

**AN ASSESSMENT OF E-TOLLING AS A METHOD  
OF FINANCING GAUTENG ROADS**

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# Abstract

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E-tolling was recently implemented on roads in Gauteng, South Africa. This gave rise to a great deal of protest by road users and a court battle between the South African National Roads Agency (SANRAL) and the Opposition to Urban Tolling Alliance, a body representing road users. The e-tolling system was criticised at various levels and on numerous grounds, some financial and others appearing to be emotional. This thesis attempted to analyse the various grounds for objection against the system, the main goal of the research being to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the upgrading of Gauteng roads would have been more cost-effective. Secondary data in the form of documents from multiple sources was used in the analysis, including an Economic Impact Assessment that was one of the key inputs into the decision to introduce e-tolling. It was found that there are multiple problems plaguing the e-toll system and e-tolling is not the most cost-effective taxation method of paying for Gauteng roads. Using a fuel levy or general tax revenue available to the National Treasury were both found to be more cost-effective methods as they would have achieved the same result (repairing and upgrading specific Gauteng roads), at a cost of R20,0913 billion less than e-tolling. It was suggested that the best taxation method/s to pay for the roads would have been using a fuel levy and general tax revenue as the primary funding methods, with vehicle licensing fees and long distance toll roads as secondary methods to aid the primary methods.

## Key words

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- E-tolling (Electronic Tolling)
- South Africa
- Cost-effective(ness)
- Taxation
- Fuel Levy
- National Treasury
- South African National Roads Agency (SANRAL)

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# Chapter 1: Introduction

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## 1.1 Context

Electronic tolling (E-tolling) of freeway users on Gauteng roads came into operation on 3 December 2013 (Mail & Guardian, 2013a:1). E-tolling was introduced by the South African National Roads Agency (or “SANRAL”), which defines itself and its mandate as follows (The South African National Roads Agency, 2013b:1):

The South African National Roads Agency SOC Limited, generally known as SANRAL, is an independent, statutory company registered in terms of the Companies Act. The South African government, represented by the Minister of Transport, is the sole shareholder and owner of SANRAL. SANRAL operates in terms of its founding legislation, The South African National Roads Agency Limited and National Roads Act (Act No. 7, 1998). . . . SANRAL has a distinct mandate – to finance, improve, manage and maintain the national road network (the “economic arteries” of South Africa).

The South African National Roads Agency (2013a:2) describes the e-tolling system (one of the tolling systems used in South Africa) as follows:

**Open Road Tolling** – This is another form of Electronic Toll Collection whereby the motorist is not required to stop at a toll booth or plaza to pay toll fees. Overhead Gantries are positioned along the toll route and technology mounted on these gantries will take photos of the front and rear of the vehicle and read the transponder (e-tag) in the vehicle – if there is no e-tag in the vehicle, it is identified using the photos that are taken of the front and rear of the vehicle.

The introduction of e-tolling has been a very controversial issue in Gauteng, resulting in the formation of an organisation - the Opposition to Urban Tolling Alliance (or “OUTA”). The Opposition to Urban Tolling Alliance describes its mandate as follows (2012:3):

To represent the interests of its constituent membership as also the interests of bodies and groups in related industries as well as motorists and the public in general in objecting to and taking such lawful steps as may be required to suspend and/or interdict and/or otherwise prevent the implementation of the Gauteng Freeway Improvement Plan (“GFIP”) and/or to take such further or alternative steps as the Association deems necessary to protect and advance the interests of its membership.

OUTA took SANRAL to court on several occasions, ultimately leading to the case being heard on appeal by OUTA in the Supreme Court of Appeal. The appeal was unsuccessful and it was held that e-tolling could go ahead, mainly due to the fact that the new Transport Laws and Related Matters Amendment Act, No. 3 of 2013, effectively wrote e-tolling into law. According to Parliament of the Republic of South Africa (2013:1):

The Bill [now an Act], tabled in Parliament by the Department of Transport, was necessitated by the development of the Gauteng Freeway Improvement Project (GFIP) as well as future plans for the development of the country's roads infrastructure. The Bill will give effect to the appropriate implementation of Electronic Toll Collection.

The Democratic Alliance (or "DA"), the main opposition political party in South Africa, has publically stated that "it was a sad day for Gauteng and the country that government had ignored public opposition to the tolling." (IOL News, 2013:1). The DA has started using the e-tolling issue as a political tool. "The DA unveiled a new billboard against e-tolls on the N3 highway in Germiston on Thursday. The blue and white billboard states: 'A vote for the DA is a vote against e-tolls'" (Beukes, 2013:1). Another significant group that has publically declared its opposition to e-tolling is the Congress of South African Trade Unions (or "COSATU"). According to Magubane (2013:1):

Cosatu Gauteng Secretary Dumisani Dakile said a programme of protests against e-tolling would start in January. The campaign will include stay-aways, sit-ins and civil disobedience to the government's instructions for road users to buy e-tags and pay tolls.

In light of this opposition to e-tolling in Gauteng, it is clear that the implementation of the system is a contentious issue and relevant in the context of the overall tax burden in South Africa.

According to Duncan (2012:2), the amount that users of the Gauteng e-tolled roads will have to pay per month has been capped at R550 for drivers of regular passenger vehicles and sport utility vehicles ("SUVs"). At first glance this does not appear to be a very large amount. The question can be asked: why is e-tolling such an emotive issue?

The following are possible reasons for the opposition to e-tolling:

- The poor performance of road departments in Gauteng: according to City Press (2012:1), the departments of roads and transport and infrastructure development in Gauteng were among five of the worst-run departments in the country, respectively

incurring irregular, wasteful and unauthorised expenditure of R2.2 billion (36.3% of its R6.1 billion budget) and R288 million (24% of its R1.2 billion budget). Perceptions are rife that wasteful government spending and poor planning by government lead to e-tolling being necessary in the first place.

- The already existing high levels of taxation experienced by South African taxpayers, including the proposed introduction of National Health Insurance already threatening to lead to a future increase in tax rates.
- The project is expected to slow economic growth and job creation. E-tolling increases business expenditure for businesses that transport goods along the affected roads. This could slow economic growth and job creation and lead to increased prices of commodities. The Impact Study (Standish, Boting & Marsay: 2010), however, estimated that e-tolling would contribute to Gross Domestic Product (GDP) and job creation. This is discussed in chapter 2.
- The majority shareholding in Electronic Toll Collection (Pty) Ltd (the e-toll collection company) is non-South African and a considerable portion of e-tolling collections will be paid to non-South African residents. E-tolling could also possibly give rise to negative perceptions of South Africa, as overseas shareholders may lose money due to problems with e-toll implementation in South Africa.
- It is estimated that SANRAL will be making a profit, which is in contrast to their own mandate, which is “to finance, improve, manage and maintain the national road network (the ‘economic arteries’ of South Africa)” (The South African National Roads Agency, 2013b:1).
- It would also appear that the complexity of the e-tolling system was not properly considered before the system was implemented and there are a number of important issues in regard to e-tolling that lack clarity.
- In regard to the e-toll fee collection system:
  - SANRAL is using threatening and inaccurate text messages showing much larger amounts than e-toll road users actually owe, in an attempt to scare them into paying; and
  - the inability of the SANRAL website to safeguard user information (such as personal details, credit card information, and any other private details), which has been easy to hack from the website.

- Other issues:
  - the fact that mini-bus taxis are exempt from paying e-toll fees, while other businesses are not;
  - the fact that non-cooperation by road users can result in a criminal record; and
  - the possibility of e-tolling being used countrywide (e-toll gantries are already being installed on certain major roads in the Western Cape).

The setting up and future maintenance of the e-tolling system has proven to be and will be very costly. Taxpayers will have to bear the burden of these high costs. “Sanral is set to spend R85 million this year on advertising its controversial e-tolling plans in Gauteng. This is in addition to the R202 million spent on advertising and campaigns in the three previous financial years” (City Press, 2013a:1). According to the Opposition to Urban Tolling Alliance (2013c:1), the cost of the system will be R71,39574 billion over the next twenty-four year period.

The Opposition to Urban Tolling Alliance (2013a:1) highlights the most commonly referred to alternatives to the e-tolling system as:

- the National Treasury [that is, general tax revenue]; and
- the fuel levy.

Long distance toll roads and vehicle licensing fees are mentioned by the Opposition to Urban Tolling Alliance (2013a:1) as sources of revenue to help to pay for Gauteng roads. On their own, these methods may not be sufficient to pay for Gauteng roads, but their contribution may have been able to ease the burden on the main funding method used.

“Outa believes the most equitable way to pay for the maintenance of the highways would be through a fuel levy.” (IOL News, 2013:1) According to the Opposition to Urban Tolling Alliance (2013b:1):

The issue at stake here is not the roads, but the intention to collect the Gauteng Freeway Improvement Plan funds through an inefficient, complex and expensive system of e-tolling, when a highly efficient and far cheaper means of applying a very small (0.7%) increase to the fuel levy would suffice.

## **1.2 Goals of the research**

There is no doubt that controversy surrounds the introduction of e-tolling on major Gauteng roads. In particular, the main complaint has been that SANRAL has overlooked all other available forms of taxation to pay for the upgrades to the now e-tolled roads. The main goal of this research is therefore to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective.

In order to achieve this main goal, the following sub-goals will be addressed:

- to describe e-tolling and how the e-tolling system operates;
- to ascertain why government chose this system of tax;
- to understand the costs incurred to date and future costs of the system;
- to consider the controversies surrounding the system and problems with the system, to ascertain whether or not they are based on fact or merely emotive reactions;
- to discuss alternatives that could have been implemented instead of e-tolls and ascertain whether they would have been a more cost-effective method of paying for the now e-tolled Gauteng roads.

The basic canons (or principles) of taxation proposed by Adam Smith in *The Wealth of Nations* 1776 (Haupt, 2014:2) can be paraphrased as:

- proportionality, according to the ability to pay;
- certainty;
- convenience;
- economy; and
- equity.

The various possible methods of taxation that could be used to finance the Gauteng toll roads will be evaluated against these maxims.

## **1.3 Methods, procedures and techniques**

The present research can be described as interpretative research for the following reasons. The research seeks to understand and describe (Babbie & Mouton, 2009) the reasons for and problems associated with the e-tolling system. Although based on facts, the conclusions may

still be subjective and different researchers may come to different conclusions in this regard. The present research will also analyse the subjective perceptions of the users of the e-tolled roads and the perceptions of others (including specialists in their respective fields). The research can also be categorised as critical research as the cost-effectiveness of the e-tolling project is critically evaluated in light of alternative forms of funding and against the basic principles of a good taxation system.

Due to the recent nature of the introduction of e-tolling in Gauteng, it appears that no academic research has been done on e-tolling in South Africa. Therefore, the documentary data to be used for the research includes:

- legislation (from the relevant South African Tax Acts and other legislation governing e-tolling);
- the Economic Impact Assessment (Standish, Boting & Marsay, 2010:16) carried out prior to the decision to implement the Gauteng e-tolling system;
- articles from the popular media and websites of reliable sources;
- submissions by the relevant controlling bodies with regard to e-tolling (including public announcements made); and
- non-South African source data (as e-tolling has been implemented in other countries in the past).

The research is conducted in the form of an extended argument, supported by documentary evidence. The validity and reliability of the research and the conclusions will be ensured by:

- adhering to the rules of the statutory interpretation, as established in terms of statute and common law;
- discussing opposing viewpoints and concluding, based on a preponderance of credible evidence; and
- the rigour of arguments.

As all data is in the public domain, no ethical considerations arise. Interviews will not be conducted; opinions will be considered in their written form.

## **1.4 Why government chose the e-tolling system to pay for Gauteng's now e-tolled roads**

The cost-effectiveness of a major project should be the main priority of policy makers before implementing a tax to fund the project. The decision to implement e-tolling should therefore have been based on a tax collection method that contributes to its cost-effectiveness. An analysis of why government chose e-tolling as the method of tax collection to pay for Gauteng's roads will contribute towards the achievement of the main goal of the present research: to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective. If it appears that the system is not a cost-effective system, the reasons why government chose e-tolling as analysed in this chapter will have to be scrutinized.

One of the main reasons why government chose e-tolling as the method of tax collection to pay for Gauteng's roads was the supposed benefits that tolling (and more specifically, e-tolling) could provide. According to the South African National Roads Agency (2013a:3), the benefits of tolling are:

- Toll roads ensure a high quality road network. In addition to contributing to improved road safety, toll roads generally reduce travelling distances and result in substantial savings on the running costs of your vehicle and much valued travel time.
- The “user-pay” principle represents a fair and precise way of paying for transportation facilities.
- Tolls link the benefits for the road user with its fees by charging users only in direct relationship to how much of the road they use.

Once tolling was decided upon as the best method to pay for the upgrade and maintenance of Gauteng's freeways, e-tolling (or “Open Road Tolling”) was chosen as the best method of tolling. According to the South African National Roads Agency (2013a:4), the benefits of Open Road Tolling (or “e-tolling”) are:

- Better Roads = Better Infrastructure = Better Economy;
- Reduces the amount of time spent on the road;
- Provides free flowing traffic along the route and assists in eliminating congestion;
- Over a period of time the motorists save on routine car maintenance;
- Reduces the amount of Carbon emission as there is less time spent on the roads;

- Improves motorist safety and security along the route as it is a free flowing collection system along an open road;
- SANRAL has implemented a Freeway Management System whereby roads are monitored and road user assistance along the tolled road network is improved in emergency situations;
- User assistance along the tolled road network is improved in emergency situations; and
- Safely engineered roads which require less maintenance over greater periods of time.

As will be argued later in the thesis, all the benefits of e-tolling of Gauteng roads, with the exception possibly of a full realisation of the “user pays” principle, could have been achieved if the road network was simply upgraded using alternative sources of funding.

Another major reason why government chose e-tolling as the method of tax collection to pay for Gauteng’s roads was the Economic Impact Assessment of the Gauteng Freeway Improvement Project, done by the University of Cape Town. According to the South African National Roads Agency (2010:4):

Various studies were undertaken as part of the preparatory phase of this project. It included an extensive Economic Impact Assessment, done by the University of Cape Town (UCT). The study indicated that the project will have a high economic rate of return and economic benefit to cost ratio. Furthermore, it indicated direct and indirect job creation as a result of a project. A snap shot of the current workforce on the project is 20000 people.

This Economic Impact Assessment is discussed in chapter 2 of the present research. One concern, and one that unfortunately cannot be resolved within the scope of the research, is whether the study was undertaken before the project commenced and formed part of the decision-making process, or whether it was used to justify a decision that had already been made. Construction on the freeway system commenced in 2008 and it is unlikely that it would have been started if a decision relating to the funding had not already been made.

Apart from these reasons, SANRAL does not seem to provide any other explanations as to why e-tolling as such was chosen as the best method of tax collection to pay for Gauteng’s roads.

## **1.5 Overview of the chapters**

**Chapter 1** of the present thesis provides the introduction to the analysis, which puts the e-tolling of Gauteng's roads into context, describes the goals of the research, analyses the methods, procedures and techniques used in the analysis, and discusses the reasons why government chose e-tolling as the method to pay for Gauteng's roads. **Chapter 2** then analyses the costs incurred and future costs of the e-tolling system, as estimated by SANRAL. It is important to establish these costs as they are used in Chapter 4 as a benchmark against which the other possible e-toll funding models are compared. Chapter 2 also analyses the Economic Impact Assessment of the e-toll project in detail in order to understand the analysis of the costs and various savings from the e-toll project that it identified. **Chapter 3** analyses the controversies and problems surrounding e-tolling in an attempt to determine whether or not they are based on fact and justifiable. An analysis of these controversies and problems also helps to achieve the main goal of the present research: to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective. **Chapter 4** analyses and compares the funding alternatives that could have been implemented instead of e-tolling to ascertain whether or not e-tolling is the most cost-effective method of taxation to pay for Gauteng's roads, thereby achieving the main goal of the present research. Finally, **Chapter 5** brings all the findings of the research together into a final conclusion. It also makes recommendations based on the findings, and discusses matters that lack clarity, limitations of the present research, and opportunities for future research.

# Chapter 2: The impact study and the projected costs of the e-tolling system

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## **2.1 Introduction**

This chapter first provides an overview of the costs incurred and to be incurred as estimated by the South African National Roads Agency (or “SANRAL”) on the Gauteng Freeway Improvement Project (which includes the implementation of e-tolling). It is important to understand the costs of the e-tolling system because they have a direct bearing on the cost-effectiveness of the system as a tax collection method. An analysis of these costs is therefore fundamental to achieving the main goal of the present research: to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective. The most cost-effective system of taxation is one which provides taxpayers with the greatest possible benefit whilst having to pay the least possible amount of tax. If the costs of the e-tolling system are compared to the costs of the alternative tax collection systems to pay for Gauteng’s roads, it may be possible to ascertain the system that will represent the lowest cost to taxpayers.

The Economic Impact Assessment (Standish, Boting & Marsay: 2010) of the e-toll project will then be analysed. It identified various savings from the e-toll project and an analysis of these projected savings will be included in this chapter. In order for there to be “savings” by taxpayers, their projected benefits from the system will have to exceed their costs (mainly e-toll fees). The Economic Impact Assessment of the e-toll project was referred to by SANRAL as a major input into the decision to implement the e-toll system.

## **2.2 Cost overview of the Gauteng freeway improvement project**

According to the Opposition to Urban Tolling Alliance (2013c:1), SANRAL’s affidavit detailing the e-toll cost breakdown (over the loan life cycle) provided in past court challenges by the Opposition to Urban Tolling Alliance (or “OUTA”) ([Appendix 2](#)) indicated the following over a twenty-four year period:

Gauteng Freeway Improvement Project: Latest Tariffs (Expenditure and income during the loan life cycle) – over 24 years (in millions of September 2011 Rands)

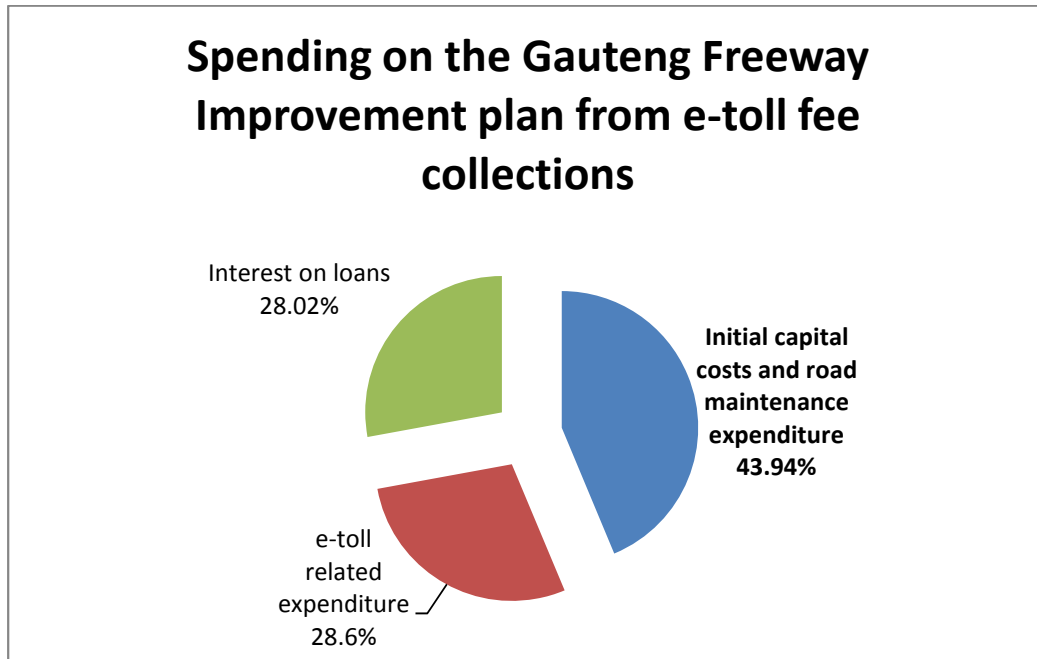
<b>Expenditure/income item for 24 year period</b>	<b>(Expenditure)/income for the 24 year period</b>	<b>Percentage of total income estimated for the 24 year period</b>
Initial Capital cost	(R20 629.99)	28.90 per cent
Road Maintenance	(R10 669.45)	14,94 per cent
Violation Processing Centre – Capital and Operating Expenditure	(R6 194.06)	8,68 per cent
Toll Related Capital and Operating Expenditure (excluding Violation Processing Centre)	(R12 170.13)	17,05 per cent
Other Operational Expenses	(R1 727.11)	2,42 per cent
Interest Expense	(R20 005.00)	28,02 per cent
REVENUE	R71 395.74	100.00 per cent

[Refer to [Appendix 2](#) for the e-toll cost breakdown over the loan life cycle provided by the SANRAL.] The estimate indicates that the project will break even over the twenty-four year period of the loan life-cycle.

