GAUTENG TOLL ROADS: AN OVERVIEW OF ISSUES AND PERSPECTIVES

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ABSTRACT

The first phase of SANRAL's Gauteng Freeway Improvement Project (GFIP) is nearing completion and toll collection is on the brink of commencing. The tariff announcement has caused uproar from road users and politicians. This paper explores the advantages and disadvantages of tolls roads and evaluates GFIP from an economic, social and legislative perspective. The paper finds that an inadequate transport network is one of the key constraints to economic growth, but funding road projects is an issue in countries with widespread poverty. Tolling is an economically viable option for Gauteng's circumstances and GFIP has proven feasible in various studies and analyses. The project is generally well aligned with the legislation of South Africa. The public's negative reaction should be temporary, since it is linked to the additional real expense that is incurred, without any immediately perceivable benefits.

1. PROBLEM STATEMENT

The first phase of SANRAL's Gauteng Freeway Improvement Project (GFIP) is nearing completion and toll collection is on the brink of commencing. The planned tolling cost structure was first announced in February 2011 and caused uproar from road users and politicians alike.

Is the toll tariff excessive and outrageous? Are motorists being "double-taxed"? Will the toll roads put cause too much strain on metropolitan roads due to route diversion? Will the project lead to poverty alleviation or will increased inflation place more burden on the poor?

This paper investigates the GFIP from various perspectives in order to shed light on recent questions raised by the public. The paper also explores the reasons for toll roads as well as its advantages and disadvantages, to determine whether it is the best way forward for Gauteng's transportation development[1].

[1] This essay does not reflect the latest e-toll news and happenings, and is based on events up to October 2011.

2. INTRODUCTION

2.1 South African road administration and finance

Road funding in South Africa has been a roller coaster ride for most of the 20th century. The brief history below provides insight into the establishment of the country's road authorities and why the toll system came into consideration.

History

In 1935 the first *National Roads Act* (Act 42 of 1935) was passed by Parliament. Before this act, the provision and maintenance of the national road network was the responsibility of provincial authorities. Due to the limited taxation base of the four provinces, the provincial administration's revenue was insufficient to deliver on the demand for roads. The *National Roads Act* of 1935 instigated the establishment of the National Road Board (NRB) and National Road Fund (NRF).

The NRF would receive its resources from import customs on petrol and other funds allocated by Parliament. The NRB's responsibilities included developing specifications and road maps, road construction supervision, and managing the NRF by settling costs incurred by provincial administration in construction and maintenance of any roads declared as "national roads". The NRB was abolished in 1948 and superseded by the National Transport Commission (NTC).

Even after an increase in the quota from petrol customs, the NRF could not provide sufficient funds to support maintenance and new road construction. Substantial government contributions and another increase in the tax on imported petrol were needed to reimburse the NTC's loans from the Treasury.

In 1971 a new *National Roads Act* (Act 54 of 1971) came into operation. This act assigned exclusive responsibility to the NTC with regard to planning, developing, construction and maintenance of national roads. Further tax increases led to a significant surplus in funds. Where expenditure had always been confined in the past, the available finance now accommodated current needs and allowed for future planning. The NTC thrived until 1974, planning and partially constructing a network of dual carriageway freeways.

In 1974 an unexpected decline in NRF income occurred due to the Government's fuel conservation measures. This income decrease coupled with an escalation in construction cost resulted in the depletion of reserves by 1980. Subsequent loans from Treasury financed two new projects, but indicated that the NTC was unable to continue the development of the road network. Alternative sources of income had to be investigated.

Supporting the NRF by means of tolls were analysed by the NTC and a parliamentary selected committee considered the policy proposal put forward. Parliament approved, and the NTC gained the advantage that funds could now be borrowed, since the toll-revenue could repay interest on a loan and later fund road maintenance.

The South African Roads Board replaced the NTC in 1988, with similar responsibilities to the NTC's. The South African National Roads Agency Limited (SANRAL) superseded the SARB in 1998 and is the current national roads authority (Nieuwoudt 2009, pp. 3-18). The NRF was renamed the SANRAL Portfolio Fund.

SANRAL

SANRAL is the current national roads authority in South Africa. According to Nieuwoudt (2009, p. 18), it was established in 1998 for three main reasons:

- To provide the national roads authority with more commercial and financial freedom,
- Improved access to capital markets,
- For enhanced effectiveness, efficiency and faster decision making.

