THE IMPLICATIONS OF IMPROVEMENTS ON ROAD-TRANSPORT FOR THE TSHWANE METROPOLITAN POLICE

Ву

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DEDICATION

This study is dedicated to my late grandfather David Mollo; who always insisted that "Education is not the filling of a pail, but the lighting of a fire" may your precious soul Rest eternal in Peace. *ROBALA KA KHOTSO NTATE-MOHOLO*

SUMMARY

An improved roads and public transport system also referred to in this research as road-transport, is strategic to economic growth in countries worldwide. This is why the improvements relating thereto have been prioritised by governments in developing economies such as South Africa. The problem that therefore informed the research in this this study is that ever since the improvements on road-transport in South Africa, the implications thereof on the role of the Tshwane Metropolitan Police Department (TMPD) have not been studied, to understand the associated dynamics. The dynamics relate to how the road-transport improvements have swayed the role of law enforcement in the City of Tshwane. To unpack the dynamics, the study posed the question: What are the implications of the roadtransport improvements on the role of the TMPD? In an attempt to answer this question, the study premised itself on exploring one primary aim, which is: to explore the implications of the road-transport improvements, on the role of the TMPD. To operationalise this aim, the study used three research objectives, which are: to describe the road-transport improvements in South Africa; to explain the role of the Tshwane Metropolitan Police Department; as well as to identify factors that hinders the effectiveness of the TMPD. The research used a qualitative approach wherein primary data was collected using interviews. The research showed that road-transport improvements in South Africa can be summarised into two categories. These are traffic improvements and improvements in public transport. The research also found that the role of the TMPD include traffic policing, by-law enforcement, crime prevention, crime investigation and crowd management. Although the role of the TMPD is regulated properly, the study shows that this law enforcement agency was constrained by a number of challenges. The challenges include: lack of clarity in their crime prevention mandate; limited investigative powers; balancing their enforcement and crime prevention mandates; poor training in crowd management; staff shortages; resource problems; and administrative challenges. To deal with the problems thus requires strong management and leadership within the institution.

Key terms: Road-transport; Crime prevention; Crime investigation; Crowd management; Law enforcement; Bus rapid transport; Taxi recapitalisation; Service delivery; Tshwane Metropolitan Police Department; Policing

DECLARATION

	Student No: 5479-947-3
I, Beauty Thabisile Mabaso declare that work THE IMPLICATIONS OF IMPROVEMENTS TSHWANE METROPOLITAN POLICE, sub Technologie degree is my own work and that quoted have been indicated and acknowledged	ON ROAD-TRANSPORT FOR THE mitted in fulfilment of the Magister all the sources that I have used or
Signature:	Date:
BT Mabaso	

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LIST OF ACRONYMS

ADF African Development Bank

ANC African National Congress

APRM African Peer Review Mechanism

BRT Bus Rapid Transit

CBD Central Business District

C-BRTA Cross-Border Road Traffic Agency

CEO Chief Executive Officer

COT City of Tshwane

EMPD Ekurhuleni Metropolitan Police Department

ETOLL Electronic tolling

GDP Gross Domestic Product

GFIP Gauteng Freeway Improvement Project

GPS Global Positioning System

IDP International Development Plan

IRPTN integrated Rapid Public Transport Network

IRT Integrated Rapid Transit

IT Information Technology

ITS Intelligent Transport System

JMPD Johannesburg Metropolitan Police Department

MDG Millennium Development Goals

MPD Metropolitan Police Department

MSA Moving Strategy South Africa

MVR Moving Violation Recorder

NCPS National Crime Prevention Strategy

NDP National Development Plan

NHTS National Household Travel Survey

NLTA National Land Transport Act

NRB National Road Boards

NRTA National Road Traffic Act

NTA National Taxi Alliance

NTC National Transport Commission

NTV New Taxi Vehicle

RTIA Road Traffic Infringement Agency

RTMC Road Traffic Management Cooperation

SANRAL South African Roads Agency Limited

SANTACO South African National Taxi Council

SAPS South African Police Service

SONA State of the Nation Address

TMPD Tshwane Metropolitan Police Department

TRT Tshwane Rapid Transit

USA United Stated of America

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1.1 INTRODUCTION

An improved roads and public transport system (also referred to as road-transport system) is strategic to economic growth in countries worldwide (Walters, 2008:98). This is why the improvements relating thereto have been prioritised by governments in developing economies such as South Africa. In justifying some of the related benefits, Lloyd (2003:2) argued that improved road-transport has made cities safer. This implies that improvements in road-transport also have an impact police work. Of relevance to police work in this regard, is that the improvements in road-transport have enhanced movement in cities, reduced traffic congestions and resulted in fewer traffic violations (Walters, 2008:98). Lesser violations on the road allow authorities to divert more resources to crime prevention and thus increase safety within the cities.

South Africa being a developing economy, is also improving on its road-transport. This is done to compete with the rest of the world in terms of the economy. However, the country's developments in road-transport have to date raised some serious concerns. One such concern is increased numbers of commuters who depend on municipality buses for daily transportation (Lloyd, 2003:1). The high commuter turn-out has to this effect, caused people to stand in long queues over extended periods at bus station. Such situations have created opportunities for criminals to rob people of their belongings. For the Tshwane Metropolitan Police Department (TMPD), safety at city bus stations continues to be a serious challenge.

Other challenges in South Africa include mass protests by the taxi industry particularly in the Gauteng Province, over the recapitalisation process that involved the Bus Rapid Transport (BRT) system, and the related shootings and industrial actions by bus drivers over salary issues (Walters, 2008:11; Mail & Guardian, 2014; News24, 2014). Such actions have consequently solicited police interventions to protect lives and properties. To this end, the municipality police are supported by the South African Police Service Amendment Act (83 of 1998) and the Regulation of

Gatherings Act (205 of 1993), which respectively gives effect to their establishment, outlines their responsibilities in crowd management, as well as the perimeters for cooperation with other state departments (South Africa, 1993; South Africa, 1998).

Despite South Africa having proper legislation to enable policing within its cities, the complexities and interactions between policing and road-transport improvements have seldom been studied. For the City of Tshwane in particular, such lack of research implies poor understanding on how the improvements in road-transport may have impacted on the city's safety plans. Related research could in this regard, unearth lessons that can enhance the operational efficiency of the police. The lack of research in the South African context is thus one of the reasons why this study explored the implications of road-transport improvements on the role of the TMPD.

1.2 BACKGROUND TO THE STUDY

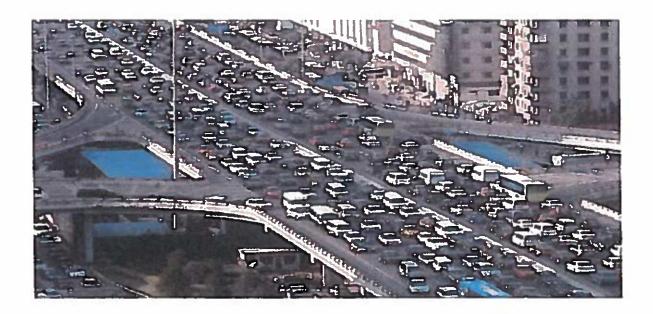
The improvement and sustainability of public road-transport is a global concern. To address some of the relating issues, the World Bank recommends cost-effective developments and proper maintenance on road-transport as imperative for economic growth and sustainability (Krynauw & Perold, 2005:362). Improved road-transport infrastructure facilitates the movement of goods and people, an activity that is much needed to inject more money into businesses. To elaborate, Venables (1999:319) pointed out that improvements in road-transport benefits the economy by reducing travelling costs. Of importance is that reduced costs allow travellers to save and to spend the savings on other areas of the economy. There is no doubt that increased spending increases the revenue margins in the city. For municipal police, increased city revenue allows for increased budgets for crime prevention and extra resources.

In the same way that improvements in road-transport would yield benefits, the same improvements also have associated shortfalls that need to be understood and addressed. To substantiate, Venables (1999:319) argues that improvements on road-transport can also increase traffic volumes, especially when the cost for public transport gets to a point of exceeding the cost of travelling privately. This could lead

to individuals travelling alone in private vehicles, which could lead to increased traffic volumes and congestion. For the TMPD, heavy traffic congestions call for the deployment of more officials at pressure points to facilitate the flow of traffic. Such a move though necessary, will be at the cost of removing officials from their crime prevention role, enforcing municipality by-laws and creating safety within Tshwane.

Some of South Africa's cities are ranked amongst the worst in terms of traffic congestions. For example, a 2010 survey showed that Johannesburg was in the top twenty cities with traffic congestion (SAcarfan, 2016). Figure 1 below shows typical Johannesburg busy weekday traffic. The traffic generally presents problems for metropolitan police who have to physically manage and facilitate the traffic flows. This is usually at the cost of deploying a lot of manpower and other resources.

Figure 1: Johannesburg traffic congestion



Source: SAcarfan (2016).

According to Lloyd (2003:2) traffic congestion also reduces the capacity of any road at any given point and over a particular distance and period. This last named author summarised the negative effects relating to road traffic congestions as follows:

- The traffic congestions waste time for motorists and passengers in that they
 cause delays that result in late arrival at work, schools and meetings. Such
 delays thus impact negatively on economic growth as they result in loss of
 revenue and knowledge needed to work and grow the economy;
- The personal and business losses from the delays not only impacts negatively
 on businesses, but also result in loss of revenue for the state in that the losses
 mean that government will not collect taxes on lost income;
- Traffic congestions are also stressful and frustrating for road users. The
 frustration often leads to anger, rage, bad driving and increases in fatalities as
 a result of accidents and the related road rage fights. In most cases, the
 accidents and fights result in serious injury or death, which requires the
 metropolitan police to intervene either pre or post the incident.

The heavy congestion on the roads can also lead to serious implications for the condition of the road surface. Nordengen and Oberholtzer (2006:2) pointed out that road improvements can also lead to increased heavy duty vehicles that are often overloaded. These last named authors further confirms that such situations could also result in the premature deterioration of the road surface, which could lead to increased road accidents, insurance claims and loss of human lives. Increases in the number of heavy duty vehicles thus require an increased law enforcement capacity to monitor compliance with regulations. For the TMPD in particular, monitoring and enforcing compliance with heavy duty vehicles alone is a challenge. This is because the limited staff numbers (City of Tshwane, 2014), the large number of vehicles on the road and the geographical breadth of the area to be covered, makes it difficult to check on every heavy duty vehicle within the confines of the city.

1.2.1 An overview of road-transport improvements in South Africa

To deal with issues relating to road-transport improvements and the related safety and security issues, requires political will and thus responses from national government. The South African government does recognise the importance of an adequate and modernised transport infrastructure, as well as the provision of safety and security to accompany such developments. This sentiment was echoed by President Jacob Zuma during the State of the Nation Address (SONA) in February 2012. This address focused almost completely on infrastructure development (South Africa: 2012). Such focus is indicative of the political will and the government's commitment to create an enabling environment for economic growth in the country.

During 2012, President Jacob Zuma revealed the National Infrastructure Plan through the Presidential Infrastructure Coordinating Commission. To this effect, the government of the Republic of South Africa invested R1 trillion in public infrastructure (including road-transport) over period of five years, from 2008 to 2012 (South Africa, 2012). Many of the projects have to this day, been either completed or nearing completion. Some of the projects include the *Rea Vaya* bus project in Johannesburg. *Rea Vaya* which means "we are moving" is a Bus Rapid Transport (BRT) system is used by more than 100 000 commuters (South Africa, 2012).

The number of commuters using the *Rea Vaya* in Johannesburg effectively necessitates safety and security around the bus stations. Johannesburg's *Rea Vaya* public road-transport network is regarded as one of the best in the world, with buses that run on high quality engines and low sulphur diesel, transit lanes that that have the capacity to carry thousands of commuters each day, which operates on complementary and feeder routes serviced by buses that have doors on both sides (City of Johannesburg, 2015). Figure 2 below is a visual representation of the *Rea Vaya* buses at the Ghandi square bus depot located in the center of Johannesburg.

Figure 2: Rea Vaya buses



Source: City of Johannesburg (2015)

According to the City of Johannesburg (2015), Rea Vaya bears similarities with public road-transport systems in countries such as the United Kingdom, United States, Indonesia and China. The one positive about Rea Vaya is that the introduction of the Rea Vaya BRT system managed to drastically reduce carbon emissions in and around Johannesburg (City of Johannesburg, 2015). Cities such as Bogota in Colombia and Curitiba in Brazil in South America have also introduced world-class BRT systems. Discussions and comparisons between some of the large cities in South Africa and cities in South America are outlined in the next chapter.

The one challenge with road-transport infrastructure development In South Africa however, is that there is generally a tendency towards funding transport infrastructure on a user pays principle. An example of this is the e-tolling system introduced in the national and provincial roads, particularly in the Gauteng Province. This system attracted protests from the public, civil rights groups and trade unions (Tubbs, 2012). This caused problems for the metropolitan police departments, who had to deal with public order situations, without adequate training. For example, the Johannesburg Metropolitan Police Department (TMPD) had to monitor more than 2000 bikers who in 2014, protested against the e-tolls in Gauteng (News24, 2014).

Similar bus systems have also been built in Cape Town; whilst the Tshwane municipality's BRT system is still in the process of completion. At the same time, Nelson Mandela Bay, Buffalo City, eThekwini and Rustenburg are also in the processes of introducing the BRT. According to the 2012 SONA by President Jacob Zuma, the country's harbours and ports have also been improved, with a 700 kilometre fuel pipeline being built from Durban to Gauteng to transport 4 billion cubic litres of petrol, diesel and jet fuel a year (South Africa, 2012). By 2012 about 1500 kilometres of new roads in the country had been built (South Africa, 2012). Of concern is that the implications of such infrastructure improvements on the role of municipal police remain under-researched, particularly in the context of South Africa.

1.2.2 South Africa's road-transport and security challenges

South Africa embarked on improving its road-transport infrastructure as a response to growing its economy. According to Pienaar, Krynauw and Perold (2005:374), the improvements were based on the travel needs of commuters; the motivation and evaluation of the system; the level of accessibility and mobility in cities; and the compliance of service by operators and contractors in accordance with specification and user-needs. There is no doubt that the element of compliance required of the police to enforce regulations relating to tar surfaces, road marking paintings and road signs. Walters (2008:98) however argues that South Africa's transport system is characterised by challenges that are not generally present in developed economies. This last named author thus summarised the challenges in South Africa as follows:

- Plenty low-capacity 16 seater vehicles, some of which are not adequately maintained, worsened by taxi associations rivalry, under which they operate;
- Concerns over industry sustainability, fleet age profile and lack of adequate funds for operational subsidies;
- Lack of integrated planning, with little commitment from government and lack of timeous capital investment to replace rolling stock is not in time,

Although South Africa is in the process of tackling most of the challenges, law enforcement in both traffic and road-transport remains problematic (Walters, 2008:98). One such challenge is lack of reliable data on road-transport related crimes. Bener, Abu-Zidan, Bensiali, Al-Mullah and Jadaan (2003:603) confirmed that public transport in developing countries is troubled by unreliable data. The police are information-driven and as such they rely on data for the successful management of crime (Bloss, 2007:211). Without credible data, city police will fall short of the intelligence to deal with traffic-related crimes. To deal with the problem, developing economies could borrow from best practices elsewhere around the globe. To this end, South Africa is supported by the National Land Transport Act (NLTA). The NLTA recommends the adoption of national and international best practice in the implementation of public transport (Pienaar *et al.* 2005:362). Implied is that the professionalisation element purported in the NLTA not only includes architectural road-infrastructure improvements, but security and law enforcement tactics as well.

1.2.3 The Taxi Recapitalisation Process

Other road-transport improvements in South Africa included the Taxi Recapitalisation Process. This process came as a result of interactions between the South African government and other countries, based on the principle of professionalisation. The idea was to reposition the country's road-transport system by learning from other countries that have succeeded in this regard. To this effect, lessons from South America are evident in how government had implemented the taxi recapitalisation process as a repositioning measure. According to Walters (2008:105), the South African government spent R7.7 billion to replace the existing 16 seater taxis with 14-18 and new 19-35 seaters. This last named author further argues that such a move was necessary because minibus taxis had been operating without being properly regulated since the mid 1980's and this has resulted in oversupply, capital replacement problems, and long-term economic sustainability-related problems.

The taxi industry in South Africa consists in a privately-run and still largely unregulated minibus or *kombi* taxis. The origins of the industry can be traced as far back as the late 1970s. This industry was intended to fill the gap between urban public transport supply and demand and remains the main form of motorised public transport for two-thirds mainly black population, of all public transport users (Lucas, 2011:1320). The two-thirds are in comparison to one in five people who utilise the buses, as well as one in seven people who use rail as transportation (Dibben, 2006). In fact, the reality in South Africa is that taxis are the only mode of public transport accessible to the majority poor black communities, a situation created by apartheid.

For metropolitan police departments such as the Tshwane Metropolitan Police Department, the minibus taxi recapitalisation process however created a number of challenges. Because of issues relating to scrapping allowances for the old minibus fleets, the taxi scrapping agency, income taxes, routes and rank control, minimum wages, working hours and conditions, as well as other vehicle related issues, government and stakeholders such as the South African National Taxi Council (SANTACO) would not agree to some aspects of the process (Walters, 2008:106). This led to violent mass protests which needed intervention from municipal police.

At the receiving end of the problems relating to the taxi recapitalisation process was also the Johannesburg Metropolitan Police Department (JMPD). This is because most gatherings for protests started in Johannesburg (News24, 2014). The TMPD in particular, is usually also affected because the Union buildings in Pretoria which is in their jurisdiction, is mostly where the memorandums for demands would be handed over to government officials (News24, 2014). Of concern is that staff from the metropolitan police departments is required to cooperate with the South African Police Service (SAPS) in monitoring and escorting the protestors, albeit without proper training in crowd management. This not only puts the lives of TMPD officials at risk, but could also solicit inapt and illegal action from police personnel involved with such interventions, should the protests turn violent and require the use of force.

1.2.4 The Gauteng Freeway Improvement Project

The Gauteng Freeway Improvement Project (GFIP) is another initiative by the South African Roads Agency Limited (SANRAL). This project is intended to refurbish the existing highway networks within provinces (Pienaar, 2011:697). If well planned, the refurbishments could reduce overall transport costs, increase productivity in the economy, reduce the burden in the highway, as well as attract investment (Havenga, Simpson, Fourie & De Bod, 2011:150). Of relevance to this study is that the improvements in South Africa's roads are imperative to the viability and sustainable growth of the economy. Yet, even the best of road infrastructures in the country will not become sustainable if the roads are not being aptly maintained and well policed.