An analysis of these figures shows that over a twenty-four year period of the Gauteng Freeway Improvement Project:

- 43,94% (28,9% on initial capital costs and 14,94% on road maintenance) of the R71,39574 billion projected e-toll fees to be collected is to be used for capital and maintenance costs on the roads;
- 28,6% of the R71,39574 billion projected e-toll fees to be collected is to be used on e-toll related expenditure (8,68% on Violation Processing Costs capital and operating expenditure, 17,05% on toll related capital and operating expenditure, and 2,42% on other operational expenditure); and
- 28,02% of the R71,39574 billion projected e-toll fees to be collected is to be used to pay the interest on the loans that SANRAL took out in order to implement the Gauteng Freeway Improvement Project.

It is estimated that only 43,94 per cent of the R71,39574 billion projected e-toll fees to be collected over a twenty-four year period of the Gauteng Freeway Improvement Project are to be used for capital and maintenance costs on the roads. This means that only 43,94 per cent of e-toll fee collections (i.e. tax collections) are to be used to achieve the main goal of financing, improving, managing and maintaining the now e-tolled Gauteng roads.



The South African National Roads Agency (2013b:1) defines its mandate as “to finance, improve, manage and maintain the national road network (the “economic arteries” of South Africa)”. As toll collection is a form of taxation, SANRAL should try to achieve its mandate in a manner that places the smallest possible tax burden on the taxpayers paying for the roads. To pay for the additions and maintenance of Gauteng’s roads in a manner that places an unnecessarily large tax burden on taxpayers would not be a cost-effective system of taxation.

In terms of how the e-toll tax collections are spent, this is therefore not a cost-effective system of taxation because 56.06 per cent of e-toll tax collections are effectively being wasted by the system. In fact, more money is being spent on expenses (>50%) than is being spent on the roads. It must be noted however, that no matter what method of taxation was used, the interest of R20,005 billion over a twenty-four year period on the loan taken out by SANRAL would always have to be incurred to pay for the initial capital costs of the roads due to cash-flow constraints.

### 2.2.1 Capital costs of the Gauteng freeway improvement project

In response to the answer to the question “how much did the Gauteng Freeway Improvement Project cost”, the Opposition to Urban Tolling Alliance (2014:1) stated:

There are two parts to the GFIP [Gauteng Freeway Improvement Plan] project costs **but the numbers are always kept vague** [SANRAL’s numbers], so in simple terms and rounding off:

- (i) The actual construction cost of the freeway upgrade, interchanges and additional lanes, etc. is frequently quoted at R17,9bn.
- (ii) Sanral indicated in 2006 that the 185 km GFIP would cost around R6,8bn.
- (iii) In 2008, they revised this cost to R11,4bn and by 2011, the final cost came in at R17,9bn. (own emphasis)

It is worrying that SANRAL has been “vague” about the cost details of the Gauteng Freeway Improvement Project because clarity and transparency should be of utmost importance to a government department.

According to the Opposition to Urban Tolling Alliance (2013b:1), the *Gauteng Freeway Improvement Project Capital Expenditure* as provided by SANRAL are:

Roads	R17 884 002 094
Gantries	393 867 035
Systems	1 837 480 096
Midrand	229 756 283
Customer Centre	<u>217 217 399</u>
	20 562 322 907
Cost overruns and interest accrued (established at R2 437 677 093)	<u>2 438 000 000</u>
Total Debt	<u>R23 000 322 907</u>

The Opposition to Urban Tolling Alliance (2013b:1) estimates that the capital cost (including interest owing) of the system will be R2 171 067 772 per annum and therefore R39,9 billion over a twenty year period.

### 2.2.2 Loan taken out by SANRAL

According to PoliticsWeb (2013:1), as part of the evidence provided in the Supreme Court of Appeal case between the OUTA and SANRAL, in relation to how SANRAL paid for the Gauteng freeway improvements:

On 9 May 2008 SANRAL issued a media release to the effect that it had awarded seven contracts for the implementation of the GFIP. On 24 June 2008 work commenced in earnest on the project and continued for the next two years in order to prepare certain sections of the proposed toll road network for the Fifa 2010 World Cup. After a three month period of inactivity during the World Cup, work on the freeway system recommenced and continued into 2011. It involved a massive infra-structural development, including the construction of bridges, flyovers, on- and off-ramps, and related services. It also included the construction of 42 overhead gantries that became a feature of the Gauteng landscape in the period following the World Cup in 2010. **The costs incurred by SANRAL to finance this construction exceeded R20 billion.** SANRAL procured this funding from the money market by issuing bonds which are effectively repayable loans, repayment of which was guaranteed by the South African government through the Treasury. Should SANRAL fail to collect tolls, so we are told, it will not be able to meet its obligations under the loan. In practice this will mean that the guarantee by the government stands to be called up. (own emphasis)

This loan taken out by SANRAL will incur the obligation to pay interest. This interest expenditure is an additional expense of the Gauteng Freeway Improvement Plan Project. SANRAL's affidavit relating to the e-toll cost breakdown presented in court hearings stated that interest on loans to pay for the Gauteng Freeway Improvement Project over a twenty-four year period will amount to R20,005 billion (Opposition to Urban Tolling Alliance, 2013c:1).

### 2.2.3 Running costs of the e-toll system

In terms of the e-toll collection costs, the Opposition to Urban Tolling Alliance (2014:1) stated that:

On 18 September 2009, SANRAL awarded the e-toll collections tender to ETC (Electronic Toll Collection JV – 85% owned by Kapsch Trafficom) for just over R10bn, broken down as follows:

- R1,33bn for the design and building of the works.

- R8,35bn to operate (manage and administer) the e-toll collection system.
- R0.34bn for asset replacement fund.

According to Slabbert (2013:1):

The contract with ETC stretches over five years from the start of e-tolls, after which it will be put on open tender again. With e-tolls set to start before the end of the year, that means the contract may be up for grabs by 2018. Many South African operators have the capacity to take over this function, says Alex van Niekerk, head of Toll and Traffic at Sanral.

The contract between SANRAL and Electronic Toll Collection (Pty) Ltd is a five year contract and therefore the R8,35 billion is to be paid at R1.67 billion per annum. As Slabbert (2013:1) points out, Electronic Toll Collection (Pty) Ltd only has a five year contract with SANRAL and thereafter it is possible that some other body may take over the system. However, due to the specialised nature of the system, not many organisations will be able to perform the necessary functions and it is yet to be seen whether they will be able to run the e-toll system at a cheaper rate than Electronic Toll Collection (Pty) Ltd. For these reasons, it is likely that the running costs of the e-toll system will remain at roughly the same levels in the future (after taking into account the effect of inflation).

#### 2.2.4 Costs of advertising and other campaigns

“Sanral is set to spend R85 million this year on advertising its controversial e-tolling plans in Gauteng. This is in addition to the R202 million spent on advertising and campaigns in the three previous financial years” (City Press, 2013a:1).

Although the costs of the project may have been accurately estimated, no details are provided relating to how the revenues were calculated over the twenty-four year period of the loan and the fact that the income is estimated to be exactly equal to the costs over this period raises the (unanswerable) question whether this was simply a balancing figure.

### 2.3 Analysis of the economic impact assessment of the Gauteng freeway improvement project

With regard to the planning process for e-tolling and the Gauteng Freeway Improvement Project, the South African National Roads Agency (2010:4) states:

Various studies were undertaken as part of the preparatory phase of this project. It included an extensive Economic Impact Assessment, done by the University of Cape Town (UCT).

It is clear that the Economic Impact Assessment of the Gauteng Freeway Improvement Project (referred to as “the Impact Assessment”) is a crucial document and played a major role in the decision to implement the e-toll system. It therefore needs to be analysed to ascertain the basis on which this decision was made. The authors (Standish, Boting & Marsay, 2010: vii) state their mandate as follows:

. . . the Provincial Government of Gauteng, SANRAL and relevant local authorities wish to understand the economic implications of upgrading the existing Gauteng freeway network, adding capacity, adding new roads and tolling the entire network.

The authors assert (Standish *et al*, 2010:i) that the financial analysis reflects the financial benefits to road users, not the project proponent. Therefore, while SANRAL’s financial projection reflects a break-even situation for the project itself, the Impact Assessment measures the impact on the economy as a whole, and particularly the economy of Gauteng.

The Impact Assessment (Standish *et al*, 2010:i) applied three methods of analysis:

- a cost benefit analysis;
- a micro-economic analysis; and
- a macro-economic analysis.

Each of these components of the assessment is dealt with under separate headings below.

### 2.3.1 The cost benefit analysis

The cost benefit analysis is described by the authors (Standish, *et al*, 2010:i) as “the primary measure of the project’s viability” and “a robust indication of the value that the project can deliver to the national economy”. The results of the analysis (Standish, *et al*, 2010:i) are set out as follows:

<b>Benefit Cost Ratio</b>	<b>Internal Rate of return</b>	<b>Net present Value (R billion)</b>
8.4	37%	209,8

The costs and benefits of the project (in 2010 prices, which is slightly lower than the SANRAL cost estimate based on 2011 prices) expressed at its net present value and based on a toll fee of 70 cents per kilometre, is as follows (Standish *et al*, 2010:39):

<b>Costs</b>	<b>R million</b>
Initial construction costs	16 410
Road maintenance costs	12 902
Cost to local authorities	<u>459</u>
	<u>29 772</u>
<b>Benefits</b>	
Road user savings	<u>239 580</u>
<b>Net benefits</b>	<u>209 808</u>

These costs, however, differ from the SANRAL estimate provided above. The cost to local authorities is not specifically reflected in the SANRAL estimates, while the substantial costs relating to the Violation Processing Centre and other toll-related expenditure, as well as the interest expense, are not reflected in the cost-benefit analysis in the Impact Assessment. Costs are therefore understated by approximately R38 370 million (in 2011 terms).

The benefit to cost ratio is therefore 8,0 (based on a toll fee of 70 cents per kilometre) and the internal rate of return (the rate at which the present value of the costs and the benefits is equal to zero) is 37%. In the table above the benefit cost ratio as reflected in the executive summary is 8,4; this is based on a toll rate of 50 cents per kilometre, however.

The project costs were obtained from the SANRAL estimates. The Impact Assessment provides no details as to how the cost to local authorities was calculated, but it can be assumed that this, too, was based on a SANRAL estimate of the cost of upgrading roads that would carry a heavier traffic load due to motorists diverting onto these roads to avoid paying the toll fee.

The road user savings comprise the following (Standish *et al*, 2010:46):

- savings in vehicle operating costs, due to reduced time on the roads and a better road surface;
- savings related to the reduced possibility of accidents on the less congested roads; and

- savings related to the shorter time spent on the road due to less traffic congestion, expressed in terms of the cost of time.

The savings in vehicle operating costs were calculated using information supplied by SANRAL, as an output from the Highway Design and Maintenance Standard Model 4 (HDM4) software, developed by the World Bank and used by traffic engineers in South Africa (Standish *et al*, 2010:43). The cost of accidents was determined from a SANRAL database, also based on the HDM4 methodology and used to determine the savings due to reduced accidents on the less congested toll roads. It is submitted that these estimates have been based on credible evidence.

The third component of road user savings was time savings, based on speed predictions by traffic engineers (Standish *et al*, 2010:46). The speed saving as a result of travelling on the tolled roads was then multiplied by the time costs as determined in the Impact Study. The time costs and vehicle occupancy rates were based on roadside interviews conducted by SANRAL in 2009 and increased to 2010 values based on the increase in GDP (Standish *et al*, 2010: 47). Time costs were divided into working and non-working time costs for class 1 vehicles (light passenger vehicles) and only working time costs for other vehicles. For the purposes of the study, based on previous research (Gwouldiam: 1997, in Standish *et al*, 2010:47), non-working time was assumed to be one-third of working time. The final time cost per vehicle was as follows (Standish *et al*, 2010:47):

<b>Time cost per light vehicle (rands per hour)</b>	
	<b>2010 price</b>
Commuting time	177,66
Non-working time	180,90
Working time	168,58

As the time cost is based on the income levels as revealed by interviewees, this is a value that is highly likely to be inaccurate as interviewees are usually reluctant to disclose their actual income. The authors of the impact study (Standish *et al*, 2010:72) report that of the 27 000 interviews conducted, only 5 524 were willing to disclose their income and the authors also questioned the accuracy of this information. From the Impact Assessment, it is not possible to establish the relative cost of the three components: vehicle operating costs, accident costs

and road user costs, so that the potential error in the estimate of total road user costs is impossible to establish. This makes the road user savings of R239 580 million questionable.

### 2.3.2 The micro-economic analysis

Standish *et al* (2010:i) state that the micro-economic analysis investigates the “costs and benefits . . . from the perspective of a range of different stakeholders”. The potential micro-economic impacts are described by the authors (Standish *et al*, 2010:67) as including impacts on individual drivers and their ability to pay, impacts on jobs and wages, impacts on the cost of consumer goods, impacts on business generally and on specific businesses.

#### Impact on individuals

The first estimate quantifies the toll burden in Gauteng in 2011 in three ways:

- Toll revenue as 0,34% of Gauteng gross geographical product (Standish *et al*, 2010:68). The toll revenue was taken from the SANRAL estimate, the South African GDP was obtained from the South African reserve Bank Quarterly bulletin for June 2010 and increased by 2,5% and the Gauteng share of national GDP was obtained from a 2007 Community Survey.
- Toll revenue from light vehicles as 0,43% of Gauteng Household Gross Disposable Income. This includes business travellers, many of whom would not pay the toll fees in their personal capacity.
- Toll revenue from light vehicles as 0,48% of Gauteng Household Gross Disposable Income of people falling into the LSM categories 7 to 10, these being the people most likely to own vehicles.

This appears to suggest that the burden on the individuals will be light.

This analysis was taken a step further in an attempt to quantify the impact on the individual road user, based on the data from the roadside interviews conducted by SANRAL in 2009. From this sample, the number of people who are work commuters was extracted (15 472 responses) (Standish *et al*, 2010:72), this was then narrowed down to work commuters travelling more than 100 kilometres a month (9 244 responses) (Standish *et al*, 2010:73). In order to calculate the final toll burden a toll fee of 71,5 cents per kilometre was used (Standish *et al*, 2010:73), as well as assumed frequent user discounts ranging from 5 per cent for 810 120 gantry passes per month to 40 percent for 361 passes and higher (it is not clear whether SANRAL contemplates these discounts). Only 5 524 respondents were prepared to

reveal their income levels (Standish *et al*, 2010: 5) (and these were probably not all accurate) and finally of these respondents only 1 728 were single occupants of the vehicle (Standish *et al*, 2010: 76). Based on this, the conclusions are made (Standish *et al*, 2010:77) that:

<b>Number of people</b>	<b>Percentage (of the sample of 1 728)</b>	<b>Percentage of income spent on toll fees (equal to or greater than)</b>
390	22%	3%
191	11%	5%
23	1,3%	10%

This conclusion appears to attempt to demonstrate that the cost of the toll fee to an individual commuting for work purposes is not very high, but this is based on a very small sample and on income levels that may not have been reported accurately. This brings the credibility of this conclusion into question.

#### Impact on business

This part of the Impact Assessment discusses anecdotally, and not supported by empirical evidence, the benefits of the freeway system for businesses, based on the cost of travel, travel time and operating costs and safety (Standish *et al*, 2010:77) and makes the claim that this will translate directly into business productivity improvements as a result of:

- greater reliability/time keeping by staff;
- distributors of goods can complete more turnarounds per day; and
- more business appointments can be achieved in a day (Standish *et al*, 2010:78).

This conclusion may not be correct in that the staff may have used their own time to make sure that they arrived at work on time, people keeping business appointments may have done the same. It also assumes that distributors of goods will experience an increase in turnover such that an increased number of turnarounds is required.

#### Impact on public transport

The Impact Assessment concludes on the impact on public transport (Standish *et al*, 2010:79), after acknowledging that the toll costs that may have to be paid would be passed on

to the users of the transport, who would be less able to balance savings in time and safety than private users:

- the increased costs would need to be mitigated by lower toll fees and/or road space prioritisation for high occupancy vehicles;
- freeways are not generally the primary routes used by public transport and decongestion of these non-freeway routes would be of benefit to public transport.

Impact on the cost of consumer goods

In order to address the possibility that the payment of e-tolls would increase the cost of consumer goods and destroy jobs and reduce wages, the authors of the Impact Assessment analysed the cost/benefit of the upgraded roads on the basis of a hypothetical journey by a hypothetical vehicle fleet carrying two types of foodstuffs – fruit and vegetable and dry goods (Standish *et al*, 2010:82). The analysis used the toll tariff used by the traffic engineers (not specified) and was based on a journey from Pretoria to Isando (close to the OR Tambo international airport) and from there to Soweto. A number of simplifying assumptions were made in carrying out the analysis. The impact on the cost of the cargoes was calculated and this was then compared to household spending patterns and income, resulting in the following (Standish *et al*, 2010:86):

- the percentage increase in the cost of various consumer goods ranged from 0,77 per cent at the highest level on agriculture and dairy products and 0,11 per cent on all other products; and
- the total increase in the cost of consumer goods relative to annual household income was as follows :

<b>Annual household income</b>					
< R 8 070	R8 071 – R12 263	R12 264 – R24 365	R24 366 – R55 159	> R55 160	Pensioners
<b>Total increase in cost of consumer goods</b>					
0,15%	0,15%	0,15%	0,14%	0,13%	0,14%

This served to demonstrate, based on the assumptions, that the impact of tolling on the cost of consumer goods would be minimal.

### 2.3.3 The macro-economic analysis

The Impact Assessment refers to the macro-economic analysis as showing (Standish *et al*, 2010:i) “the effect of the project on the national and regional economies, including job creation and economic efficiency effects” and that this is also “important from a policy perspective”. Two calculations were therefore made: the contribution to Gross Domestic Product (GDP) and to the Gauteng Gross Geographical Product (GGP) and the creation of jobs (Standish *et al*, 2010:88).