SANRAL's vision and mission is to be recognised as a world leader in the provision of a superior primary road network in southern Africa through:

- A highly motivated and professional team
- State-of-the-art technology
- Proficient service providers
- Promoting the "user pays" principle (SANRAL 2009, p. 4).

2.2 Gauteng Freeway Improvement Project

The Gauteng Freeway Improvement Project (GFIP) is SANRAL's most recent highway upgrade initiative comprising of several phases. The first phase involves upgrading 185km of currently congested highways. After cabinet approval in 2007, SANRAL continued with the Intent to Toll process (SANRAL n.d.).

The first phase is almost complete, but at the time of write up (2011/09/09) toll collection has yet to commence. The latest proposed toll costs are around 50c/km for normal passenger vehicles, while heavy duty trucks are on average to be charged 297c/km.

3. TECHNICAL REVIEW

SANRAL's business is separated into two operations: non-toll roads and toll roads.

3.1 Non-toll roads

Non-toll roads are financed by funds from the National Treasury. The challenge regarding non-toll roads is that increasing demand needs to be catered for with declining funds. The NRF/SANRAL Portfolio Fund has not been allocated a portion of the levy on fuel since 1988 (Nieuwoudt 2009, p. 92). Expansion of the non-toll road network is not feasible, since the finance SANRAL receives is only sufficient to maintain 40% of the non-toll roads under their jurisdiction. It is predicted that the national road network will deteriorate rapidly due to under-funding during the next decade (Nieuwoudt 2009, p. 27).

3.2 Introduction to toll roads

Definition

According to Wikipedia a toll road "is a privately or publicly built road for which a driver pays a toll (a fee) for use."

Road types

Nieuwoudt (2009, p. 121) suggests that toll be charged on roads where congestion is common. The reason for this is that the user does not pay the entire cost of the journey (see 0). The users pay for their own vehicle cost and travelling delays, but they also create delays and costs on other road users and the environment. Tolls can be used to discourage users from making unnecessary trips. The balance in toll revenue and total trip cost can be achieved.

On the contrary, Nieuwoudt (2009, p. 121) discourages the tolling of rural roads where congestion is a rare occurrence. He argues that rural roads should be viewed as “pure public goods”, because the road users do not influence each other significantly.

Advantages of private owned toll roads

Since the Government of South Africa is the approving body of toll tariffs, road users have the opportunity to express dissatisfaction with toll schemes and tariffs. SANRAL toll roads should therefore be reasonably priced.

The private sector participation in construction, operation and maintenance of SANRAL’s toll roads takes place on a competitive basis, so high levels of effectiveness and efficiency can be accomplished in the projects’ implementation (Nieuwoudt 2009, p. 116).

Usage of collected toll revenues

All toll tariffs are determined by the Minister of Transport on recommendation of SANRAL. Toll road income contributes to the SANRAL Portfolio Fund. The primary objective for new SANRAL toll roads is to be entirely financed through capital market loans and that the revenues are sufficient to repay loans. The collected funds are used to finance:

a) Toll plaza operator fees.
b) Toll plaza maintenance costs.
c) Head office administration costs.
d) Interest costs on the relevant loans.
e) Redemption of the loans (Nieuwoudt 2009, p. 114).

3.3 Advantages of toll roads

Procurement and dedication of funds

Toll road schemes are more costly for road users than obtaining funds through taxation or a fuel levy, but the funds can be obtained much sooner. Toll roads enable the public sector to contract the private sector for the construction, operation and maintenance of the road for a period of 25 to 30 years. The private sector could raise the required capital sooner due to better credit rating and cost of finance (Haiden 2003, p. 4). The roads could even attract foreign investment.

The revenue collected on a toll road can be dedicated to expenditure on the scheme, so political interference is avoided in its allocation (Haiden 2003, p. 5).

Users have access to the advantages of a better road sooner than they would have under a public sector funded scenario.

Improved road

The road is usually upgraded and expanded before it is tolled. This expansion provides increased capacity and thus reduced congestion. The upgrade of a road generally also improves the safety and decreases accidents.

Tolls also act as a form of congestion charge. It rations the use of the road to those with the highest need to travel. This reduces unnecessary trips and congestion (Haiden 2003, p. 4).

The combination of all the laterally mentioned factors leads to decreased general travel cost, even though the additional toll tariff is charged.

