defined as the granting of an exclusive right to provide a service without payment by the authority. The authority referred to in

this regard is the South African National Roads Agency Ltd, which is currently dealing with making decisions on tariffs charged by concession companies or imposing minimum service requirements. Concession contracts make provision for concessionaires to be technologically innovative as they emphasise output specifications rather than input.

A variety of concession contracts is designed in such a way that the risk is eventually transferred to the private sector. Such concession contracts involve the Build Own Operate (BOO), where the concessionaire is required to build, own and operate the infrastructure. Such concessions typically are on a fixed-term basis, after which the operating rights can be transferred to other private service providers. The Build Own Operate does not involve the transfer of the assets back to government. This means that the assets remain private and this may give investors more protection and could facilitate the financing of the concession by making these assets available as collateral.

Under the Build Operate Transfer (BOT), the private investors finance and build roads at their own risk, operate these roads for an agreed period, and then transfer ownership to the public sector. In the case of a Build Transfer Operate (BTO), a new facility is built on a turnkey basis with private capital, and the ownership title is transferred to the host government after completion of the construction. The private contractor operates the facility for a fixed term under a separate agreement.

A Rehabilitate Operate Transfer (ROT) is the same contractual arrangement as a BOT, but for the rehabilitation of an existing facility rather than the construction of a new one. A Rehabilitate Operate Transfer requires a contractor to repair and operate a public-owned facility, which is transferred back to the public sector

A Build Own Operate Transfer (BOOT) arrangement or agreement provides for a project company to finance the building of an infrastructure facility and to operate it for a fixed period, after which the ownership over the assets is transferred to

the host government. A lease is a contract that provides a right to the use of the assets, legally owned by the lessor, in exchange for a specified rental paid by the lessee. A lessee rents state-owned facilities for a time, and is responsible for the expense of the operation, maintenance and management functions associated with these.

The study indicated that Public-Private Partnership projects involve significant investment in terms of time, energy and capital. The projects are generally of social significance and have public policy consideration, hence emphasis is more often than not on job creation and eradication of poverty. The analysis of Public-Private Partnerships in various countries revealed that the concept is interpreted differently by different countries. The concept may take many forms, from simple commercialisation to a point where the private sector is dominant. Of fundamental importance is that for the partnership to be sustainable, there should be a long-term agreement between the public and private sectors to provide and operate a transport infrastructure or services. There should be a sharing of responsibility and risk by the public and private partners. As the transport system operates in a turbulent macro-environment, a great deal of challenges brought about by this dynamic environment reflects the complexity of the system within which highways operate. Many disciplines such as transport economics, engineering, environmental science, the social science, and law, to name a few, must be involved in finding solutions.

7.2.3 Conclusions

- Liberalisation and concessions are fashionable in many countries. These concepts need to be encouraged in South Africa.
- Build Own Operate may not be ideal for South Africa due to the fact that the public sector's power of eminent domain may not be exercised.
- Build Operate Transfer is ideal for South Africa due to the fact that government's ownership of infrastructure is maintained.

- Build Transfer Operate may not be ideal for South Africa due to the fact that government is denied the ownership of infrastructure.
- Rehabilitate Operate Transfer affords the public sector the ability to exercise its power of eminent domain.
- Build Own Operate Transfer is still to be tested. For the mere fact that infrastructure is transferred back to the public sector at the end of the concession period, it may be tested for its functionality.

7.2.4 Recommendations

As the rationale for Public-Private Partnership is based on the fact that government needs capital injection, it is recommended that more spatial development initiatives be identified where the Public-Private Partnership concept can be applied. It is envisaged that this would be a method of acquiring resources or technological innovations. Among the various forms of Public-Private Partnerships that are applicable in the transport infrastructure, it is recommended that the franchising and concession agreements be encouraged as they are long term by nature and would therefore give the private sector enough opportunity to mature in the field.

Japan has experienced challenges with respect to the resistance to change on the part of trade unions during the rollout of its Public-Private Partnership projects. It is therefore recommended that the unions be brought on board as part of the public participation process during the unfolding of the Public-Private Partnership processes in South Africa.

7.3 STRATEGIC OPTIONS AS DERIVED FROM THE ANALYSIS OF THE ENVIRONMENT

7.3.1 Findings

The present chapter dealt with the reciprocal relationship between the environment in which the toll road operates and that constituted by the

surrounding macro-environmental factors. Ecological economists are of the view that the economy and the natural environment are interdependent systems. From a strategic management point of view, a transportation industry, just like any other industry, needs to focus on the broader environment that is referred to as a general environment.