The Gauteng Freeway Improvement Project is however also challenged. According to Lucas (2011:1332), one of the key challenges in South Africa, "lies in finding the public finance which is needed to build new public transport networks that can match existing and emerging land uses and can also cater for the transport needs of low income sectors of the population, which may be quite different from the patterns of travel behaviour which higher income sectors reveal". Simply building new roads is however not enough. The building of roads has use funding models that will not further promote the taxation of the already burdened motorists and tax payers. The introduction of the tolling on Gauteng freeways is an example of this overburdening.

The improvements in Gauteng highways although necessary, attracted a lot of public controversy from road users, politicians and trade unions alike. This became evident following a February 2011 announcement that the improvements would encompass an electronic tolling (etoll) system. Some of the issues raised related to questions as to whether the proposed tariffs for etolls would be affordable and why motorists were being double-taxed (Pienaar, 2011:697). To this effect, the issues relating to the highway improvements thus resulted in a lot of dissatisfactions, which resulted in protracted court action aimed at preventing the tolling from being implemented. Such issues also resulted in mass demonstrations, which required of agencies such as the TMPD to assist in monitoring court proceedings and crowd management. Figure 3 below is a depiction of the e-toll infrastructure erected in Gauteng freeways.

Figure 3: Gauteng etoll infrastructure



Source: Eye Witness News (2016)

The downside to the infrastructure in Figure 3 above is that when etolling was introduced, there were a number of challenges. For example, a report by the Gauteng government found that etolls were unaffordable for the ordinary residents of Gauteng (BizNews.com, 2015). In response to the issue, national government through Deputy President Cyril Ramaphosa announced a new hybrid model for etolls. The model capped the price of travel by 30 Cents per kilometer, with only part of the funding coming from expenses incurred by motorists passing under gantries (BizNews.com, 2015). The Deputy President also announced that e-toll fees will be linked to license renewals (BizNews.com, 2015), meaning that motorists would not get their vehicle license discs renewed unless they've paid their e-toll accounts. Of concern is that at the time of such an announcement, there really nothing in the legislation which supported this kind of announcement. This type of decision meant that the withholding of vehicle lisences discs because of unpaid etoll bills is illegal.

An interesting observation about the electronically tolled highways in the Gauteng province is that there was always a risk of motorists diverting to smaller road to avoid paying extra. This often results in a strain on smaller roads because such diversions lead to motorists congesting the smaller metropolitan routes. This becomes a challenge for metropolitan police departments as they have to deploy personnel to facilitate the flow of traffic in those routes. It is definite that the diversions do increase traffic volumes and congestions, which also impacts on the condition of the road surface, resulting in all sorts of negative impacts. To this effect, Pienaar (2011:701) summarised the disadvantages relating to the tolling of roads as follows:

- The system increases inflation due to increased investment spending. This
 dents the ideal of the improvements, that of improving the quality of life for all;
- It causes institutional drawbacks, especially if a toll scheme was to fail, which would result in taxpayers having to bear the financial burden;
- The system exacerbates inequality because it forces people to pay more;
- Revenue from tolls is expended in the road and nothing for public transport.
 This increases roads capacity, but decreases capacity for public transport.

With additional costs for motorists, the disadvantages linked with the electronic tolling of road thus raises questions as to whether the improvements on Gauteng highways could result in poverty alleviation. For a country having emerged out of an oppressive political era and haunted by poverty and inequality, South Africa cannot afford to implement initiatives that are seen to be perpetuating poverty. Of relevance to this study though is the fact that poverty is known to be an active agent in promoting crime and as such, protracted poverty will result in challenges for law enforcement agencies. To succeed, South Africa needs to take lessons from other countries that have successfully implemented the poverty alleviation initiatives.

1.3 THE NATIONAL DEVELOPMENT PLAN

As the main response to dealing with poverty, inequality and stimulating economic growth, South Africa introduced the National Development Plan (NDP). The NDP consist of fifteen chapters. Chapter eight in particular, deals with the development of national roads system during the second half of the 20th century as a response to stimulating economic growth (Mitchell, 2014:55). One of the initiatives in chapter 8 of the NDP is thus the "get out of the mud" slogan. The development of a good road system following the "get out of the mud" basic network is necessary because of the increasing role of road traffic as imperative in the economic and social landscape of South Africa. According to Mitchell (2014:55) in 1959, total investment in roads outside of towns had reached R750 million, while investment in railways and harbours had reached R1 224 billion rand values at the time. There is thus a tremendous backlog after the Second World War in rural or intercity roads problem facing the central government's road authority and the National Roads Board (NRB).

In 1948 the Board's powers were separated and transferred to the National Transport Commission (NTC). Initially, the NTC fought the pressure for the original 1935 roads scheme to be extended and concentrated on completing the NRB Programme of national roads (Mitchell, 214:55). The pressure of extending the so called "special roads" was intended to service areas with no rail facilities. The project resulted in the National Transport Commission carrying 70% of the cost, with the remainder being met by the provincial road authorities (Mitchell, 2014:56). This suggests a historical problem of scarce funds for road constructions, an issue that still persist to this day. Of concern is that taxpayers carry the costs for new roads.

According to (Mitchell, 2014:56), revenue accumulating to the National Road Fund was not enough for the national roads system to be reconstructed to the new standards before long stretches of the existing road surface started breaking up. This meant that it is essential for the Commission to pass on to the provinces its financial responsibility towards most of the then existing system of limited-access national highways which were not part of the new planning. The existence of the challenges thus that led to the NDP focusing on changes for road-transport. Of worry is that the NDP has not found alternative funding mechanisms to alleviate the burden of costs for the construction of new roads, which are carried by taxpayers.

1.3.1 Road-transport improvement policy in South Africa

For South Africa to effectively deal with road-transport improvements requires strong policy responses. The foundation for such responses was thus laid by the report of the Commission of Inquiry into the Coordination of Transport in South Africa (Mitchell 2014:56). The Commission *inter alia* recommended that, after completion to black-top standard of the accepted national and special roads programme, the National Road Fund which was to be used to fund the construction of new national roads, be established. Mitchell (2014:56) postulates that in 1971, the National Road Act (Act 54 of 1971) thus came into operation on the first day of October 1971. This Act assigned the exclusive responsibility for national road planning, construction and maintenance of the primary road network to the National Transport Commission. The Act enabled the Commission in Chief Directorate of National Roads in the Department of Transport, to build up its own engineering capacity. Thus, began two golden decades for the construction of new national roads. The Directorate was later in 1998, however commercialised and became what is known today as the SANRAL.

Mitchell (2014:56) further pointed out that the anticipated commission spend R1 250 billion in Rands for ensuing a ten year period until 1982. However in less than three years there was a shortage of funds to complete the programme. Such problems thus indicate the fact that historically, South Africa's road-transport improvement initiatives have always faced challenges. Some of the challenges came as a result of the reduced fuel consumption emanating from oil prices, which reduced the National Roads Fund's income, which was based on the devoted fuel levy on motor fuel consumption (Mitchell, 2014:56). In 1974 the same commission abandoned the earlier programme in pursuit of a revised three year plan, which ultimately also failed.

Post the period 1970-1980, the government introduced SANRAL. This agency was established by virtue of the South African National Roads Agency Act (Act 7 of 1998). This legislation is intended to make provision for a national roads agency that is to manage and control the Republic's national roads system and take charge, amongst others, of the development, maintenance and rehabilitation of national roads within the framework of government policy (South Africa, 1998). SANRAL is a

public company wholly owned by the State. The agency's powers and functions, financial and operational accountability, including the regulation of its functioning is prescribed in the Act (South Africa, 1998). According to Act 7 of 1998, SANRAL is responsible for prescribing measures and requirements with regard to the Government's policy concerning national roads, with regard to the use and protection of national roads (South Africa, 1998). The provision to protect therefore implies that SANRAL and metropolitan police departments have a shared-vision, that of providing safety and security to all road users within the Republic of South Africa.

1.3.2 The construction of new roads in South Africa

The construction of new roads in South Africa galvanised mainly in the 1990's. During this period, attention was focused on national roads in and around the major metropolitan areas, particularly on the N3 route between, Durban, Johannesburg and the N1 between Cape Town and Johannesburg (Mitchell, 2014:56). Furthermore, this period also saw major road improvements on the N2 from Cape Town to Port Elizabeth along the Cape coast, as well as between the Umtamvuna River and Durban. The Garden Route section of the N2 remained the setting for major confrontation between the NTC and environmentalists. The roads engineers support the preservation of the natural environment and numerous millions of Rands were spent on maintaining the roads (Mitchell, 2014:57). The accomplishment of the Johannesburg ring road was however planned 30 years prior, and was followed by the completion in the late 1980's of the 4 kilometre long road in Dutroit kloof road.

The purpose of the improvements on was to alleviate traffic congestion by increasing the number of traffic lanes South Africa's freeways or national roads (Chavani, 2016). The main object of the project was to minimise interference with traffic flow, while demolishing the existing bridges and replacing them with new interconnected ones (Chavani, 2016). This required significant planning, skill and expertise in the management, construction and engineering fields, including the safety and security aspects. There is no doubt that the safety and security aspect relating to road-transport improvements highlighted the importance of the role of law enforcement. Figure 4 below depicts some of the contraction projects on the Gauteng freeways.

Figure 4: National road construction side in Gauteng



Source: Chavani (2016)

Despite the improvements, the major routes in South Africa continued to be problematic for law enforcers. According to Statistics South Africa (2011), road accidents in the country have always been the second most common cause of non-natural deaths, accounting for 11,1% of the total mortality rates. According to Mitchell (2014:57) the extensive progress made in improving roads in South Africa provide good connectivity links for goods to be moved around the country. This last named author thus summarises the implications of South Africa's roads as follows:

- The growth of the contracting and consulting engineering industries;
- The construction of ring roads and bypasses around cities and larger towns;
- Modern standards being adopted for roads, and the advent of freeways;
- The development of concrete roads, asphalt-treated bases and asphalticwearing courses of varying kinds;
- The concessioning of certain national roads to the private sector; and

 The introduction of toil roads to supplement the demands on the National Road Fund, enabling many strategic road projects to be built, which would otherwise not have been built from taxation revenue.

The period between 1990 and the turn of the century was again the time of growing demands in relation to roads construction. The financial planning is essential and it is necessary to recognise the necessity as to why roads need to be improved. Despite the benefits relating to implications of road-transport improvements as summarised by Mitchel (2014) above, literature however did not indicate if there were studies conducted to specifically show the same implications on the role of municipal police. This is also confirmed by Zeleza (2002:21), who argues that research capacities in most African countries are not strengthened, owing to challenges in the economic and political spheres. Thus, the same goes for research on the implications of road-transport improvements on the role of metropolitan police agencies in South Africa.

1.4 CHARACTERISTICS OF PUBLIC TRANSPORT IN SOUTH AFRICA

Public transport in South Africa is characterised by a number of particularities that are generally lacking when compared to other public transport systems in developed world countries (Walters, 2003:1). The first of the characteristics is the abundance of low capacity vehicles alias 16 seats taxis in commuter services and the domination of this form of public transport in the overall public transport sphere. Associated with this are issues such as poor vehicle maintenance, inter taxi association rivalry, industry sustainability, fleet age profile and general bad driver behaviour. According to Saturday Star (2014), taxis are a real danger on the South Africa's road, and this is because taxi drivers have killed thousands of passengers each year through the reckless and negligent driver behavior. Other factors that contribute to taxis being a danger on the roads include poor maintenance on the fleets (Saturday Star, 2014).

South Africa as a developing country is however not the only country with challenges. According to (Walters, 2003:1), public transport in other developing countries is also generally marked by a lack of adequate financing for operations. Likewise, research on how road transport improvements have impacted on the role of police in the developed world is also something that is also relatively seldom done. To address such a challenge would thus require contextualised research on the implications of road-transport improvements on the role of municipality or city police.

Despite South Africa having peculiarities its public transport system, provincial and local government are tasked to cater for the increasing population. For example, it is estimated that the Gauteng province also will have 18.6-million inhabitants in 25 years, with 8.9-million workers and other 24-25 million passengers that will have to travel from home to work or to other destinations, on any weekday (Mail & Guardian, 2013). Currently, the main mode of transport in South Africa is minibus taxis that are problematic. The following is an extract from Mail & Guardian (2013), provides an expose of the main characteristics that can be found in the public transport system:

"South Africa is a country in desperate need of a viable and sustainable public transport network. According to the South African National Taxi Council, taxis transport approximately 15-million commuters daily and this consists of 60 to 70% of the commuting public and workforce. Yet, this industry is plagued with health and safety issues and a track record of death and poor driving".

According to a 2012 South African Institute of Race Relations report, minibus taxi death rates are 27 deaths per 10 000 vehicles and three times higher than the nine deaths per 10 000 for small vehicles and yet considered statistically safer than cars (Mail & Guardian, 2013). Of relevance to this study is the fact that the deaths not only impact on the role of the metropolitan police departments, but also on the role of the SAPS. This is because the metropolitan police have to draw sketches for the accident report, whilst the SAPS have to conduct investigations on all mortalities. This kind of disconnection between the different roles of the different police agencies in South Africa thus underscores the level of training received by municipal police.

The same report by the South African Institute of Race relations further showed that 59% of drivers killed in road accidents had consumed alcohol (Mail & Guardian, 2013). Indeed, the same report argues that "with a functioning, safe and efficient public transport network these incidents could be severely limited as the drunken public is given a choice on how to get home". Of course, this is not the only factor that can contribute to preventing loss of lives in this instance. A well capacitated and well-resourced law enforcement capacity is also needed to enforce compliance.

Other features of public transport in South Africa are that it is fragmented and not well coordinated (Mail & Guardian, 2013). This last assertion was made by Jack van der Merwe, Chief Executive Officer (CEO) of the Gautrain Management Agency, in reaction to issues of congestion, pollution and the over-crowding that are also common features of the public transport system in South Africa ((Mail & Guardian, 2013). Perhaps a more holistic approach that enables the involvement of city police during planning phases for road transport improvements would be a step in the right direction. For example, road architectural plans for public transport could benefit from inputs made by city police officials, on crime prevention and on security issues.

1.4.1 The Bus Rapid Transport System in South Africa

Across all of South Africa's metros, there has been a shift towards developing sustainable and reliable public transport infrastructures that are designed not only to appeal to commuters of all economic backgrounds (Mail & Guardian, 2013), but to safe and secure travelling as well. From Cape Town to Durban to Johannesburg to Tshwane, public transport is undergoing a transformation. One such initiative to transform the public transport system in the country is the Bus Rapid Transport (BRT) system. It is the same improvements that necessitated this research, to unearth how road-transport improvements had impacted on the role of the TMPD.

South Africa has experienced sustained economic growth over the last 12 years (2002-2015) and it is projected to accelerate. One of the side effects of sustained economic growth has been a growth in car ownership with the resultant dramatic

increase in road congestion practically throughout the country. In the economic heartland of the country the Gauteng Province, a trip of 40km between Johannesburg and Pretoria in the morning peak can take up to two hours or more (Walter, 2003:2). Similar situations are found in and around the metropolitan corridors of Johannesburg, Pretoria and Cape Town. Of concern is that spending longer periods travelling, could in itself become a serious crime predisposing factor.

The BRT is a flexible, rubber tired rapid transit mode that combined stations, buses, vehicles, services, running ways and intelligent transportation system (ITS) elements into an integrated system with a strong positive image and identity (Levinson, Zimmerman & Clinger, 2003:4; Wright, 2002:1; Walters, 2007:108) that was introduced to provide reliable and frequent public transport with high frequency corridors where passengers are transported over longer distances (City of Tshwane, 2014). The one problem with the dedicated lanes or running ways for the BRT is that taxis often drive in the lanes without authorisation. This then necessitates that metropolitan police department should deploy police throughout the city to deal with the problem, whilst removing personnel from other crime prevention duties.

In Gauteng Province, the BRT system was implemented using the *Reya Vaya* buses in Johannesburg for the first time in South Africa, followed by the "*A Re Yeng*" buses in Tshwane (City of Tshwane, 2014; Mail & Guardian, 2014; News24, 2014). The BRT system was thus introduced as part of a plan to substitute the minibus taxis, once the taxi recapitalisation process was concluded. However, the system also has its own shortfalls, which are summarised by (Walters, 2008:107) as follows:

- There were concerns that the process could stifle competition and resulted in larger operator groupings;
- The system risked taxi operators postponing maintenance on vehicles in anticipation of the scrapping process linked with recapitalisation;

 There were concerns that the processes could result in job losses as a result of the downsizing in the industry;

Although the introduction of the BRT system was a step in the right direction, the relating processes were not without challenges. To elaborate, role players did not have faith in the sustainability of the processes as some of the taxi operators especially the National Taxi Alliance (NTA), who felt that BRT will create loss of business for them because the system was to replace the taxi industry (Walters, 2008:107). Moreover, taxi drivers expressed fears that BRT would threaten their livelihood and questioned how the system would benefit the industry. Likewise, city police were never part of the processes, except when there were mass demonstrations. Some of the concerns were cited in Walters (2008) as follows:

- Taxi owners cited unfair competition with BRT because of dedicated lanes;
- Another issue was the extended time taken to construct local BRT systems;
- Budgetary constraints also caused delays in the implementation of the BRT.

1.4.2 Bus Rapid Transit in Cape Town

The improvement of public transport in Cape Town is one of the eight key strategic focus areas identified by the city and its integrated development plan for achieving its long term vision and development goals. The city has a population of 3.74 millions of people (Ugo, 2014:2) and applies an Integrated Rapid Transit (IRT) system, which is an audacious initiative, intended to transform the public transport sector by improving the quality of service to the commuters. Furthermore, the city has since 2007 been working on the first phase of the IRT, to improve its public transport (Ugo, 2014:2). MyCiti Integrated Rapid Transit (IRT) 'Siyajikeleza' is designed to ensure that all passengers can utilise the service frequently. This includes the disabled, the elderly, young children, pregnant women, passengers travelling alone at night and passengers with luggage including suitcases. (Goldwyn, 2013:1). MyCiti is a high quality bus-based transit system in Cape Town that delivers fast, comfortable and cost-effective mobility with segregated right of way infrastructure in an urban area.