Job creation and gross domestic product (GDP)

GDP is defined as the total value of all final goods and services produced in the country. GDP is an indicator of welfare, and an increase in GDP could lead to a better life for a country’s population. Toll roads can significantly increase GDP over the lifetime of the project (Standish 2010, p. 89).

A toll road project leads to direct and indirect job creation. Direct jobs are created in the construction, operation and maintenance of the road and indirect job creation is stimulated through the increased business and commercial opportunities following the development (See also section 3.5.4.3 a).
For more advantages, see section 0.

3.4 Disadvantages of toll roads

Inflation due to toll
Toll road schemes cause an increase in investment spending, which could have an inflationary effect. This effect could however be compensated for by exploiting other forms of investment. The high serviceability of a well maintained toll road could have a greater cost-lowering effect on the price of consumer items than the cost-increase caused by the toll tariff. A net deflationary impact could even be achieved if producers shifted the costs AND benefits forward to the consumer (Nieuwoudt 2009, p. 141).

Diverted traffic
The introduction of tolls along corridors can cause significant traffic diversions. When tolls were implemented on the N1 between Pretoria and Bela-Bela a traffic diversion of 30-40% to the non-tolled alternative was experienced (Kekana 2006).
This traffic diversion can have serious impacts on regular users of the alternative route. Examples of these problems include:

a) Increased vehicle operating cost,
b) Congestion,
c) Environmental hazards,
d) Increased number of accidents,
e) Premature failure of pavement.

Indirect effects may also be experienced along the alternative route, such as:

a) Reduced pedestrian safety,
b) Decreased land value,
c) Impact on prices of goods and services (Kekana 2006, pp. 3-4).

Institutional drawbacks
If a toll scheme were to fail, taxpayers and ratepayers would have to bear the financial burden of the outlay cost (Haiden 2003, p. 5).

Inequity
Inequity occurs when road users are forced to have additional cash expenses. Not all users benefit equally from toll roads, since some value their time and safety more than others. The saved time and increased safety would not be worth the cost to some users (Haiden 2003, p. 6).

Effect on land use and environment
Toll roads could lead to dispersal of development due to people attempting to avoid tolls. It could also lead to unnecessary duplication of routes to capture traffic that would have used the toll route. This expansion might have adverse effects on sensitive environments (Haiden 2003, p. 6).

Public transport
Toll roads are a step in the wrong direction if policies and strategies strive to promote the use of public transport. The revenue from a toll scheme is expended in the road itself and not available to upgrade public transport. The demand for public transport is also reduced if the capacity of roads is increased (Haiden 2003, p. 6).

3.5 Economics of toll roads

Economic motivation for toll roads

Road user charges
The toll tariff gives the user a direct cost and the user can then make a decision on whether he will benefit sufficiently from "buying" the road or if using an alternative would be more favourable (Nieuwoudt 2009, p. 119).

Enhancement of road development
Toll financing allows for national road construction to start sooner than when relying on general tax revenue. Subsequently, users can enjoy the benefits of the road earlier. The availability of funds when maintenance is required is another issue when roads are financed through tax. Tolled roads can be maintained when necessary, which prolongs the serviceable life of the pavement structure (Nieuwoudt 2009, p. 120).

Marginal cost pricing
The cost of a vehicle trip is comprised of private cost and social cost. Private cost represents fuel cost, wear and tear on the vehicle and driver cost. Social cost consists of variable road maintenance cost and congestion cost.
Toll roads lead to a high quality road network, which improves road safety, decreases travel time and reduces operating costs (Kekana 2006, p. 2).
The optimal economic solution is to set toll tariffs such that the cost of the journey is equal to the average marginal cost of vehicle trips. Lower prices will result in too many trips being undertaken and thus congestion. Congestion leads to lower speeds, and more delays. Higher prices will discourage people from undertaking some trips, leading to under-utilisation of the road and its benefits (Nieuwoudt 2009, pp. 120-121).

Feasibility criteria for toll roads
SANRAL toll roads can be viewed feasible even though they are not completely self-financing. They have to be analysed based on the following criteria:

a) An economic rate of return higher than 15% per annum after providing for toll-related capital and maintenance costs.
b) The expected toll road revenue has to support the capital market loans that constitute at least 30% contribution to the outstanding project cost.
c) The cost of toll collection over the project life cycle has to be reasonable (Nieuwoudt 2009, p. 113).