Within this context, the role of the Department of Transport within the macro-environment needs to be analysed. In a way, this chapter examined the entire remote environment as well as how it impacts on the Department of Transport especially with regard to the role of the emerging commercialised entities such as the National Roads Agency.

In the toll roads industry, technology has greatly contributed to the establishment and development of the field of intelligent transportation systems (ITS) that are nowadays driving various efforts intended to secure safety on our roads through amongst others the dissemination of information about the road network that allows authorities to take pro-active action in advance.

In terms of the impact of ecological factors on the transport industry, it is important to note that every effort must be made to comply with the National Environmental Management Act (NEMA), Act No 107 of 1998, the concessionaire is expected to bear all the risks and costs with respect to environmental damage caused by the project. To this end, the concessionaire has to procure the services of a specialist to undertake environmental studies in compliance with the National Environmental Management Act (NEMA), Act No 107 of 1998.

In dealing with feasibility studies of Public-Private Partnerships, it is imperative to acknowledge culture from both the ecological economics and strategic management points of view. According to South Africa's National Heritage Resource Act, Act No. 25 of 1999, it is a requirement that an environmental study should cover any cultural heritage that may exist through which the road will

pass. Persons who might be affected by the project are very important role players to be brought on board prior to the commencement of the project.

In terms of the assessment of the impact of economic factors on the transport industry, the expectation is that the South African economy will grow by about 5 percent a year over the next three years. If the operation of the economy and society are to be accelerated, transport infrastructure is of great interest and is vitally necessary in overcoming the problem of distance. As the economy grows, so does the provision of transport infrastructure or facilities and this is positively correlated with the level of economic development. In as far as the political factors are concerned, every Public-Private Partnership arrangement involves a political context and would be influenced by the relevant political party in question.

The analysis of various environmental factors received attention. The influence of these factors precipitated various outcomes, such as the establishment of the South African National Roads Agency Limited. The impact of a range of externalities on the entire transport system was also analysed. It became evident that these factors also influence one another. On the economic side, it must however be emphasised that a healthy economic growth is expected in the coming decades.

In the final analysis, the Department of Transport has to evaluate a range of options. It has to analyse whether to contract out the management of national roads to consultants and contractors. The second option would be that of outsourcing the management of roads to the private sector while under the control of the Agency.

Three investment models have been suggested, and the preferred option is the one that ensures that the private sector becomes fully operational in the road transport infrastructure. Of fundamental importance is that different spheres of government need to be taken into account in a Public-Private Partnership

arrangement.

7.3.2 Conclusions

Government at all levels plays a major role in the supply of transportation infrastructure. Figure 3.2 of this study has categorically indicated that the private sector can be a useful complement to government action. A practical example is the Build Operate and Transfer scheme that is being executed by the N3 Toll Concession Company for the rehabilitation, construction and financing of the N3 Toll route from Heidelberg in Gauteng to Cedara in KwaZulu Natal.

7.3.3 Recommendations

The study recommends that the concerned spheres of government get involved in the Public-Private Partnership projects, as it is a significant means of investing in infrastructure.

7.4 THE INTRODUCTION OF COMPETITION IN THE PROVISION OF TRANSPORT INFRASTRUCTURE

7.4.1 Findings

While the Competition Commission is involved in competition matters, the study has advanced detailed facts why a transport economic regulatory authority is needed in the transport industry. The introduction of competition could be seen as a way in which government reasserts its power over concession companies through appropriate regulations that are designed to govern the behaviour of both state-owned and private sector companies. To this end, the study suggests that an economic regulatory authority is the body to level the playing ground.

In the process of introducing competition policy as a means of regulating the transport industry, one of the considerations should be to promote a culture of competition, after which regulatory authorities may be established to police anticompetitive behaviour and to ensure that prices converge to a competitive

price.

Competition for the market in the transport industry was discussed in the light of the whole tendering process leading to the appointment of the successful bidder in the concessioning of a road transport infrastructure. What was emphasised in the study is that the traditional approach used in the past in terms of managing infrastructure was now history, and competition is sought to attract a significant number of well-qualified bidders in the market.