In its approach to the improvement of road-transport, the City of Cape Town has also taken accessibility into account. The access to facilities include paving work to help the visually impaired locate stations and platforms, induction loops at ticket kiosks for the hearing impaired and CCTV cameras, which are monitored by a control centre, on buses and at stations, as well as boarding bridges on buses serving residential and central city routes which provide passengers with level access onto the platform and to buses from bus stops, if required (Goldwyn, 2013:1). MyCiti was introduced in November 2013 and has an impressive of 89 per cent growth of passengers (Goldwyn, 2013:1). The growth has led to the number of buses and routes being increased. The most popular routes in the city are the 214 Table View route to Big Bay, the 102 Salt River service, and the 251 Century City route (Goldwyn, 2013:1).

The increases in bus routes have also increased the scope of police work within the city itself. For example, the City of Cape Town had to form a transport enforcement unit known as the IRT Bus Unit. This Unit consist in 33 dedicated police personnel who patrol the MyCiTi buses and stations (City of Cape Town, 2014). Some of these police officials patrol the Paarden Eiland area along the MyCiTi route on bicycles (City of Cape Town, 2014). The presence of police along the bus routes and stations in the City of Cape Town has thus resulted in lesser muggings reported.

1.4.3 Bus Rapid Transit in Durban

The eThekwini Integrated Rapid Public Transport Network (IRPTN) which is *GO* Durban" is one of the largest service delivery in the transport sector in South Africa. *GO* Durban promises to promote transport that is generally accessible to all Durban citizens (eThekwini Municipality, 2011). *GO* Durban is well known as the key pillars integral to the stimulation of economic growth with the aim being to deliver unified transfers across the city by facilitating easy of access at stations and precincts using electronic ticketing, to provide safety and security (eThekwini Municipality, 2011).

Go Durban plans to have nine transport corridors connected by various modes of transport bus, rail and taxi's across eThekwini by 2027. The establishment of transport is essential to the creation of a vibrant, functional and sustainable city in

line with the City's vision (eThekwini Municipality, 2011). The purpose of transport planning is the provision of access to work, social facilities such as education, hospitals, as well as goods and services. Go Durban is aimed at providing affordable and accessible public transport to eThekwini citizens and to not only connect different areas around the city but also to provide transport services to areas which are previously not been serviced to incorporate a sense of community in the city.

Currently, seventy one buses have the right of way along various city corridors to ensure that commuters have the efficient travel and thus to guarantee that they are free from congestions and delays (eThekwini Municipality, 2011). The buses travel from KwaMashu to and Lahee Park in order to deliver according to eThekwini Municipality (2011). The following are the key strategic deliverables for eThekwini:

- Upgraded facilities, stops and stations;
- Extended hours of operations;
- Electronic ticket integration when making transfers;
- Integrated feeder services including walking, cycling and taxi networks;
- Full universal access for people with special needs and wheelchair access

The aim of *GO* Durban is to ensure that residents have a safe, affordable and quality schedule public transport for commuters. The *Go* Durban thus provides opportunities for densification, mixed-use and transit oriented development to minimise the need for travel (eThekwini Municipality, 2011). As part of the city's Integrated Development Plan (IDP), eThekwini has also included an 8 point plan. Pillar 4 of this IDP encompasses passenger safety (eThekwini, IRTPN, 2008), which pillar undoubtedly has implications on the role of city police. The safety and security plan for the city is further echoed in the eThekwini Road Safety Plan 2005-2010, which emphasises commuter safety as the priority, particularly for police agencies.

1.4.4 Bus Rapid Transit in Johannesburg

Johannesburg is the largest city in South Africa. The city covers an area of 1645 square kilometres and has population of about 4 434 827 million people (Statistics South Africa, 2015a). An analysis of commuter uptake of the BRT system in the city reveals that the city has higher traffic volumes in South Africa (Ugo, 2014:3). This is because of individuals resorting to the use of private vehicles and travelling alone in some instances. There is no doubt that such traffic dynamics have also led to increases in the number of traffic violations thus adding to the workload of the police.

According to (Rahim, 2014:34) transportation played an important part in the structure and the development of the city. This last mentioned author further points out that the main forms of transportation in the city are commuter trains, state buses and mini-bus taxis. Moreover, public transport such as buses and taxis played a significant role in the struggle during apartheid regime and through actions like bus boycotts and strikes, which also solicited police intervention. Rahim (2014:34), further assert that the apartheid era also saw the establishment and growth of the taxi Industry, which in post-apartheid necessitated the need for improvements in public road-transport. This led to the implementation of the *Rea Vaya* bus project.

The Rea Vaya was launched in 2009 after a long period of taxi strikes. The system provides a world class public transport that is well-organised, reliable and affordable (Rahim 2014:39). Moreover, the project is also part of the city's civilisation plan in order to bring business back into the city centre. Allen (2013:3) argues that Rea Vaya was chosen as a case study as there are many learning experiences that can be replicated in other cities. This last named author points out that the key objectives of Rea Vaya are to promote economic growth; to restructure the previously apartheid-structured city; to sustain development and to enhance good governance. This last assertion thus shows that South Africa is in need of a good and decent public transport. Likewise, the assertion also suggests that South Africa needs an effective capability to police crimes about road-transport improvements.

The Rea Vaya project is part the City of Johannesburg's Integrated Development Plan (IDP). The city's IDP has a vision which classifies public transport system as one of the strategic focus areas. Developed public transport provides the capability for other focus areas such as economic growth, sustainable urban infrastructure and services. The four visions are: a city government that generates an environment for shared growth and economic development; a city known for its operative and justifiable service delivery to commuters and; a city that separates itself as a well administrated and effectively run management successfully (South Africa 2010:14).

Despite the introduction of *Rea Vaya*, many South Africans continue to struggle with access to public transport. A 2007-2008 survey by the Department of Transport (DoT) showed that there was social exclusion of certain groups of society from public transport (Lucas, 2011:1320). The survey followed a 2003 National Household Travel Survey (NHTS) on the issue of transport and social exclusion (Department of Transport, 2005). The survey was the first of its kind in South Africa and "it identified that the overwhelming majority of South African households do not have regular access to any form of motorised transport and that this seriously undermines their ability to participate in key economic and social activities" (Lucas, 2011:1320).

The results of both the 2003 and 2007-2008 surveys were hardly surprising. This is because the lack of transport experienced by poor South African has been a common feature in both the pre- and post-apartheid era (Khosa, 1995). Of concern is that successive South African governments have not been able to address the problem. This has resulted in South Africa missing the target of attaining its Millennium Development Goals (MDGs), specifically in terms of ensuring that public transport accessible to all members of society, in order to address the rampant inequality in the whole country (Grieco, Ndalo, Bryceson, Porter & McCray, 2009).

Lack of access to public transport does create inequality as it is tantamount to the economic exclusion of certain sections of society from the economy. According to ANC Secretary-General Gwede Mantashe, inequality creates the notion of a superior race which has given birth to, and continues to perpetuate to racism in South Africa to this day (eNews Channel Africa, 2016). Of concern is that government responses

to the issue of access to public transport focused on the development of new transport infrastructure projects and in particular major road building programmes in rural areas (Lucas, 2011:1320). Post-apartheid, there has been poor government response to the transport woes of the poor and low income earners, who happen to also constitute the majority of South Africa's urban population (Lucas, 2011:1320).

1.5 THE TSHWANE RAPID TRANSIT (TRT)

The City of Tshwane also constructed the Integrated Rapid Public Transport Network (IRPTN) in Arcadia on the 11th of July 2012. The city consists of 2 921 488 million people and covers an area of 368km² (Statistics South Africa, 2015b). Like Johannesburg, the City of Tshwane's main objective is to also improve road transportation by implementing BRT to facilitate travelling (City of Tshwane 2015). Tshwane is the fourth large city to introduce BRT after Johannesburg, Nelson Mandela Bay Municipality and Cape Town. The Tshwane Rapid Transit (TRT) known as "A re Yeng" project is a government initiative aimed to expand road transportation and to reduce traffic congestion. Like the other cities, the improvements on road-transport have also impacted on the work of police. Figure 5 below is a depiction of the "A re Yeng" bus of the Tshwane Rapid Transit system.





Source: Project Isizwe (2015)

The city of Tshwane spent R2.6 billion Rands to build its BRT projects (City of Tshwane, 2015a). The project consists of 80 kilometre bus lanes, 62 stations that from Mabopane through Pretoria CBD and 340 buses (City of Tshwane, 2015a). An interesting aspect about the BRT in Tshwane is that it became operational in December 2014 and the buses came fitted with a world-first in mobile connectivity that offered uninterrupted free Wi-Fi for commuters on board (Project Isizwe, 2015). Furthermore, highways in Gauteng have been expanded to reduce traffic congestions. However, the establishment of etolls in Gauteng have also resulted in motorists diverting to smaller roads within the City of Tshwane, which increases the likelihood of traffic violations, road accidents and traffic congestions in those roads.

1.5.1 Structure of the "A re Yeng" Bus Rapid Transit in Tshwane

There are diverse types of buses that are used in Tshwane and are served by the feeder routes. "A Re Yeng" is a visual acknowledgment of the most important land mark 'Union Building'. The mixed shapes and colours of the trade identity represent the variety of Tshwane residents who are signified as reaching for the sky (South Africa, 2011). A Re Yeng assists people to travel from work, health facilities, Universities and recreational areas. The feeder routes are indicated as follows:

- Starts from Nana Sita Station that is situated in Nana Sita Street, in a
 westerly direction and turns right into Bosman Street and proceeds and
 turns right into Boom Street;
- Proceed along Boom Street bearing left and proceed into Soutpansberg Road, proceed bearing left into Dr. Savage Road. Continue along Dr. Savage Road and turn left into HF Verwoerd Road, proceed and take second off ramp under Bophelo Road and continues to the terminus in Malan Street;

- Depart from Malan Street and proceed east and turn right into Johan
 Heyns Drive, proceed bearing right and turn right into Soutpansberg Road;
- Proceed along Soutpansberg Road bearing left into Dr. Savage Road, continue with Dr. Savage Road and turn left into Sisulu Street. Proceed with Sisulu Street and turn left into Struben Street, continue with Struben Street, turn right into Nelson Mandela Drive. Proceed with Nelson Mandela Drive and turn right into Nana Sita Street up to Nana Sita Bus Station.

Table 1: Tshwane Train, Mini-bus Taxis and Buses

Region	Train	Mini-bus taxi	Bus
1	10.7%	12.4%	38.1%
2	4.5%	21.8%	21.8%
3	3.0%	8.5%	18.5%
4	0.4%	0.9%	17.0%
5	0.6%	15.3%	21.3%
6	5.7%	3.9%	37.6%
7		6.7%	30.6%
City of Tshwane	5.1%	8.9%	28.5%

Source: City of Tshwane (2015)

The above stipulated statistics in Table 1 designate that buses in Tshwane have played a significant role in ensuring that all commuters are provided with safe, efficient and affordable transport. However, the dissatisfaction from interested groups such as taxi organisations that have objected to city bus projects, have often compromised the safety of commuters. This has resulted in police having to escort and patrol most of the buses and stations in the city, to protect lives and property. However, many neighbourhoods in the City of Tshwane are not properly policed and so it is not safe for people to walk around in the day and night (Lucas, 2011:1330).

1.5.2 Tshwane Rapid Transit Station and bus routes

A TRT station in Tshwane is an enclosed bus shelter that caters for the needs of the passengers. Such stations allow access to the station on both sides of the TRT using two opposite directions (City of Tshwane, 2014). This enables passengers to move through an access control area when entering or leaving the stations. Stations in Tshwane will assist more than one bus in the same direction all together to reduce the delays at stations, and buses will stop at demarcated platform. TRT stations are different from each other due to dissimilar stations that are provided. The station sizes differ due to the expected passenger demand. These variations should however be accommodated within the uniform modular approach, for a consistent image and accommodation of standard requirements (City of Tshwane, 2014).

The bust stations in Tshwane however also present challenges. According to Lucas (2011:1339) some children are forced to hang out on the street because they cannot afford to travel to activities outside their own areas of residence. This has resulted in the taking drugs, committing petty crimes, and also being introduced to gang culture (Lucas, 2011:1339). Lucas (2011:1330) is of the view that "transport often provides a hub for criminal activities, with gangs particularly hanging out at stations and taxi stops or using the trains to mug passengers". The criminal activities at the Tshwane bus stops therefore create major challenges for the police who have their hands full. There is no doubt that the police are constrained by a myriad of issues. The relating challenges have been revealed in the research findings chapter of this same report.

There are two types of stations in Tshwane, the Memory Box and Retro Tram concept stations. The Memory Box is positioned on Paul Kruger Street. This concept includes images and information relating to the historic buildings surrounding it, while the Retro Tram Concept was chosen for the Stations outside of the CBD. This concept suggests the imagery of the old tramlines realised in a modern style. Its distinctive design and allegory to trams suggests high quality rooted in the past but also reflects a modernity of the future (City of Tshwane, 2014). Figure 6 below thus show the Retro Tram bus station design in the City of Tshwane.

Figure 6: Retro Tram bus station



Source: The South African National Roads Agency (2015)

The creative design approach of bus stations in Tshwane has helped the city to blend functionality with the rich architectural heritage in the capital city (The South African National Roads Agency, 2015). This design was of this high class and modern station (Figure 6) was inspired by connecting historically important buildings that connect the early days of the city with South Africa's struggle for liberation during the period of the 1950s and 1960s, to facilitate the movement of passengers into the urban core of the city (The South African National Roads Agency, 2015).

The Tram bus stations in the City of Tshwane are also complemented by the equally world class Memory Box bus station. The Memory box bus stations are designed using transparent materials (Blogspot, 2016). The transparency implies that the police can monitor passengers before they board the buses without moving into the station itself. Likewise, the transparency could serve as deterrence as criminals will not commence their illicit activities if they can be seen from a distance. Figure 7 below is an artist's impression of what a Memory Box station in Tshwane looks like.

Figure 7: Memory Box bus station



Source: Blogspot (2016)

The City of Tshwane (CoT) main objectives is to provide effective and accessible transport to passengers. The TRT infrastructure will make the most of the facilities for non-motorised traffic such as cycling and walking (South Africa: 2014). Important progress has been made on A re Yeng, meaning "let's go" in Setswana forms part of the City of Tshwane 2055 growth and development strategy (Mail & Guardian, 2014). A re Yeng consists of 51 stations and on an 80km route. The route will extend from Kopanong in Soshanguve via rainbow junction and the central business district (CBD), to Menlyn with a branch to Hatfield ending in Mamelodi (Mail & Guardian, 2014). Yet, the A re Yeng system and phases will be all completed in June 2018.

The TRT also consists of line 2 that forms the part of A re Yeng beginning phase and it is approximately 7km long and it runs from Pretoria CBD to Hatfield via Sunnyside and it connects to Gautrain station in Hatfield. Moreover, the route will entails of seven stations, two in the CBD, three in Sunnyside, one in Loftus stadium and one in Hatfield (Mail & Guardian, 2014). The construction of seven stations commenced in February 2014 and some are almost complete. "The *A Re Yeng*" system will use cutting edge technology and will depend on heavily on an intelligent transport system that is an industry term for advanced applications which, without embodying intelligence as such goal to provide innovative services relating to different modes of transport and traffic management and enable various users to be better informed and make safer, co-ordinated and smarter use of networks (Mail & Guardian, 2014).

1.5.3 Challenges of the Tshwane Rapid Transit System

The City of Tshwane faces many challenges, such as poor public transport system, long travel times, traffic congestion, forced transfers on public transport, poor safety records, and lack of non-motorised facilities. These challenges place pressure on the transport system. In order to address these challenges, the City of Tshwane implemented TRT (South Africa: 2014). Another challenge is the delay that is caused by unavailability of staff to manage and operate the business and control side of the bus rapid transit as well as lack of planning and budgeting. Moreover, the construction of TRT in Tshwane caused a number of elements to be removed such as trees, a number of significant parking's were removed and many hawkers lost businesses (South Africa: 2014). The TRT challenges in Tshwane are as follows:

- Compressed natural gas-powered buses are not yet available and discussions are still under way on the accommodation of the "A re Yeng" at Tshwane bus depots;
- Automated fare collection tender and control centre tender has not yet been finalised;
- Tender process for six stations that is not finalised and staff yet to be appointed and trained;
- Currently, there is no provision for inception services in the budget and planning;
- Station management tender not yet advertised (South Africa: 2014).

1.6 THE ROLE OF THE TSHWANE METROPOLITAN POLICE DEPARTMENT

The TMPD was established in 4 April 2002 and their functions include traffic policing, by-laws enforcement and crime prevention (Rauch, Shaw & Louw, 2001:5; van Huyssteen & Oranje, 2003:1; City of Tshwane, 2014). The department was officially launched on the 23rd of February 2002 and amalgamated the traffic and security departments of 13 councils, previously known as Greater Pretoria (Newham, 2004:21). The department consists in 2000 police staff and 450 vehicles, to enable the agency to service about 2, 9 million residents (Statistics South Africa, 2015b).

Because of the crime prevention function, the TMPD is bound to cooperate with agencies such as the South African Police Service. To this effect, the TMPD are supported by the Tshwane Crime Prevention Strategy of 2002-2007 and the National Crime Prevention Strategy (NCPS) 1996-1999 (van Huyssteen & Oranje, 2003:1; Breetzke & Horn, 2009:114). Also, the TMPD relies on the Constitution of the Republic of South Africa (Act 108 of 1996) and the South African Police Service Amendment Act (Act 83 of 1998), to support their role of providing security services.

The NCPS provides an interesting point of departure in supporting the role of the TMPD. A brief history of crime prevention initiatives in South Africa shows that the NCPS was the first official policy document on crime management in post-apartheid. This strategy clearly emphasises the proactive approach to dealing with crime (Breetzke, 2009:114). For the TMPD, the NCPS therefore imply that staff had to engage in some of the crime combating activities that were traditionally done only by the SAPS. This meant an increased scope of work for police officials in the TMPD.