Funding mechanisms
As discussed in section 0, tolling a road gives access to more funding options. The private sector can collect the funds much faster than the public sector, because of credit rating.

3.6 Economic analysis of GFIP

GFIP was analyses economically using three different tools. These were:

a) Cost benefit analysis – This method gives a robust indication of the value that the project delivers to national economy.
b) Micro-economic analysis – Looks at the above costs and benefits from the perspective of stakeholders.
c) Macro-economic analysis – Looks at the project's effect on the national and regional economies (Standish 2010, p. i).

Cost benefit analysis

Standish (2010, p. 38) performed a Cost Benefit Analysis of GFIP. Costs included in the study were:

a) Construction, maintenance and operations costs of the roads and toll collection infrastructure.
b) Road user costs.
c) Cost of diversions off the toll road onto the local network.
d) Cost to Provincial/metropolitan Authorities for increased load on their network due to traffic diversions.

The benefits and costs were analysed for different levels of toll fees. The toll tariffs indicated in Table 1 refers to light vehicle toll. Rates for class B vehicles are 2.5 times more and for class C vehicles 4.5 time more.

Table 1: Results of Cost Benefit Analysis (Standish 2010, p. 39)

Results of Cost Benefit Analysis	**Toll Rate per km**					
	0c	**30c**	**40c**	**50c**	**60c**	**70c**
Initial Construction Costs	14,689	16,410	16,410	16,410	16,410	16,410
Operating & Maintenance Costs	2,793	12,902	12,902	12,902	12,902	12,902
Cost to Local Authorities	0	193	270	344	398	459
Total Costs (R million)	**17,483**	**29,505**	**29,582**	**29,656**	**29,710**	**29,772**
Road User Cost Savings	244,761	248,019	244,401	247,967	240,831	239,580
Total Benefits (R million)	**244,761**	**248,019**	**244,401**	**247,967**	**240,831**	**239,580**
Net Benefits (R million)	227,279	218,514	214,819	218,311	211,121	209,808
BCR	14.0	8.4	8.3	8.4	8.1	8.0
IRR	41%	37%	37%	37%	37%	37%

Benefit Cost Ratios are above 8 for all the cases, which indicate that the project is beneficial to society from an economic point of view.

Micro-economic analysis

Even though the Benefit Cost Analysis indicated that road users in general would benefit from the project, Standish (2010, p. 67) also explored the impacts of the project on:

a) Wages and expenses of individual users

Table 2: Distribution of toll effects on individual drivers (Standish 2010, p. 77)

Percent of Sample: Toll Cost as a Percentage of Income
(Single occupant vehicle, Work purpose Journey)

	Monthly Toll Cost (with discount)						
Monthly income	<200	200-400	400-600	600-800	800-1000	1000-1300	1300-1600
Up to R4,999	50.0%	20.0%	20.0%	10.0%	0.0%	0.0%	0.0%
R5,000-R7,999	34.4%	6.3%	25.0%	9.4%	12.5%	6.3%	6.3%
R8,000-R10,999	45.0%	21.3%	13.8%	7.5%	8.8%	3.8%	0.0%
R11,000-R13,999	34.0%	17.0%	14.9%	13.8%	16.0%	3.2%	1.1%
R14,000-R15,999	31.3%	22.4%	12.2%	12.9%	9.5%	9.5%	2.0%
R16,000-R19,999	34.7%	21.0%	15.6%	14.5%	8.4%	4.6%	1.1%
R20,000-R24,999	39.4%	17.6%	18.1%	13.4%	6.8%	3.9%	0.8%
R25,000-R29,999	41.8%	22.5%	11.3%	11.3%	7.5%	4.2%	1.4%
R30,000+	46.0%	17.1%	15.3%	8.6%	7.3%	5.1%	0.6%
	40.2%	18.9%	15.3%	11.5%	8.2%	4.9%	1.0%

Telephonic surveys were performed and a statistical analysis has yielded the table above. It is important to note that toll exception for taxis and buses (as is the latest indication) have not been taken into account for the study. The results of the survey show that:

- 22% of the sample will spend more than 3% of their income on tolls
- 11% of the sample will spend more than 5% of their income on tolls
- 1.3% of the sample will spend more than 10% of their income on tolls.

b) Cost of consumer goods
In a study which ignores all user benefits and assumes all toll tariffs are passed on to the consumers, Standish (2010, p. 87) concludes that the project would most likely cause an increase in the cost of consumer goods, but predicts that the increase would be “very small indeed”.

c) General business
Businesses will be affected by the change in generalised travel cost. Generalised cost is a measure which combines safety, travel time, and operating costs. GFIP will most likely have a positive effect on businesses due to the improved road conditions and decreased travel time. The project should lead to higher levels of productivity (Standish 2010, p. 78).