With regard to competing through the tender process, specific procedures need to be followed and these include that the tender has to be advertised through the tender bulletin, which is often called "call for tenders". The tender process begins with a government organisation establishing a future need for a high-value good or service. The logical methodology to be applied here is to define the need, to cost it and to include it in the next budget. Once the budget is approved and introduced, the organisation may then call for tenders.

The received tenders must be assessed and, in an ideal situation, tenders must be opened in public, and all those who submitted proposals for tendering should be invited to be present. In case none of the bids presented on the appointed day satisfies the criterion that is popularly known as "value for money", then all the bids on offer should be rejected. However, in a case where bids are of an acceptable quality, they have to be ranked so that the second-ranked bidder could be considered in case a satisfactory contract cannot be concluded with the first ranked bidder.

In the technical examination of bids, the technical proposal should be suitable for local needs. The bidder may not use a high technology solution where a low technology one would suffice. The financial evaluation on the other hand should consider among other things, the financial flows used in the bid document and should be consistent with the minimum technical design and performance standards and with specifications in the bid documents;

There is also a stage called "negotiations" with the preferred bidder whereby the agency elects one or two of the bidders and then undertake negotiations with them, eventually agreeing and signing project contracts. This is followed by the "awarding of tenders". The tender-awarding authority should immediately make public the winners of tenders and the next step should be to draw up a contract with the successful tenderer.

Competition was discussed as key to unlocking the fundamental rights of users, such as the freedom of choice. The perception here is that government should implement policies designed to improve competition because competition is seen as a key to unlocking the people's right to freedom of choice in the transport industry. The fundamental rights sought by consumers are to:

- afford them to make meaningful choices;
- afford them the opportunity to be heard;
- provide safety; and
- inform them of the services provided.

7.4.2 Conclusions

This chapter dealt with historical issues of protectionism in the transport industry and how these issues were superseded by new constitutional imperatives that gave the public the right of choice in as far as public transport provision is concerned. To give expression to the people's right to choose what mode of transport they want, competition became the fundamental key to unlock the old transport monopoly that was protected by the government of the day. Seen as such, it is no longer problematic to come across Public-Private Partnerships in the market place and in road transport infrastructure as a way of enhancing service delivery.

The study dealt with the concept of competition in detail because it is central to the exercising of the right of choice by the people who intend to achieve

individual freedom as a way of protecting their fundamental rights within society. There is therefore a critical need to deepen the talent and skills of those officials who are involved in both the public and private sectors so that they are empowered to protect the citizens' right to choose. A variety of problems was entertained and solutions were advanced regarding how to make road use safer. It needs to be pointed out that many transport issues had been flagged and examined and pertinent answers suggested and proposed on how to deal with problematic situations.

The fact that a monopoly is not desirable as it limits the user's right to choose was investigated. The user's choice and sovereignty were explored and it was concluded that users should be offered latitude of choice and users themselves are the ones to determine what those options are. It is therefore concluded that the Department of Transport review the withdrawal of an alternative non-toll route as it contradicts the principle of free competition and thus limit the road user's freedom of choice.

7.4.3 Recommendations

It is recommended that the concessionaires that are engaged in commercial or economic activities such as the collection of toll fees be subjected to a transport economic regulatory authority. While it is acknowledged and accepted that the National Roads Agency operates as a concession-granting authority, it needs to continue as such and create space for a transport economic regulatory authority to exercise its regulatory powers. Of fundamental importance in the process of establishing a transport economic regulatory authority is that there should be adherence to corporate governance principles and transparency should be the order of the day.

7.5 TRANSPORT ECONOMIC REGULATORY REGIMES IN THE TRANSPORT INDUSTRY

7.5.1 Findings

This chapter dealt with aspects flowing from Chapter 4, such as competition for the market and competition in the market. The focus was on the after-award of the bid, which requires the establishment of a project company, which is sometimes referred to as an interim concession company. It is this concession company that needs to be regulated to ensure that it does not operate as a monopoly, hence the necessity to establish a transport economic regulatory authority as the central focus of this study.

A conceptual framework for a Public-Private Partnership was unfolded. This framework contains critical elements such as the relationship between the Department of Transport, the agency or granting authority and the concession company. The long-term relationship between the granting authority and the concession company makes it imperative to suggest various regulatory regimes that should ensure that users of services are protected.

In trying to investigate the autonomy of a transport economic regulatory authority in South Africa, a variety of independent agencies was analysed and it was found that some had been created outside the normal cabinet organisation. There are those who are engaged in staff functions in support of other agencies. Agencies such as one for environmental protection fall outside cabinet level departments and are regarded as independent agencies. The personnel managing these agencies are appointed by the President with confirmation by the Senate.