The NCPS is based on a four-pillar approach to crime prevention. The pillars included (1) the reforming of the criminal justice system, (2) changing the public's values and attitudes to crime, (3) reducing crime through environmental design and the development and (4) combating trans-national crime. For TMPD officials who are confined within city limits and have not been trained in the investigation of crime, combating trans-national crime is a challenge. To address the inherent gaps, political will is thus needed to amalgamate the metropolitan police departments with

the SAPS, the South African Police Service Act (Act 68 of 1995). To this end, the African National Congress (ANC) resolved in 2012 to merge the metropolitan police departments with the SAPS. A big concern about the ANC as South Africa's majority and ruling party in this regard, is that by the end of 2015, this resolution for the merger had not been implemented (IOL News, 2015).

The TMPD is independent from the South African Police Service (SAPS). The agency is funded by local government (the Tshwane Metropolitan Municipality), in terms of the South African Police Service Act, 1995 (Act 68 of 1995) as amended (South Africa, 1995; City of Tshwane, 2015b; Newham, 2006:3). According to the City of Tshwane (2015b), the functions of the Tshwane Metropolitan Police Department as identified in earlier discussions in this section, entail the following:

- Traffic or road policing: Traffic or road policing refers to the enforcement of the National Road Traffic Act, 1996 (Act 93 of 1996), in order to promote the free flow of traffic and to reduce road traffic incidents or accidents, as well as to protect the road infrastructure in and around the city (South Africa, 1996; Newham, 2006:2; City of Tshwane, 2015b).
- By-law policing: By-law policing is the core for safety, security and order. The relating activities contribute towards crime prevention, but require planning and the involvement of other role players. Thus, crime prevention requires: the integration of by-law enforcement activities; the standardisation of by-law enforcement processes; the implementation of the docket process; community involvement; and other contemporary policing approaches.
- Crime prevention: The White Paper on Safety and Security (1998) defines
 crime prevention as a set of activities intended to reduce, deter or prevent the
 occurrence of crimes, by changing the environment in which they occur, by
 changing the conditions which cause them, and by providing a strong
 deterrent in the form of an effective Justice System (South Africa, 1998).

The functions as detailed above, underscores the need to acknowledge the key role played by the Tshwane Metropolitan Police Department, in providing high quality security services to society in general. This is because like improved road-transport, the quality services rendered on the road and transport infrastructures (also referred to as the road-transport system) is also a key contributor to the economy in the City of Tshwane. The same economy thus feeds into the provincial economy and into the national Gross Domestic Product (GDP). Lucas (2011:1320) agrees that improved road-transport in Tshwane is one of the drivers of the economy in South Africa, but further argues that through its characteristic feature of facilitating mobility; road-transport is also key in promoting social integration. This is why South Africa sought to support its economy by improving bot its road and public transport infrastructures.

In carrying out its mandate, the TMPD has aligned itself to all legislative provisions delegated to local government. Thus, it is equally important that this agency should also align its strategies to national and provincial priorities, goals and objectives, as well as conform to the city's IDP, the City of Tshwane's long-term strategy, five-year strategic plan, as well as the annual Service Delivery Budget Implementation Plan and Budgets (South Africa, 1996; Newham, 2006:2; City of Tshwane, 2015b). Of importance in this research, is the TMPD role of protecting the road and transport infrastructure and how the relating improvements have impacted on their functions.

1.7 PROBLEM STATEMENT

The African Peer Review Mechanism (APRM) identified poor service delivery as one of the areas that South Africa has to deal with, this in order to improve on the level and quality of governance (Mkhabela, 2007:8). Such finding also included the performance of metropolitan police agencies such as the TMPD. An important aspect in this regard is to determine what the implications of road-transport improvements have been in the role of the TMPD. This determination can be used as one of the responses to improve police service delivery, particularly in light of the road improvements that have been initiated. The problem that thus informed the

research in this this study is that ever since the current improvements on road-transport, the implications thereof on the role of the TMPD have not been studied.

The role of the TMPD include as already indicated, include traffic and by-law enforcement. Apart from their traditional role, the department is often also required to engage with crowd management functions, for which staff is not adequately trained. The crowd management duties in question relate mostly to demonstrations relating to some aspect about road-transport infrastructure improvements in the country. Also, the lack of proper crowd management gear and issues relating to the chain of command between the SAPS and metropolitan police in general during crowd management remains unclear. Like most metropolitan police, the TMPD also faces challenges brought about by improvements in road-transport system. Some of the challenges were noted by van (Huyssteen & Oranje, 2003:39) and are as follows:

- The department established a crime prevention unit which ended up assuming sole responsibility for crime prevention. This compromised the ideals in an integrated approach to combating crime, contained in the city's IDPs. One of the concerns in this regard, is the fact that it is doubtful if engineers in the City of Tshwane consult with police on safety and security issues, when planning for improvements on the road-transport infrastructure;
- The TMPD also lacks the capacity and resources needed to become more
 effective in crime prevention. The department has 7 regional offices that
 service about 11 sectors (City of Tshwane, 2014). Given the limited staff
 numbers, the policing of the entire geographical breadth becomes challenging
 in that staff may sometimes not be able to focus on road-transport incidents.
- New organisational structures in the City of Tshwane were as such that regions were demarcated in disregard of the locations of police stations. This meant that some bus stations in the BRT system were placed too far from the police stations, with the results that if crime was reported, the police took longer to arrive (South Africa, 2014), which constitutes poor service delivery.

The small number of traffic officials also creates a lot of problem to the city since the service is rendered 24 hours a day; this means the number of officials available is divided between eight hour shifts. Moreover there are constantly officials that are involved in other tasks such as training, administration and vehicle inspection. It is also imperative to note that available officers are not only going to be focusing on the policing of crime but they are also expected to engage in traffic and municipal by-law enforcement. This supplementary reduces their ability to directly challenge the levels of serious crime at local level. Research by Newham (2006:2) showed that TMPD staff worked 20,476 hours per month, 43 % are related to traffic policing, 23 per cent to crime investigation and 2 % to by-law enforcement. To tackle some of the problems, South African Police Service and the Tshwane Metropolitan Police Department should work together to ensure some of the problems are addressed.

1.7.1 Aim and Objectives of the Study

The aim of the research in this study is to explore the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department.

The following are thus the objectives of the study:

- To describe the road-transport improvements in South Africa;
- To explain the role of the Tshwane Metropolitan Police Department;
- To identify factors that hinders the effectiveness of the Tshwane Metropolitan Police Department;
- To make recommendations to the City of Tshwane on how to resolve the road-transport improvements related problems faced by the Tshwane Metropolitan Police Department.

1.7.2 The Research Question

The first step in research is to identify the problem and then ask a specific research questions that is relevant to the phenomenon being studied (Welman & Kruger, 2001:11; Brynard & Hanekom, 2006:16; Hofstee, 2006:85). The research question in this study is therefore phrased as follows: What are the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department?

1.8 SIGNIFICANCE OF THE STUDY

The findings in this study will demonstrate to the City of Tshwane what the policing or law enforcement challenges relating to the improvements in road-transport are. Therefore, the findings will highlight the challenges faced by the Tshwane Metropolitan Police Department in dealing with crimes emanating from the improvements in road-transport. The study will thus make suggestions on how to overcome the related challenges. Similarly, the study will generate contextualised empirical contributions that can also be applied in other municipalities. The contributions can also be used to enhance public safety around the transport system. To this effect, this study will further contribute to and build on the body of existing knowledge, to enable other researchers to conduct further studies on the subject.

1.9 KEY THEORETICAL CONCEPT

1.9.1 Crime Prevention

Crime prevention refers to a set of activities or strategies that are intended to prevent or reduce the risk of crime (Crowe & Zahm, 1994:22; Clarke, 1997:2; Hughes, 1998:19). In this study, crime prevention is defined as the sum of all activities aimed at dealing with crime, either proactively or reactively. The crime prevention activities in this context thus also include patrols, city by-law enforcement, and traffic policing.

1.9.2 Bus Rapid Transport

Buss Rapid Transport or BRT defined as a flexible, rubber tired rapid transit mode that combined stations, buses, vehicles, services, running ways, and intelligent transportation system (ITS) elements into an integrated system with a strong positive image and identity (Levinson, Zimmerman & Clinger, 2003:4; Wright, 2002:1; Walters, 2007:108). The BRT is thus not only seen as a flexible and efficient public transport, but as a driver for economic growth within the Republic of South Africa.

1.9.3 Taxi recapitalisation

Taxi recapitalisation consist an elaborate process by government to restructure the taxi industry (Walters, 2008:105; Venter, 2013:114; Arrive Alive, 2016a). The taxi recapitalisation in South Africa is thus in line with the White Paper on National Transport Policy of 1996, as well as the Moving South Africa Strategy (MSA). For the purpose of this study, the definition provided by Arrive Alive (2016a) is adopted. This last named source defines the taxi recapitalisation programme as an intervention by the South African government to convey safe, effective, reliable, affordable and accessible taxi operation for commuters by introducing New Taxi Vehicle (NTVs) designed to undertake public transport functions in the taxi industry.

1.10 RESEARCH LAYOUT

Chapter 2 Literature Review: the chapter provides a broad context and theory base for the study, and will be narrowed to what the study intends to investigate.

Chapter 3 Research Methodology: the chapter discusses the research methods and techniques used to investigate the research problem.

Chapter 4 Findings: the chapter provides analysis, discussion and interpretation of the research findings based on the data collected to inform the research.

Chapter 5 Conclusions and Recommendations: the chapter summarises the primary research findings and present conclusions and recommendations on the research conducted in the study.

1.11 CONCLUSION

Compared to what other developing countries in South America have achieved in terms of improvements in road-transport systems, South Africa is still far behind. Of relevance to research in this study though is that whilst South Africa is implementing best global practices on road-transport, the related security dynamics and the implications of road-transport improvements on the role of the Metropolitan Police Departments need to be identified, studied and understood. The findings in this research thus provide insights on how the safety and security aspects relating to improvements in road-transport can be dealt with, moving forward. The study thus highlighted the community safety issues that need to be taken into consideration during the architectural planning for developments in road-transport infrastructures.

2.1 INTRODUCTION

Many countries worldwide have embarked on improving their public road-transport infrastructures as a means to stimulate economic growth. This has in many ways, been an easy task for developed nations. In comparison to developing economies, developed economies worry more about the sustainability of their existing road-transport infrastructures, whilst developing economies worry more about housing, health, employment, poverty eradication and crime prevention (Reichenheim, de Souza, Moraes, de Mello Jorge, da Silva, de Souza Minayo, 2011:10). Crime prevention in particular, thus highlights the value of the role played by the police in ensuring the safety and security aspects, within any country's road-transport system.

An important consideration about public road-transport systems relates to the implementation of effective road safety plans. A major concern in this regard is that in comparison to their more affluent counterparts, developing economies have struggled to attain the objectives in their road safety plans, this owing to many shortfalls. One such problem is the debts owed by developing nations to institutions such as the International Monetary Fund (IMF). Lloyd (2003:1) argued that high debts inhibit service delivery. For the police, high debts imply less money for crime prevention and thus poor safety levels in the country's road-transport infrastructures.

One developed country whose road safety plan has been effective in engaging communities, is Australia. The Australian National Road Safety Plan (2007-2008) emphasises more on safer speeds, safer roadsides, safer vehicles, safer driving and responsible pedestrian behaviour (Australian Transport Safety Bureau, 2008:1). To attain such objectives requires more resources, well maintained and paved roads, as well as an enhanced law enforcement capability. Of importance is that in comparison to developing economies, countries such as Australia have enough resources to implement their road safety plans. In most cases, developed countries are troubled by problems that are not usually present in developing economies. In this context, countries in Africa are among some of the most challenged in the world.

This chapter therefore provides a global overview of the improvements in road-transport and outlines the related socio-economic benefits. As a point of departure, the chapter reflects on the road-transport lessons from other developing economies in South America, using cities such as Bogota and Curitiba as benchmarks, but also highlights the related road-transport and policing challenges. The chapter likewise draws comparisons between these South American and three of the major cities in South Africa. Finally, the chapter discusses both the regulatory framework for road-transport improvements and for policing or law enforcement in South Africa. The aim in this chapter is thus to construct a contextual picture of the research problem, which seeks to answer a question relating to the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department (TMPD).

2.2 A GLOBAL OVERVIEW OF IMPROVEMENTS IN ROAD-TRANSPORT

Improvements on public road-transport infrastructures are critical in bringing opportunities for wealth creation, prosperity and increased commerce in countries worldwide (Bishai, Quresh, James & Ghaffar, 2006:65). For that reason, most developed economies have allocated huge budgets to improve on their road-transport infrastructures. One such government is that of the United States of America (USA). In addressing the improvement, a task team recommended in 1991 that the American government should spend more than \$3 trillion over 20 years, to build roads (Winston, 1991:113). Such investment attests to a commitment by the United States government to promote economic growth and to lower travelling costs.

In comparison to developing economies, affordability and huge budgets for projects in developed countries may not be an issue. This is because developing economies can never match their developed counterparts in terms of providing huge budgets for road-transport infrastructure improvements (Veneables, 1999:319). In spite of the constraints, there are however some developing economies whose road-transport models have proven to be successful. Such stories can be found in South America, whose cities have been recognised by the World Bank as being among the best, following their successes in road-transport (Pienaar, Krynauw & Perold, 2005:362).

What stands out about South America, is the fact that the road-transport systems in countries such as Brazil and Colombia were introduced between 1964 and 1988, a period when there were unitary governments in power (Pienaar *et al.* 2005:362). Of importance in this regard is that South Africa with its colonial and apartheid past, can also benchmark its road-transport system from other developing economies that have also emerged from negative political pasts. This is because the benefits that can be accrued from an improved road-transport system include high economic productivity (Holl, 2004:343), the quick movement of goods (Janic, 2007:33) and increased passenger safety on public roads (Tann, 2009:355). There is no doubt that the police do play a major role in dealing with the safety aspect, which is crucial in ensuring the sustainability of the benefits from an improved road-transport system.

According to Walters (2008:98), efforts to improve public transport in developing countries have indeed been inhibited by lack of finances. In addition, Walters (2008:99) further argues that developing economies have been characterised by deficient road traffic and road-transport infrastructure enforcement capacities. To address the challenges, developing nations need to do research. The research is important in helping developing economies to identify and understand the complexities in road-transport and how these impact on the role of the police. This is the same reason that inspired this research to explore the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department.

2.2.1 The value of improved road-transport to South Africa

The benefits that can be accrued from an improved road-transport system are exactly what South Africa needs to address poverty and inequality. A World Bank survey showed that South Africa is the most unequal country in the world, with the rich getting richer and the poor getting poorer, this owing to the injustices caused by colonialism and apartheid (Global Education Magazine, 2015). According to the European Union Road Federation (2009), an improved road-transport system has undeniable socio-economic benefits that include: investments in the road sector; employment; broader access to areas; poverty alleviation; enhancing social cohesion and integration; as well as providing equal opportunities for all within the economy.

To benchmark on the improvements in its road-transport system, South Africa did in fact send a delegation to South America to draw some insights (Pienaar *et al.* 2005:362). However, the one worrying issues is that following South Africa's visit to South America, very little debate has been advanced on the road-transport lessons, an issue that defeats the notion of professionalism. Lucas (2011:1320) confirmed that there was very little debate on road and transport issues in South Africa, much to the detriment of the poor and vulnerable of the society. If South Africa is to succeed in developing and sustaining a state-of-the art road-transport system, ongoing discourse on lessons from other economies irrespective of whether these are failures or successes is vital. Thus, discourse on the implications of the road-transport improvements in any economy, including on the implications thereof on the role of police agencies, accompanied by relevant research is equally important.

Road-transport improvements in South America have been implemented in cities such as Belo Horizonte, Curitiba and São Paulo in Brazil, Quito in Ecuador, as well as Bogotá in Colombia (Levinson, 2002:20). Because of the improvements in their road-transport systems, the South American region has successfully emerged as a major competitor of the United States in terms of navigability on the roads (Fuller, Yu, Lalor & Krajewski, 2001:1). This has resulted in increases in exports and price drops in food and other commodities, making the region to become a globally competitive market (Fuller *et al.* 2001:1). Although this study will not reflect on all of the lessons from all of the South American cities mentioned herein, this next section focusses on the road-transport lessons that can be derived from the City of Bogota.

2.2.2 Lessons from South America: The City of Bogota

Bogota is the capital of Colombia and is situated in the Andes Mountains (Pienaar, Krynauw & Perold 2005:369). It is the largest and most populated city in Columbia, with an estimated population of 8.35 million people (Turner, Kooisan & Winkelman 2012:6). Such population figures in a city undoubtedly require increased police presence to ensure high levels of security. This means that the level and quality of road-traffic policing and crime prevention in such a city needs to always be kept in

check. Thus, police presence in the road-transport system of a city such as Bogota needs to also be increased, in order for safety and security services to be more accessible to members of the public and to be more responsive to road-user needs.

An important consideration about Bogota is that the city has experienced significant growth in private car ownership since 1943, a situation that has led to high accident rates and to severe air pollution during peak travelling times (Turner *et al.* 2012:6). Such dynamics present problems for city police as they have to ensure that personnel are deployed at pressure points to try and facilitate the flow of traffic and monitor compliance with the law during peak traffic. Likewise, the inherent air pollution also requires a law enforcement capability to ensure that car emissions are kept in accordance with city ordinances, a responsibility which traditionally falls outside of the functions of city police. Whether the City of Bogota has such law enforcement capacity is an issue that will require contextualised research to validate.

In the late 1990's, the public transportation system in the City of Bogota was relatively unsafe, underused, inefficient, and offered poor quality of service. According to Turner et al. (2012:7), the 1990s was a period in which the transport system in Bogota was characterised by: "[high accident rates and long commuting times; mass transit options that were limited to privately owned public bus service which suffered from the oversupply of bus route permits; inadequate institutional capacity and a fractured owner/driver relationships which resulted in fleet oversupply; low quality services and high social cost due to slow travel; and operating inefficiency]'. In South Africa, fractured relationships relating to road usage or road-transport infrastructure improvements have often resulted in rage, loss of lives through murder and accidents, as well as assaults with intend to do grievous bodily harm (News24, 2015). Such dynamics have therefore presented challenges for police personnel, who often have to document and investigate the related cases.

In the year 2000, Bogota embraced a new metro idea wherein busways were constructed. This was the same year in which the city introduced its first Bus Rapid Transport (BRT) system, the TransMilenio. Because of its success, the system was adopted for the rest of Colombia. Among other things, the TransMilenio decreased

the average travel time by 32%, increased property values along the main line by 15 to 20%, enhanced tax revenues, created jobs, and improved community health and safety (Turner, et al 2012:6). There is no doubt that the high mobility brought about by the introduction of the TransMilenio also encouraged the police to increase their service delivery efforts to the road users. Such responsiveness is critical in ensuring safety in the road-transport infrastructure. Figure 8 below shows the TransMilenio.