#### Contribution to GDP and GGP

The contribution to GDP was calculated using the projected costs of the project from 2008 to 2030 and business time savings from 2011 to 2030. The business time savings far exceeded the contribution of the actual cost of the project from 2012 onwards. The results are reflected in Table 34 of the Impact Assessment (Standish *et al*, 2010:88):

<b>Contribution to GDP (R million in 2010 prices)</b>				
<b>Year</b>	<b>Upgrade cost</b>	<b>Business savings</b>	<b>Total contribution</b>	<b>Cumulative contribution</b>
2008	7 422	-	7 422	7 422
2009	9 914	-	9 914	17 336
2010	11 597	-	11 597	28 933
2011	4 747	3 270	8 018	36 950
2012	2 012	3 542	5 554	42 504
2013	1 904	3 856	5 760	48 264
2014	1 846	4 224	6 070	54 334
2015	1 862	4 662	6 524	60 858
2020 <sup>Note</sup>	3 387	5 469	8 856	101 482
2025 <sup>Note</sup>	2 221	4 465	6 686	140 510
2030 <sup>Note</sup>	6 329	7 685	14 014	192 363
<b>Total</b>	<b>53 241 (49%)</b>	<b>37 173 (41%)</b>	<b>90 415</b>	

*Note:* The figures for 2020, 2025 and 2030 in the first three columns reflect the annual average cost, while the cumulative figure includes the total for the five-year period.

The project costs are derived from the SANRAL projected costs expressed in 2010 prices. However, no details are given in the Impact Assessment relating to how the business savings

were calculated. In view of the large contribution of business savings to GDP (41% of the total contribution) and the assumptions upon which this calculation would have been made, this result may be open to criticism. The time saving on which it was based were probably derived from the data provided by the engineers, but the assumption that all time savings are converted into business income and at a rate not disclosed in the Impact Study makes the final result questionable.

The claim that business would effect savings has been contradicted. Van Schie (2014:1) reports as follows on how Shoprite Checkers has been affected by e-tolling:

At a presentation of Shoprite Checkers' interim results for the six months ending in December last year, the retailer said calculations showed the e-toll fees would add about R4 million to distribution costs each year.

The company operates 529 food distribution trucks, which travel 140 000km a day on average.

Group spokeswoman Sarita van Wyk said: "Shoprite will obviously try to absorb the additional expense for as long as possible."

"But it will not be feasible to absorb the impact on retail prices in the long run."

This report shows increased business costs for Shoprite Checkers, not business savings as forecast by the Impact Assessment. If Shoprite Checkers was experiencing savings in excess of the R4 million rand increase in distribution costs per year (e-toll fees), there would be no need to "absorb the additional expense" as stated by Sarita van Wyk.

The calculation of the contribution to Gauteng GGP is even more problematic as no details are provided as to the basis on which the project costs or business savings were reduced to reflect the benefit to only the Gauteng province (Standish *et al*, 2010:90). The only comments in the Impact Assessment are "there would be indirect effects on other provinces" and "after taking into account all of the multiplier effects it is estimated that the project would make a total contribution of . . . R8,1 billion to GGP".

### Job creation

Job creation is one of the benefits that the Impact Assessment points to as a major positive factor of the Gauteng Freeway Improvement Project. The job creation potential of the project

is calculated in the Impact Assessment (Standish *et al*, 2010:91) by combining the jobs to be created by the project itself, and the jobs created through business time savings Standish *et al* (2010:1) state that “the number of jobs created from ‘business time savings’ is expected to increase from 3 341 in 2011 to 7 851 in 2030, in line with the increased savings as the traffic numbers increase.” While it could be assumed that the job creation as a result of the project itself may be fairly accurate, no information is provided on how business time savings were converted into jobs. As the business time savings themselves are open to criticism, the resulting potential job creation is even more questionable.

The Impact Assessment then goes on to calculate indirect job creation (Standish *et al*, 2010:92), by using a multiplier effect of 25 per cent, to amount to 23 363 by 2030. As this is based on the potentially flawed direct job creation, this figure too is open to criticism.

#### 2.3.4 [Other aspects of the project](#)

The Impact Assessment also sets out other positive (and negative) aspects of the project. These include:

- The possible negative effect on captive communities and businesses who would have no other choice but to use the freeway, but concludes (Standish *et al*, 2010:80) that “[i]t is anticipated that the numbers of parties affected would be very small”. This claim is unsubstantiated by any evidence.
- Certain properties may decline in value (Standish *et al*, 2010: iii) as a result but “this in itself [would] be an opportunity to change the usage of the property and realize a ‘new’ benefit”. Again, how this new benefit would arise is not supported by any evidence.
- Standish *et al* (2010:i) agree that “the economic benefits would have been even higher if they were funded in part or wholly from the National Treasury”. However, they point out that the risks involved in this are the potential increase in tax, sovereign credit ratings and the sovereign cost of borrowing. As the State is acting as guarantor for the loan, this is a weak argument.
- Standish *et al* (2010:ii) also recognise that the e-tolling option is not an optimum solution from SANRAL’s perspective as it may reduce road user benefits, but that this should be weighed against the consequences of the roads not being in a good condition (the “do nothing” alternative). They also state that it is sub-optimal in

national economic terms as a direct funding approach with SANRAL as the agent would optimise the economic benefits. The “do nothing” alternative was never a choice, as the roads would in any case have had to be upgraded and maintained.

- Standish *et al* (2010:x) also refer to the “efficiency cost” of the e-tolling system as a result of “the cost of establishing and administering the tolling infrastructure”, including “the compliance cost to vehicle owners”. However, they also refer to the efficiency gains as a result of the “user-pays” principle, differing toll tariffs and the ability to implement the project more rapidly. The claim that the project could be implemented more rapidly is fallacious. In fact the need to erect gantries and other toll-related infrastructure probably caused a delay that would not have arisen if the roads had simply been upgraded.
- The freeway improvement plan is consistent with national policies, including “the principle of user charging or cost recovery from direct users [sh]ould be applied as far as possible” (Standish *et al*, 2010:v). In chapter 4.2.2 of the present research it is argued that Gauteng contributes a disproportionate amount to the National Treasury in relation to its budget allocation and therefore indirectly subsidises the other provinces. By using other methods to fund the freeway improvement plan, the other provinces, in a sense, would be correcting this imbalance.

The other policy concern relating to the use of general tax revenue or the fuel levy to fund the project is (Standish *et al*, 2010:94) “the financial policy on the part of government that fiscal integrity means that there should be no earmarking of funds”. The fuel levy is already partly earmarked for the purpose of third party protection and the proposed National Health Insurance anticipates a special tax levy to help to pay the cost. The principle of earmarking certain tax funds is therefore not applied absolutely in practice, which negates this policy concern. Practice would indicate that earmarking certain funds is acceptable.

One of the potential problems that were not taken into account by the Impact Assessment was non-compliance by road users. It has already been shown in chapter 1 that there has been large scale opposition to e-tolling and users are refusing to buy e-tags (News24, 2013:1). If, for example, a fuel levy was used to pay for the roads, users’ dependency on petrol would ensure that non-compliance would not be an issue.

South Africa is not the first country to have implemented e-tolling and SANRAL should have investigated how the system has performed in other countries. It appears that non-compliance was not considered at all. According to De Beer (2013:1), commenting on the problems of the e-tolling system implemented in Portugal:

- Last year, EP failed to collect a total of €30.6 million from offending drivers” (“EP” is Estradas de Portugal, the agency responsible for administering the roads in Portugal);
- Currently, 29 percent of all monies collected from these motorways are channelled towards administrative fees, which rose from €17 million in 2011 to €42 million last year (statement by António Ramalho, the Estradas de Portugal chairman);
- Another headache for EP has been that thousands of cars have streamed onto secondary roads across the country since the introduction of tolls on SCUT motorways (“SCUT” refers to the e-tolling system in Portugal);
- The EP chief openly admitted that the expected revenue from these motorways is ‘frankly well below those indicated by initial studies’ commissioned by the government;
- Overall, revenue from SCUT motorways plummeted by 74 percent in 2012 on the previous year, EP said, and with traffic figures dropping even further in 2013, there seems to be no apparent end to the rot; and
- “The system is unsustainable and we hope it doesn’t stay the way it is. If it doesn’t change, we will not have enough money to conserve, preserve and maintain a road network which is considered the fourth best amongst OECD member nations”, Mr Ramalho argued.

Clearly information was available concerning possible problems with the proposed e-tolling system.

One of the questions that remain unanswered is whether the Impact Assessment was used to make the decision to implement e-tolling or to justify the decision that had already been made. The study was completed in 2010, but construction on the Gauteng road system started two years earlier, in 2008.

## **2.4 Conclusion**

This first thing this chapter set-out to achieve was to provide an overview of the costs incurred and to be incurred on the Gauteng Freeway Improvement Project (which includes

the implementation of e-tolling), as estimated by SANRAL. An analysis of these costs is fundamental to achieving the main goal of the present research: to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective, because the various methods to finance the project have a direct bearing on the cost-effectiveness of the system as a tax collection method. It was stated that the most cost-effective system of taxation is one which provides taxpayers with the greatest possible benefit whilst having to pay the least possible amount of tax.

There are heavy costs involved in operating the system and over a twenty-four year period, only R31.29944 billion (R20,62999 billion (initial capital costs) + R10,66945 billion (road maintenance expenses)) of the R71,39574 billion (i.e. 43,94%) in projected collections are to be used to establish and maintain the toll-road system. This means that only 43,94 per cent of e-toll fee collections (i.e. tax collections) are to be used to achieve the main goal of financing, improving, managing and maintaining the now e-tolled Gauteng roads.

It was demonstrated that SANRAL has actually been “vague” about the cost details of the Gauteng Freeway Improvement Project. In fact, the most recent cost estimates of the project that are referred to in this chapter only became available when SANRAL was forced to provide these figures in court (the Opposition to Urban Tolling Alliance, 2013c:1). This is worrying because clarity and transparency should be of utmost importance to a government department.

Other cost aspects of the Gauteng Freeway Improvement Project provided in this chapter were:

- The Opposition to Urban Tolling Alliance (2013b:1) estimates that the capital cost (including interest owing) of the system will be R2 171 067 772 per annum and therefore R39,9 billion over a twenty year period. This is in contrast to SANRAL’s initial estimated capital costs for the project of R6,8 billion in 2006 - surprisingly revised to R17,9 billion by 2011 (the Opposition to Urban Tolling Alliance, 2014:1).
- SANRAL’s affidavit relating to the e-toll cost breakdown presented in court hearings stated that interest on loans to pay for the Gauteng Freeway Improvement Project over a twenty-four year period will amount to R20,005 billion (Opposition to Urban Tolling Alliance, 2013c:1). Due to cash-flow constraints, however, this cost would probably

have had to be incurred no matter what funding model was used for the Gauteng Freeway Improvement Project.

- On 18 September 2009, SANRAL awarded the e-toll collections tender to ETC (Electronic Toll Collection JV – 85% owned by Kapsch Trafficom) for just over R10bn (Opposition to Urban Tolling Alliance, 2014:1).
- “Sanral is set to spend R85 million this year on advertising its controversial e-tolling plans in Gauteng. This is in addition to the R202 million spent on advertising and campaigns in the three previous financial years” (City Press, 2013a:1).

The costs reflected in this chapter will be used in Chapter 4 to analyse the cost-effectiveness of the e-toll system as a system of tax in general, and in comparison to its alternatives, and will therefore assist in achieving the main goal of the present research of analysing e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective. The initial impression, as illustrated in this chapter, is that e-tolling is not likely to be a cost-effective system of tax collection as more money from e-toll (tax collections) will be paid out in the form of expenses (>50%) than money that will actually be used to pay for the roads – for which the system was implemented in the first place.

The second focus area of this chapter was the Impact Assessment of the Gauteng Freeway Improvement Project carried out by Standish *et al* (2010), which identified various savings from the e-toll project. An analysis of these projected savings was set out in this chapter. The Impact Assessment of the e-toll project was referred to by SANRAL as a major input into the decision to implement the e-toll system and measures the impact on the economy as a whole, and particularly the economy of Gauteng. The Impact Assessment (Standish, *et al*, 2010:i) applied three methods of analysis:

- a cost benefit analysis;
- a micro-economic analysis; and
- a macro-economic analysis.

**With regard to the cost benefit analysis:**

- It was described by the authors (Standish *et al*, 2010:i) as “the primary measure of the project’s viability” and “a robust indication of the value that the project can deliver to the national economy”.
- The results of the analysis (Standish *et al* 2010:i) as reflected in the executive summary showed a benefit to cost ratio of 8.4 (which should have been 8,0), an internal rate of return of 37% and net present value (taking into account all estimated costs and benefits) of R209.8 billion. The methodology and figures used in some of the calculations were, however, found to be questionable:
  - In the cost-benefit analysis, costs were based mainly on SANRAL estimates, but omitted the cost of the e-toll system, as well as the interest expense over the twenty-four years. The other costs were based on SANRAL estimates, which cannot be verified. Road user savings exceed the other costs (construction and road maintenance costs and the cost to local authorities) by a multiple of eight. This makes the accuracy of the estimate of road user savings critical. There were three components to these savings – vehicle operating costs, savings due to the reduced likelihood of accidents and the value assigned to time savings due to less congestion on the roads. The calculation of the reduction in vehicle operating costs and the savings due to fewer accidents were based on SANRAL estimates, which in turn were based on software developed by the World Bank and used in South Africa. These can be assumed to be reasonable accurate. Concern was raised, however, about the calculation of time savings. The speed predictions and savings in time were calculated by traffic engineers and can also be assumed to be reasonably accurate. But the time cost was based on roadside interviews and the income levels as revealed by interviewees and this is a value that is highly likely to be inaccurate as interviewees are invariably reluctant to disclose their actual income. The authors of the impact study (Standish *et al* 2010:72) report that of the 27 000 interviews conducted, only 5 524 were willing to disclose their income and the authors also questioned the accuracy of this information. The potential error in the estimate of total road user costs is impossible to establish. This makes the road user savings of R239 580 million questionable.

**In regard to the microeconomic analysis,** Standish *et al* (2010:i) state that it investigates the “costs and benefits . . . from the perspective of a range of different stakeholders”. In the analysis, the toll revenue (as estimated by SANRAL) was expressed as a percentage of Gauteng Gross Geographical Product, the toll revenue from light vehicles as a percentage of Gauteng Household Gross Disposable Income and this toll revenue from light vehicles as a percentage of the disposable income of the people most likely to own light vehicles. As these percentages were all less than 0,5 per cent, this was interpreted as being very low. This was then extended to the toll burden on an individual road user and was shown to range from three per cent to ten per cent of income. This result was also found to be questionable as it was based on only 1728 roadside interviews and the income levels that the interviewees reported. It was also based on a number of assumptions and a toll fee of 71,5 cents per kilometre.

The next aspect of the micro-economic analysis – the impact of e-tolling on business – was discussed anecdotally and not supported by empirical evidence. The claim is made that time savings on the roads will translate directly into productivity gains as staff will be on time for work, more business appointments can be fitted into a working day and distributors of goods can achieve more “turn-arounds”. This is a questionable conclusion as being on time for work or an appointment was achieved in the past by using private time for travelling and more deliveries assumed increased turnover requiring more deliveries. The impact on public transport was also discussed anecdotally and it was noted that the cost to commuters would be mitigated by e-toll discounts, road space prioritisation and the fact that freeways are not used primarily by public transport vehicles.

The final component of the micro-economic analysis calculated the impact of the toll fees on the cost of a range of consumer goods. It is based on a hypothetical journey and a number of assumptions and revealed that the increase in the cost would be in the range of 0,15 percent of household income.

**With regard to the macro-economic analysis,** the Impact Assessment refers to it as showing (Standish *et al*, 2010:i) “the effect of the project on the national and regional economies, including job creation and economic efficiency effects” and that this is also “important from a policy perspective”. Two calculations were made: the contribution to Gross Domestic Product (GDP) and to the Gauteng Gross Geographical Product (GGP) and

the creation of jobs (Standish *et al*, 2010:88). Once again, this analysis was found to have problems:

The contribution to GDP was calculated using projected costs and business time savings generated by the project for various years. No details are given in the Impact Assessment relating to how the business savings were calculated. In view of the large contribution of business savings to GDP (41% of the total contribution) and the assumptions upon which this calculation would have been made, this result may be open to criticism. The time savings on which it was based were probably derived from the data provided by the engineers, but the assumption that all time savings are converted into business income and at a rate not disclosed in the Impact Study makes the final result questionable.

- Job creation is one of the benefits that the Impact Assessment points to as a major positive factor of the Gauteng Freeway Improvement Project. While it could be assumed that the job creation estimates as a result of the project itself may be fairly accurate, no information is provided on how business time savings were converted into jobs. As the business time savings themselves are open to criticism, the potential resulting job creation is even more questionable. The Impact Assessment then goes on to calculate indirect job creation (Standish *et al*, 2010:92), by using a multiplier effect of 25 per cent, to amount to 23 363 by 2030. As this is based on the potentially flawed direct job creation, this figure too is open to criticism.

Finally, it was shown that one of the major potential problems not taken into account by the Impact Assessment (or at any other stage of the decision to implement e-tolling) was non-compliance by road users. This problem would not have existed had a fuel levy or general taxpayer funds available to National Treasury (or both) funded the project. South Africa is not the first country to have implemented e-tolling and SANRAL should have investigated how the system has performed in other countries, or at least taken this into consideration before implementing the system. Clearly information was available concerning possible problems with the proposed e-tolling system as demonstrated by De Beer (2013:1), commenting on the problems of the e-tolling system implemented in Portugal.

Taking all of the problems plaguing the Economic Impact Assessment into account, the results appear to be questionable. This is worrying as it was one of the major planning components leading to the implementation of e-tolling.

In chapter 4 other methods of taxation are discussed that could have been used to fund the project and it will be shown that they would have cost less than the e-tolling system. This will determine whether the extra costs of the e-tolling system are justified.

# Chapter 3: The controversies and problems surrounding e-tolling

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## 3.1 Introduction

It is important for any method of taxation not only to be cost-effective, but to be accepted by the public, which has to pay the tax. Not being accepted by the public can cause problems and increased administration costs, thereby decreasing the cost-effectiveness of the system even further. It has been indicated in chapter 1 that the implementation of e-tolling has been controversial and plagued by accusations of inherent problems. The public has broadly rejected the concept of e-tolling, which has already caused problems and has the potential to cause further problems in the future. An analysis of some of the controversies and suggested problems with the implementation of e-tolling in South Africa, as well as their validity, will be presented in this chapter. This will be done in an attempt to ascertain whether e-tolling was in fact the best tax collection method to pay for Gauteng's roads, thereby aiding in the achievement of the main goal of the present research.

## 3.2 Poor running of road departments in Gauteng

According to City Press (2012:1):

Gauteng Premier Nomvula Mokonyane's spokesperson, Xoli Mngambi, released a statement today following a City Press report yesterday according to which Gauteng had squandered 10.9% (R6.6 billion) of its budget on unauthorised, irregular and wasteful expenditure in 2010/2011.

The departments of roads and transport and infrastructure development in Gauteng were among five of the worst-run departments in the country, respectively incurring irregular, wasteful and unauthorised expenditure to the tune of R2.2 billion (36.3% of its R6.1 billion budget) and R288 million (24% of its R1.2 billion budget).