Another area investigated was that of regulatory commissions that are formed to regulate a particular area of the economy and which are structured differently. Typically, these commissions are headed by a group of individuals called directors or commissioners appointed by the President and confirmed by the Senate. These commissions are protected in various ways from removal by the

President. In some cases, their terms of appointment overlap with presidential terms. Presumably, the regulatory commissions are to perform their tasks independently and objectively, free from undue influence either by the political incumbent or by the affected clientele. The nature of regulatory work makes this task exceedingly difficult.

Seen in the above light, the study proposes that the introduction and establishment of the transport economic regulatory authority be made to fall within the department of transport for a specific period before becoming completely autonomous in order to be well guided and funded. It is further emphasised that, for the transport economic regulatory authority to function efficiently and effectively in the long term, it needs to be independent and insulated from political pressures. It must enjoy independent legal status and should not serve simply as a mouthpiece of government.

Various research studies conducted by Kessides, Basanes and the INTOSAI Working Group focusing on the autonomy of transport economic regulatory authorities were consulted, but it was found that it would be virtually impossible to free the proposed transport economic regulatory authority from political intervention. The various research findings prove that political leadership is generally sought to guide the effective functioning of a transport economic regulatory authority. This implies that there is a need to establish a specific action plan on how government can introduce an effective transport economic regulatory authority. It should be a regulatory authority, which would commit itself to monitor transport activities credibly with a view to adhere to transparent governance in the transport industry.

A host of different types of regulatory regimes was analysed and a multinational regulatory authority was suggested since South Africa is currently dealing with SADC members. The regional transport economic regulatory cooperation might be a more realistic option for alleviating scarce regulatory expertise and resources. It was further suggested that the creation of separate regulatory

institutions might yield a degree of independence from political interference. Of major importance regarding a transport economic regulatory authority is that it should acknowledge the fact that the private sector is the primary mover of economic investment, although the public sector attracts, stimulates and encourages private sector economic development efforts

The concept of a granting authority versus a regulatory authority was analysed and on the one hand the former is said to be responsible for granting a concession, a license or some other right. In this study, a granting authority would refer to the National Roads Agency, which is in essence involved in the granting of roads concessions. A regulatory authority, on the other hand, would ensure that there is compliance with minimum and maximum toll fees charged to the road users. The current state of affairs in South Africa is that the public authority that signs the contract is the party responsible for its performance. Presently, the South African National Roads Agency Limited still has the final say on tariffs and is the party legally entitled to intervene unilaterally in or to terminate the contract on the grounds of "public interest".

A host of institutional requirements was discussed and this covered aspects such as coherence, independence, accountability, transparency, predictability and capacity. Different regulatory options were discussed and it was established that the adoption of an appropriate regulatory option depends on its autonomy to execute regulatory decisions with the minimal political interference.

7.5.2 Conclusions

The study concludes that a transport economic regulatory authority may be an appropriate structure to introduce mechanisms that could control the transport industry and make it competitive by doing away with monopolies. A well-functioning transport economic regulatory authority should be creative and responsive to any market demands that are imposed upon the transport industry. Finally, for Public-Private Partnerships to function optimally they should be well regulated, implying that there should be an effective transport economic

regulatory authority that has legal powers in order to eradicate the deficiencies detected in a contract. It was noted that certain infrastructural activities are best advanced by private entrepreneurs, and the intervention of a transport regulatory authority is indispensable in this respect.

7.5.3 Recommendations

It is evident that setting up a transport economic regulatory authority to govern concession companies would significantly promote competition and thus cultivate a mutual relationship between road users and the toll road industry. Having a separate transport economic regulatory authority could also signal a commitment to enforcement and, in the long term, may bring about experience in dealing with complex competitive behaviour in the market place.

7.5.3.1 Need for enforcement

Procedures should be put in place to ensure that regulatory enforcement is implemented in the different spheres of government. Road users should be protected in terms of being afforded an intermediary to complain to if the service quality is not provided to their satisfaction.

The monitoring of concession companies has to be done by an independent regulatory authority with minimal political interference.

Traffic and revenue forecasts should be produced by independently recognised experts, and should reflect the willingness of motorists to pay tolls.

The terms of the concession, and particularly its length, should be compatible with the nature of the project and should allocate an appropriate mix of risks and rewards to the private sector.