Figure 8: The TransMilenio buses



Source: Metro International (2012)

The busways in Bogota are opened to any of the thousands of private buses that run all over the city, with the overall capacity to rapidly move around most of the metro system up to between 45,000-46,000 passengers per direction at peak times and has been hailed as a cure for transport problems, especially in a developing economy such as Colombia (Hidalgo & Pierre, 2008:78; Gilbert, 2008:439; Turner, et al 2012:6). For South African cities such as Tshwane and Johannesburg, the BRT busways present a challenge for the metropolitan police departments. This is because taxi operators often drive along the bus lanes, in contravention of the law.

By introducing improvements in road-transport, Bogota has completely transformed its public transit system, which is now labelled as a model for effectively moving a developing country's transport system towards sustainability (Cain Darido, Baltes, Rodriguez & Barrios, 2007:45; Hidalgo & Pierre, 2008:78; Turner *et al.* 2012:7). The

TransMilenio is one of the highest-capacity and best examples high-level BRT systems in the world. This is because the system show what BRT can achieve if high-capacity design and operating characteristics are designed to be strong (Cain *et al.* 2007:45) and to offer a competitive advantage in the market (Fuller *et al.* 2001). For this reason, even cities in affluent and highly developed countries such as the United States, may as well derive sustainability lessons from a city such as Bogota.

2.2.3 Challenges in the road-transport system in Bogota

Despite the related advantages, the TransMilenio has however faced challenges. One such challenge is crimes such as pick-pockets on the buses. Research (Flores, 2005) showed that three quarters of a sample thought that the TransMilenio was insecure, either because of the risk of robbery or because of the huge crowds on the busses. To deal with the crime-related challenges, the TransMilenio signed an agreement with city police to allocate 500 young cadets and 110 officers at entrances to the bus stations (Gilbert, 2008:448). Whether a country such as South Africa has learned from such intervention in Bogota, is something that is to be seen.

Following the signing of the agreement with the police in the City of Bogota, the implementation of the TransMilenio did eventually reduce the number of crimes on the system's corridors. According to Cain, Darido and Baltes (2006:18), the reduction in crime came as a result of continued deployment of police in and around the TransMilenio bus stations. There is generally one state police guard at each station entrance and four guards are normally assigned to each CBD station (Cain et al. 2006:18). Guards from private security firms are also strategically positioned from 21H00 to 06H00, to help pedestrians cross the road and to protect stations from vandalism (Cain et al. 2006:18). Of concern is that in South Africa, police visibility in bus stations is not that high and the closest witnessed event to helping pedestrians to cross the road would be scholar patrols during schooldays. In this context, South Africa has more to learn from Bogota, which is also a city from a developing country.

According to a May 5th 2011 article by Simon Romero, the City of Bogota was reported at the turn of the 2000 millennium, to have emerged as a mecca for urban planners (New York Times, 2015). As a result of this newly found renaissance, freethinking mayors brought about significant transformation by designing innovative low-emission rapid transit system, addressing overcrowding in buses and sending mimes to intersections to ridicule and humiliate traffic violators (Financial Times, 2015; New York Times, 2015). Whether sending mimes to mock traffic violators can become a practical and even a globally acceptable crime prevention strategy, is an issue that depends on the cultural setups, in each of the countries around the world.

Although the interventions in Bogota were successful, they however attracted a lot of criticism globally. This is because the city had introduced many construction projects in pursuit of improving the road-transport infrastructure. Because the projects were implemented simultaneously, the City of Bogota suffered months of traffic chaos (Cain *et al.* 2006:11; Hidalgo & Pierre, 2008:78; Gilbert, 2008:439; Turner *et al.* 2012:7; Financial Times, 2015; New York Times, 2015). The projects also led to a corruption scandal, which resulted in Bogotá's Mayor Samuel Moreno being suspended (New York Times, 2015). Of concern is that the corruption scandal not only dented the image of the city, but also increased the investigations caseloads. Such increases impacts negatively on service delivery when considering police-population ratios and the number of other crimes that the police have to deal with.

The TransMilenio consists of buses and minibuses. The implementation thereof was intended to reduce traffic congestions in Bogota. However, the TransMilenio buses contain poor ventilations and trips took several hours to arrive at bus stations (Rahim, 2014:26). This led to passengers resorting to using private cars (Rahim, 2014:26). Of concern is that the type of challenges in Bogota put the city at the risk of eroding the benefits that can be accrued from an improved and world class road-transport system. The challenges in Bogota thus underscore the need to efficiently manage processes, in order to optimise the benefits from improved road-transport.

The other challenge in the road-transport system in Bogota had to do with the negative reaction of traditional companies to proposals on the implementation of the TransMilenio. The negativity was characterised by resistance from existing bus operators who feared loss of business and hesitated to use new processes such as awarding concerns through open request (Turner *et al.* 2012:9). Similar reactions were indeed witnessed in South Africa with the introduction of the BRT systems in the cities of Tshwane, Johannesburg and Cape Town. One incident of note was the blockading of roads particularly in Mamelodi a suburb in the City of Tshwane during July 2015. Taxi operators in Mamelodi used burning tyres and hijacked trucks to blockade the road, in protest over the allocation of public road-transport routes (eNCA, 2015). This incident solicited high police presence, to manage the violence.

To deal with its own challenges in road-transport, the City of Bogota in particular, prioritised existing operators in the bidding process, established a fund to balance the negative impacts to existing operators, engaged companies and stakeholders in dialogue, as well as during the planning and implementation phases (Turner *et al.* 2012:9). According to Venter (2013:116), South Africa also went through some administrative, financial and industrial processes to eliminate some of the challenges that could have hindered road-transport improvements, particularly its BRT systems. Whether the interventions will contribute to economic growth, is yet to be witnessed.

The City of Bogota also uses ticket booths to enable passengers to pay with smart cards that use a magnetic device which updates the ticket and boarding process (Lozano, 2009:3). Passengers can change from a local to an express bus as well as on route to another using the same electronic fare card that is automatically debited at entrances. The one challenge with such a ticket booths is that they also accept cash for the purchase of tickets. The presence of cash in any public place always carries the risk of attracting robberies, which would present a problem for the police.

The buses in the City of Bogota also operate on dedicated lanes and this happens for 18 hours each day with each bus carrying 60 passengers that include people with disabilities (Lozano, 2009:3). Of concern is that if there are no security personnel in transit the buses as is sometimes the case, then passengers especially the

vulnerable such as people with disabilities, the elderly and children, may fall victim to crime. In response to the inherent challenges, the City of Bogota recognised the need for tailored interventions. The responses were intended to deal with not only the safety and security aspects, but also with the administrative and political problems, to regulate commuter behaviour on-board the buses. The responses to the road-transport challenges in Bogota are therefore discussed in this next section.

2.2.4 Bogota's responses to the road-transport challenges

To deal with its challenges, the City of Bogota introduced an operation fleet centre. This center notifies passengers about schedule changes and updates. Moreover, the buses are equipped with Global Positioning System (GPS) which is linked to the operation centre (Lozano, 2009:3). As a result of the interventions, the TransMilenio improved on the air quality and reduced emission by 40%, increased the number of passengers being transported, reduced travelling times, introduced specialised infrastructure, efficient operators and an advanced ticketing systems (Lee, 2003:3).

According to Lee (2003:3), the TransMilenio also introduced detailed rules that need to be observed by all passengers and operators aboard the buses and inside the stations for effective and safe operations of the system, which rules dictate that:

- Safety of children is to be held by adults and no animals allowed on-board.
- Passengers to always walk on right-hand side to allow the system to move faster and quickly.
- Passengers to stand behind yellow line until the bus stops and doors open.
- Passengers are not allowed to board while under the influence of alcohol.

For South Africa to attain optimal results in its BRT system, the country has to also implement strict rules. Of importance is that a culture of respect and conforming to rules in the public transport system has to also be promoted. Thus, metropolitan areas such as the City of Tshwane could only achieve compliance with rules not only through police presence, but through advertising campaigns in media platforms that include newspapers, television and online social network adverts. Likewise, city ordinances that foster stiffer punishment for offenders will also have to be introduced as a way of deterring criminal and disorderly behaviour in all public transport podia.

2.2.5 The policing challenges in the road-transport in Bogota

Like any other city in a developing economy, Bogota has its fair share of challenges in law enforcement. The inherent challenges limit the police's effectiveness in combating crimes such as murder and vandalism (Colombia Reports, 2015). The vandalism in particular, also means that the buses and stations around the city are vulnerable to criminal activities. According to Colombia Reports (2015) the effectiveness of the police in the city of Bogota is hindered by limitations in legislation. Such limitations thus impact negatively on the safety of transport users.

Speaking specifically about the well-being of citizens using public transport, Lucia Bastidas a councilwoman at the city of Bogota argued that the law in Colombia is as such that there is not sufficient legal grounds to allow the proper punishment of those who disturb the peace (Colombia Reports, 2015). Likewise, the commander of the Bogota Police further notified the city council that the TransMilenio are at the mercy of delinquents and beggars (Colombia Reports, 2015). The challenges faced by the police in the City of Bogota therefore underscore the need to increase efforts to ensure public safety and to always safeguard the public road-transport infrastructure.

To add to the law enforcement challenges in the City of Bogota, users of the TransMilenio also hold demonstrations in protest of lack of security and poor service delivery inside the buses and station (Financial Times, 2015). For the police, such protests solicit interventions in the form of crowd management tactics. For metropolitan police departments in South Africa, engaging in crowd management activities underscores the need to standardise training and to re-align such training with training being offered to South African Police Service (SAPS) personnel. A worrying factor in this regard is that crowd management is not even accentuated as one of the key functions in some metropolitan police departments, such as the Tshwane Metropolitan Police Department (Newham, Masuku & Gomomo, 2002).

Another challenge in Bogota is the retention of resources to restrain law enforcement. "Historically, legislators in Bogota used the city council as a forum to build a political following, often through public opposition to the mayor's policies and expand their grip on resources to underwrite clientelist practices" (Moncada, 2009:436). Such practices have restricted the police's access to resources and at times forced their loyalty to some politicians in order to gain some access to the resources. This has impacted on the autonomy of the police and hence their effectiveness in ensuring safety and security in and around the transport system.

The law enforcement challenges in Bogota are also mainly due to city police being understaffed, with the ratio of 1 police official per 1,333 of the population in the city (Colombia Reports, 2015). Police accountability in Bogota is also problematic. According to Moncada (2009:431), increasing police accountability and institutional reforms in the Latin American region is generally a daunting task. Likewise, South Africa also faces similar challenges in terms of police accountability, but not police-population ratios. If the police are to succeed in ensuring safety in the road-transport infrastructure, enhancing accountability and making adequate reforms is imperative.

2.2.6 Road-transport lessons from the City of Curitiba

Like Bogota, Curitiba is another South American city which South Africa can draw road-transport lessons from. Curitiba is the capital of the Parana state in Brazil and is situated in the southern part of the country (Pienaar, Krynauw & Perold 2005:363). Curitiba is Brazil's most populated city with 1.8 million people and an area of 435 kilometre squares (Lindau; Hidalgo & Faschini, 2010:274). The city also has a BRT system that typically uses physically separated median lanes along wide multilane arterial roadways (Pienaar et al. 2005:364). The bus stations are 1,200 to 1,500 feet between major intersections with provisions for overtaking via passing lanes at stations (Pienaar et al. 2005:364). The BRT system in Curitiba was thus designed to integrate urban transportation, land-use development and to preserve the city's environment (Levinson, 2002: 21; Pienaar et al. 2005:365; Lindau et al. 2010:274).

The Curitiba transport system was developed as part of an overall master plan to facilitate the movement of people and goods. The basic objectives of the system include radial expansion of the city along five corridors (structural axes), integrating land use and transport, and protecting the city center (Brazil, 2015). The busways or BRT are widely recognised for their innovative features such as trunk and feeder bus lanes that enable convenient fare-free transfer; bi-articulated five-door buses and parallel tube stations with off-vehicle fare collection; floor-level boarding to facilitate easy access; as well as direct express service along one-way arterial streets (Levinson, 2002:22; Lindau et al. 2010:275; Brazil, 2015). The BRT system in Curitiba is thus designed to give commuters quicker and practical service that is affordable. Figure 9 below is a depiction of the BRT buses in the City of Curitiba.

Figure 9: Curitiba BRT buses



Source: Tadamun (2014)

As previously mentioned, the BRT station in the City of Curitiba is located in "plastic tubes" with high-level platforms that match the floor height of the BRT buses (Levinson, 2002:19; Pienaar et al. 2005:367; Lindau et al. 2010:276; Brazil, 2015). Because the stations also feature off-vehicle fare collection at the end of the tube stations, the process thus speeds up passenger flows and reduce dwell times (Levinson, 2005:20; Pienaar et al. 2005:366; Lindau et al. 2010:275). What is interesting about the City of Curitiba is that the bus fares are charged on a flat rate and are government subsidised (Lindau et al. 2010:275), thus making it cheaper and accessible to the poorest of the poor citizens of Brazil. According to Levinson (2002:20), the following are the fundamental attributes of the BRT system in Curitiba:

- simple route structure and frequent service at all times of day;
- headway-based as opposed to time-point schedules;
- less frequent stops and level boarding and alighting;

Given how improvements on road-transport infrastructures have contributed to the socio-political and socio-economic landscape in South America, an important consideration is for other governments worldwide to also derive the implementation lesson. More importantly, lessons on road-transport improvements should also include issues on traffic safety and security (Bener, Abu-Zidan, Bensiali, Al-Mulla & Jadaan, 2003:6050), which issue is the prerogative of municipal police. To demonstrate the lessons, Pienaar *et al.* (2005:364) further summarised the key success factors associated with the road-transport system in Curitiba as follows:

- The system has exclusive and closed bus ways with a fixed fare to enter and once in the system, any distance can be travelled at capped costs;
- The system has radial and circular routes with stations and terminals at nodal points, to facilitate the linkage between departure and arrival points. Also, the system uses cross-subsidisation of longer routes used by the poor, by shorter routes used by the more economically affluent, as well as the cross-subsidisation of lower density routes, using high density routes;
- The system benefits from the government's allocation of a particular percentage from the national budget, to infrastructure development. Similarly, the operational part of the system is left financially independent.

Although the transport system in South America was successful and should be adopted, developing countries however have challenges that will not necessarily make it easy for them to adapt to such models. For instance, the politics in developing economies may be as such that poverty alleviation and redressing economic imbalance are top of the priority list for government (Pucher, Korattyswaropam, Mittal & Ittyerah, 2005:188; Walters, 2008:980; Reichenheim et al. 2011:194). Of concern is that developing economies do not have the sufficient law enforcement capacity to deal with crimes (Shaw, 2002:3), even in the road-transport.

2.2.7 The Road-transport challenges in Curitiba

The City of Curitiba built its reputation as an urban planning model for an innovative transportation system (Mercier, Duarte, Domingue & Carrier, 2015:1454). However, in recent years the BRT system in Curitiba has become overcrowded and costly (The Atlantic CityLab, 2016). This challenge has forced people to drive in their private cars. Such movement also meant that the number of privately owned vehicles and dangerous gas emissions on the roads may have increased substantially. The increases therefore imply an increased workload for police due to traffic congestions and the likelihood of increases in traffic violations.

Because of the movement of people to private vehicles, Curitiba has now registered the highest ratio of vehicles per inhabitant and its bike paths remain largely underutilised (The Atlantic CityLab, 2016). According to Lindau *et al.* (2010:274), Curitiba has one of the highest private car ownership rates in Brazil with almost 400 cars registered per 1,000 inhabitants. The migration of people from public buses to private cars has effectively decreased the BRT rides in Curitiba by 14 million rides or 4.3 % in the period 2011-2015 (The Atlantic CityLab, 2016). The kind of losses incurred by the City of Curitiba may impact negatively on the growth and sustainability of a developing nation such as Brazil. Other challenges in Curitiba's public road-transport system can therefore be summarised as follows:

- The bridges built in ramps instead of stairs can result in fatigue for many
 passengers and difficulty for use by older persons and others with mobility
 challenges (Ricket, 2010:6). Implied is that pedestrians bridges using only
 stairs are inaccessible not only to wheelchair users but to a broad range of
 persons with mobility concerns including many of those with hidden
 disabilities such as arthritis, partial sight, blindness or heart conditions.
- There are excessive bus-to-platform gaps at BRT stations. The gaps can make boarding difficult for passengers, especially for children, the elderly or frail persons, the blind and passengers using wheelchairs (Ricket, 2010:9).

- The decreases in BRT trips led to accidents from speeding buses, including complaints about ever-increasing fare prices (The Atlantic CityLab, 2016).
- The management of the BRT system in Curitiba is also in a crisis, owing to poor governance within the city council (The Atlantic CityLab, 2016).

Legislation in Brazil also presents another serious challenge. For Example, the Brazilian Constitution of 1988 is not really conducive to good corporate governance in municipalities (Mercier et al. 2015:1456). This has resulted in policy constraints and has also impacted negatively on road-transport improvements in general, including the BRT in Curitiba. Likewise, Curitiba's planning method also concentrates on the formal city, which forces the poor to establish illegal settlements due to lack of affordable housing (The Atlantic CityLab, 2016). There is no doubt that such dynamics creates a situation where people are forced into a life of crime, which creates more challenges for the police.

2.2.8 The road-transport and policing challenges in Curitiba

Curitiba also faces challenges in terms of policing its road-transport infrastructure. One such problem relates to driving under the influence of alcohol. According to Aguilera, Sripad, Lunnen, Moyses, Chandran and Moyses (2015:219), the issue of alcohol and driving has forced the police in Curitiba to establish sobriety checkpoints in order to minimise the negative economic impacts caused by road injuries and fatalities. These last mentioned authors further pointed out that the police in Curitiba have to deploy manpower and use resources such as breathalysers to obtain blood samples from drunken motorists, in order to test the amount of alcohol concentration in the blood. Of concern is that the resources and manpower deployed at such checkpoints could have been used elsewhere to fight other serious and violent crimes such as murder, rape, assaults and robberies, if motorists had taken issues upon themselves to develop a culture of using the road infrastructure responsibly.