This article shows how poorly the Department of Roads and Transport and the Department of Infrastructure in Gauteng have performed in the years leading up to the implementation of e-tolling. They were both on the list of the five worst-run departments in the whole of South Africa. The R2.2 billion of irregular, wasteful and unauthorised expenditure by the South African Department of Roads and Transport in 2010/2011 (a single year) makes up 4,29% of the total R51,30444 billion needed to fund the entire Gauteng Freeway Improvement Project

over the next twenty-four years. In fact, R51,30444 billion needed to fund the Gauteng Freeway Improvement Project over twenty-four years equates to R2,137685 billion per annum and the R2.2 billion of irregular, wasteful and unauthorised expenditure in 2010/2011 would more than cover one year's expenditure on the Gauteng Freeway Improvement Project. This begs the obvious question: Could Gauteng's Freeways have been paid for already if the Department of Roads and Transport had not squandered so much of its budget over the years and had used that money to build the roads?

### **3.3 The adequacy of the e-toll fee collection system**

According to the Congress of South African Trade Unions (2014:1):

The NTA (National Taxi Alliance) is rightly frustrated at government's failure to issue operating licenses, and at taxis being billed even though they are supposed to be exempt.

It is not only taxi operators who are up in arms about being incorrectly billed. Thousands of other people have received bills for cars they do not own, or journeys they have not made. Some have reported receiving bills despite living in a different province and never having used an e-tolled highway. People are even angrier at receiving threatening and illegal cellular telephone text messages (SMSs) and e-mails demanding payment for e-tolls.

According to Dlamini (2014:1):

Motorists' complaints about Sanral include:

- The SMSes demanding payment do not contain the name or registration number of the recipient's vehicle;
- The amount given on the SMS increases after only a week;
- Some of the recipients of the SMSes are yet to receive invoices;
- When invoices are received, the amount that has to be paid is less than 10% of the amount cited in the SMS;
- Other motorists receive e-mails threatening that they will be stopped by members of Sanral's toll road enforcement unit if they do not pay up;
- A motorist can receive as many as four different billing amounts;
- Call-centre agents urge motorists to pay the higher amounts before invoices are received;
- Motorists are told to pay now and query later; and
- Some bills sent by e-mail refer to vehicles that have been written off.

Dlamini (2014:1) goes on to state:

Sheeda Kalideen, a Durban accountant, said her daughter used her car in Johannesburg and travelled between the city and Pretoria about three times a week. Kalideen first received an SMS demanding payment of R418.02. The amount later increased to R1144.50 but, when the invoice finally arrived in the post, the total she owed was just R62. "This is ridiculous. These people's accounting system is not right," said Kalideen.

Another SMS demanded that a motorist settle a R943.60 bill. But he later received an invoice detailing when and which gantries his vehicle had gone under. The total amount due was R113.67. "I was told I had to register to pay. Then I was told I had to settle the larger amount first, that I had received via SMS, and they would reimburse me the difference. It is ludicrous," he said.

Thembi Maseko, of Witbank, Mpumalanga, visited Gauteng on Christmas Eve. Six days later she received an SMS saying she owed Sanral R480.70. "They do not have a case against me. They cannot bill me using an SMS. I need a printout showing how they arrived at that figure. They cannot threaten me because I have not shown any signs that I'm not willing to pay. Let them prove that I have used their road," Maseko said.

According to MyBroadband (2014:1):

The Justice Project South Africa (JPSA) said that they cannot fathom why Sanral and TMT Services has chosen to put the cart before the horse by accusing people of being "violators" before they have sent them an invoice.

JPSA said that the SMS and e-mail demands are not legitimate demands for payment, but are in fact an attempt to short-circuit the e-road regulations and force people to pay as quickly as possible without due processes and legislation being followed.

JPSA warned that Internet scammers will quickly catch onto the dubious practices of Sanral and TMT Services, and use SMSes and e-mails to scam users.

"Sanral and TMT Services have provided them with all of the tools they need to commit this kind of fraud," the JPSA said.

It is clear that the e-toll collection system is flawed and inadequate. Using text messages to bill users and threatening them for non-payment is highly unprofessional and not in line with proper legal process that should be followed. The poor manner in which the e-toll collection system is being run brings the credibility of the system into question. These issues are likely

be costly to fix and the costs will be borne by taxpayers (e-toll road users). They will therefore affect the cost-effectiveness of e-tolling as a tax collection method.

Another major flaw with the e-toll collection system has been its inability to protect its users' personal details (e-toll road users that have an account with the South African National Roads Agency (SANRAL) to settle their bills), including credit card and bank details. According to IAfrica.com (2014:1):

Sanral confirmed that its e-tolling website was hacked. "Sanral strongly condemns the cyber-attack on the online e-toll account management website," Sanral spokesperson Vusi Mona was quoted as saying in a BusinessTech report.

According to a report a hacker called "Moe1" warned that the PINs used to access the e-tolling website could be easily obtained if the username was known. This had implications for user information on the website.

According to Vermeulen (2014:1):

An unofficial security advisory issued by a hacker identifying themselves as "Moe1" has warned E-toll users that the PINs used to log into their E-toll website accounts can be easily obtained if their username is known. This is due to a page on the South African National Roads Agency Limited (Sanral) website which can be exploited to expose the PIN of any registered E-toll website user.

The page is intended to be used as part of a standard two-stage account registration process, Moe1 explained, where the user would click on a link in an e-mail to confirm their account. However, the page at the link contains a "serious security problem," according to Moe1. It provides the user's PIN on the confirmation screen. Although displayed as asterisks (\*), creating the impression that the PIN is obscured, the PIN is actually available in clear text in the source code of the web page. The source can be easily viewed from just about any browser.

In the security advisory, Moe1 provides a four-step guide to "hack an E-toll account in 5 seconds", along with a proof of concept exploit and a video of the exploit in action.

Protecting user information is perhaps the most important thing that any website should achieve. It is clear that SANRAL has not been able to protect user information. In fact, users' private information, including bank details has been easy to hack from SANRAL's website. Fixing problems such as these is likely to be costly and the costs will again be borne by the

road users (the taxpayers). This will again have a negative impact on the cost-effectiveness of the e-toll system. It is not known how much money has been stolen from e-toll road users from the information leaked from the e-toll website. Also, if the e-toll website's current flawed programming is fixed, hackers will probably be able to find other ways of accessing user information.

### **3.4 The possibility that SANRAL has been misleading the public**

According to the South African National Roads Agency (2013c:1):

SANRAL's General Manager for Communications Vusi Mona says for every rand collected through e-tolling on the Gauteng road network, only 17c goes towards the cost of managing the toll operation and collecting tolls.

The remaining 83 cents goes to a variety of needs linked to the road including servicing the loan incurred in order to complete the Gauteng Freeway Improvement Project (GFIP), Mona said.

"The 17c covers all the costs associated with collecting tolls including salaries, bank transaction costs, toll infrastructure maintenance costs, telecommunications costs, postage costs, municipal rates and taxes, incurred by ETC - the South African firm appointed by SANRAL to manage e-tolling. This reflects the payment that the toll operator receives in terms of tendered rates," says Mona.

This is a statement made by SANRAL to defend itself against the allegations that due to very large expenses on the e-toll project, the majority of e-toll fees collected will not actually be used on road upgrades and repairs (the very thing that the fees are intended to be used for in the first place). In response to this statement by SANRAL, the Opposition to Urban Tolling Alliance (2013c:1) stated:

OUTA objects to Sanral's repeated statement that the cost of e-toll collections is "only 17%" of the revenue generated by e-tolling.

E-toll collection and administration systems in the US, for example, cost just over 5%. As Wayne Duvenage, OUTA Chairperson says "17% is simply excessive, unacceptable and well outside any reasonable benchmark" More enraging, is the fact that Sanral only speak of the e-toll related capital and operations expenditure and conveniently leave out the

Violations Processing Centre (VPC) and other operational costs related to e-toll collection.

The table below [not included in the present thesis] was included in Sanral's affidavit of the e-toll cost breakdown provided during the past court challenges with OUTA. The toll related costs "excluding the VPC" reflect a cost of R12,2bn over 24 years, i.e. 17% of the R71bn generated by toll collections. This figure also differs significantly from earlier figures submitted by Treasury during the same court challenge.

From this table one can see a further R6.2bn (or 8,7%) for the VPC process and another 2,4% of other operational expenses. The obvious question is why exclude these figures from the total e-toll collection process? . . . Normally, business reflects all revenues and the costs related to chasing or writing off debt as integral to the overall business is reflected and cannot be ignored, as Sanral is doing here.

To further indicate Sanral's smoke and mirrors on this issue, Kapsch TrafficCom - an 85% shareholder in the ETC JV - recently announced (<http://bloom.bg/14utrge>) that income generated by eTolling for them will be a minimum of €50m (i.e. R670m) per annum. This amounts to over R16bn over the same 24-year period used by Sanral. This alone is some 22% of the R71bn eToll revenues and well over the 17% indicated by Sanral. Who's misleading who here? If Kapsch's figures are misleading, then Sanral ought to warn them of this, as there are massive and highly punitive fines when misleading investors in this way.

The important point is that SANRAL appears to be trying to mislead the public. They have been very vague about the costs of the e-toll system and the figures that the Opposition to Urban Tolling Alliance have provided were obtained from an affidavit presented in court. These figures should have been available to the public. The cost breakdown of the Opposition to Urban Tolling Alliance (2013c:1) (refer to [Appendix 2](#)) clearly shows that expenses will actually make up 28.15% of the e-toll fees collected. The question is, why mislead the public? Is this statement by SANRAL just propaganda? And, if SANRAL has been misleading the public in this regard, one may question how else they have been misleading the public.

### **3.5 The already existing high levels of taxation experienced by South African taxpayers**

According to Appendix 1 to the Income Tax Act No.58 of 1962 (hereafter referred to as “the Act”), natural person taxpayers that fall into the highest marginal income tax bracket pay a forty per cent tax on their taxable income in excess of R617 000 in the 2013 year of assessment. There is a 28% corporate tax rate and a fifteen per cent withholding tax levied on South African source dividends distributed to shareholders other than companies and regulated intermediaries (Part VIII of the Act). Dividends tax must be withheld whether the dividend is being paid to a South African resident or non-resident and may only be reduced in the case of non-residents if a double taxation agreement exists. This gives an effective tax rate for a South African company shareholder of 38.8 per cent (taking into account the corporate tax rate of 28 per cent and assuming that out of each R100 of pre-tax profit, a dividend of R72 is declared). This is nearly the same as the highest marginal tax rate for natural persons.

Other than personal income tax, South African taxpayers also have many other taxes to pay. According to the South African Revenue Service (2014:1), the following types of taxes are paid in South Africa:

- Air passenger tax;
- Capital Gains Tax;
- Corporate Income Tax;
- Diamond Export Levy;
- Dividends Tax;
- Donations Tax;
- Estate duty;
- Excise duty;
- Income Tax;
- Mineral and Petroleum royalties;
- Pay-As-You-Earn (which is a pre-payment of tax);
- Provisional Tax (which is a prepayment of tax);
- Retirement Funds Tax;
- Skills Development Levy;

- Stamp duty;
- Transfer duty;
- Unemployment Insurance Fund; and
- Value-Added Tax.

Due to high personal income tax rates, high corporate tax rates (an effective tax rate of 38.8 per cent for shareholders), and multiple other types of taxes payable in South Africa, it is clear that South African taxpayers carry a heavy tax burden, especially those who earn high incomes. Other forms of tax include taxes such as property rates and various types of levies and licence fees.

It is these high income earning taxpayers that the South African government (and the legislature) should seek to protect and retain because they contribute large amounts of tax to the National Treasury and are usually in a position to help expand the economy (as high income usually means more skilled persons or persons operating at a higher level in business, such as managers or directors of companies). High tax rates may be an important reason why people emigrate to other countries and corporate entities move offshore, especially if those countries offer more favourable tax rates or benefits such as free schooling, free health care, etc.). Because these persons are usually highly skilled, other countries will no doubt try to entice them to immigrate. An example of this is Australia's Skills Migration Program, where labourers with a certain level of skills needed in Australia are allowed to apply for "Skilled Visas", allowing them to work in Australia and become a permanent resident or even (eventually) a citizen of Australia (Australian Department of Immigration, 2014:1).

Grant Thornton South Africa (2010:1) states:

The golden goose – the SA taxpayer – is under threat of extinction from over taxation according to one of the world's leading accounting and consulting firms.

Director and head of tax at Grant Thornton Johannesburg, AJ Jansen van Nieuwenhuizen, is urging SARS to resist trying to get more money out of existing taxpayers. "SARS must certainly be feeling overwhelming pressure to squeeze the golden goose further, as has been the case in many developed countries since the recession."

Currently 24% of the South African individuals who are on SARS's database carry 64% of the personal income tax burden, whilst 50% of the tax-paying database only contribute 3.1% in personal income tax to the National Revenue Fund.

Jansen van Nieuwenhuizen notes that the 24% who carry the largest part of the personal tax burden only equate to 2.75 million individuals. Personal income tax collections for the fiscal year to March 2009 were R196 billion, which represented 31.4% of total revenue collections. Those same 2.75 million taxpayers therefore bring in 20% of the total tax collected, before considering the additional VAT, fuel levy and Customs and Excise paid by this group of taxpayers. After taking these indirect taxes into account, this minority group contributes in excess of 60% of total revenue to the fiscus.

“We need to widen the tax base as a matter of urgency,” said Jansen van Nieuwenhuizen.

The argument that South African taxpayers are subject to high tax rates appears to be sound because, although e-tolling fees are relatively small in comparison to other South African taxes, great opposition has met the implementation of the e-tolling system. This could be due to taxpayers’ (or the “golden goose” as referred to above) already negative perceptions of taxation in South Africa (and the high levels) and the fact that adding another form of taxation into the mix is too much for taxpayers (both on a monetary and an emotional level). High income-earning South African taxpayers probably own vehicles due to a perceived dangerous and inadequate public transport system (taxis and busses in South Africa have a bad reputation amongst South African citizens). It is these same taxpayers who will also be carrying the major burden of e-toll fees. If government is seeking to retain these high income earning taxpayers, it does not appear that putting an additional tax burden on them (i.e. e-tolling) is advisable.

AJ Jansen van Nieuwenhuizen points out (in the quotation above) that the tax base in South Africa is currently very narrow. A major reason for the narrow tax base is unemployment.

According to TradingEconomics (2014:1):

The Unemployment Rate in South Africa decreased to 24.10 percent in the fourth quarter of 2013 from 24.50 percent in the third quarter of 2013. Unemployment Rate in South Africa is reported by the Statistics South Africa. Unemployment Rate in South Africa averaged 25.26 Percent from 2000 until 2013, reaching an all-time high of 31.20 percent in the first quarter of 2003 and a record low of 21.50 percent in the fourth quarter of 2008. In South Africa, the unemployment rate measures the number of people actively looking for a job as a percentage of the labour force.

Clearly, there is a large percentage of South Africa's labour force (24.10 per cent in the fourth quarter of 2013) that is actively looking for but cannot find employment. This is a major contributing factor to poverty in South Africa. According to SowetanLive (2012:1):

The number of South Africans receiving social grants will swell to 16.7 million over the next three years, according to the 2012/13 Budget, tabled in Parliament on Wednesday.

Spending on social grants will grow from R105 billion in 2012/13, to R122 billion in 2014/15, the 2012 Budget Review shows.

The mid-year population estimate for 2013 was 52,98 million people (Statistics South Africa, 2013:2). If an estimate of 16.7 million people receiving government grants in South Africa is considered, this would be 31,52% of the population who receive social grants from government. It is clear from these statistics that major contributing factors to South Africa's small tax base is the fact that many South African citizens earn very little money, and poverty is a problem, largely due to a high unemployment rate in South Africa.

Unfortunately, the vast majority of South African taxpayers either have no income, or they do not declare their income to the South African Revenue Services, or earn less than the threshold amounts at which tax becomes payable. This puts South Africa in a different position to other countries (so called first-world countries) in that these other countries have a larger tax base and are therefore able to either have lower tax rates, or to spend more. These countries also have a smaller social security burden in that they do not have as many citizens living in poverty that need to be cared for by the state. Being in a different economic situation to these countries, South Africa cannot afford to implement the same kind or level of taxes that they impose. With this reality in mind, the question is, is copying e-tolling as a form of taxation from first world countries a step too far for South Africa?

### **3.6 Possible perceptions of wasteful government spending**

There has long since been a debate about wasteful spending by the South African Government. According to Grant Thornton South Africa (2010:1):

Jansen van Nieuwenhuizen said taxpayers were experiencing growing frustration at seeing wasteful state expenditure and lack of service delivery and wonder how much less

tax they would have to pay if government were more parsimonious. The reported shortfall last year in revenue collections by SARS for the 2009 fiscal year was R70bn.

City Press (2013b:1) talks about South African's perceptions of service delivery in South Africa:

Speaking at the release of the report in Cape Town, Deputy Minister in the Presidency Obed Bapela said the service delivery figures showed a worrying trend. "It's not an issue of no money; it's an issue of efficiency. Service delivery remains a challenge and, indeed, it is a worrying element," he told journalists. According to the report, 51% of those surveyed near the end of last year thought government was performing well. This is 3% lower than in May last year.

If enough revenue is being collected, there should be efficient and effective spending by government to better the lives of its citizens. City Press (2013b:1) points out that many South African citizens do not feel that this is the case. It appears that government is not spending the money efficiently, that it collects from taxes.

Negative perceptions of government and government spending could be a major factor why South Africans have opposed e-tolling so vigorously, especially if they do not feel that government will make proper use of the e-toll fees collected.

### **3.7 The proposed introduction of National Health Insurance**

E-tolling has come into operation before a proposed National Health Insurance. The South African National Department of Health (2011:1) describes the proposed National Health Insurance as follows:

South Africa is in the process of introducing an innovative system of healthcare financing with far reaching consequences on the health of South Africans. The National Health Insurance commonly referred to as NHI will ensure that everyone has access to appropriate, efficient and quality health services. It will be phased-in over a period of 14 years. This will entail major changes in the service delivery structures, administrative and management systems.

This will place a large additional burden on the South African National Treasury. According to Grant Thornton South Africa (2010:1):

Proposed National Health Insurance (NHI) will most likely put additional financial pressure on taxpayers. Certain estimates have put the annual cost of a proposed NHI to be in the region of R100 billion, of which a portion is proposed to be funded directly by additional separate taxpayer contributions. The extent of the additional contributions are rumoured to be between 3% and 9% of a taxpayer's monthly income.

“In principle, the concept of an NHI makes a lot of sense in a country where there is a large tax base carrying the majority of the tax bill, which is not the case in SA,” he said.

Jansen van Nieuwenhuizen added that Government should carefully consider the broader implications of its decisions as well as the interests of the taxpayer.

It is clear that this proposed National Health Insurance will put additional pressure on taxpayers (most likely in the form of increased taxes), who now also have to worry about paying e-toll fees (which have already increased). National Health Insurance is already in the process of being implemented and, due to an already existing strain on the National Treasury, the question is where government will find the money to fund it. The answer will most likely be to increase taxes for the high income earning South African taxpayers (the same taxpayers that it is vital for South Africa to protect and retain). It appears that to implement e-tolling just before a proposed National Health Insurance was not a politically astute decision by the South African government.