7.6 TRANSPORT ECONOMIC REGULATORY INTERVENTIONS IN THE TRANSPORT INFRASTRUCTURE

7.6.1 Summary and recommendations

This chapter constitutes a summary of the entire study and the concept of Public-Private Partnerships, and an assessment of the validity of establishing a "transport economic regulatory authority" was expressed throughout the study. The process of monitoring and evaluating Public-Private Partnerships is seen as an essential aspect of strategic management, and a transport economic regulatory authority is meant to fulfill the function of monitoring Public-Private Partnership processes.

From the study, it is clear that a norm regarding a transport economic regulatory authority should be able to promote the interest of various stakeholders such as government, the toll road industry and road users. Chapter 2 of the study gave detailed information of the experience gained from a number of industrialised countries. These experiences were thoroughly investigated to assess to what extent they have influenced the South African transport industry. This has culminated in the suggestion of a Public-Private Partnership model depicted as Figure 6.1, which is believed to be suitable for the South African situation after weighing available options. The model stipulates the broad strategies that are stipulated by government at the strategic level and goes on to be linked with operational strategies at the functional level. It must however, be reiterated that strategic management involves processes such as environmental scanning, strategy formulation, strategy implementation, evaluation and control. The establishment of a transport economic regulatory authority serves as an ultimate strategy to monitor, evaluate and control Public-Private Partnership processes and issues with transport economic implications, as is evident from the model (see Figure 6.1).

For the assessment of a regulatory intervention mechanism in the transport

infrastructure, this study has suggested establishing mechanisms such as a regulatory body with full understanding of public sector economics and operations. It is further suggested that a body of expertise within the Department of Transport be created to deal with transport infrastructural issues. This aspect should be treated with the utmost urgency and an action plan should be sought to expedite the process.

The study has pointed out that practical challenges in implementing transport economic regulations are imminent. This revolves around the scarcity of technical expertise such as transport economics, accounting, auditing, transport engineering, law and economics. To overcome these challenges, it is suggested that there should be regional transport regulatory advisors to facilitate information exchange. It is further suggested that there should be a call for proposals by the Department of Transport for the creation of a database of regional transport regulatory advisors. The intention is to build skills capacity in the transport economic regulatory environment. This aspect too should be treated with a sense of urgency. It means that an action plan stipulating who should be responsible and when to get the process off the ground should be set in place.

A need to establish a multinational regulatory authority was expressed. This followed on South Africa's cooperation with neighbouring countries for its ultimate success. The study proposed that the current mandate of the Cross-Border Road Transport Agency be explored particularly with respect to finding out whether it is currently able to deal with transport economic regulatory issues across the South African borders.

The study acknowledges a concerted effort of the provincial government of Gauteng to establish an independent certifier for the monitoring of the progress and impact made by the concessionaire. However, it is proposed that it should be seen as a transition measure towards the establishment of a fully-fledged institutionalised transport economic regulatory authority.

In projecting the role of the transport economic regulatory authority, it is evident that one of its functions would be to intervene during the operating phase of a Public-Private Partnership project because it has to ensure that the concessionaire has sufficient funds for maintenance and repair of the assets. Among the tasks to be performed are the evaluation and monitoring task, which is done to ensure that service quality is not compromised, thus ensuring that users derive value for money. In addition, it is important to assess the concessionaire's financial capability through reviews and audits throughout the operation phase.

The study proposes that a transport economic regulatory authority be linked with all relevant stakeholders in order to discharge its duties of promoting the interest of government, toll road industry and road users efficiently. It is emphasised that the fundamental rights of users be honoured, namely the right to make meaningful choices, the right to be heard, the right to safety and the right to be informed.

The concept of competition *for* and *in* the market was examined in the light of the entire tendering process. With regard to competition for the market, the study is of the opinion that those activities that constitute the tendering process are crucial as they level the playing field for prospective bidders. The key stages in the procurement process were listed and include the consultation stage, the deadline, tendering, negotiation, analysis and the selection phase in which the preferred bidder is identified. The process ends with the technical requirements and contract terms being concluded and is a significant way of attracting investors from all walks of life.

The study also referred to competition in the market, which refers to that type of competition that takes place after the bid has been awarded. This type of competition requires the earnest intervention of a transport economic regulator, which would regulate, inter alia, the relationship between the different modes of transport. The question around the assessment of introducing a transport

economic regulatory authority has been validated as evidenced in sections 6.2 and 6.2.1 of this study. A transport economic regulatory authority is therefore essential to regulate competition *for* the market as well as *in* the market.