Driving under the influence of alcohol is one of the major causes of road traffic injuries and deaths around the world (Sripad *et al.* 2011:220; Aguilera *et al.* 2015:219; eNews Channel Africa, 2015; SABC News, 2015). In Brazil, traffic-related deaths are the second leading cause of death, after homicides (Reichenheim, de Souza, Moraes, de Mello Jorge, da Silva, de Souza Minayo, 2011:2). Research (Reichenheim *et al.* 2011:6) showed that in 2007, traffic-related deaths in Brazil accounted for 30% of all recorded fatalities. Curitiba being one of the major cities in Brazil is thus also affected by the same dynamics that are prevalent in the country.

When a person dies on the road, it is often the responsibility of the police to manage the investigation processes. In Brazil, the processes are however overseen by an often inefficient and corrupt police, with insufficient and inadequate responses, poor investigation processes, poor information systems to monitor traffic-related deaths, as well as a justice system that promotes rises in lawlessness (Reichenheim *et al.* 2011:1). Such dynamics thus have a negative impact on the efficiency of policing, particularly in ensuring public and infrastructure safety in the road-transport system.

2.3 ROAD-TRANSPORT IN AFRICA

Africa in one continent that needs to unpack and research on the dynamics that relate to its road-transport infrastructures. This is because road-transport infrastructure is the leading platform that facilitates the movement of people and goods in Africa. Yet, road-transport infrastructures on the continent face a number of challenges. The challenges range from difficulties in regulating the infrastructures, increasing numbers of vehicles, urbanisation, to poor Gross Domestic Products (GDP) and high population growths (Maritz Africa, 2015). According to Maritz Africa (2015), the following are the road-transport challenges that Africa is faced up with:

Road transport accounts for 80% of freight traffic and 90% of passenger traffic
in Africa. However, only a quarter of the total road network on the continent is
paved. Thus, poor road conditions are a problem in many countries. Poor
road conditions result in road accidents which are a challenge for law
enforcers, who have to investigate collisions, including the resulting deaths.

- Road accidents comprise 25% of injury-related deaths in North Africa. In Egypt, Tunisia and Morocco, road traffic accidents tally to more than half of injury-related deaths (Egypt – 64%, Tunisia – 58%, Morocco – 51%).
- Nearly twice as many males (15-59 years) die from injuries caused by road traffic accidents and violence, than those that die from diseases such as tuberculosis, respiratory infections and cancer, while deaths due to HIV/AIDS were only slightly higher than those caused through road accidents.

To deal with road traffic accidents requires of governments in Africa to implement strategies that can reduce the number of fatalities and injuries due to road traffic accidents. Some of the strategies will include: improved road infrastructure; speed limits; compulsory seatbelts and child restraints; drink-driving laws, bans on the use of cellphones while driving; and legal requirement for motorcyclists to wear helmets (African Development Bank, 2013:1). There is no doubt that such interventions could never succeed without increased cooperation between law enforcement agencies, civil society, Non-Government Organisations and other state departments.

2.3.2 The enforcement of road safety in Africa

The enforcement of road safety measures across Africa is however generally weak (African Development Bank, 2013:1). The lack of resources (Gastrow, 2001:4), poor investigative skills (Sinclair & Matlala, 2011:51), limited forensic capacities (Chikwanha, 2010:1), poor intelligence (Gastrow, 2001:4; Van der Spuy, 2009:253) and poor training (South African Police Service, 2009:35), are some of the factors that have generally weakened law enforcement capabilities in sub-Saharan Africa. The weaknesses effectively imply that law enforcement in road-transport specifically on the African continent is of a poor quality, much to the detriment of public safety.

The situation where law enforcement capabilities on the roads are weakened also exacerbates social inequalities. According to Maritz Africa (2015), the lower income groups often have to walk longer distances or are left without transport. This makes such groups more vulnerable to crimes such as robberies. Poor road-transport infrastructure thus makes it more difficult for vulnerable groups to access social services such as police, in the event they require assistance or need to report crimes. Likewise, poor roads also imply that police may find it difficult to get to victims, who may require assistance in the event of a crime having been committed.

African countries have however shown some positive trends in the development of road transport in recent years. To elaborate, road maintenance has improved and the majority of African countries have established active road funds (Maritz Africa, 2015). According to estimations by Maritz Africa (2015), nearly half of the main road network on the continent is in good condition. This marks an increase of 100% from five years ago. As a result of the improvements on the roads, there is improved access to services and markets. The services that can be accessed thus include emergency services such as ambulances, fire-fighters and law enforcement officers. Access to such public services could also lead to other socio-economic benefits.

2.3.3 The impact of poor road-transport infrastructures in Africa

The improvements in the last five years (2011-2015) are indicative of the fact that most African governments are beginning to invest in, and to take road-transport infrastructure developments seriously. Yet, sub-Saharan Africa needs to overcome many challenges, if it is to attain any meaningful socio-economic impacts. The challenges include huge and underdeveloped geographical areas (NEPAD, 2012) that remain seriously under-policed (Gastrow, 2001:4), as well as extreme poverty and political instability (Baker, 2008:33; Matlala, 2012:76; NEPAD, 2012). For example, the Democratic Republic of the Congo has an area of over 905,000 square miles but 54 years post-independence, the country has no proper roads (NEPAD, 2012). According to Baker (2008:33), poverty has forced most police in Africa to operate on little resources. This is one of the issues that have contributed to negative impacts on the safety and security in Africa's road-transport infrastructures. Thus, any upgrades to road-transport need to be accompanied by improved security.

Improving roads infrastructures in Africa will increase the transportation of goods and raw materials, facilitate transactions and negotiations, boost tourism and facilitate the quick movement of people to emergency care facilities (NEPAD, 2012). According to the African development bank (ADF), the roads in Africa are however in such bad condition and need huge investments (NEPAD, 2012). This has led to increased travelling costs. For example, transport costs are 63 percent higher in Africa than in developed countries, much to the detriment of competitiveness in international and local markets (NEPAD, 2012). Of relevance in this study is how the lack of improvements impact on the security issues around such poor road-transport infrastructure, in particular how the police deal with crimes around the infrastructure.

Poor roads also have a negative impact on intra-African trade. The current trade on the continent is just 11 % of total trade (NEPAD, 2012). There is no doubt that this figure would have been higher with better road-transport infrastructure. In comparison to Africa, trade among Southeast Asia's 10 countries stands at 37 % (NEPAD, 2012). Much of what is considered road-infrastructure in many African countries was constructed by colonial regimes (NEPAD, 2012). This explains the poor road-infrastructure inheritance, a legacy faced by most African economies.

To enhance their chances of reaping the socio-economic benefits, African countries therefore needs to commit resources and focus more on improving its road-transport infrastructures. Tann (2009:355) further summarises some of the socio-economic benefits that can be accrued from improved road-transport infrastructures as follows:

- Improved travel time: increases service frequency and eradicates delays;
- Reliability: this offer reliable travel:
- Identity and image: gives cities and country a positive image;
- Safety and security: guarantees passengers of an experience free of hazards, security threats and makes them feel less vulnerable whilst in transit.

According to Rankin (2004:1), improved road-transport infrastructure also offers service speed and reliability, greater ridership, high capacity, as well as operational flexibility. Of concern is that many countries around Africa generally have poor or no mechanisms to properly regulate their road-transport infrastructures. According to Stott (2003:1), many countries in sub-Saharan Africa have poor or no regulatory tools and thus most governments' lacks in terms of capacity to deal with problems. Likewise, this next section highlights the regulation of road-transport in South Africa.

2.4 THE REGULATION OF ROAD-TRANSPORT IN SOUTH AFRICA

The Constitution of the Republic of South Africa (Act 108 of 1996a) identifies the legislative responsibilities of different levels of government regarding roads, traffic management and road-transport improvements (South Africa, 1996a; South Africa, 2000; South Africa, 2015a). Road-transport is a function regulated and implemented at all levels of government and the Department of Transport (DoT) is responsible for the functions at the national level. The strategic goals of the DoT are to: ensure an efficient and integrated infrastructure network that serves as a catalyst for socioeconomic development; ensure a safe and secure transport sector; improve rural access, infrastructure and mobility; improve public transport systems; increase the contribution of the transport system to job creation; as well as to increase the contribution of the transport sector to environmental protection (South Africa, 2000).

To facilitate the execution of its mandate, the DoT collaborates with additional role players such as the Cross-Border Road Transport Agency (C-BRTA). The C-BRTA is responsible for market access regulation, the issuing of permits to cross-border transport operators, as well as providing support to the small and medium cross-border road-transport businesses (Cross Border Road Transport Agency, 2015). Thus, any cross-border operator that enters the country without duly issued permits could be subjected to prosecution, which would involve investigations by the police.

Other role players that collaborate with the DoT include the South Africa National Roads Agency Limited (SANRAL), which is responsible for infrastructure development on all national highways; the Road Traffic Management Cooperation

(RTMC), which is responsible for consolidating powers and resources to eliminate the fragmentation of responsibilities for all aspects of road traffic management across the various levels of government in South Africa, as well as to provide for cooperative and coordinated strategic planning, regulation, facilitation and law enforcement in respect of road traffic matters at national, provincial and local levels (Road Traffic Management Cooperation, 2016); the Road Traffic Infringement Agency (RTIA), which is responsible for facilitating the prosecution of road-traffic infringements (Road Traffic Infringement Agency, 2015), as well as the Road Accident Fund (RAF), which is an entity that provides a social security safety net to the country and economy by providing a compulsory social insurance cover to all road-users in South Africa, in the event of accidents (Road Accident Fund, 2015).

2.4.1 The policy and legislative framework

Many countries in sub-Saharan Africa can benchmark their road improvements and law enforcement processes on what South Africa is doing. To facilitate the road-transport processes, South Africa is also supported through a sound policy and legislative framework. The policies and legislation can be summarised as follows:

- The white paper on National transport policy: The White Paper on National Transport Policy that was published in 1998 and sets out the government's vision of providing a safe, reliable, effective, efficient, and fully integrated transport operations and infrastructure which will best meet the needs of freight and passenger customers at proving levels of service and cost in a fashion which supports government strategies for economic and social development whilst being environmentally and economically sustainable (Department of Transport, 2013:10).
- Moving strategy: Published in 1998, this strategy is intended to show the
 path on how the needs, objectives and priorities as postulated in the White
 Paper of 1997 can be realised (Marrian, 2001:2).

- The National Land Transport Transition Act (Act 22 of 2000): This law was enacted to respond to the challenges, weaknesses, inefficiencies and problems confronting the public transport industry in South Africa (South Africa, 2000). The key feature of the act is its requirement for municipal, provincial and national level of transport planning to be the basis on which all future public transport operating licenses are awarded. The Act gives cities the option to negotiate with existing public transport industry players and contract them to operate and facilitate an integrated public transport system.
- Public Transport Strategy and Action Plan (2007): This document was
 developed late in 2006 and early 2007 to complement the public transport
 strategy. Likewise, the Public Transport Strategy and Action Plan (2007) lays
 the foundation for the fast-tracking of the implementation of an Integrated
 Rapid Public Transport Networks (IRPTN), which gave birth to the BRT
 systems, the Taxi Recapitalisation Process and other road-transport related
 improvement programmes within South Africa (Pillay & Seedat, 2007:403).

2.4.2 Comparing road-transport in South African and South American cities

Unlike most countries in Africa, South Africa seems to have sound entities to manage road-transport infrastructure improvements. In addition to sound management entities, the country also has sound tools to regulate law enforcement in its road-transport. However, following the success associated with the implementation of public transport infrastructure improvements in South American cities of Bogota and Curitiba, an important question that needs to be asked is whether such models could be applicable for cities in South Africa. Similarly, critical to this study is also the question on how safety, security and the law enforcement role of the metropolitan police departments were dealt with. Table 2 below, therefore demonstrates comparisons between the South American and South African major cities that have succeeded in their implemented of the Bus Rapid Transport system.

Table 2: Comparison of Transport Perimeters

Transport Indicator	Curitiba	Bogota	Tshwane	Cape Town	Johannesburg
Population (million)	1. 6	4. 4	2. 3	2. 9	2. 8
Peak public transport	428 000	870 000	510 000	400 000	487 700
person trips (am 2hr	(taken as 20%				
peak)	of daily figure)				
Public transport vehicle	2 100	21 000	21 000	10 770	13 450
fleet					
Average public	0, 27	0. 14	0.14	0. 14	0. 17
transport trips per					
inhabitant (am 2hr					
peak)					

Source: Pienaar et al. (2005:374)

Although there is no indication of how cities in South America dealt with security issues, data in Table 2 above shows that South African cities are compatible with the South American cities in terms of public road-transport. On average, population numbers in all 5 cities in Table 2 are not vastly far apart. This implies that the population densities can be plotted based to social corridors to enable city police to plan better for safety and security in the transport infrastructure. Likewise, the numbers of vehicles in each of the cities seem to be proportionate to the population, which explains why the average of trips in each of the cities are not that far apart.

The similarities in Table 2 suggest that cities in South Africa could be professional enough and adopt the South American Model. To this end, cities in South Africa are supported by the White Paper on National Transport Policy of 1996 (South Africa, 1996b) and the 20-year Moving South Africa Strategy. These policy documents support the notion of borrowing from local and international best practices and accelerating initiatives to improve on public transport (Marrian, 2001:10; Walters, 2008:98; Department of Transport, 2013:10). For agencies such as the Tshwane

Metropolitan Police Department, the existence of such policy and legislation lays a strong foundation that regulate how staff operates in terms of responding to the challenges relating to ensuring safety and security within the road-transport system.

2.5 THE REGULATORY FRAMEWORK FOR POLICING IN SOUTH AFRICA

Policing in South Africa is also regulated in terms of the Constitution of the Republic of South Africa (Act 108 of 1996a). Section 205(1) of the constitution makes provision for the establishment of a police service at national, provincial, as well as at the local spheres of government (South Africa, 1996a). For this reason, agencies such as the TMPD are primarily responsible for policing at the local government level, in their areas of jurisdiction. This is the same level where the police are also responsible for ensuring safety and security within the road-transport infrastructure.

In terms of section 205(3) of the constitution, the powers of the police include: crime prevention, crime combating, the investigation of crime, maintaining public order, protecting and securing the inhabitants of the Republic and their property, as well as upholding and enforcing the law (South Africa, 1996a). These powers are also echoed in the South African Police Service Act (Act 68 of 1995), the Criminal Procedure Act (Act 51 of 1977), and the South African Police Service Amendment Act (Act 83 of 1998), which operationalises the powers conferred upon the police by the constitution (South Africa, 1995; South Africa, 1996a; South Africa, 1998). Of importance is that although the constitution seems to be conferring powers only to the South African Police Service (SAPS), the legislative framework in South Africa is as such that it enables the National Commissioner of the SAPS to also confer crime prevention and crowd management powers to the metropolitan police departments.

Another important consideration about policing in South Africa is that it is also regulated through political control and a civilian oversight capacity to ensure accountability. In terms of section 207 of the constitution, the President of the Republic is responsible for appointing the National Commissioner of the police (South Africa, 1996a). This implies that the President remains the commander-inchief of all police services and thus the Minister of Police is the political head who

reports to the President on matters of law enforcement. Likewise, section 208 of the constitution makes provision for the establishment of a civilian secretariat that reports to Parliament, to ensure accountability in police work (South Africa, 1996a).

2.5.1 Municipality police in South Africa

As already mentioned, municipal police service also form part of the broader police service in South Africa. This is the same category under which agencies such as the Ekurhuleni Metropolitan Police Department (EMPD), the Johannesburg Metropolitan Police Department (JMPD), the Durban City Police, the Cape Town City Police, as well as the Tshwane Metropolitan Police Department, fall under. To this day, the term 'municipal police' continue to have a negative undertone for many South Africans. This is because the term was linked with poorly trained police who used brutal tactics in black townships during the 1980s, to further the objectives of the apartheid regime (Rauch, Shaw & Louw, 2001:4). To this day, some police in democratic South Africa still show violent tendencies that are reminiscent of the apartheid (Marks & Flemming, 2004; Baker, 2008; DefenseWeb, 2010; eTV, 2012).

Other than the name, municipal police of old however have nothing in common with today's municipal police, otherwise known as the Metropolitan Police Departments (MPDs). The origins of the current municipal police or MPDs can be traced back to the traffic police departments, which were established at local government level in the 1930s (Rauch, Shaw & Louw, 2001:13). The purpose of establishing municipal police using a separate piece of legislation was to firmly ground their functions and jurisdiction at local government (South Africa, 1998) whilst the South African Police Service functions at the national, provincial and local spheres of government. To this effect, the South African Police Service Amendment Act (Act 83 of 1998) outlines the complex and lengthy process required for the establishment of municipal police departments (South Africa, 1998). According to Rauch *et al.* (2001:13), the statutory functions of a municipal police service include traffic policing, the policing of municipal by-laws and enforcement of city regulations, as well as crime prevention.

Traffic policing in particular is also regulated through the National Road Traffic Act (Act 93 of 1996c) also known as the NRTA (South Africa, 1996c). The NRTA sets out the different types of offences in road-transport, thus laying the foundation for how the road-transport infrastructure should be utilised, what the standard of the roadworthiness of vehicles using the road should be, what the speed limits on the roads should be and what the penalties are for any traffic transgressions (South Africa, 1996c), in order to ensure safety and security on South Africa's road system.

2.5.2 The challenges in policing the road-transport system in South Africa

One of the biggest challenges in the policing of road-transport in South Africa has to do with the legislative mandate of the municipal police or MPD's. A typical example of such a challenge is the fact that MPD's don't exactly have many investigative powers other than in road accident crashes where persons are not deceased. Rauch *et al.* (2001:2) pointed out that the MPD's are not permitted by law to conduct investigations. After making arrests, the MPD's hands over suspects to the SAPS who will conduct further investigations. The shortfall in South Africa's legislation thus undermines the role of MPD's and relegates them to some sort of a second-stream police service. This could have a negative impact on the morale of MPD personnel.