### **3.8 The possibility that poor planning by government lead to e-tolling being necessary in the first place**

The Opposition to Urban Tolling Alliance highlights the fact that there has been possible poor planning by government in regard to maintaining the now e-tolled roads and the implementation of e-tolling is making the public pay for government's failings. According to the Opposition to Urban Tolling Alliance (2013a:1):

These are existing routes whose base structure capital costs have been paid for through taxation over time. Following years of infrastructure neglect and a growing number of cars, obviously the time came for Government to conduct repairs and expansion, something they ought to have provided for through medium and long term planning in the past. To develop this economic zone over decades along these freeway routes and then introduce an additional tax for use thereof, is tantamount to extortion, especially in the absence of alternative public transport services and routes.

According to the South African National Roads Agency (2014:1), the answer to the question “Why do we have to pay tolls on an existing road, which was initially paid for out of taxes?” is as follows:

Roads deteriorate over time due to environmental and other influences, such as weather, ultraviolet radiation, overloading, etc. Tolls are not levied on the current asset/road (which is a 'sunk' cost), but on the new works and future improvements, including operations and maintenance. Monies derived from taxes are used on other non-toll roads.

SANRAL's reason for tolling is therefore to pay for operations, maintenance and improvements of the roads on which the tolls are implemented. It would appear that they are fulfilling their mandate in regard to e-tolling as they will be using the money collected from e-tolling to fund the improvements to the Gauteng roads. The main problem however, as pointed out by the Opposition to Urban Tolling Alliance (2013a:1), is that there has been poor planning on the South African National Road Agency's part. According to Duvenage (2013:1), SANRAL's initial estimates of the costs of the Gauteng Freeway Improvement Project (which includes the implementation of e-tolling to pay for the now e-tolled roads) were R4,5 billion in 2004, but rose to R20,6 billion by 2011 (or R17,9 billion before taking into account the capital costs of the e-toll system). Duvenage (2013:1) states that:

South African citizens simply do not have to accept a 350% increase from original estimates of R4,5bn in 2004 which, incidentally, was noted for a 340km Gauteng Freeway upgrade in Sanral's 2005 to 2008 declaration of intent. But even if one compares the final cost of R17,9 billion to the more recent figure of R6,4 billion, estimated by Sanral in 2006, the difference is still grossly unacceptable. In most private sector organisations, an increase to this extent on any sizable capital expenditure project would have executive managers packing for new jobs.

The problem with the large rise in cost estimates is that the original estimates would have been used in the proposal for the Gauteng Freeway Improvement Project, which ultimately led to its implementation. Duvenage (2013:1) clearly indicates a lack of adequate planning by SANRAL. To have an estimate of road costs 350 per cent less than the final cost shows an inadequate planning process (especially considering the magnitude of the project and the fact that the project affects the lives of so many people).

It was also seen in chapter 2 that the decision to implement e-tolling was based on the Economic Impact Assessment of the Gauteng Freeway Improvement Plan, that itself was shown to be problematic.

In conclusion, it appears that there has been poor planning on the part of SANRAL with respect to the implementation of e-tolling in Gauteng.

### **3.9 Possibly no benefit to Gauteng residents**

According to City Press (2013a:1), the Member of Parliament of the Democratic Alliance, Ian Ollis, noted that e-tolling would not benefit Gauteng residents and would hit the poor hardest “by increasing the price of doing business, resulting in food price increases and inevitably undermining economic growth and job creation”. The increase in prices of commodities requiring transportation along e-tolled roads is a serious concern. Vehicles that transport goods along these roads will have to pay e-toll fees and the larger the vehicle, the greater the fee (vehicles that transport goods are usually large trucks in the highest tolling fee bracket). The extra e-tolling fees paid by businesses will ultimately lead to a decrease in cash flow (because the fees represent an extra expense for businesses), leading to decreased profits that would normally be invested in new ventures and additional staff. It is clear that either commodity prices will increase, or there will be slower economic growth and job creation (or both). Van Schie (2014:1) reports that Shoprite Checkers would be negatively affected by e-tolling. This is will probably be the case with all businesses that have vehicles travelling along the e-toll routes. In terms of the Impact Assessment (Standish *et al*: 2010), however, it was concluded that the increase in the price of consumer goods would be minor and businesses would enjoy cost savings.

As was discussed in chapter 2, job creation as a result of “business time savings” may not occur and possibly the only job-creation benefit from e-tolling will be jobs specifically attributable to e-tolling (e.g. fixing gantries, working for the Violations Processing Centre etc.) and possibly indirect job creation relating to the project itself.

### **3.10 Non-resident benefits from the e-toll collections**

A major problem with the e-tolling system is that a large proportion of the fees collected by SANRAL will benefit non-South African residents and not South African residents, as taxes should. This does not make sense when other methods of taxation could have been used that would not have resulted in the benefit to non-South African residents. This aspect of the e-

tolling system appears to be one of the most controversial for South Africans that now have to pay e-tolls.

### 3.10.1 Shareholding in the electronic toll collection company

Electronic Toll Collection Pty (Ltd) (or “ETC” as it is commonly referred to) is the company that was awarded the contract to collect e-tolling fees in South Africa. According to Traffic Management Technologies (2014:1) the shareholding of Electronic Toll Collection (Pty) Ltd is as follows:

- Kapsch TrafficCom AG in Austria owns 25% shareholding in Electronic Toll Collection (ETC);
- Kapsch TrafficCom AB in Sweden (a wholly-owned subsidiary of Kapsch TrafficCom AG in Austria) owns a 40% shareholding in Electronic Toll Collection (ETC);
- Traffic Management Technologies (or “TMT”) holds 35%.

According to Traffic Management Technologies (2014:1), its shareholding is as follows:

- 56.8% is owned by KTC SA Holding (a wholly-owned subsidiary of Kapsch TrafficCom AG in Austria);
- 26.63% is owned by Zoey Trust, Gelaman Trust and Transfin Trust; and
- 16.57% is owned by Matemeku – TMT (Pty) Ltd.

What this means is that the non-South African shareholding in the e-toll collection company, Electronic Toll Collection (Pty) Ltd is as follows:

- Kapsch TrafficCom AG in Austria owns 25% shareholding in Electronic Toll Collection (Pty) Ltd;
- Kapsch TrafficCom AB in Sweden (a wholly-owned subsidiary of Kapsch TrafficCom AG in Austria) owns a 40% shareholding in Electronic Toll Collection (Pty) Ltd;
- 56.8% of TMT Services and Supplies (TMT) (which holds a 35% shareholding in Electronic Toll Collection (Pty) Ltd) shareholding is owned by KTC SA Holding, which is a wholly-owned subsidiary of Kapsch TrafficCom AG in Austria. This gives an effective shareholding in Electronic Toll Collection (Pty) Ltd of 19.88% by KTC SA Holding (a wholly owned subsidiary of a non-South African company).

Thus, in total, 84.88% of the shareholding in the e-toll collection company is non-South African (effectively all owned by Kapsch TrafficCom AG in Austria).

[Refer to [Appendix 1](#) for a diagrammatical representation of the shareholdings described above]

### 3.10.2 [E-tolling fees will be earned by non-South African companies](#)

According to Mail & Guardian (2013b:1), SANRAL's spokesperson Vusi Mona stated that "ETC [Electronic Toll Collection joint venture] is paid for services rendered on a monthly basis, and the payment is strictly according to a bill of quantities as specified in the tender contract". Mail & Guardian (2013b:1) also noted that Vusi Mona defended SANRAL by saying "Sanral awarded the e-tolling contract to the ETC because its tender was more than R2-billion lower than the next offer".

Much controversy has surrounded the fact that non-South Africans will benefit from the e-tolling project. According to Mail & Guardian (2013b:1), quoting SANRAL's spokesperson Vusi Mona:

"Of course, everyone is now jumping on the political bandwagon that once e-tolling commences, all the collected monies will be going overseas. This is simply not true," spokesperson Vusi Mona said in a statement on Wednesday.

The question is therefore, how much will non-South Africans benefit and how much will South Africans benefit from Electronic Toll Collection (Pty) Ltd (the only non-South African component of the e-tolling system)?

In order to answer this question, how Electronic Toll Collection (Pty) Ltd is to be taxed needs to be ascertained. If the company is taxed in South Africa, part of the income flowing from the e-tolling service fee will be retained in South Africa in the form of tax revenue. Since South African taxes are collected on a "residence" basis of taxation, the first step is to determine whether Electronic Toll Collection (Pty) Ltd is a South African "resident" for tax purposes. The definition of a "resident" is found in section 1 of the Act and sub-paragraph (b) of the definition of a "resident" provides:

**"resident"** means any -

- (b) person (other than a natural person) which is incorporated, established or formed in the Republic or which has its place of effective management in the Republic,

but does not include –

any person who is deemed to be exclusively a resident of another country for the purposes of the application of any agreement entered into between the governments of the Republic and that other country for the avoidance of double taxation

According to Bloomberg BusinessWeek (2014:1) and South African Companies (2014:1), Electronic Toll Collection (Pty) Ltd was incorporated in South Africa in 2005 and is based in Centurion, South Africa (i.e. it has its place of effective management in South Africa). Electronic Toll Collection (Pty) Ltd is therefore a South African “resident” for income tax purposes because:

- it was incorporated in South Africa;
- it has its place of effective management in South Africa; and
- is not specifically excluded from being a “resident” of the Republic in terms of subsection (b) of the definition of a “resident” in section 1 of the Act.

This status as a “resident” taxpayer of South Africa means that the company will be taxed on its worldwide income (i.e. all income earned by the company, whether in South Africa, or not).

Electronic Toll Collection (Pty) Ltd was incorporated specifically to collect e-toll fees from road users on South African e-roads and will earn a monthly fee from SANRAL for these services. The income will be included in the “gross income” of Electronic Toll Collection (Pty) Ltd and be taxed at the company rate of 28%, after deducting relevant expenditure and allowances. This represents a monetary benefit to South Africa. Another monetary benefit to South Africa will be the dividends tax paid on dividends declared by Electronic Toll collection (Pty) Ltd to its shareholders. According to the Opposition to Urban Tolling Alliance (2013b:1), the income that will be awarded to Electronic Toll Collection (Pty) Ltd for services rendered will be R1,3 billion per annum (according to the tender agreement between SANRAL and Electronic Toll Collection (Pty) Ltd). The tax collected from Electronic Toll Collection (Pty) Ltd and dividends tax collected on

dividends they declare will form part of the tax revenue accruing to National Treasury. This will partly off-set the outflow of funds to non-residents in the form of dividends.

“Kapsch TrafficCom AG (KTCG), the Austrian maker of toll-road systems, said it would get an annual revenue boost of more than 50 million euros (\$66.4 million) from a delayed South African project that may start next month” (Weber, 2013:1) The amount of money that is being earned by non-South African companies (i.e. by Kapsch TrafficCom AG – who represent the entire non-South African shareholding in the e-toll project) is R734 million per annum (or 50 million euros at the euro to rand exchange rate on 21 January 2014). This R734 million will be after dividends tax (of 15% on dividends declared) has been paid.

### **3.11 SANRAL will make a “profit”**

The Opposition to Urban Tolling Alliance (2013b:1) calculations (based on estimated figures) estimates that SANRAL will earn a “profit” of R44 billion over the next twenty year period, after expenses. This profit was calculated by using an estimate of e-toll collections over a twenty year period using:

- the daily gantry transactions per day (according to SANRAL);
- an 85 per cent level of compliance; and
- average revenue per transaction of R3,60 (adjusted for larger vehicles).

Estimated e-toll expenditure per year was then subtracted from this figure and the result over a twenty year period reflected a profit of R44 billion.

According to the Opposition to Urban Tolling Alliance (2013c:1), SANRAL’s estimate of the e-toll cost breakdown over the loan life cycle provided as an affidavit during past court challenges, indicated that over a twenty-four year period no profit would be made. The cost break down showed that the estimated revenue from e-toll collections was expected to be R71,39574 billion (possibly a flawed calculation or even a “balancing figure”) and expenses were also estimated to equal R71,39574 billion. As a tax collection mechanism, e-tolling should not, ideally, make a profit. Earning a profit would also be in contrast to SANRAL’s own mandate, which is “to finance, improve, manage and maintain the national road network (the ‘economic arteries’ of South Africa)” (The South African National Roads Agency, 2013b:1).

These are clearly opposing views regarding the profitability of the e-tolling system, but if the SANRAL estimates are inaccurate, any excess collections will presumably be spend on upgrading the roads. Taking the problems with collecting e-toll fees into account, there is more likely to be a shortfall.

### **3.12 Issues lacking clarity**

Clark (2012:1) points out that “COSATU is one of the few parties who have received access to the tender documents and the contract with ETC. It was asked to keep the documents confidential. They have still not been made public, despite various requests, even from the applicants in the recent court case.” The question that needs to be asked is why the tender documents and the contract with Electronic Toll Collection (Pty) Ltd have not been made public? Clarity and transparency is required when dealing with contracts of this nature. According to Times Live (2013:1):

"The DA has received the SA National Roads Agency Limited's (Sanral) contract documentation on e-tolling in Gauteng," transport spokesman Ian Ollis said in a statement on Sunday.

"Delivery of the documents follows the DA's successful request for Sanral's e-toll contract documents via a Promotion of Access to Information Act (PAIA) application submitted in June 2013."

Sanral had agreed to provide all 5848 pages of the contractual agreements, he said.

“Upon receiving the documents however, Ollis said three items from the 65 item contract tender register were missing.”

These were the financial memorandum of the tender documentation and two items of the electronic toll collection (ETC) submission.

According to Flanagan (2013:1), when the Democratic Alliance questioned SANRAL about the missing documentation (including the tender report), SANRAL's deputy information officer, Haniel Motaung, said: “As far as I'm concerned we have sent a full set of documents to the DA”. He also said he was not aware of any documents being missing. Even though SANRAL was legally required to give the Democratic Alliance all the e-toll documents, certain important sections were missing.

Another worrying piece of information comes from South Africa Today (2013:1):

A good place to discover who is at the end of the trail is to ask those who are experiencing fall-out from criticizing the Gauteng e-Toll fraud. At the top of the list is Congress of South African Trade Unions (Cosatu) general secretary, Zwelinzima Vavi, who vowed in September 2012 to continue to oppose the Gauteng eTolling and to make the system “unworkable”. The ANC regime immediately set Cosatu (the third leg of the “tripartite alliance”) and media hacks onto Vavi, alleging “financial impropriety relating to Cosatu's new building in Braamfontein, Johannesburg”.

It would appear that Mr Zwelinzima Vavi’s opposition to e-tolling has led to investigations on other affairs that the Congress of South African Trade Unions has been involved in while he was the General Secretary.

Clark (2012:1) provides some additional information: “The supposed link to companies involved in the arms deal is between Kapsch TrafficCom AB in Sweden and Saab. Saab is the company that makes the Gripen fighter aircraft, of which South Africa ordered 26 in 1999”. As has been indicated, Kapsch TrafficCom AB in Sweden owns 40% of Electronic Toll Collection (Pty) Ltd (and is a wholly owned subsidiary of Kapsch TrafficCom AB in Austria which effectively owns 84.88% of Electronic Toll Collection (Pty) Ltd). The fact that this company has a link (no matter how small) to the controversial 1999 South African arms deal is a matter of concern. “Swedish defence group Saab on Thursday admitted that millions were paid to clinch a South African contract for fighter jets but said its erstwhile British partner BAE Systems had paid the bribes” (News 24, 2011:1). Saab therefore admits to being involved in corruption involving South African authorities. According to Gibbons (2013:1):

In late 1999, Kapsch bought a company called Combitech from Sweden’s Saab. This had been Saab’s venture into e-tolling, and the authoritative TollRoadsNews reported the deal in January 2000, noting that “Combitech made great efforts to get into the North American market . . . but was unable to do so.” We may surmise that Saab was quite pleased to unload this small and unprofitable part of its business. This is the company that became Kapsch TrafficCom AB – in effect, the Swedish subsidiary of the Austrian parent.

The link between Kapsch TrafficCom AB in Sweden and Saab is therefore a substantial one. As discussed, Kapsch TrafficCom AB bought the e-tolling business from Saab.

### **3.13 Other Problems**

#### **3.13.1 Non-cooperation by road users can lead to a criminal record**

According to Wheels 24 (2014:1), spokesman of SANRAL, Vusi Mona, warned that if a driver did not pay the account within 60 days "the offence" would be handed over to the prosecuting authority "to be dealt with in terms of the Criminal Procedure Act". "Failure to comply with this could result in a criminal record" he said. At the present moment, nobody has been prosecuted for non-compliance.

#### **3.13.2 The possibility of e-tolling being used countrywide**

According to South Africa Today (2013:1), the N1 and N2 roads in the Western Cape now have e-toll gantries being installed so that the system can be implemented there and there is planning for KwaZulu Natal roads to have e-tolls implemented as well. It may be that opposition to e-tolling on Gauteng roads has been exacerbated by the knowledge that it may be implemented on major roads countrywide.

#### **3.13.3 Complexity of the e-tolling system**

"E-tolling is not simply about demand management. It cuts across a number of complex transport planning, economic, land use and traffic engineering issues that require a multi-disciplinary approach for effective implementation" (Heyns, 2012:7). On the face of it, it would appear that not enough planning and consideration of alternatives has gone into the implementation of e-tolling in Gauteng, especially considering that overseas examples of how the system may fail have been at the disposal of SANRAL.

#### **3.13.4 Possible negative foreign perceptions of South Africa**

Weber (2013:1) had the following to say about the negative consequences for Kapsch TrafficCom (the majority shareholder in the e-tolling collection company in Gauteng) due to e-tolling in Gauteng:

Kapsch posted three straight quarterly losses in the year ended March 31 that were partly caused by the delays in South Africa, the continent's biggest economy.

It is important for South Africa to appear as a good investment opportunity for non-South African individuals and companies because such investment provides a benefit to the South African economy. If the e-tolling system proves to be a financial disaster, the South African government's ability to effectively attract foreign investment may be called into question,

especially as non-South African companies such as Kapsch TrafficCom have already posted losses due to their decision to invest in South Africa. If the system does incur losses, these losses will increase.

### 3.13.5 [Mini-bus taxis are exempt from paying e-tolls](#)

According to the Government Gazette No. 37038 of 19 November 2013, “a mini-bus taxi-type service” is exempt from having to pay e-toll fees if the following conditions are met:

- the service must be as defined in section 1 of the National Land Transport Act No. 5 of 2009 (hereafter referred to as the “National Land Transport Act”) where the service is for commuting as defined in the National Land Transport Act, including the transportation of scholars and private contract passengers; and
- where such transportation, on the Gauteng Freeway Improvement Plan roads, is authorised by the same operating licence or permit that authorises the commuter services.

A “mini-bus taxi-type service” is defined in the National Land Transport Act as “an unscheduled public transport service operated on a specific route or routes or, where applicable, within a particular area, by means of a motor car, minibus or midibus”.

The e-toll exemption for taxis was written into law **after** the decision to use e-tolling to pay for Gauteng’s roads. It was therefore not decided upon in the planning process for e-tolling. It has been speculated that this exemption was subsequently written into law because the South African National Roads services were fearful of the taxi owners’ reactions to having to pay e-tolls. An example of such speculation is expressed by Tubbs (2013:1) as follows:

Suggestions that government and its roads agency are afraid of taxi associations and owners are baseless and inaccurate, says the SA National Roads Agency (Sanral).

This comes in response to the impression that fear of violence and taxi wars motivated the decision to excuse SA's minibus taxis from paying e-tolls.