The assessment of how regulatory intervention mechanism would operate was investigated and it was found that the use of a single regulator for several industries was the preferred option. The preference is based on scaling down fixed costs and consolidating scarce talents in a cross-cutting manner.

Figure 6.1 gives a broad indication of the contributory role of the construction management and competitive operational phases towards the realisation of the broad strategies at the national level of government.

The establishment of a transport economic regulatory authority should not be seen as a way of encroaching on the good work currently being done by the South African National Roads Agency Limited. The aim of the transport economic regulatory authority is to ensure that effective monitoring takes place to satisfy the interest of government, the toll road industry and road users. The impartial intervention of the transport economic regulatory authority is sought to ensure that a harmonious relationship among these parties is maintained.

The White Paper on National Transport Policy (Republic of South Africa, 1996c:16) states that infrastructure will be regulated where monopoly situations could occur, which implies that setting up a transport economic regulatory authority is justified and should be established.

7.6.2 Conclusions

Issues that received particular attention in this study include the aims and objectives of the study as they pivot on the need to establish a transport economic regulatory authority by the Department of Transport as reflected in (DoT, 2005:40). This body should ideally be free from a fragmented approach, which in the past has paralysed the transport industry. It is not surprising therefore; that the current regulatory environment in South Africa proposed as

noted in the National Freight Logistics Strategy is not acceptable. It is therefore suggested that the roles and responsibilities of the proposed transport economic regulatory authority be explicitly articulated and workshopped with stakeholders such as Transnet, the Competition Commission, the South African National Roads Agency and others who would be affected during the course of its operation. After these workshops, clearly refined regulations can then be legislated because any inconsistency and possible overlap would have been eliminated.

The wisdom derived from McNutt (2005:191), was utilised, as this author says the establishment of a national regulatory authority whose role is to play an active role in the regulatory reform of the Public-Private Partnership arrangements, is required. Equally so, the researcher is of the opinion that a transport economic regulatory authority in South Africa could play a role of transforming the state-owned transport enterprises. It is therefore; proposed that within the transport economic regulatory unit, a specific portfolio dealing with the regulation of Public-Private Partnerships be established as this continues to gain momentum.

7.6.3 Recommendations

Rather than embarking on high-tech capital-intensive equipment, emphasis should be on equipment that is operable within the South African context. The labour force should not be faced with sophisticated machinery that would take ages for them to understand and operate.

7.6.3.1 Need for training

Training should be provided on an ongoing basis to ensure that individuals in the Public-Private Partnership fraternity are capacitated with respect to the initial bidding, negotiations towards financial closure, different modalities applied in the construction industry as well as the actual operation, monitoring and control function of a transport economic regulatory authority. This should also include

exposure to the Public-Private Partnership guidelines that have been prepared by the National Treasury, and training needs analysis should be an ongoing process.

7.7 CONCLUDING REMARKS

South Africa is currently reaping the major economic and social benefits of quickly improving the road network with minimum public expenditure as a result of private sector investment in toll roads. The mechanism by which the private sector is participating in concessions to construct, finance, operate and maintain roads in return for toll revenue has gained popularity. It needs to be emphasised however, that the absence of alternative routes in the toll road industry would prompt concession companies to behave like monopolists and thus raise prices in pursuit of profit, knowing very well that road users have no other choice.

7.7.1 Need for international agencies

Based on Section 3.2.6.7 of this study, it is explicitly stated that the purpose of the South African Competition Act (Republic of South Africa, 1998a) is to promote employment and to advance the social and economic welfare of South Africans. As the Act strives to expand opportunities for South African participation in world markets and to recognise the role of foreign competition in South Africa, it is necessary to recommend the intervention of agencies such as the International Bank for Reconstruction and Development (IBRD) in future Public-Private Partnership projects. The IBRD provides loans and development assistance to middle-income countries, of which South Africa is one. Such countries need to be creditworthy and should strive for the achievement of sustainable development. It is important to note that the International Bank for Reconstruction and Development is not a profit-seeking entity but committed to deal with Public-Private Partnership projects.

7.7.2 Need for the International Finance Corporation (IFC)

Section 3.2.6.7 of this study indicated that, through the implementation of the

Competition Act, there should be a great potential to encourage the promotion of direct investment in South Africa. Measures that have been put in place consists of inter alia the Tax Holiday Scheme, which is open to firms making new investments which exceed R3 million. For investments to take place in earnest, it is recommended that the International Finance Corporation (IFC) be considered as a solution for easing direct foreign investment in South Africa.