Macro-economic analysis
The two most important macroeconomic effects are job creation and gross domestic product (GDP) (Standish 2010, p. 88). Other impacts not discussed in this section includes capacity increases, lower transportation costs, contribution to gross geographic product, and effects that would flow from construction and operation of the roads.

a) Gross domestic product
The graph in Figure 1 shows the contributions that GFIP can make to national GDP.

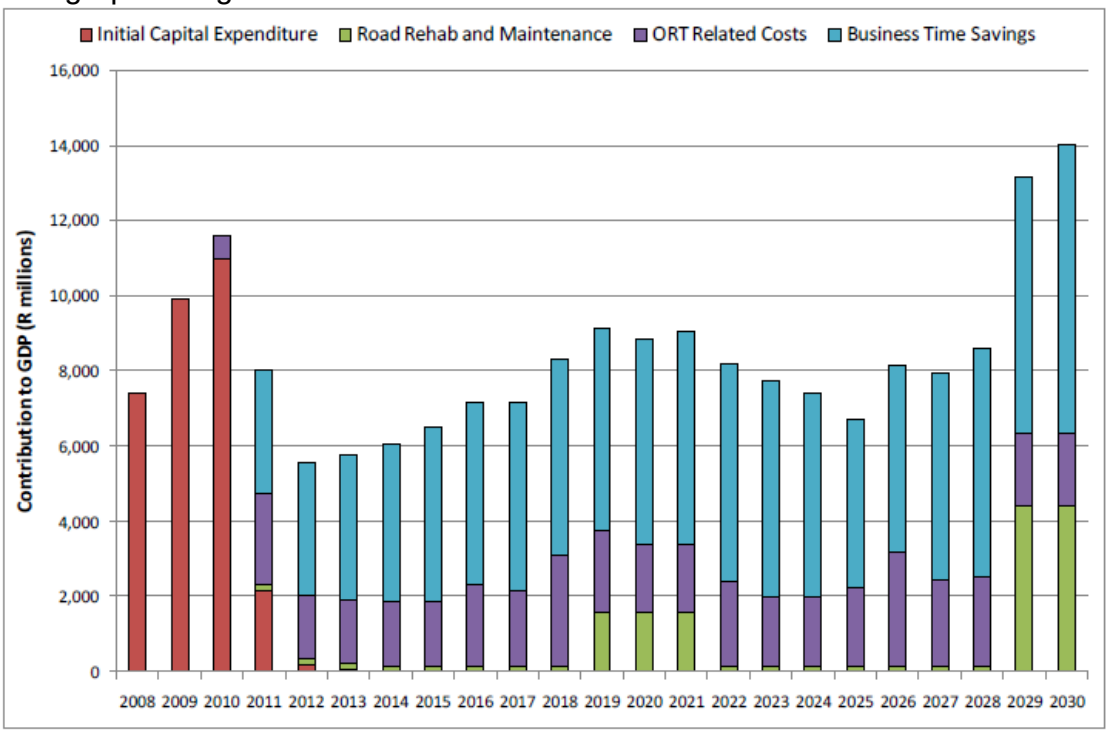

Figure 1: Detailed contribution of GFIP to GDP (Standish 2010, p. 89)

GDP has the capacity to add wealth to a country’s economy and its population. GFIP could increase cumulative GDP by over R207 billion by the end of 2030 (Standish 2010, p. 89).

b) Job creation
GFIP would lead to the creation of three types of jobs:

- Jobs in the construction and operation of the toll road.
- Indirect jobs due to multiplier effects of toll roads and changes in transport costs.
- Jobs can be created through increased business and commercial opportunities.

4. SOCIAL PERSPECTIVE

The Road Freight Association and AfriForum appointed economists.co.za to perform an independent consumer impact study on GFIP. The study makes no mention of toll road benefits, but places emphasis on the disadvantages (Economists.co.za 2011).