If SANRAL’s decision to exempt taxis from paying e-tolls was due to fear of their reaction, it seems that their fear was well founded. Problems with taxi-bus exemptions, due to them being billed for e-tolls by SANRAL after not acquiring the relevant licensing on time/at all, led to the National Taxi Alliance to embark on a protest on the

third of February 2014. The protest led to certain acts of violence. Matsimela (2014:1) reported:

On February 3, local non-striking taxi operators faced the wrath of the striking ones. Two incidents of taxi related violence were reported.

Crystal Park police acting spokesperson Tryna Maritz said a taxi driver travelling along Elm Road towards the R21 direction was assaulted and by other taxi drivers who also damaged his taxi and took R200 from him. He was accused of not taking part in the strike and his explanation that he was a long distance taxi driver was not accepted. The incident occurred at around 3pm. Police were called to the scene and a case of assault with intent to cause grievous bodily harm was opened.

In another incident, a taxi driver travelling along Peenz Road in Zesfontein was stopped and his taxi damaged quite badly after being accused of not taking part in the strike. “He escaped without injuries and a case of malicious damage to property was opened, said Maritz.

No arrests were made in both incidents.

Whether the taxi exemption from paying e-toll fees was due to fear or not, this exemption does not appear to be fair. Taxi services are private businesses that are run with the objective of making a profit. If government was trying to run e-tolling in a fair manner, they would exempt all business, not just taxis. There is no justifiable reason for exempting one type of business owner and not another. This is clearly not a decision that promotes the equity of the e-toll system. Exempting taxis also leads to other categories of road users having to carry a greater tax burden as they will have to bear the costs of the e-toll fees that taxis would have paid. Van Schie (2014:1) reports on how Shoprite Checkers (Shoprite Checker’s Group spokeswoman Sarita van Wyk) comments that they (as a business) should also be allowed an e-toll exemption if taxis are, as follows:

“While we support public-transport exemptions for buses and minibus taxis as a means to support the workforce of this country, it is our contention that our food-distribution vehicles should not be subjected to additional costs because of the impact on the price of basic food for the country’s most vulnerable consumers.”

“We are thus considering making representations to the South African National Roads Agency for exemption from e-tolls.”

It must be kept in mind that the Economic Impact Assessment for the Gauteng Freeway Improvement Plan promised business time “savings” to businesses using e-tolled roads. In asking for an exemption, it is clear that no such “savings” have been experienced by Shoprite Checkers.

### **3.14 Conclusion**

Some of the controversies and suggested problems with the implementation of e-tolling in South Africa, as well as their validity, were discussed in this chapter.

- The Department of Roads and Transport and the Department of Infrastructure in Gauteng were both on the list of the five worst-run departments in the whole of South Africa, incurring irregular, wasteful and unauthorised expenditure of R2.2 billion (36.3% of its R6.1 billion budget) and R288 million (24% of its R1.2 billion budget) respectively. This R2.2 billion of irregular, wasteful and unauthorised expenditure by the South African Department of Roads and Transport in the 2010/2011 year would more than cover one year’s average expenditure to be incurred on the Gauteng Freeway Improvement Project.
- There have been countless complaints by motorists who have been incorrectly billed and sent abusive and threatening text messages telling them to pay their e-toll fees. It is clear that the e-toll collection system is flawed and inadequate. This collection method does not follow proper legal process. This will possibly increase costs, which will have to be borne by taxpayers (e-toll road users). These increased costs will affect the cost-effectiveness of e-tolling as a tax collection method.
- There have been issues regarding the hacking of users’ information (including credit card and bank details) from the e-toll website. Protecting user information is perhaps the most important thing that any website should achieve. It is unknown how much money has been stolen from e-toll road users as a result of these problems. Fixing problems such as these is likely to be costly and these costs will have to be borne by the road users (the taxpayers). This will have a negative impact on the cost-effectiveness of the e-toll system.
- SANRAL appears to have been misleading the public because it has repeatedly defended the allegations of high costs of the e-toll system by stating that the costs make up only

17% of e-toll collections, whereas they actually make up 28.15% of the e-toll fees collected.

- Due to high personal income tax rates, high corporate tax rates (especially considering an effective tax rate of 38.8 per cent for shareholders), and multiple other types of taxes payable in South Africa, it is clear that a heavy tax burden exists for South African taxpayers, especially those who earn large incomes. It does not appear that putting the additional tax burden of e-tolling on taxpayers is advisable.
  
- South Africa is in a different position to other countries (so called first-world countries) in that these other countries have a larger tax base and are therefore able to afford to levy additional taxes on their existing taxpayers. These countries also have a lighter economic burden in that they do not have as many citizens living in poverty that need to be cared for by the state. South Africa cannot afford to implement the same kind/level of taxes. Copying e-tolling systems as a form of taxation from first world countries may not be the right strategy for South Africa. A proposed National Health Insurance is already threatening to cause a large increase in taxes and implementing e-tolling just before a National Health Insurance is implemented is not to be recommended, especially considering the heavy tax burden that is already imposed on South African taxpayers.
  
- Negative perceptions of government and government spending could be an important factor in explaining why South Africans have opposed e-tolling to such an extent, especially if they do not believe that government will make proper use of the e-toll fees collected.
  
- It appears that there was poor planning by SANRAL before deciding to implement e-tolling:
  - There has been a large increase in cost estimates for the Gauteng Freeway Improvement Project over the years and the original (low) estimates would have been used in the proposal for the Gauteng Freeway Improvement Project, which ultimately led to its approval and implementation. To have an estimate of road costs 350 per cent lower than the final cost indicates an inadequate planning process.

- The Impact Assessment exhibits certain shortcomings and even though it is clear other countries have had major problems with e-toll implementation in the past (including large levels of non-compliance), and the Impact Assessment makes what appears to be optimistic and unsubstantiated claims that the gross domestic product will increase and job creation will be achieved as a result of the system.
- The threat by SANRAL that non-cooperation by road users can lead to a criminal record.
- Opposition to e-tolling by road users may be aggravated by the knowledge that the system will be implemented countrywide; these fears appear to be well-founded because the N1 and N2 roads in the Western Cape now have e-toll gantries being installed and there is planning for KwaZulu Natal roads to have e-tolls implemented there as well.
- There is possibly no benefit to Gauteng residents from the implementation of e-tolling as they face paying e-toll fees and possibly even lower economic growth and job creation, despite the fact that the Economic Impact Assessment identifies benefits resulting from “business time savings”. It was shown that no such savings appear to have been experienced by Shoprite Checkers (as reported by van Schie (2014:1)) and it is likely that no such savings will be experienced by other businesses.
- Non-South African shareholding in the e-toll collection company amounts to 84.88 per cent of the shareholding (it is effectively owned by Kapsch TrafficCom AG in Austria) and therefore a large portion of e-toll fees (R734 million per annum after income tax and dividends tax) will be paid to non-South Africans and will not benefit South Africa.
- Although the twenty-four year projection by SANRAL (discussed above) reflected a break-even position, it has been claimed that SANRAL will be making a profit.
- There are other issues lacking clarity including the following:
  - the Congress of South African Trade Workers (COSATU) is one of the few parties who have been given access to the e-toll tender documents and the contract with Electronic Toll Collection (Pty) Limited and are now opposed to the e-toll system;

- when SANRAL was forced by law to hand over the e-toll contract documentation to the Democratic Alliance, important documents were missing. According to Flanagan (2013:1), when asked about these missing items, SANRAL's deputy information officer, Haniel Motaung said "As far as I'm concerned we have sent a full set of documents to the DA";
  - it would appear that Mr Zwelinzima Vavi's opposition to e-tolling has led to investigations into matters that the Congress of South African Trade Unions has been involved in while he has been the general secretary. The true motives behind these investigations may be questioned; and
  - there is a link between Kapsch TrafficCom AB in Sweden (a majority shareholder in Electronic Toll Collection (Pty) Limited) and Saab, as Kapsch TrafficCom AB bought the e-tolling business from Saab. Saab has openly admitted to paying bribes to South African officials as a part of the controversial 1999 South African arms deal.
- The complexity of the e-tolling system may not have been properly considered.
  - Problems with the e-tolling system could possibly cause negative foreign perceptions of South Africa.
  - "Mini-bus taxi-type services" as defined in section 1 of the National Land Transport Act are exempt from having to pay e-toll fees. There is a possibility that this could have been due to SANRAL being fearful of negative reactions by taxi owners to having to pay e-tolls. Exempting taxis, which are in essence a business, is unfair because if these businesses are exempt, all businesses should be exempt from having to pay e-tolls. Van Schie (2014:1) reported that Shoprite Checkers also believe that they should be entitled to an exemption. Exempting taxis leads to other categories of road users having to carry a greater tax burden as they will have to bear the costs of the e-toll fees that taxis would have paid.

It is important for any method of taxation not only to be cost-effective, but to be accepted by the public which has to pay the tax. Due to all the problems and controversies with e-tolling referred to in this chapter, it does not appear that the public has accepted the system and the system appears to have many problems. This will no doubt lead to problems in the future, such as non-compliance by road users and increased administration costs to try to get road

users to pay e-toll fees. Increased costs will decrease the “cost-effectiveness” of the system even further, making it even less likely to be a cost-effective system of tax collection in the future.

# Chapter 4: Alternative funding for e-tolling

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## 4.1 Introduction

Comments in the media and by the Opposition to Urban Tolling Alliance and others have asserted that e-tolling is not a cost-effective system of tax collection. However, it needs to be ascertained whether it is the most cost-effective method, taking into consideration the available alternatives. This will assist in achieving the main goal of the present research: to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective, leading to the smallest possible tax burden on taxpayers.

According to the South African National Roads Agency (2013a:4), the benefits of Open Road Tolling (or “e-tolling”) are:

- Better Roads = Better Infrastructure = Better Economy;
- Reduces the amount of time spent on the road;
- Provides free flowing traffic along the route and assists in eliminating congestion;
- Over a period of time the motorists save on car routine maintenance;
- Reduces the amount of Carbon emission as there is less time spent on the roads;
- Improves motorist safety and security along the route as it is a free flowing collection system along an open road;
- SANRAL has implemented a Freeway Management Systems whereby roads are monitored and road user assistance along the tolled road network is improved in emergency situations;
- User assistance along the tolled road network is improved in emergency situations; and
- Safely engineered roads which require less maintenance over greater periods of time.

These benefits clearly played a major role in SANRAL’s decision to choose e-tolling as the system to pay for Gauteng’s major roads. Possible benefits such as these have been communicated to the public by SANRAL in an attempt to persuade the public that e-tolling is a good system to pay for Gauteng roads. However, being a system of taxation, cost-effectiveness should have been an important priority of SANRAL. An analysis of these

possible benefits of e-tolling in relation to how they contribute to cost-effectiveness will therefore be necessary.

The following positive aspects of e-tolling were identified by the South African National Roads Agency (2013a:4) that are directly linked to having better roads are:

- Better Roads = Better Infrastructure = Better Economy;
- Reduces the amount of time spent on the road;
- Over a period of time the motorists save on routine car maintenance;
- Reduces the amount of carbon emission as there is less time spent on the roads; and
- Safely engineered roads which require less maintenance over greater periods of time.

The mandate of SANRAL has always been the upgrading and maintenance of the roads. Therefore, “Better Roads = Better Infrastructure = Better Economy” and “safely engineered roads requiring less maintenance” would have resulted no matter what system of taxation was chosen to pay for it. The claims relating to the reduction of time spent on the road, resulting in lower carbon emissions and a saving on car maintenance, appear to be incorrect. There are a finite number of cars using the roads and if fewer cars travel on the toll roads because of having to pay toll fees, this simply diverts the problems to the secondary roads and creates congestion, increased carbon emissions and more costly car maintenance. These potential positive outcomes identified by SANRAL therefore do not contribute anything further to the system’s overall cost-effectiveness.

With regard to the benefits identified by SANRAL, it would appear that the e-tolling is being compared only to other tolling methods where road users have to stop and pay at manned toll booths:

- provides free flowing traffic along the route and assists in eliminating congestion; and
- improves motorist safety and security along the route as it is a free flowing collection system along an open road.

Tolling is not the only method that could have been used to pay for Gauteng’s roads and other methods (such as using the general tax revenue collected on behalf of National Treasury or a fuel levy) could also have paid for the roads and allowed free flowing traffic.

The following benefits have also been highlighted by the South African National Roads Agency (2013a:4):

SANRAL has implemented a Freeway Management Systems whereby roads are monitored and road user assistance along the tolled road network is improved in emergency situations.

These benefits should have been provided no matter what system of taxation was used to pay for the roads. These benefits therefore contribute nothing to the cost-effectiveness of the e-toll system as a method of taxation.

The Opposition to Urban Tolling Alliance (2013a:1) highlights the most commonly referred to alternatives to the e-tolling system as:

- the National Treasury [that is, general tax revenue]; and
- the fuel levy.

Long distance toll roads and vehicle licensing fees are mentioned by the Opposition to Urban Tolling Alliance (2013a:1) as sources of revenue to help to pay for Gauteng roads. On their own, these methods may not be sufficient to pay for Gauteng roads, but their contribution may have been able to ease the burden on the main funding method used. The extent to which they may have been able to ease the burden on the main funding method used will be analysed in this chapter.

Using a fuel levy or general tax revenue as methods of paying for Gauteng's roads will be analysed in isolation to allow for direct comparisons of cost-effectiveness with e-tolling, to see whether they would have been a more cost-effective method of paying for the now e-tolled Gauteng roads. If both of these methods are in fact more cost-effective than e-tolling, the best method of paying for Gauteng's roads may have been to raise the taxes to pay for the roads by using a combination of a fuel levy and general tax revenue as the main methods, and long distance toll roads and vehicle licensing fees as secondary methods. This would have put the least amount of additional strain on each method of tax collection. An analysis of this situation will therefore also be carried out.

In order to conclude on the relative advantages of the alternative methods of taxation, the general principles of taxation as postulated by Adam Smith (Haupt, 2014:2) will be applied to the various alternative forms of taxation.

## **4.2 The fuel levy as a source of funding**

“Outa believed the most equitable way to pay for the maintenance of the highways would be through a fuel levy.” (IOL News, 2013:1)

### **4.2.1 The existing fuel levy**

According to Schedule 1/Part 5 of the Schedules to the Customs and Excise Act No. 91 of 1964 (hereafter referred to as the “Customs and Excise Act”), there is an existing 212,5 cents per litre fuel levy on petrol and a 197,5 cents per litre fuel levy on diesel. According to the Automobile Association of South Africa (2014:1), the price of petrol on 5 February 2014 was R13,96 for petrol in Gauteng and R13,59 at the coast and the price of diesel on 5 February 2014 was R13,15 in Gauteng and R12,88 at the coast. This means that the fuel levy makes up:

- 15,22 per cent of the petrol price in Gauteng;
- 15,64 per cent of the petrol price at the Coast;
- 15,02 per cent of the diesel price in Gauteng; and
- 15,33 per cent of the diesel price at the coast.

### **4.2.2 Why a countrywide fuel levy is more equitable than the e-toll “user-pays” principle**

According to the South African National Treasury and the South African Revenue Service (2013:30), personal income tax is South Africa’s largest source of tax revenue and contributed 34.0 per cent of total tax revenue collections for 2012/13 (33.8 per cent for 2011/12). The report (National Treasury, 2013:34) reveals that total personal income tax collections for the 2013 year of assessment in South Africa amounted to R206,668 billion and also reveals (2013:37) that of the total R206,668 billion personal income tax collections countrywide, Gauteng contributed R104,2 billion. This is by far the largest collection from any province, with KwaZulu-Natal being the second largest at R26,5 billion. These figures illustrate that Gauteng contributed 50,42 per cent of the total personal income tax contributions for the entire country and therefore 17,1428 per cent of the total tax collections countrywide.

According to the Opposition to Urban Tolling Alliance (2012b:1), for the 2011 tax year of assessment, Gauteng contributed R260,834 billion of the total tax collections (including all types of taxes levied in South Africa) of R674,183 billion for the year of assessment. This

equates to 38,69 per cent. According to Nkomfe (2013:8), over the 2013 Medium Term Expenditure Framework period, Gauteng received national transfers amounting to R76.9 billion. According to MoneyWeb (2013:1), this was subsequently increased by a further R3 billion. Even at R79.9 billion (R76.9 billion + R3 billion) allocated to Gauteng for the 2013/2014 year, it is receiving far less money from the government than it is contributing in taxes. According to the South African National Treasury and the South African Revenue Service (2013:1), tax revenue collected amounted to R813.8 billion in the 2013 tax year of assessment. The R79.9 billion allocated to Gauteng means that they have only been allocated 9,818 per cent of the total tax collections in the 2013 year. This is far less than for example, the 38,69 per cent of total tax contributions they contributed in the 2011 tax year of assessment.

From all these figures, it is clear that Gauteng to some degree helps to finance all the other South African provinces, as it contributes the most taxes and does not receive a proportionate amount of government spending. The entire country benefits from tax collections from Gauteng and its infrastructure used to generate the money which is subject to tax. This infrastructure required road upgrades and repairs to run more cost-effectively (this was the need that led to the Gauteng Freeway Improvement plan – resulting in the implementation of e-tolling). Levying a fuel levy countrywide to pay for Gauteng's roads therefore appears to be equitable. Although the “user-pays” principle (the founding principle of tolling) makes economic sense in many situations, this does not appear to be the case for these very important Gauteng roads. The roads are not merely travel routes, but the main routes used to travel around the economic hub of South Africa. There are no viable alternatives as the alternative routes are always very congested. Toll roads and the “user-pays” principle make sense on roads like the N3 between Johannesburg and Durban, because if the user does not want to pay toll fees for the convenience of these roads, he or she can divert onto a secondary road and still be able to travel with relative ease. This is not possible in Gauteng, as the secondary roads are simply not adequate if all the users of the freeways chose not to pay the toll fees and divert onto these secondary roads. Having Gauteng residents alone pay for the roads is the same as saying that each Province should carry its own financial load. However, this is clearly not the case, as Gauteng is helping to finance all of the other provinces when it comes to tax contributions, and now e-tolling is putting yet another tax burden on Gauteng residents.

### 4.2.3 Effects of using a fuel levy to pay for Gauteng's roads

It has been stated by the Opposition to Urban Tolling Alliance (2013c:1) that the amount spent and to be spent over the next 24 year period on Gauteng's roads is R51,30444 billion (R20,62999 billion initial capital costs + R10,66945 billion road maintenance expenditure + R20,005 billion interest expense) - (see Appendix 2). This equates to an average of R2,137685 billion per annum.

According to the South African Petroleum Industry Association (2012:36), South Africa consumed 11,714 billion litres of petrol and 11,262 billion litres of diesel in 2012. Not taking increases in fuel consumption into account, this would equate to 281,136 billion litres of petrol and 270,288 litres of diesel consumed over the next twenty-four year period (551,424 billion litres of both petrol and diesel combined). It is likely that fuel consumption will increase in the future (considering the fuel consumption statistics from the South African Petroleum Industry Association (2012:36), it appears that there has been a general increase in fuel consumption over the years). Thus by not taking potential increases into account, the "worst case" scenario will be projected in the calculations discussed below.

Taking into account cost of R51,30444 billion (over the next twenty-four year period) for the road upgrades, road maintenance and interest on the loan to pay for the initial capital costs of the roads, a fuel levy of R0,0930399112 per litre would have to be levied for the next twenty-four years, less than ten cents per litre of petrol and diesel.