7.7.3 Absolute need for transport economic regulatory authority

Section 3.2.6.7 of this study dealt with Competition Act, Act No. 89 of 1998 (Republic of South Africa, 1998a), which put into place a regime that is meant to contribute to economic growth and global competitiveness. The purpose of the Act is partly to provide consumers with competitive prices and product choices. The matter of choice is the central focus of this study, hence it is concluded that establishing an independent transport economic regulatory authority that would ensure, inter alia, that the toll fees charged by toll road concessionaires are justified and fair, is a strategic must. The establishment of a transport economic regulatory authority is seen as the right intervention at the right time to ensure that a whole range of Public-Private Partnership processes is well monitored and regulated.

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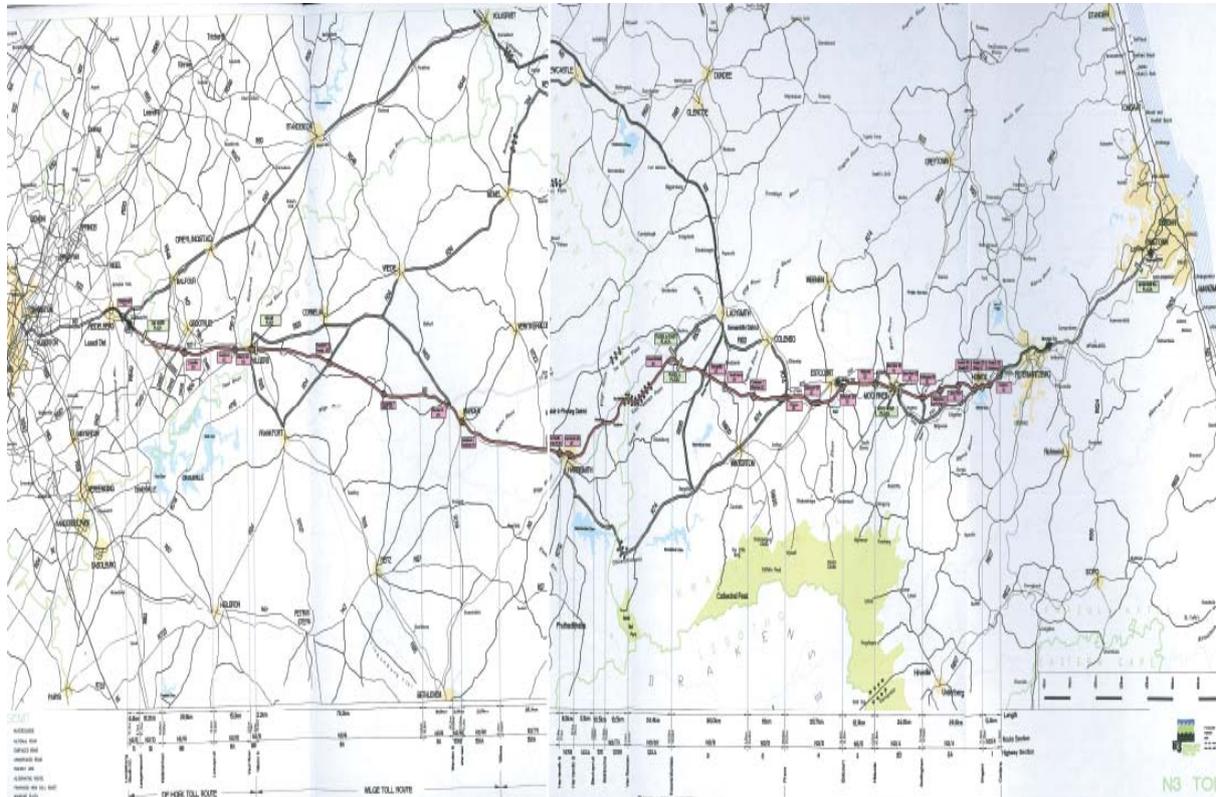
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ANNEXURES

Annexure 1: The N3 Corridor from Heidelberg to Cedara



Annexure 2. A list of countries that underwent a Public-Private Partnership process