GFIP is a hot topic in the media currently. A quick search on the internet yielded several newspaper articles related to the toll road. Figure 2 provides a schematic presentation of the major interest groups and their stated perspectives. The majority of articles discuss the issue of toll tariffs being too high. Political parties and politicians use the opportunity to generate support for their causes.

Some of the issues raised in the articles are mentioned below with the solutions that were reached:

- Tolls tariffs too high

The first proposed tariff was 66c/km for light passenger vehicles. SANRAL has since adjusted this to 49.5c/km; given the vehicle has an e-tag.

- Taxis will have to raise fares in order to pay tolls and this will influence the poorest population

SANRAL exempted taxis and commuter busses from tolls altogether, so the poorest populations will not be directly affected.

- Tolls are just another tax and motorists will face double taxing

This is propaganda spread by politicians with little technical knowledge, seeking support. The technical section of this report proves that revenues are spent on the scheme and that the contribution from taxes is hopelessly insufficient even to maintain the existing road network.

- The joint-venture appointed for the construction and operation of the e-tolling system is 85% owned by an Austrian company

It goes against policy and strategy to award such a significant tender to a foreign company with no BBBEE, but care need to be taken to collect all the facts before accusing SANRAL of misconduct as no such evidence has emerged.

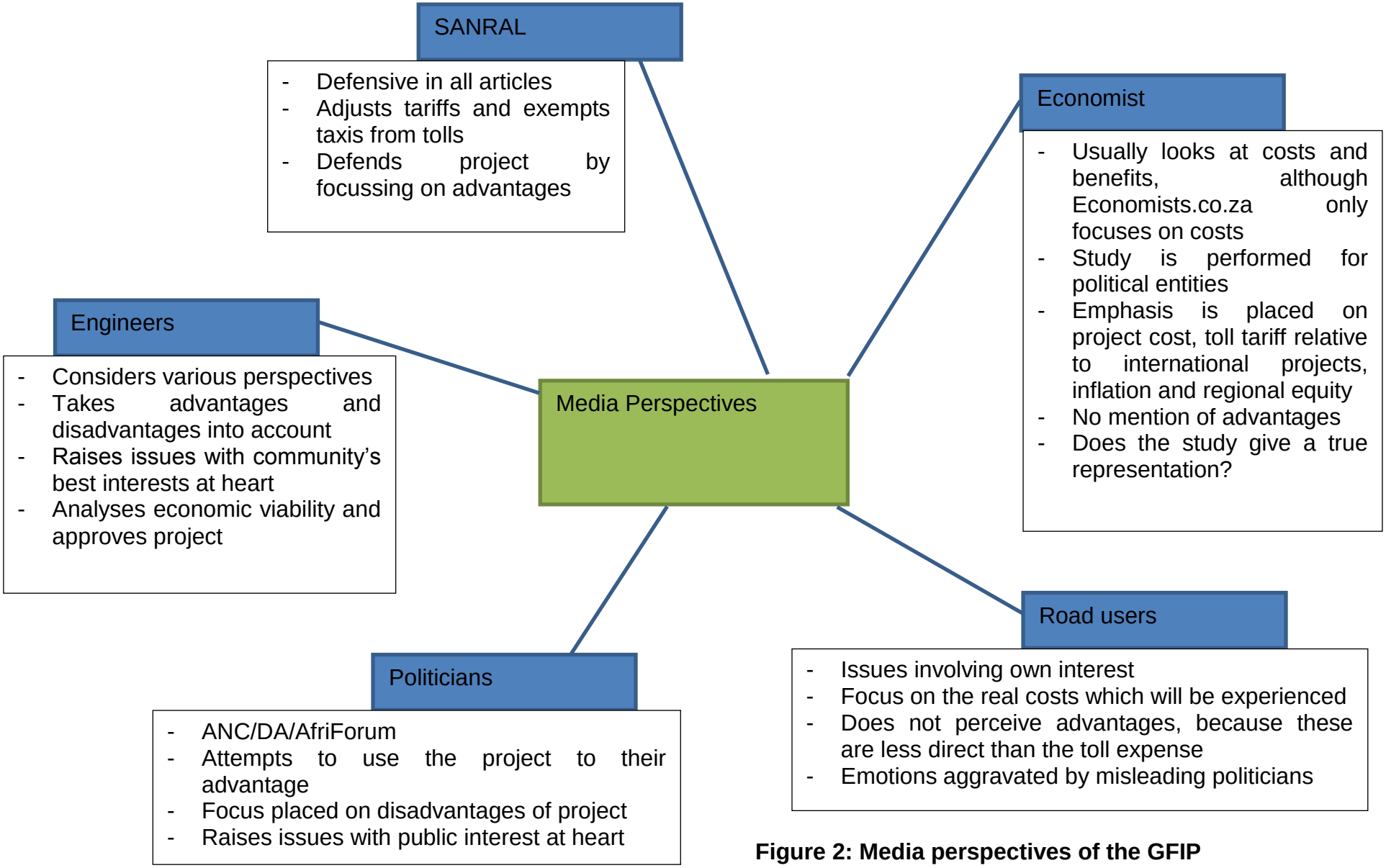

Figure 2: Media perspectives of the GFIP

5. STRATEGIC/LEGISLATION PERSPECTIVE

5.1 National level

Toll Road Policy for the Republic of South Africa

According to the Department of Tranport (1991, Chap 12:1) future financing of national roads in South Africa will have to depend on toll road policies, as a direct user-charge which motorists are willing to pay. GFIP is in line with this prediction of the Department of Transport.

The Department of Transport's (DOT) Strategic Plan for 2007-2010, describes the DOT's responsibility to maximise transport's contribution to the economic and social development of society through the provision of integrated transport systems (Standish 2010, p. 8).

The South African National Roads Agency Limited and National Road Act, 1998 (Act 7 of 1998) contains the legislation for toll roads. According to this act, SANRAL has various responsibilities and powers:

a) Responsible for the strategic planning, development, building, operation and maintenance of the country's national roads system.
b) SANRAL may appoint by contract, any other person or institution to do any of the above on its behalf.
c) SANRAL may declare any national road to be a toll road with the consent of the Minister of Transport.
d) SANRAL may levy and collect a toll from any toll road user.
e) SANRAL may raise funds by means of loans and bonds from any source (Nieuwoudt 2009, pp. 111-112).