This fuel levy of R0,0930399112 per litre of petrol and diesel (using the 05/02/2014 petrol and diesel prices) constitutes only:

- 0,666475 per cent of the price of petrol in Gauteng;
- 0,68462039 per cent of the price of petrol at the Coast;
- 0,70752784 per cent of the price of diesel in Gauteng; and
- 0,72235955 per cent of the price of diesel at the Coast.

These percentages can be compared to the existing fuel levy of:

- 15,22 per cent of the petrol price in Gauteng;
- 15,64 per cent of the petrol price at the Coast;
- 15,02 per cent of the diesel price in Gauteng; and
- 15,33 per cent of the diesel price at the coast.

The opposition to a fuel levy imposed countrywide to pay for Gauteng roads (at just over 9 cents per litre) would probably not have been nearly as strong as the opposition to e-tolling. As the price of petrol is likely to increase over the next twenty-four years, this fuel levy as a percentage of the total petrol and diesel prices is likely to decrease, making it an even smaller burden on motorists.

#### 4.2.4 The fuel levy as a tax collection method compared to e-tolling

From the figures provided by the Opposition to Urban Tolling Alliance (2013c:1), R20,0913 billion directly attributable to the e-toll system (R6,19406 billion Violation Processing Costs capital and operating expenditure + R12,17013 billion toll related capital and operating expenditure + R1,72711 billion other operational expenditure) will be incurred over the next twenty-four year period. These expenses will have to be paid for by e-toll road users and are costs related solely to the e-toll system. This additional e-toll expenditure would not have to be incurred if a fuel levy was used to raise the money for Gauteng roads. Apart from the unavoidable R20,00500 billion interest expense (which could only have been avoided if the roads were upgraded as taxes were collected and no loan was taken out), all the money collected from a fuel levy would be used to benefit the South African road network. The fact that a fuel levy would cost R20,0913 billion less than e-tolling to achieve the same result (upgrading and repairing Gauteng roads) indicates that a fuel levy is a more cost-effective method of tax collection as it would place a smaller tax burden on taxpayers.

A fuel levy is also a method of tax collection that people are not able to oppose. Their dependence on petrol would ensure that they pay the fuel levy. This is not the case for e-tolling as road users can simply refuse to pay (which is what has been occurring). This increases administration expenses and creates a further loss as money is being wasted trying to collect unpaid toll fees. This inability to oppose the tax or resist making payment also makes a fuel levy a more efficient method of taxation than e-tolling. The majority of the positive aspects of e-tolling mentioned by the South African National Roads Agency (2013a:4) have to do solely with the benefits that better roads provide. A fuel levy would also have led to better roads and therefore would have created all the same benefits. The only difference is that a fuel levy would not lead to road users using alternative routes to try to avoid paying toll fees. Whether this traffic diversion creates a positive or negative impact on travel time is still debatable as no clear calculations have been attempted.

### **4.3 A budget allocation by National Treasury**

Using the National Treasury funds is the similar to a fuel levy in the sense of all South African resident taxpayers having to pay for Gauteng's road upgrades. The same debate is therefore relevant here. As Gauteng's infrastructure is so crucial to South Africa due to Gauteng contributing the most taxes of any Province by a large margin and not receiving a proportionate share of expenditure, it would be more equitable for all South African taxpayers to pay for the infrastructure than only Gauteng road users paying.

According to the South African National Treasury and the South African Revenue Service (2013:1), tax revenue collected amounted to R813.8 billion in the 2013 tax year of assessment<sup>1</sup>.

Due to the existing strain on the National Treasury, it is unlikely that it would have been able to fund the Gauteng Freeway Improvement Project without making use of a loan and incurring interest on the loan. This, according to the Opposition to Urban Tolling Alliance (2013c:1) would cost an additional R20,00500 billion in interest over a twenty-four year period, meaning a total cost of R51,30444 billion (initial capital expenditure + road maintenance cost + interest) over a twenty-four year period. Over a twenty-four year loan period, payments would equate to R2,137685 billion per annum. If it is assumed that total tax revenue collected will remain constant over the next twenty-four year period (highly unlikely – there has been a consistent trend of growth and the South African National Treasury and the South African Revenue Service (2013:1) noted a 9,6 per cent increase in tax collected between the 2012 and 2013 tax years of assessment), the yearly payments would only equate to 0,2626794 per cent of total tax collections per annum. As this is a relatively small percentage of total tax collections, this method of financing the Gauteng roads is highly feasible, especially if implementing a National Health Insurance costing in the region of R100 billion rand per annum (according to Grant Thornton South Africa (2010:1)) is something that government considers to be achievable.

Using general tax revenue (like a fuel levy) is a method of tax collection that people are not able to oppose. Taxpayers are forced to pay taxes and would not be able to oppose the spending on the upgrading and maintenance of Gauteng roads. This is not the case for e-tolling as road users can simply fail to pay (which has been occurring). This increases

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<sup>1</sup> Unless otherwise stated, the figures used in this part on the analysis come from estimates made by the Opposition to Urban Tolling Alliance (2013c:1).

administration expenses and creates an even greater loss as money is being wasted trying to get road users to pay. This inability to oppose the tax or resist payment also makes using general tax funds a more efficient method of taxation than e-tolling. Many taxpayers are oblivious of exactly how taxes are being spent and it is unlikely that they would have been aware that general tax collections had paid for Gauteng road upgrades.

The majority of the positive aspects of e-tolling mentioned by the South African National Roads Agency (2013a:4) have to do solely with the benefits that better roads provide. Using general tax revenue would also have led to better roads and therefore would have created all the same benefits. The only difference is that using tax revenue would not lead to road users using alternative routes to try to avoid paying tolls. Whether this traffic diversion creates a positive or negative impact on travel time is still debatable as no clear calculations have been attempted.

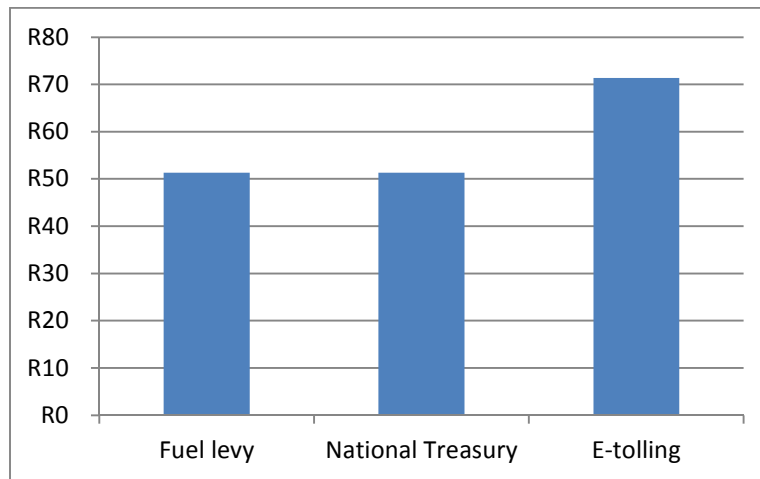
#### 4.3.1 The use of general tax revenue out of the national budget to fund e-tolling

The additional expenses of R20,0913 billion (R6,19406 billion Violation Processing Costs capital and operating expenditure + R12,17013 billion toll related capital and operating expenditure + R1,72711 billion other operational expenditure) to be incurred over the next twenty-four year period that are directly attributable to the e-toll system will have to be paid for by e-toll road users and will result in a direct loss to society created solely by the e-toll system. This additional e-toll expenditure would not have to be incurred if National Treasury paid for Gauteng's road upgrades and repairs.

If the National Treasury was not able to raise the R31,29944 (initial capital expenditure of R20 629,99 billion + road maintenance costs of R10 669,45 billion) in a single year without needing to take out a loan, the R20,00500 billion interest expenditure would have to have been incurred. This method of taxation would be as cost-effective as a fuel levy to pay for Gauteng roads as it would cost the same amount (i.e. R51,30444 billion) to achieve the same results, and would cost taxpayers R20,0913 billion less to achieve the same results.

System of taxation used to pay for Gauteng's Roads	Costs of the system (over a twenty-four year period- the period of the loan life-cycle)
Fuel levy	R51,30444 billion
National Treasury	R51,30444 billion
E-tolling	R71,39574 billion

**The costs of the taxation methods to pay for Gauteng's roads (in billions of Rands)**



A combination of general tax revenue and a fuel levy could also be considered, or a higher fuel levy for Gauteng motorists (which motorists from other provinces would not be opposed to).

**4.4 Vehicle licence fees**

According to the Opposition to Urban Tolling Alliance (2013a:1):

Revenues generated by the sale of Car Licenses at the local level are (supposed to be) utilised to fund road maintenance and infrastructure development within the local municipal and metro areas. These fees have been increased substantially in recent years, however, the benefits to the local road user are not being experienced at the levels expected from the local authorities. Nonetheless, these fees are also part of the road funding hybrid model.

According to ForesightPublications (2013:1), licence fees in Gauteng range from R228 for vehicles weighing between 250 kilograms and 500 kilograms to R19 452 for vehicles weighing 11500 kilograms to 12 000 kilograms and an additional R500 for each additional

500 kilograms (or part thereof) exceeding 12 000 kilograms (note that these fees are quoted by ForsightPublications (2013:1) from the Gauteng Provincial Gazette No 376, 20 December 2013 and are therefore accurate).

According to the National Traffic Information System (2013:1), as at 31 December 2013 the total number of “live” registered vehicles in Gauteng was:

- 3 854 594 self-propelled vehicles (38,96 per cent of all the registered vehicles in South Africa);
- 411 631 registered trailers (38,13 per cent of all registered trailers in South Africa); and
- 5 363 all other unknown vehicles (38,81 per cent of all other unknown vehicles in South Africa).

Due to the substantial vehicle licensing fees paid by Gauteng residents and the large number of vehicles registered in Gauteng, it is clear that a considerable amount of licence fees are being collected and, according to the Opposition to Urban Tolling Alliance (2013a:1), this money should be being used to “fund road maintenance and infrastructure development within the local municipal and metro areas”. A large proportion of these fees collected should have been used to pay for the freeway upgrades on Gauteng roads to ease the burden on taxpayers paying for these roads and could have been used to ease the burden on motorists paying a fuel levy or the burden on the National Treasury. At the very least, these licensing fees should now be used to assist to pay for the upkeep of Gauteng roads to ease the burden on people paying e-tolls.

#### **4.5 Long distance toll roads**

According to the Opposition to Urban Tolling Alliance (2013a:1), long distance toll roads, and tolling new rural and inter-city roads, which aim to bypass more dangerous older routes, could have been used because these routes offer clear benefits to road users who would also have the option of using the alternative routes. “SANRAL earns billions from these rural tolled routes and these funds reduce the burden to subsidise other rural and urban road construction from the general road funding tax pot” (Opposition to Urban Tolling Alliance, 2013a:1).

It does not appear that the existing long distance toll routes are helping to subsidise now e-tolled Gauteng freeways and new long distance toll routes could have been used to help ease

the tax burden on existing road users, now having to pay for all the costs of the roads through the ineffective tax collection system of e-tolling.

## **4.6 The general principles of taxation**

The following conclusions can be drawn from an analysis of the available methods of taxation to pay for Gauteng roads in terms of the basic canons (or principles) of taxation proposed by Adam Smith in *The Wealth of Nations* (1776, in Haupt: 2014):

- proportionality, according to the ability to pay;
- certainty;
- convenience
- economy; and
- equity.

### **Ability to Pay Principle**

The e-tolling system does not comply with the requirement that taxes should be levied according to the taxpayers' ability to pay, as all road users (with the exception of the "mini" taxi industry), irrespective of their levels of income are required to pay the same amount. To a lesser extent, neither the fuel levy nor an adjustment to licence fees take into account the vehicle owner's ability to pay the additional amount, although the addition to the fuel levy is so small that vehicle owners are unlikely to find it onerous. Using general tax revenue to fund the Gauteng road upgrade does satisfy the ability to pay principle to a great extent, as income taxes are levied on the individual's taxable income. Value-Added Tax (in terms of the Value-Added Tax Act 89 of 1991) is levied at a flat rate of 14 percent on all taxable supplies and therefore impacts equally on consumers, irrespective of their ability to pay. However, certain basic foodstuffs are exempt from the tax, which provides relief for low income-earners.

### **Certainty Principle**

All three methods of taxation (e-tolling, a fuel levy, or the general tax revenue) would satisfy the certainty principle of taxation as taxpayers would be aware of exactly how much tax they will have to pay. There is less certainty, however, for a fuel levy and e-tolling because taxpayers will not know exactly how much fuel they will use per annum or how many kilometres they will have travel on Gauteng roads per annum and will therefore not know exactly how much tax they will have to pay.

### Convenience Principle

Using general tax revenue available to National Treasury to pay for Gauteng roads is very convenient because taxpayers have to submit their tax returns annually. The fuel levy method of tax is also very convenient because taxpayers would pay for petrol as they buy it. The least convenient method of tax is clearly e-tolling because road users have to register their vehicles, receive monthly invoices and pay them on time, receive text messages on their cell-phones telling them how much they need to pay, and due to fake number plates being used in Gauteng, people may be asked to pay for using e-toll roads even if they have not driven on the roads. If a road user encounters any problems with the e-toll system, the onus is on that road user to resolve the problem with the e-toll help-centre. E-toll users who do not pay on time also face the possibility that they may have to appear in court and have a criminal record if found guilty.

### Economy Principle

This is perhaps the most important principle of taxation. The public should be paying the least amount of tax possible in order to achieve the maximum possible results. It was concluded that a loan would almost certainly have had to be taken out no matter what method of taxation was used. Assuming a loan did have to be taken out (as has occurred with the e-tolling system), the most economical methods of taxation would have been a fuel levy or using the general tax revenue (National Treasury) as they would both only cost taxpayers R51,30444 billion to pay for the roads. The least economical method of taxation is e-tolling as it will cost taxpayers R71,39574 billion to pay for the roads (R20,0913 more than using a fuel levy or the National Treasury).

### Equity Principle

In addition to the principles of a good taxation system, it is essential that a tax system should be equitable and be seen to be equitable.

In terms of the equity principle, it would appear that taxing all South African motorists to pay for Gauteng roads would be the most equitable method of taxation considering Gauteng's large contribution to total tax collections in South Africa and the proportionately lower budget allocation granted to the province. Taxing only Gauteng road users (as e-tolling does) to pay for infrastructure that effectively benefits the entire country does not appear to be equitable. Paying for the roads using a fuel levy is a more equitable method of taxation than e-tolling as it spreads the tax burden of paying for infrastructure that benefits the entire

country between all road users (i.e. instead of making only Gauteng road users pay for infrastructure that benefits the entire country). It would appear, however, that using the general taxpayer funds available to National Treasury would be the most equitable method of taxation as the burden of paying for the roads would be shared between all taxpayers and not road users. Taxpayers are persons who earn sufficient income to become liable for tax, while many motorists would suffer a disproportionate financial burden.

From the results of this analysis, it would appear that:

- Using the general tax revenue available to National Treasury satisfies all five principles of taxation most effectively;
- Using a fuel levy is also an effective method of taxation to pay for Gauteng roads as it satisfies all five principles of taxation, but to a slightly lesser extent; and
- Using e-tolling to pay for Gauteng's roads is the least acceptable system of tax to pay for Gauteng roads. In terms of satisfying the principles of taxation, e-tolling is the least acceptable method of taxation because it does not adhere to the principles of "ability to pay", "convenience", "economy" or "equity".

#### **4.7 Using a combination of all the taxation methods**

It has been shown that using a fuel levy or the National Treasury to pay for Gauteng's roads would cost taxpayers the same amount (i.e. R51,30444 billion), and that both of these methods would have been cheaper than implementing e-tolling (which cost R71,39574 billion). It is clear then that both of these methods, in any proportion, are cheaper than e-tolling and therefore more cost-effective methods of taxation. Applying the "canons" (or principles) of taxation (Haupt, 2014:2) also demonstrated that using a fuel levy or general taxation revenue were better forms of tax collection and therefore more cost-effective. There is no doubt then that these alternative methods would have been better tax collection methods than e-tolling to pay for Gauteng's roads.

Using a fuel levy or general tax revenue as methods of paying for Gauteng's roads were analysed in isolation, as this allowed for direct comparisons of cost-effectiveness with e-tolling. In reality, the best method of paying for Gauteng's roads would most likely have been to raise the taxes to pay for the roads by using a combination of a fuel levy and general tax revenue as the primary methods, and long distance toll roads and vehicle licensing fees as secondary methods. This would put the least amount of additional strain on each method of

tax collection and could contribute to satisfying the “user pays” requirement, as a higher fuel levy and licence fee for Gauteng motorists could be applied.

## **4.8 Conclusion**

In this chapter it was argued that, assuming a loan would have had to be taken out by SANRAL to pay for the initial capital costs of the Gauteng roads, the most cost-effective methods of paying for Gauteng roads would have been a fuel levy or using the general tax revenue, as both of these methods would have resulted in the minimum costs to taxpayers and motorists of R51,30444 billion (including interest expenditure of R20,005 billion). E-tolling was shown to be the least cost-effective method of taxation to pay for Gauteng roads as it would cost taxpayers R71,39574 billion (R20,0913 billion more than using the other funding methods).

It was then demonstrated that “long distance toll roads” and “vehicle licensing fees” are two other methods of tax collection that could help to pay for Gauteng’s roads, but have not been used to ease the tax burden on taxpayers. These methods could have been used in conjunction with a fuel levy or tax revenue (or even e-tolling).

It was indicated that according to Adam Smith’s “canons” (or principles) of taxation:

- using general tax revenue would be the best system of taxation to pay for Gauteng roads as it satisfies all five principles of taxation;
- using a fuel levy would be the second best system of taxation, but since it satisfies the criteria of all five principles of taxation to a slightly lesser extent, it is still a very good system of taxation; and
- e-tolling is the worst system of taxation because it does not adhere to the principles of “ability to pay”, “convenience”, “economy” or “equity”.

Finally, it was demonstrated that the best method of raising the money to pay for Gauteng’s roads would have been by using a combination of a fuel levy and general taxpayer funds as the primary methods, and long distance toll roads and vehicle licensing fees as secondary methods as this would put the least amount of additional strain on each method of tax collection.

The main goal of the present research , to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to

pay for the up-grading of Gauteng roads would have been more cost-effective, has been addressed. It has been concluded that e-tolling is the least cost-effective tax collection method that could have been used to pay for Gauteng's roads.

# Chapter 5: Conclusion

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E-tolling (referred to as “open road tolling” by the South African National Roads Agency (2013a:2)) to toll freeway users was brought into operation by the South African National Roads Agency (SANRAL) on 3 December 2013 (Mail & Guardian, 2013a:1) on various roads in Gauteng. SANRAL is effectively a government organisation as the South African government (represented by the Minister of Transport) is the sole shareholder and the board of directors is effectively appointed by government as well.

The implementation of e-tolling has been met with great opposition, and the main groups in opposition to the system are:

- the Opposition to Urban Tolling Alliance (or “OUTA”) (an organisation formed for the sole purpose of opposing e-tolling, trying to get the system abolished and creating public awareness of the controversies and problems of e-tolling);
- the Democratic Alliance (or “DA”);
- the Congress of South African Trade Unions (or “COSATU”); and
- Gauteng’s road users.