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COUNTRY	PUBLIC AUTHORITY	TYPE OF INSTITUTION FORMED	ROLE OF PRIVATE SECTOR	FUNDING	TYPE OF REGULATORY INTERVENTION
United States of America		State-chartered turnpike companies were formed	Private sector carries out construction, maintenance and operation of toll roads. -Pays and equips state police seconded to the toll authority	Private sector financing of roads	Transport Regulation Board with regulatory oversight over all sectors. Regulatory agencies are independent from policy makers
France	Toll Act drafted. The Act authorized -creation of state owned toll roads -right to levy tolls to finance construction, maintenance and operation of highways.	Agency awards concessions and manage road network	Concessionaires operated by publicly owned companies. 500 miles operated by a private company (Cofiroute)	Both publicly owned & private companies access funds from private capital market.	Two agencies evolved into regulatory authorities
United Kingdom	DE TR established a PPP Unit	Highways Agency manages, maintains and improves the national road network	Concessionaires build roads meeting Highways Agency's technical requirements	Public authority or Highway Agency arranges funding under DBOF	Existing Economic Regulators not exclusively focused on Toll roads.
Japan		Combination of BOT & franchise	Concessionaires	private loan capital and government borrowings	
Mexico	Ministry of Finance Toll Authority established in 1963.	Secretariat to the Inter-Ministerial Commission used as channel for managing concession loans or	Concessionaires were awarded to domestic construction companies,		Not in existence

ANNEXURE 2: A list of countries that underwent a Public-Private Partnership process

		donor support to the programme.			
Australia	<p>State gvt. controls infrastructure sectors</p> <ul style="list-style-type: none"> - Gvt. draft investment policy & published by Dept of Treasury and Finance -Gvt departments design & award concessions -project responsibility assigned to a single minister. -The minister facilitates consultation with other gvt dept involved in the project. -The minister also expected to work with Treasury & Finance <p>Treasury and Finance had to set up the Partnership Victoria as a centre of expertise</p>	<p>Gvt-owned utilities transformed into Government Business Enterprises (GBEs) that operate as businesses and are subject to the national competition policy</p> <ul style="list-style-type: none"> -each state to have a road agency with statutory authority to be in charge of managing, planning and maintaining the state road network. -state's road agency responsible for the maintenance and development of the national highway network within its boundaries <p>- -</p>	It is customary for the agency to contract out or to outsource construction	Funding sourced by Agency from federal government	Economic Regulator
Austria	<p>Federal Ministry of Ttransport, Innovation and Technology.</p> <p>Austrian established a</p>	<p>The Federal Highway Financing Act of 1996 drafted</p>	Concessionaires		

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	State owned Enterprise called ASFINAG				
Canada		Canadian Treasury Board Secretariat	Concessionaires deploys Roadside Motorist Assistance team		-Regulated by Highway Operations Control Centre -Work in coordination with Environment Canada to anticipate road conditions and surface temperatures
New Zealand	Two levels of govt, national owns National Highway System & local spheres of govt which owns and maintains other public roads in the country.	Contracted its management out to govt. owned entity (Transit New Zealand)	Local govt contract roads out for construction and maintenance to the private sector or to Local Authority Trading Enterprise (LTE)	Funding for both the national highways and local roads is provided by Transfund, an entity contracted to distribute and prioritise road expenditures from the national government's road funds	Non existent
The Philippines	National, Provincial & Municipal authorities. Investment Coordination Committee (ICC) of the National Economic Development Authority	Sectoral Agency / Specialist BOT unit Coordinate, design & implement projects -update national inventory of all nominated projects -provide general advice to foreign investors	.		-Toll Regulatory Board, .

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		<ul style="list-style-type: none"> -developing infrastructure projects -provides technical assistance and training to central and local gvt. officials on design and implementation of projects -marketed BOT concept to private investors -BOT Centre to train national and local government officials. 			
Hungary	<p>Ministry of Transport, Communication and Water Management</p> <p>- Govt passed a law for formation of strong legal framework for the control of privately financed infrastructure projects..</p>	Established Bureau for Motorway Concessions	<p>Concessionaires</p> <p>-Concession arrangements allowed for toll variations</p>	Private financing	Faced with regulatory challenges wrt toll rates regulation.
South Africa	PPP Unit under Dept of Finance for all PPP's other than national roads	SANRAL award concessions and manage relationship with concessionaires.	Concessionaires maintain and improve road network.	private loan capital and government borrowings	Existing economic regulators not applicable to Toll roads. Currently performed by SANRAL which is a concession granting authority

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