According to Rauch *et al.* (2001:3), the following are some of the additional challenges that inhibit effective policing in the Metropolitan Police Departments:

- The crime prevention mandate of the MPD's is not that clarified, particularly in relation to co-ordination with the SAPS;
- Fulfilling the enforcement and crime prevention activities weighs heavily of the mandate to metropolitan police services, with the results that little attention is paid to crime prevention;

- Training in crime prevention and enforcement of by-laws and legislation, other than traffic legislation in has not been prioritised;
- Transforming the organisational culture in MPD's from specialist enforcement such as traffic or planning enforcement, to a more generalist community policing approach has been problematic;
- Scarce finances also inhibit efforts to MPD's in some municipalities.

There is no doubt that the challenges in the MPD's also inhibit the capability to ensure safety and security in South Africa's road-transport. Likewise, the challenges imply that MPD's may not be able to meet public expectations in terms of combating crime in BRT buses and corridors in the cities. The Department of Transport has to this effect, made it clear that the BRT is crucial to the success of South Africa's transport system (Arrive Alive, 2016). Without an affordable and attractive road-transport, South Africa's economy will not prosper. Crime is thus one aspect that has to be kept in check, if South Africa is to maintain sustainable economic growth.

2.5.3 Road safety in South Africa

Crime is key challenge facing all municipal police managers. Likewise, criminal behaviour on the roads also compromises road safety in South Africa. A classic example of how criminal behaviour compromises road safety would be a person who drives under the influence of alcohol or recklessly. According to Seedat, Van Niekerk, Jewkes, Suffla and Ratele (2009:1015), drug and alcohol abuse is the leading cause of not only road accidents, but also triggers other violent crimes such as murder, rape, assaults, the abuse of women and children. These last mentioned authors also pointed out that in 1999-2000, 25 % of people arrested for weapon-related offences in Cape Town, Durban and Johannesburg were under the influence of alcohol. This is thus the same behaviour that also leads to fatal road accidents.

When accidents occur, they require police intervention and resources. In South Africa, driving recklessly and/or under the influence of alcohol or drugs is a criminal offence and will therefore solicit police intervention. To this effect, the South African Police Service Act (Act 68 of 1995), the South African Police Service Amendment Act (Act 83 of 1998), the National Road Traffic Act (Act 93 of 1996), as well as the Criminal Procedure Act (Act 51 of 1977), respectively outlines the powers of the police and effectively prescribes procedures to be followed in dealing with suspects (South Africa, 1977; South Africa, 1995; South Africa, 1996c; South Africa, 1998).

Indeed road accidents are the leading factor that compromises road safety in South Africa. According to the Road Traffic Management Corporation, 4500 people died on South Africa's roads in 2014 (eNews Channel Africa, 2015). Of concern is that the figure may have been much higher that what was reported, as the figures recorded only reflect fatalities from scenes of accidents. In reality, a lot more people die in hospitals days after the accident has occurred. For the police, the disconnection in the accident fatality figures reported mean that their intelligence becomes off pitch.

If South Africa is to ensure safety in its road-transport system, the country needs to optimise the implementation of its road-safety plans. In addition to alcohol and drugs, various sources (Africa News Network Channel, 2015; eNews Channel Africa, 2015; Seedat *et al.* 2009; SABC News, 2015) show that fatigue, speeding, impatient drivers, un-roadworthy vehicles and non-compliance with road rules, are some of the additional factors that lead to accidents and fatalities on the roads. In an interview with eNews Channel Africa (2015), the RTMC cited 14 fatal moves that are the leading causes of car crashes on South Africa's roads. The moves are as follows:

- Substance (alcohol and drugs) abuse and driving;
- Corruption, bribery, fraud;
- Aggressive driving;
- Overloading;

- Ignoring conditions;
- Ignoring pedestrians;
- Speeding;
- Reckless overtaking;
- Not wearing seat belt;
- Failing to stop or yield;
- Defective tyres;
- Un-roadworthy vehicles;
- Tiredness and sleepiness; as well as
- Destructions.

There is no doubt that a move such as corruption, bribery and fraud contributes to road crashes in that it also involves the illegal purchase of drivers licences, the buying-off of police officials to ignore un-roadworthy vehicles and other offences, and the buying-off of other criminal justice role players to avoid prosecution. In the same way, ignoring conditions such as rainy weather and destructions such as cell phone texting whilst driving also leads to crashes on the roads. Of concern is that the crashes not only warrants police intervention, but they also require of the Road Accident fund to make huge pay-outs to crash victims. The crashes also damage the road infrastructure, with repairs amounting to significant expenditure by government, thus off-setting against the benefits of the road-transport improvements.

2.6 CONCLUSION

South Africa is one of the well-resourced countries in Africa in terms of road-transport infrastructure. The country stands out as having world class roads and BRT systems, which are a key factor to stimulating economic growth. Likewise, South Africa also has sound regulatory tools to effectively police its road-transport infrastructure. Key to the issue in this study is that South Africa needs to embrace lessons in terms of road-transport improvements and the implications thereof on the role of police, from other economies that have proved to be successful in this area. In addition, South Africa also has to learn from economies that have failed in their road-transport, including the related law enforcement roles. South Africa thus needs to interrogate the intricacies relating to road-transport improvements and how these affect the work of the police. To achieve this really requires contextualised research.

3.1 INTRODUCTION

Research requires appropriate planning, structuring and reporting on all of the investigations conducted. To comply with these last mentioned aspects, the discussion in this chapter focuses on the adopted research approach and design, and on the validation for the selection thereof. The methods used to collect and preserve the data, as well as to ensure that the integrity of the data remains intact, are also explained in this chapter. To this effect, concepts such as trustworthiness, consistency, dependability, confirmability, transferability and applicability were applied to test for rigor in the collected data (Krefting, 1991:3; Mason, 2002:89; Miller & Brewer, 2003:126; van As & van Schalkwyk, 2004:63). The test for rigor in the data was likewise applied to ensure that the research remained impartial and valid.

Good research indeed aims to be impartial, sound and honest (Brynard & Hanekom, 1997:28). The aim in this research is likewise to explore the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. To make sense out of the collected data, the researcher in this study used empirical techniques that are qualitative. In this context, empirical refers to the drawing of conclusions using facts from information that is based on people's experiences (Miller & Brewer 2003:91; Kumar 2005:8; Maxfield & Babbie 2008:6). The empirical feature in this study was mostly visible during the interviewing phase of the research.

The research in this study was in fact prompted by the question: What are the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department? Krippendorff (2004:32) argues that research that is motivated by a question moves quickly from sampling to finding answers. In the quest to find answers to the posed question, the researcher chose participants using specific sampling techniques, but also took steps to ensure their safety. Thus, the sampling and data analysis techniques used, as well as the research ethics are also discussed in this chapter. The chapter also discusses limitations in this research, as well as the paradigmatic perspectives behind the selected methods and techniques.

3.2 RESEARCH METHODOLOGY

Research involves the search for knowledge and understanding phenomena (Brynard & Hanekom, 1997:1). In the search for scientific knowledge, researchers usually adopt specific theories, sometimes referred to as worldviews, philosophies or paradigms. These theories are known as the research methodology. Research methodology is different from research methods. Research methods can be defined as a set of rules and procedures that are used to guide the systematic gathering of data in order to facilitate the evaluation, acceptance, rejection and replication of the research findings (Miller & Brewer, 2003:192; Krippendorff ,2004:18; Hofstee, 2006:107; Roux & Barry, 2009:2). Research methods on the other hand refer to the sampling, as well as the data collection and analysis techniques (Hofstee, 2006:17).

Research methods are crucial as they explain how the research came to a specific conclusion, whilst research methodology provides theoretical grounding in a particular research. The two most common research methodologies are qualitative research which follows anti-positivism and quantitative research, which follows the positivist school of thought (Welman & Kruger, 2001:7). Likewise, the methods in qualitative research include observations and interviews, whilst quantitative research uses questionnaires, tests and experiments as methods (Welman & Kruger, 2001).

Positivism can be defined as a study of observable things (Welman & Kruger, 2001:7). Positivists will thus study the relationship between variable through measurement. Anti-positivism on the other hand tries to understand phenomena by draw from the experiences of people involved with what is being studied (Welman & Kruger, 2001:7). Positivism thus subscribes to the logic of generalisations. Generalisations refer to the making of inferences for the purpose of developing concepts and theories, so that data can be applied empirically to a wider population (Babbie 1995:302; Mason 2002:36; Miller & Brewer 2003:126; Flick *et al.* 2004:150). Anti-positivism (qualitative research) on the other hand follows the logic of contextualisation and is intended to attain transferability and not generalisability (Hallway & Jefferson, 2000:122; White & Marsh, 2006:36; Srnka & Koeszegi, 2007:34). This next section thus discusses the research methodology in this study.

3.2.1 Research approach and design

The implication of road-transport improvements on the role of the Tshwane Metropolitan Police Department (TMPD) is a critical issue that also has an impact on the level and quality of safety and security within the community. Such issue is complex and requires being studied using an appropriate research approach. The intricacy linked with a social event such as the implication of road-transport improvements on the role of police has always entailed that researchers should gather data using in-depth investigations. Such data could only be sourced from persons who are directly involved with the phenomenon being studied. To achieve this goal, a qualitative research approach was adopted. Qualitative research is flexible and produces rich and descriptive data from people's own experiences (Brynard & Hanekom 1997:29; Hoepfl 1997:49; Ruane 2005:12; Babbie, 1995:24).

The qualitative research approach adopted in this study also required an appropriate research design to facilitate the investigations. Research follows a path in which the approach used determines the empirical methods to be used and thus the research designs to be applied. A research design is a set of guidelines used to investigate a particular research problem (Marshall & Rossman 1989:54; Mouton 1996:107; Denzin & Lincoln 2003:36). Thus, a research design is a plan that connect theoretical paradigm to the inquiry strategies and empirical material collection methods to address a research problem (Denzin & Lincoln, 1994:14; Mouton, 1996:107). The research design of choice in this study is case study research. A case study is a qualitative strategy that is used to gather and arrange rich, descriptive and contextual data on a particular person, institution or small group of people (Thompson, 1995:202; Babbie & Mouton, 2001:280; Anonymous, 2012).

By virtue of studying the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department, this study embarked on a single case study research design. According to Babbie and Mouton (2001:280), a single case study is a research design or an investigative plan that is capable of producing valid scientific results. Therefore, a single case study design can be defined as an

in-depth enquiry into a single unit (Runyan, 1982 & Yin, 1994 in Babbie & Mouton 2001:281) as is the case with the Tshwane Metropolitan Police Department, whose role with regard to the improvements in road-transport, was studied as a single unit.

3.2.2 The value of the qualitative research approach

A qualitative approach was espoused in this research because according to Mason's (2002:1), qualitative research enables explorations on an array of dimensions. Similarly, the data unearthed in this research facilitated the identification of service delivery bottlenecks caused by an array of dynamics in road-transport improvements, which factored on the role of the TMPD. Up until the research in this study, such dynamics in the South African context remained relatively unexplored. The findings in this research thus revealed some of the complex interactions between road-transport improvements and the role of city police in Tshwane. This research is however not in any way making a claim that all of the issues relating to such interactions may have been explored, as the scope would be far beyond its confines. In fact, such exposition would require more extensive research to cover.

What is important in this study is that the research exposed some of the road-transport improvements dynamics that have otherwise inhibited the effectiveness of law enforcement. To this end, the researcher selected qualitative research because it is flexible enough to facilitate the adoption of different methods and techniques that take the human element into account. Whilst many scholars (Bryman, 1984:78; Mouton 1996:5; Brynard & Hanekom 1997:29; Hoepfl 1997:48) agree that a qualitative research approach is flexible, they have also pointed out that it also facilitates the understanding of social events. This could not have been attained using quantitative methods that fail to account for what people have experienced first-hand in their natural environment, and therefore lacks the required human touch.

This study also used qualitative research because the approach is interpretive and descriptive in nature (Creswell, 1994:110). These last mentioned elements became useful when the researcher had to make sense of the different explanations and experiences of police officials whose work is affected by the improvements in road-transport within the City of Tshwane. Thus, the aim in using qualitative research was not to attain generalisations but to contextualise to a single case being the Tshwane Metropolitan Police Department. Various scholars (Hallway & Jefferson, 2000:122; White & Marsh, 2006:36; Srnka & Koeszegi, 2007:34) agree that the object in qualitative research is to attain transferability and not generalisability. This means that qualitative findings can be transferred to similar cases, in this context to other metropolitan policing sections that are also affected by road-transport improvements.

In as much as a qualitative approach was chosen because of the benefits offered, the approach also has some shortfalls. In order to determine what the confines are and to identify any probable flaws, research needs to report on the limitations (Creswell, 1994:110). The limitations linked with the qualitative approach thus need to be highlighted, in order to determine exclusions from the research, as well as to allay any fears and to scientifically qualify the research. One of the challenges that can be linked with the qualitative research approach is that the findings thereof are open to a selection of interpretations and are highly subjective (Creswell, 1994:110).

3.2.3 Paradigmatic perspective

The subjectivity linked with qualitative research is however what distinguishes the approach from quantitative research. In fact, subjectivity is the core logic in qualitative research (Creswell, 2009:4). Each research approach comes from a particular paradigmatic perspective or philosophical worldview that underpins its basic principles. While philosophical worldviews in research generally remain hidden, they still need to be uncovered. This serves to clarify the foundation for the adoption of the research approach, design, as well as the methods and techniques used (Roux & Barry, 2009:1; Creswell, 2009:5; Spector, Merrill, Merrienboer & Driscoll, 2008:56). Similarly, the paradigmatic perspective adopted in this study is

phenomenology. According to Husserl (1913:1), phenomenology is a worldview that does not deny the existence of the real world, but only seeks to describe its essence. Thus, for scientific knowledge to translate into meaningful facts about particular events within the social setting, it needs to have strong phenomenological grounding.

3.2.4 The phenomenology worldview

Reason and Bradbury (2001:448) argues that a critical principle in social research is that knowledge must be grounded in people's experiences and the connection between the aim of the research, as well as the research methods and techniques used. The implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department could thus be best portrayed by drawing from the experiences of police personnel that work for the institution, which is the phenomenon being studied. This implies that phenomenology follows the naturalist school of thought and does not subscribe to positivism for philosophical grounding.

The basic principles of phenomenology can be found in the post-empiricist climate of the 1960s and social meanings assumptions (Welman & Kruger, 2001:7; Miller & Brewer, 2003:227; Roux & Barry, 2009:4). This attests to the fact that phenomenology is an anti-positivist and natural scientific method that studies people's perceptions, cognitions, interpretations and beliefs regarding their immediate social setting. Phenomenologists are thus the types of qualitative researchers who go into natural settings and study the views of the research participants, in order to make sense of the social world (Mouton, 1996:168; Brynard & Hanekom, 1997:29; De Vos, 1998:240; Welman & Kruger, 2001:181; Creswell, 2009:8). Likewise, the researcher in this study also had to engage with research participants in their own settings, in order to explore their experiences on how the improvements in road-transport may have impacted on their role as police officials.

3.2.5 The social constructivist worldview

This research also adopted social constructivism as a worldview. The methodological underpinnings in constructivism suggest that interactions between the researcher, the research participants and the themes, form an important part of the sociological enterprise (Miller & Brewer, 2003:41). The implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department could thus be best studied using social constructivism as a second philosophy. According to White and Marsh (2006:38), qualitative researchers seek to locate research findings in within relatable theoretical paradigms. Like the qualitative research paradigm that was adopted in this research, social constructivism is also naturalistic, subjective and interpretive in nature (Mouton, 1996:46; Brynard & Hanekom, 1997:29; Creswell, 2009:8). Social constructivists thus endeavour to acquire data by searching for the multiple realities relating to the phenomenon being studied (Flick *et al.* 2000:5; Mason 2002:88; Roux & Barry 2009:3), in this case, the implications of the road-transport improvements on the functions of the TMPD.

3.2.6 Theoretical triangulation

The adoption of phenomenology and social constructivism as the philosophical worldviews in this research enabled the researcher to investigate the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. The adoption thus enabled the study to draw from two theoretical points of reference and to attain theoretical triangulation. Theoretical triangulation refers to the use of more than one theory or philosophy in order to increase the potency of the research approach (Miller & Brewer, 2003:327). The adoption of both social constructivism and phenomenology also known as the constructivist phenomenology worldview was done to also ground this research epistemologically.

3.3 RESEARCH METHODS

Social research indeed has to do with the search for knowledge and understanding of social phenomena (Brynard & Hanekom, 1997:1). In the search for knowledge, researchers usually adopt specific methods for sampling, data collection and analysing the information collected from the research participants and other sources. Research methods are thus important as they point out part of the process followed to arrive at a specific conclusion. For qualitative research in particular, the most common methods used include observations, individual and focused group interviews. Research methods can be defined as a set of rules and procedures which are employed systematically direct the gathering of information (Miller & Brewer, 2003:192; Krippendorff, 2004:18; Hofstee, 2006:107; Roux & Barry, 2009:2). Research methods can thus be used to evaluate, accept and to reject the research. This next section thus outlines all the methods and techniques used in this research.

3.3.1 Population and sampling methods

The population in this research is police personnel who work for the Tshwane Metropolitan Police Department. A population can be defined as objects, events, phenomena, activities or cases that are being studied for the purpose of establishing new facts about certain practices or events (Brynard & Hanekom, 1997:43; Welman & Kruger, 2001:46). In order to access relevant data, research participants are usually drawn from a bigger group or population into smaller groups known as samples, this in order to limit explanations to manageable divisions (Creswell, 1994:120; Babbie, 1995:188; Miller & Brewer, 2003:128; Krippendorff, 2004:84). A sample can thus be defined as a small subset that is from and is similar to the population (Kidder & Judd, 1987:35; Brynard & Hanekom, 1997:43; Welman & Kruger, 2001:46; Trochim, 2006). In this research, random and purposive sampling techniques were used to obtain information from the selected research participants.

3.3.2 Random Sampling

This research used the random sampling technique to select subordinate operational police personnel who patrol and ensure safety and security in the road-transport system within the confines of the City of Tshwane policing precinct. The 12 random samples were selected as the researcher wanted to interview people with high positions and ranks within the TMPD. Random sampling can be defined as a systematic process wherein each participant has an equal chance of being selected (Creswell, 1994:126; Babbie, 1995:188; Welman & Kruger, 2001:47; Flick, von Kadorff & Steinke, 2004:168). The random sample comprised of 12 research participants, 3 from each of the regions in the Tshwane policing precinct.