This extensive opposition to e-tolling could not have been without reason, and it was demonstrated in this thesis that the implementation of the system is a contentious issue and relevant in the context of the overall tax burden in South Africa. It has been repeatedly stated that government did not adequately consult Gauteng residents before implementing e-tolling and to prevent opposition to the system, the Transport Laws and Related Matters Amendment Act has effectively written e-tolling into law.

## 5.1 Research findings

There is no doubt that controversy surrounds the introduction of e-tolling on major Gauteng roads. In particular, the main complaint has been that SANRAL has overlooked all other available forms of taxation to pay for the upgrades to the now e-tolled roads. The **main goal** of the present research was therefore to **analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective.**

In order to achieve this main goal, the following sub-goals were addressed:

- to describe e-tolling and how the e-tolling system operates;
- to ascertain why government chose this system of tax;
- to understand the costs incurred to date and future costs of the system;
- to consider the controversies surrounding the system and problems with the system, to ascertain whether or not they are based on fact or merely emotive reactions;
- to discuss alternatives that could have been implemented instead of e-tolls and ascertain whether they would have been a more cost-effective method of paying for the now e-tolled Gauteng roads.

Chapter 1 described e-tolling and how the e-tolling system operates (the first sub-goal of the present research). It showed that SANRAL (2013a:2) describes the e-tolling system as follows:

**Open Road Tolling** – This is another form of Electronic Toll Collection whereby the motorist is not required to stop at a toll booth or plaza to pay toll fees. Overhead Gantries are positioned along the toll route and technology mounted on these gantries will take photos of the front and rear of the vehicle and read the transponder (e-tag) in the vehicle – if there is no e-tag in the vehicle, it is identified using the photos that are taken of the front and rear of the vehicle.

Chapter 1 also attempted to ascertain why government (SANRAL – effectively acting as a government department) chose this system of tax to pay for the repair and upgrade of Gauteng roads (the second sub-goal of the present research). It was shown that the following are the most likely main reasons why SANRAL chose this system of tax:

- the supposed benefits that tolling could provide (leading to tolling being chosen as the best method);
- once tolling was decided upon as the best method to pay for the upgrade and maintenance of Gauteng’s freeways, e-tolling (or “Open Road Tolling”) was chosen as the best method of tolling. It was demonstrated that e-tolling was probably chosen as the best tolling method and the best method in general, due to the (supposedly) vast number of benefits the system could provide; and
- the Impact Assessment (Standish *et al*, 2010) of the Gauteng Freeway Improvement Project, carried out by the University of Cape Town.

Apart from these reasons, SANRAL does not seem to provide any other explanations as to why e-tolling as such was chosen as the best method of tax collection to pay for Gauteng's roads. Being a system of taxation, cost-effectiveness should have been the most important priority of SANRAL in its decision-making process. Chapter 4, however, illustrated that all the benefits of e-tolling (as indicated by SANRAL) could have been achieved using alternative methods of funding and therefore e-tolling added nothing to the cost-effectiveness of the project. Also, Chapter 2 found many parts of the Economic Impact Assessment to be questionable. The fact that all the main reasons why SANRAL chose e-tolling to pay for Gauteng roads add very little to the cost-effectiveness of e-tolling (and most of the benefits could have been achieved by alternative funding methods) makes SANRAL's decision to implement e-tolling questionable.

Chapter 2 then attempted to understand the costs incurred to date and future costs of the e-toll system (the third sub-goal of the present analysis). Although, as was discussed, SANRAL has been "vague" about the true costs of the e-toll system, they were forced to provide cost estimates in the court challenge between them and OUTA (the Opposition to Urban Tolling Alliance, 2013c:1) – Appendix 2. An analysis of these costs showed that over a twenty-four year period of the Gauteng Freeway Improvement Project:

- 43,94% (28,9% on initial capital costs and 14,94% on road maintenance) of the R71,39574 billion projected e-toll fees to be collected is to be used for capital and maintenance costs on the roads;
- 28,6% of the R71,39574 billion projected e-toll fees to be collected is to be used on e-toll related expenditure (8,68% on Violation Processing Costs capital and operating expenditure, 17,05% on toll related capital and operating expenditure, and 2,42% on other operational expenditure); and
- 28,02% of the R71,39574 billion projected e-toll fees to be collected is to be used to pay the interest on the loans that SANRAL took out in order to implement the Gauteng Freeway Improvement Project.

This means that only an estimated 43,94 per cent of the R71,39574 billion projected e-toll fees to be collected over a twenty-four year period of the Gauteng Freeway Improvement Project are to be used for capital and maintenance costs on the roads, which should be SANRAL's main goal - financing, improving, managing and maintaining the now e-tolled Gauteng roads. It was noted, however, that no matter what method of taxation was used, the

interest of R20,005 billion payable over a twenty-four year period on the loan taken out by SANRAL would have to be incurred to pay for the initial capital costs of the roads. It was shown, however, that even after taking the interest expense into account, 28,6% of the R71,39574 billion projected e-toll fees to be collected is to be used on solely e-toll related expenditure, and is therefore effectively wasted by the system, thus not a cost-effective system of taxation.

Chapter 3 then considered the controversies surrounding the system and problems with the system, to ascertain whether or not they are based on fact or merely emotive reactions (the fourth sub-goal of the present analysis). In this regard, it was made evident that:

- The Department of Roads and Transport and the Department of Infrastructure in Gauteng were both on the list of the five worst-run departments in the whole of South Africa, incurring irregular, wasteful and unauthorised expenditure of R2.2 billion (36.3% of its R6.1 billion budget) and R288 million (24% of its R1.2 billion budget) respectively. This R2.2 billion of irregular, wasteful and unauthorised expenditure by the South African Department of Roads and Transport in the 2010/2011 year would more than cover one year's average expenditure to be incurred on the Gauteng Freeway Improvement Project.
- There have been countless complaints by motorists who have been incorrectly billed and sent abusive and threatening text messages telling them to pay their e-toll fees. It is clear that the e-toll collection system is flawed and inadequate. This collection method does not follow proper legal process. This will possibly increase costs, which will have to be borne by taxpayers (e-toll road users). These increased costs will affect the cost-effectiveness of e-tolling as a tax collection method.
- There have been issues regarding the hacking of users' information (including credit card and bank details) from the e-toll website. Protecting user information is perhaps the most important thing that any website should achieve. It is not known how much money has been stolen from e-toll road users as a result of these problems. Fixing problems such as these is likely to be costly and these costs will have to be borne by the road users (the taxpayers). This will have a large negative impact on the cost-effectiveness of the e-toll system.

- SANRAL appears to have been misleading the public because it has repeatedly defended the allegations of high costs of the e-toll system by stating that the costs make up only 17% of e-toll collections, whereas they actually make up 28.15% of the e-toll fees collected.
- Due to high personal income tax rates, high corporate tax rates (especially considering an effective tax rate of 38.8 per cent for shareholders), and multiple other types of taxes payable in South Africa, it is clear that a heavy tax burden exists for South African taxpayers, especially those who earn large incomes. It does not appear that putting an additional tax burden on taxpayers is advisable.
- South Africa is in a different position to other countries (so called first-world countries) in that these other countries have a larger tax base and are therefore able to afford to levy additional taxes on their existing taxpayers. These countries also have a lighter economic burden in that they do not have as many citizens living in poverty that need to be cared for by the state. South Africa cannot afford to implement the same kind/level of taxes. Copying e-tolling systems as a form of taxation from first world countries may not be the right strategy for South Africa.
- Negative perceptions of government and government spending could be an important factor in explaining why South Africans have opposed e-tolling to such an extent, especially if they do not believe that government will make proper use of the e-toll fees collected.
- A proposed National Health Insurance is already threatening to cause a large increase in taxes and implementing e-tolling just before a National Health Insurance is implemented is not to be recommended, especially considering the heavy tax burden that is already imposed on South African taxpayers.
- It appears that there was poor planning by SANRAL before deciding to implement e-tolling as:
  - there has been a large increase in cost estimates for the Gauteng Freeway Improvement Project over the years and the original (low) estimates would have been used in the proposal for the Gauteng Freeway Improvement Project, which ultimately led to its approval and implementation. To have an original estimate of

road costs 350 per cent lower than the final cost indicates an inadequate planning process;

- the South African National Road Agency's Economic Impact Assessment exhibits certain shortcomings and even though it is clear other countries have had major problems with e-toll implementation in the past (including large levels of non-compliance), and makes what appears to be optimistic and unsubstantiated claims that there will be a substantial benefit in relation to the cost, that the gross domestic product will increase and that job creation will be achieved as a result of the system.
- There is threat by SANRAL that non-cooperation by road users can lead to a criminal record.
- Opposition to e-tolling by road users may be aggravated by the knowledge that the system will be implemented countrywide; these fears appear to be well-founded because the N1 and N2 roads in the Western Cape now have e-toll gantries being installed and there is planning for KwaZulu Natal roads to have e-tolls implemented there as well.
- There is possibly no benefit to Gauteng residents from the implementation of e-tolling as they face paying e-toll fees and possibly even lower economic growth and job creation, despite the fact that the Economic Impact Assessment identifies benefits resulting from "business time savings". It was shown that no such savings appear to have been experienced by Shoprite Checkers (as reported by van Schie (2014:1)) and it is likely that no such savings will be experienced by other businesses.
- Non-South African shareholding in the e-toll collection company amounts to 84.88 per cent of the shareholding (it is effectively owned by Kapsch TrafficCom AG in Austria) and therefore a large portion of e-toll fees (estimated at R734 million per annum after income tax and dividends tax) will be paid to non-South Africans and will not benefit South Africa.
- Although the twenty-four year projection by SANRAL (discussed above) reflected a break-even position, it has been claimed that SANRAL will be making a profit.
- There are other issues lacking clarity including the following:

- the Congress of South African Trade Workers (COSATU) is one of the few parties who have been given access to the e-toll tender documents and the contract with Electronic Toll Collection (Pty) Limited and are now opposed to the e-toll system;
  - when SANRAL was forced by law to hand over the e-toll contract documentation to the Democratic Alliance, important documents were missing. According to Flanagan (2013:1), when asked about these missing items, SANRAL's deputy information officer, Haniel Motaung said "As far as I'm concerned we have sent a full set of documents to the DA";
  - it would appear that Mr Zwelinzima Vavi's opposition to e-tolling has led to investigations into matters that the Congress of South African Trade Unions has been involved in while he has been the general secretary. The true motives behind these investigations may be questioned; and
  - there is a link between Kapsch TrafficCom AB in Sweden (a majority shareholder in Electronic Toll Collection (Pty) Limited) and Saab, as Kapsch TrafficCom AB bought the e-tolling business from Saab. Saab has openly admitted to paying bribes to South African officials as a part of the controversial 1999 South African arms deal.
- The complexity of the e-tolling system may not have been properly considered.
  - Problems with the e-tolling system could possibly cause negative foreign perceptions of South Africa.
  - "Mini-bus taxi-type services" as defined in section 1 of the National Land Transport Act are exempt from having to pay e-toll fees. There is a possibility that this could have been due to SANRAL being fearful of negative reactions by taxi owners to having to pay e-tolls. Exempting taxis, which are in essence a business, is unfair because if these businesses are exempt, all businesses should be exempt from having to pay e-tolls. Van Schie (2014:1) reported that Shoprite Checkers also believe that they should be entitled to an exemption. Exempting taxis leads to other categories of road users having to carry a greater tax burden as they will have to bear the costs of the e-toll fees that taxis would have paid.

It is important for any method of taxation not only to be cost-effective, but to be accepted by the public which has to pay the tax. Due to all the problems and controversies with e-tolling

referred to in the present analysis, it does not appear that the public has accepted the system and the system appears to have many problems. This will no doubt lead to problems in the future, such as non-compliance by road users and increased administration costs to try get road users to pay e-toll fees. Increased costs will decrease the cost-effectiveness of the system even further, making it even less likely to be a cost-effective system of tax collection in the future.

The final sub-goal of the present research was to discuss alternatives that could have been implemented instead of e-tolls and ascertain whether they would have been more cost-effective methods of paying for the now e-tolled Gauteng roads. Chapter 4 addressed this question. Using a fuel levy or general tax revenue as methods of paying for Gauteng's roads were analysed in isolation to allow for direct comparisons of cost, and in order to conclude on the relative advantages of the alternative methods of taxation, the general principles of taxation as postulated by Adam Smith (Haupt, 2014:2) were applied to the various alternative forms of taxation.

E-tolling was shown to be the least cost-effective method of taxation to pay for Gauteng roads as it would cost taxpayers R20,0913 billion more than using a fuel levy or general taxpayer funds. According to Adam Smith's "canons" (or principles) of taxation:

- using general tax revenue would be the best system of taxation to pay for Gauteng roads as it satisfies all five principles of taxation;
- using a fuel levy would be the second best system of taxation, but since it satisfies the criteria of all five principles of taxation to a slightly lesser extent, it is still a very good system of taxation; and
- e-tolling is the worst system of taxation because it does not adhere to the principles of "ability to pay", "convenience", "economy" or "equity".

After summarising all the findings, it was concluded that:

- e-tolling is the least cost-effective tax collection method that could have been used to pay for Gauteng roads; and
- the best method of raising the money to pay for Gauteng roads would have been by using a combination of a fuel levy and general taxpayer funds as the primary methods,

and long distance toll roads and vehicle licensing fees as secondary methods as this would put the least amount of additional strain on each method of tax collection.

The main goal of the present research , to analyse e-tolling in Gauteng to ascertain whether or not the introduction of e-tolling was justified or whether an alternative method of taxation to pay for the up-grading of Gauteng roads would have been more cost-effective, was therefore addressed.

## **5.2 Conclusion**

It is clear that the e-tolling system is not an cost-effective system of tax collection and was not properly planned. A more cost-effective system would be one using a combination of a fuel levy and general taxpayer funds as the primary methods, and long distance toll roads and vehicle licensing fees as secondary methods.

Based on the fact that e-tolling is not a cost-effective system of tax collection and that there are more cost-effective methods of tax collection available, e-tolling should not be implemented elsewhere in South Africa. This would show a lack of respect for the public and their money.

It is clear that there needs to be better planning in future when it comes to taxation in South Africa. Key elements of tax collection such as “cost-effectiveness” (especially “economic cost-effectiveness”) should be the main priority. Government should accept that South Africa is in a different position to other countries and take this into consideration before implementing taxes that other countries use.

According to Clarke (2014:1):

Take the so-called Intelligent Transportation System (ITS), known as the Gauteng Open Road Tolling scheme. In theory, the plan was to ease traffic congestion to get people to and from work more punctually; to move goods between producer and consumer more cost-effectively; and reduce toxic vehicle emissions. It was supposed to create a more productive urban economy, because investment would flow into public transport systems **so that South Africa could show the world what an Intelligent Transport System should look like on the African continent** (own emphasis).

Is it possible that an ideal such as this caused policy makers to overlook important fundamentals of tax collection such as “cost-effectiveness” (especially “economic cost-

effectiveness”), or to think that South Africa would somehow be different to other countries where e-tolling has failed?

The fact that e-tolling was only recently implemented means that there appears to have been no academic research done on the system yet. This is a limitation to the research as there is no other research to be used to critique or on which to base the findings. Extensive use had therefore to be made of secondary data.

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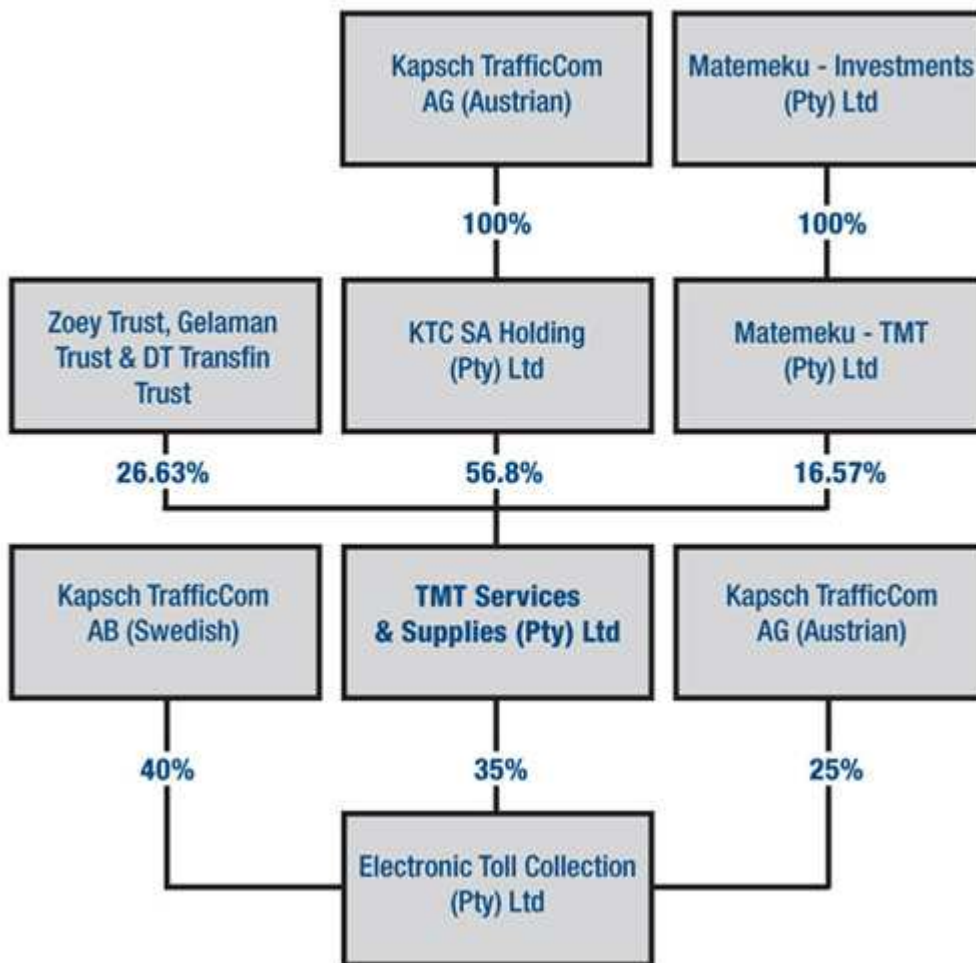
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# Appendix 1

The following diagram is a diagrammatical representation of the shareholdings of Electronic Toll Collection (Pty) Ltd (the e-toll collection company) according to Traffic Management Technologies (2014:1):

## TMT's Share Structure



## Appendix 2

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The following is the e-toll cost breakdown (over the loan life cycle) provided by the South African National Roads Agency during the past court challenges with the Opposition to Urban Tolling Alliance – Reference: The Opposition to Urban Tolling Alliance (2013c:1).

Gauteng Freeway Improvement Project: Latest Tariffs (Expenditure and income during the loan life cycle) – over 24 years (in millions of September 2011 Rands)

<b>Expenditure/income item for 24 year period</b>	<b>(Expenditure)/income for the 24 year period</b>	<b>Percentage of total income estimated for the 24 year period</b>
Initial Capital cost	(R20 629.99)	28.90 per cent
Road Maintenance	(R10 669.45)	14,94 per cent
Violation Processing Centre– Capital and Operating Expenditure	(R6 194.06)	8,68 per cent
Toll Related Capital and Operating Expenditure (excluding Violation Processing Centre)	(R12 170.13)	17,05 per cent
Other Operational Expenses	(R1 727.11)	2,42 per cent
Interest Expense	(R20 005.00)	28,02 per cent
REVENUE	R71 395.74	100.00 per cent