GFIP as a project is aimed at upgrading and improving the national highways in Gauteng, which is consistent with SANRAL's responsibility. According to the powers listed above SANRAL is authorised to declare the Gauteng highways to be tolled roads and thus to collect toll from the roads' users. The financing acquired for the project is also within SANRAL's authority.

Act 7 of 1998 also gives the Minister of Transport permission to withhold consent for the declaration of a toll road if SANRAL has:

a) Given notice of the proposed declaration.
b) Given an indication of the approximate locations of planned toll plazas.
c) Invited interested persons and parties to comment and make recommendations regarding the proposed declaration and the plaza locations.
d) Requested the relevant Premier to comment on the proposed declaration and any other matter relating to the toll road.
e) Given affected municipalities opportunity to comment (Nieuwoudt 2009, p. 112).

1996 White Paper

Primary roads are regarded as elements of the country's economic infrastructure on which financial return should be achievable. It also suggests that the principle of user charging from direct users be applied as far as possible (Standish 2010, p. V). GFIP is well aligned with this paper and its recommendations.

Task entrusted to SANRAL

SANRAL's principal tasks are to:

a) Strategically plan, design, construct, operate, rehabilitate and maintain South Africa's national roads to support socioeconomic development.
b) Generate revenue from the development and management of its assets.
c) Undertake research and development to enhance the quality of life of all South African citizens, with particular emphasis on their social and economic well-being.
d) Advise the Minister of Transport on matters relating to South Africa's roads

e) Finance, plan, construct, provide, operate and maintain roads in neighbouring countries on the request of the Minster of Transport and those countries (SANRAL 2009, p. 13).

By undertaking the GFIP, SANRAL is in line with the first four of their entrusted tasks.

Broad Based Black Economic Empowerment (BBBEE)

SANRAL claims that their procurement policy supports and promotes BBBEE. This initiative is targeted at training and empowering historically disadvantaged South Africans to become economically independent and stimulating growth of SMME's (SANRAL 2009, p. 52).

Freeway improvement and tolling in general is usually beneficial to people who value their time, i.e. middle- and upper class populations (Kekana 2006, p. 45). Low income earners will only benefit from toll roads under special circumstances, for instance when public transport is subsided. The latest proposed toll tariffs states that commuter taxis and buses would be exempted from toll altogether (see article in Appendix B: "New Gauteng Tolls Announced"). This could ensure that the poorest of the province's population would not be hit hardest by the tolling scheme.

SANRAL awarded the tender for the design, build and operation of GFIP's new e-tolling system to a local joint venture company. However, 85% of the company is owned by an Austrian based firm. The tender was worth R 6.2 billion.

Non-toll road policy

Non-toll roads are financed through funds allocated by the National Treasury. SANRAL confirmed that approximately 60% of the current non-toll road network is older than its design life of 20 years and that up to 65% of their limited allowance from the Treasury is spent to maintain the ageing network for daily use (SANRAL 2005, p. 22). Upgrading and maintaining these roads will require a significant amount of capital expenditure.

Considering the high cost of planning, designing and construction of national roads, GFIP would be deemed unviable under this policy (Nieuwoudt 2009, pp. 103-104).

5.2 Provincial level

Standish (2010, p. 11) lists the most relevant provincial documents as follows:

- Gauteng Growth and Development Strategy - Transport need to facilitate economic growth and social policy objectives;
- Gauteng Strategic Agenda for Transport - Includes the efficiency of infrastructure use with focus on public transport capacity provision to limit road investment;
- Gauteng Road Freight Corridor Study - Identifies freight intensive routes and suggests freight route prioritisation;
- Gautrain Integration Report - Includes recommendation that both freeway and additional public transport investment needs to support broader objectives of the project;
- Gauteng bus routes rationalisation study - Aims to align longer distance subsidised bus routes with other public transport provision;
- Gauteng Strategic Roads Development Plan – Emphasises the need for freeway expansion.

GFIP aligns well with four of the latter documents. Project alignment with the Gauteng Strategic Agenda for Transport and Gauteng bus routes rationalisation study is questionable.

Gauteng's Growth and Development Strategy

The Growth and Development Strategy of Gauteng strives to improve the quality of life of all citizens by addressing poverty and unemployment (Gauteng Provincial Government 2005, p.3).

Hook warns that all road investments will not necessarily induce economic development (2005, p. 14), nor will it inevitably alleviate poverty (2005, p. 19). He encourages governments to perform a cost-benefit analysis as well as considering maintenance to be done, project life and project benefits (2005, p.15).

GFIP had been analysed with a thorough cost-benefit analysis, which included a maintenance plan and the potential of economic development. The results were presented to the authorities and the project was approved.

6. CONCLUSION

An inadequate transport network is one of the key constraints to economic growth in Gauteng. Congestion and poor road surface condition results in significant travel times and high accident rates. This decreases GDP and costs the road accident fund substantial sums of money daily. GFIP has started addressing this issue by rehabilitating and upgrading the existing network (Standish 2010, p. 94).

The issue arises when it comes to funding the project. The ideal way to fund a road rehabilitation/upgrade project is through tax and fuel levies. However, since poverty is so widespread in South Africa, budgetary allocations are aimed at poverty relief, often at the expense of other services (Standish 2010, p. 94).

The major advantages of tolls roads relates to funding, road condition and job creation. Funds can be procured more readily and are dedicated towards road improvement and maintenance. The roads condition is improved in terms of safety and capacity, which leads to safer and shorter travel times. Jobs are created in the construction, operation and maintenance of the road, as well as due to economic growth stimulated by the project.

GFIP is likely to lead to poverty alleviation, because taxi minibuses and commuter buses will be exempted from paying tolls. With no increase in travel fare and an increased mobility and accessibility, the poor commuter will experience an increased life quality. The change in prices of general consumer items will not inevitably increase. If producers pass the costs and benefits of toll roads on to the user, the prices should remain relatively constant.

The disadvantages of toll roads are mostly related to user reactions. An increased load might be imposed on the alternative routes due to traffic diversion. Public transport will not be advanced, since toll roads encourage private vehicle use.

GFIP is in line with the majority of strategic plans and regulations of Gauteng, with the exception of the e-tolling tender award which was given to a majority Austrian-owned joint-venture.

Economically, toll roads are the only viable option for road funding in a country like South Africa. Various different economic analyses have proven that GFIP is an economically feasible project and that users would benefit from the scheme.

Kekana (2006, p. 46) reveals that society generally reacts negatively towards toll roads in the first few years after implementation. He believes this is because the public finds it difficult to pay for things which were originally provided for free. Tolling is experienced as a sudden real expense, while the savings in running costs, services and saved time are not immediately notable. As soon as users get used to the tolls and realise the benefits, their attitudes will improve drastically.

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