3.3.3 Purposive Sampling

The other participants in this research were selected using a purposive sampling technique. The purposive sample comprised of managers of the group selected in the random sample. The research participants in the purposive sample were selected because they have more experience and more consolidated knowledge in the form of reports on incidences relating to road-transport and how the improvements thereof impact on the role of their subordinates. According to Babbie (1995:287), purposive sampling is used to generate a greater understanding of the phenomenon being studied. Purposive sampling can thus be defined as a non-probability technique that is applied to deliberately decide on which research participants or units of analysis to select (Babbie 1995:225; Maxwell, 1997:87; Ritchie, Lewis & Elam, 2003:79; Teddlie & Yu, 2007:77). The purposive sample also in consisted in 8 research participants, 2 from each of the four Tshwane regions.

3.3.4 The Tshwane metropolitan policing precinct

The City of Tshwane includes Pretoria, Centurion, Winterveld and Temba. These areas cover a number of many other small suburbs (affluent neighbourhoods) and townships (less affluent and mainly Black neighbourhoods). The areas in Tshwane

thus consist in both poor and rich neighbourhoods, which signify the inequality in South Africa. Road-transport improvements have been effected in and around all the areas in the Tshwane municipality, this as part of the provincial and national infrastructure development and as a move to stimulate economic activity. All the four major areas in the metropolis fall under the jurisdiction of the Tshwane Metropolitan Police Department. Thus, research in this study was conducted in all of the areas.

3.3.5 Methods of data collection

Data collection in qualitative research is systematic, with well-structured plans and clearly defined stages that have clear rules to be followed (Smka & Koeszegi, 2007:38). According to Marsh (2006:38), qualitative researchers usually collect data on a solitary research question by using a number of information sources. This last named author further argues that such researchers do this with an understanding that the type of findings that can be generated using multiple sources can be easily transferable. In collecting data, this study used interviews as a primary data collection technique and literature review as a secondary data collection tool. Of importance is that both interviews and the literature review are appropriate techniques that can be used to collect data in qualitative research. Various scholars (Babbie 1995:268; Mason 2002:62; Miller & Brewer 2003:167) agree that techniques such as interviews and a literature review are effective when jointly used in qualitative research. Similarly, Mouton (1996:38) alerts researchers as to the importance of using data collection methods that are appropriate to the task at hand.

3.3.6 Methodological triangulation

By using interviews and a literature review, this research triangulated. The type of triangulation attained is methodological triangulation. Methodological triangulation refers to the use of more than one method to collect data (Creswell, 1994:174; Miller & Brewer, 2003:328; Bryman, 2007:2). Miller and Brewer (2003:327) agree that using different research methods augments the strengths of the techniques used in qualitative research. Thus, data on the implications of the road-transport

improvements on the role of the TMPD could best be accessed using one-on-one interviews, focus group interviews and a literature review as the most appropriate methods. All interviews conducted used the semi-structured interviewing approach.

3.3.7 Semi-Structured Interviews

As already mentioned, the type of interviews used to collect the data that informed the research in this study followed a semi-structured technique. Semi-structured interviews can be defined as flexible dialogue that uses guides to collect data from the research participants (Jarratt, 1996:14; Mouton, 1996:36; Welman & Kruger, 2001:161; Lewis-Beck, Bryman & Liao, 2004:10). According to Miller and Brewer (2003:167), semi-structured interviews are useful in obtaining in-depth data because they allow research participants to build their own responses to the questions. This means that semi-structured interviews enable the participants to provide answers about their experiences of in the settings, in a free and in a less pressured mood.

Interviews are useful in the collection of empirical data. The empirical data that was collected in this research pertains to explorations on the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. The interviews in this research thus produced good results as they solicited quality answers from the research participants. The quality of answers thus contributed towards an element of credibility in the research. According to Montesh (2007:37), interviews are a reliable and effective tool for primary data collection during research.

In this study, using semi-structured interviews in particular enabled the researcher to form trust-based relations with the research participants. Such relations were critical in ensuring that all research participants agreed to and honoured the appointments for the interviews, as well as provide honest answers during the interviews. Although the issue of honest answers may be something difficult to ascertain at any given point, the fact that all the information provided can be cross-referenced and was corroborated throughout the interviews to a point of saturation, attest to the honesty. To further elaborate, all research participants responded to similar basic questions according to the sample category and the interview schedule used is attached hereto

(Annexure A). The only deviation in the questions was in the probing questions that followed the answers. This is because each participant answered in their own way.

Not all of the research participants who were selected in both the random and purposive sample were interviewed. This is because interviews were conducted until the data reached a point of saturation. Guest, Bunce and Johnson (2006:60) agree that interview should be conducted to a point of saturation. These last named authors further argue that saturation has no clear guideline. The guideline for saturation in this study was determined by the fact that no new information was forthcoming from the answers provided by the research participants. The answers provided by the participants were only confirming those given before by other participants who were interviewed before. As a result, only 5 research participants were interviewed in the purposive sample and only 10 in the random sample. Not all participants were interviewed in both samples because the data became saturated.

3.3.8 Focus group interviews

Of the 10 research participants interviewed in the random sample, 6 were interviewed in a focus group. A focus group involves organised discussion with a selected group of individuals to obtain data about their views and experiences of a topic (Gibbs, 1997) in this case, the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. A focus group can thus be defined as a small-group discussion guided by a researcher (Community Tool Box, 2015). According to the Marketing Research Association (2016), a focus group is a qualitative research data collection technique that involves a small group of people (6-10) that share a common set of characteristics (demographics, attitudes, etc), who participate in a discussion on a predetermined topic led by the researcher.

The common characteristic in the context of this research was that the research participants were all TMPD personnel that are faced up with policing the road-transport system in the City of Tshwane, on a daily basis. The researcher thus used the semi-structured interviewing approach in the focus group, in order to obtain the different perspectives about the subject under investigation. Gibbs (1997) agrees

that focus group interviewing is particularly suited for obtaining several perspectives about the topic being investigated. The purpose of the focus group was thus not only to solicit opinions about the phenomenon being studied but to also guide future action (Community Tool Box, 2015). In this context, recommendations for future action on how the Tshwane Metropolitan Police Department can deal with the road-transport improvement-related challenges are outlined in detail in the next chapter.

3.3.9 Limitations of the interviews

Despite the successes, data collection proved to be challenging. During the interviews, the managerial positions held by some of the research participants who were selected in the purposive sample became problematic. This was because there were occasional disruptions. At times, the research participants because of their managerial positions had to excuse themselves in the middle of the interview, to respond to either administrative or operational requirements or cell phone calls from their subordinate or superiors. This led to some of the interviews being delayed, which was costly in terms of time, even though the events did not derail the purpose. All research participants in the purposive sample were thus interviewed individually.

About 4 of the research participants who were selected in the random sample were also interviewed individually. Some of these participants did not trust enough and therefore provided answers which were safe enough not to get them into trouble with their superiors, which led to less descriptive data being provided. According to Matlala (2012:110), "the police generally have a tendency of being mistrustful of persons from outside of their domain". Various scholars (Cochran & Bromley, 2003:90; Paoline, 2003:202; Brown, 2007:211; Gottschalk & Gudmunsen, 2009:170) have indeed confirmed that police officials are forever cynical, secretive and highly suspicious of all outsiders. Despite the challenges, the interviews conducted in this study however yielded positive results. This is because the interviews enabled the research to obtain in-depth descriptions relating to experiences on the phenomenon being studied, whilst at the same time, also allowing the participants to individually build their unique responses to the questions asked (Miller & Brewer (2003:167).

3.3.10 Researcher limitations

In the same way that the limitations of the research have to be reported in an honest fashion, so should the researcher's limitations. Reporting on the researcher's limitations could indicate errors that may have occurred during the interpretation of the data. Such errors may have been caused by the fact that the researcher has no practical experience of policing and is not familiar with any of the dynamics that factor between road-transport improvements and law enforcement. It is possible that this kind of limitation may have subjected the research findings to some biases. In this context, the researcher's knowledge of the subject being researched is solely based on information from the interviews and the literature review in this same study.

3.3.11 Literature review

As previously indicated, literature review was used as a secondary data collection tool in this research. The purpose was to provide context to the research problem. Various scholars (Marshall & Brossman, 1989:34; Brynard & Hanekom, 1997:31; Hofstee, 2006:91; Montesh, 2007:33) agree that the purpose of a literature review is to inform researchers on what the current train of thought is on a particular subject. The literature sources used in this research broadened the researcher's understanding on what the implications of the improvements on road-transport are, on the role of the Tshwane Metropolitan Police Department. Likewise, literature enabled the researcher to make comparisons between South Africa's road-transport and other developing economies whose improvement in road-transport are hailed as among the best around the world, including the relating law enforcement initiatives.

According to Creswell (1994:21), qualitative researchers use literature inductively and in line with the methodological assumptions in the research. As the logic in qualitative research, inductive processes enable the making of inferences (Bryman, 1984:82; Welman & Kruger, 2001:180; Mason, 2002:2). This is why White and Marsh (2006:27) emphasise that inductive inferences enables movement from analysing text to answering research questions. By examining national and

international literature on road-transport and on policing, the researcher was able to understand the relating convergence points. Thus, doing a literature review not only clarifies the key dimensions of the phenomenon being studied (Jarratt, 1996:13), but also facilitates conclusions on a specific research problem (Hoefstee, 2006:106).

Arriving at a conclusion regarding a specific research problem requires among other things that the researcher should thoroughly analyse literature. Law enforcement issues in particular should be subjected to more rigorous analysis, to prevent crime and to identify and solve the related problems (Leigh, Read & Tilley, 1996:2; Scott, 2000:1; Braga, 2002:1). For the purpose of this study, analysis is also important in identifying and solving the safety and security problems in the road-transport system. This next section deals with issues on how the data in this research were analysed.

3.3.12 Data analysis

Data analysis depends on obtaining large data that need to be interpreted (Creswell, 1994:153; Welman & Kruger, 2001:183; van As & van Schalkwyk, 2004:167). Some of the methods used to analyse data in qualitative research include analysing text, visuals or speech. Text refers to narratives of findings on the phenomenon being studied (Krippendorff, 2004:24; Hofstee, 2006:117; White & Marsh, 2006:36), in this case the implications of road-transport improvements on the role of the Tshwane Metropolitan Police Department. Thus, text includes the interview scripts that were transcribed for the purpose of analysing the data, in order to produce rich descriptions. Miles and Huberman (1994:153) agree that qualitative data does produce rich descriptions and explanations on the phenomenon being studied.

Qualitative data analysis is eclectic and there is no right way of analysing the findings but the goal is to obtain large consolidated data (Creswell, 1994:153). Miles and Huberman (1994:1) argued that qualitative data is a source of well-grounded rich descriptions and explanations of processes. In synthesising the descriptions and explanations, Creswell (1994:153) maintains that the researcher must make comparisons and contrasts when conducting qualitative data analysis and be open to

possibilities and alternative explanations for the findings as well as collect and interpret data, and write the research report simultaneously. In this study, the analysis was thus also done simultaneously with data collection and interpretation.

Post the collection phase, data needs to be analysed so that it is transformed into meaningful facts. This is done to provide answers to the research question. Various sources (Creswell 1994:153; Welman & Kruger 2001:183; van As & van Schalkwyk 2004:167) have pointed out that data analysis is dependent on obtaining large and consolidated amounts of data that need to be interpreted. In this research the data was as already stated, sourced using interviews and literature review. To process the data, this research employed a technique known as phenomenographic analysis.

3.3.13 Phenomenographic analysis

Phenomenography is a fairly new qualitative data analysis method. The method was developed in the mid to late 1970s and has its origins from Sweden at the University of Gothenburg (Atlasti.com, 2016). The focus in phenomenographic analysis is on the experience of a phenomenon with the aim to investigate the differing ways in which people experience, perceive, apprehend, understand, and conceptualise various phenomena (Walsh, 2000:19). A phenomenographic analysis technique thus seeks a description, analysis and understanding of people's lived experiences (Atlasti.com, 2016). According to Walsh (2000:19), the different experiences which emerge from the data are sorted into categories of description. Categorisation refers to the allocation of texts to predefined categories based on their content (Creswell, 1994:154; Babbie, 1995:312; Lewis, Yang, Rose & Li, 2004:362). In this research, the categories of descriptions are in accordance with the research objectives. The objectives are outlined in detail in the form of research findings, in the next chapter.

3.4 DATA INTEGRITY

All data collected to inform research needs to be tested for rigor. This is done to determine and ensure the integrity of the data. The one way to achieve this is by testing for validity and reliability in the data. Validity and reliability are however used to test for rigor in quantitative research. Qualitative data can be tested for rigor using constructs such as trustworthiness and authenticity (van As & van Schalkwyk, 2004:63). Qualitative researchers therefore apply trustworthiness, consistency, neutrality, dependability, confirmability, transferability and applicability to test for rigor in the data (Krefting, 1991:3; Mason, 2002:89; van As & van Schalkwyk, 2004:63). This was the same criterion that was used to ensure data integrity in this research.

3.4.1 Credibility

Credibility is comparable to internal validity in quantitative research. This construct is used to establish honesty and value in qualitative research. The criteria for credibility thus involve long and mixed field experiences, reflexivity, member-checking, triangulation and peer review (Krefting, 1991:8; Key, 1997; Creswell & Miller, 2000:127). By spending more time in the field whilst collecting data, interacting with different research participants, checking with participants if the data provided has not been misrepresented, this study was able to ensure that the research stays credible. Also, the methodological triangulation using more than one data collection method and the peer review by the supervisor and the different examiners, further attest to the credibility element built into the research in this study.

3.4.2 Dependability

Dependability equates to external validity in quantitative research. This construct is applied to establish consistency in qualitative research. The criteria used to determine dependability also involves reviews and intense descriptions (Krefting, 1991:8; Key, 1997; Creswell & Miller, 2000:127). To attain dependability, this study

obtained in-depth descriptions on the implications of the improvements in road-transport, on the role of police. The descriptions in this study were drawn from the different views and experiences of police personnel working for the Tshwane Metropolitan Police Department. In further compliance with dependability, some of the insights drawn from the participants were corroborated by data from literature.

3.4.3 Confirmability

Confirmability is the equivalent of internal reliability in quantitative research. This concept is used to attain neutrality in qualitative research. Although various authors such as Krefting (1991:8), Key (1997), as well as Creswell and Miller (2000:127) may have argued that qualitative research is subjective, the same authors have also pointed out that there is truth to inferences made in qualitative research. In this research, confirmability was attained through peer review and triangulation of the sources used in the literature review. Reporting on the different limitations in this research facilitated neutrality and thus an element of confirmability in the research.

3.4.4 Transferability

Transferability equates to reliability in quantitative research. The construct used to establish applicability in qualitative research. The criteria for transferability speak directly to sampling procedures used and obtaining in-depth descriptions (Krefting, 1991:8; Key, 1997; Creswell & Miller, 2000:127). In this research, the random and purposive sampling techniques were used to source participants. The participant offered in-depth descriptions on the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police department. This implies that the research methods used enabled the study to attain transferability as the in-depth descriptions are in line with the logic in the adopted qualitative research paradigm.

3.5 QUALITY ASSURANCE

For research to maintain high standards of credibility, the report should explain how issues of quality were dealt with. Quality assurance thus refers to measures taken to ensure the degree to which the project complied with standards in social research (Matlala, 2012:111). According to Kotler and Keller (2006:146), quality refers to the sum of features that bear a product's ability to satisfy the implied or stated needs. In this context, the product is this same research report. All of the features that characterise the quality aspect in this research are outlined in this next discussion.

3.5.1 Recording and storage of data

Quality assurance in research also includes the creation of multiple procedures that are used to record all of the information that was collected to inform the research (Creswell, 1994:148). In this research, a digital recorder was used to capture all interviews. The information was labeled and then safely stored on a CD-ROM. This was the same information that was later transcribed, which transcripts were used during the data analysis process. All material relating to research thus needs to be kept safe. According to Richards and Morse (2013:142), managing qualitative data involves the creation of records (Richards & Morse, 2013:142). Implied is that recording is an important part of managing data. Likewise, data collected in this study was also stored onto a computer program and in an external hard-drive. The data collected in this research was stored so that other researchers, who may seek to replicate the research in this study, may in future be free to access all the material.

3.5.2 Pilot study

As another measure to ensure quality, a pilot study was done in order to assess the phrasing and suitability of the questions contained in the interview schedule. This process was done before the actual study commenced. The process was conducted to ensure that quality questions were asked, in order to solicit appropriate answers

3.5.3 Editing the Research

Editing in this report was done by the study supervisor at the university for content and for technical prowess. This report was similarly edited for language and grammar by a privately hired expert. Annexure B is attached hereto, as testimony.

3.6 ETHICAL CONSIDERATIONS

Welman and Kruger (2001:171) argued that ethical considerations come into play when research participants are recruited, during the intervention or data collection and analysis, as well as during the release of the results or research findings. Thus, a key aspect in social research has to do with upholding the code of ethics. Even though there is no agreement on what really constitutes ethics in social research, various scholars (Babbie, 1995:448; Mouton, 1996:10; May, 2001:59) have equated ethics to conduct that constitute appropriate moral behaviour and acting in the best interests of the research participants. This means that an important aspect in upholding research ethics is to always defend the safety of the research participants. According to Terre Blanche, Durheim and Painter (2006:63), there is an evolving emphasis on ethics in social science research and ongoing assessment of related processes. Therefore, research that is exempted from reviews could lose credibility.

3.6.1 Unethical Research

Research that is exempt from reviews is in fact unethical. Unethical research has its history in some bad practices in Europe, the most horrific of those being the atrocities by German Nazi researchers during World War II, who used human beings for experimentation (Terre Blanche *et al.* 2006:61). The prevention of such practices in social science research thus necessitated ethical reviews. According to Hofstee (2006:118), reporting on ethical procedures is important as the process also outlines how the research complied with institutional protocols. This research was conducted in line with the University of South Africa's Policy on Research Ethics (2007). The reporting was honest and none of the research participants were ever

exposed to any harm. In addition, permission was duly sought from management of the Tshwane Metropolitan Police Department, to conduct the research. Also, Annexure C is attached hereto, as proof that permission to do research was granted.

3.6.2 Respect for privacy

There is no doubt that scientific research is a dynamic process that sometimes entails the invasion of the research participant's privacies. In fact, violation of privacy even by researchers can be subject to litigation or prosecution, depending on the laws of the country where the violation may have occurred. For example, in South Africa, the constitution protects the right of every person to privacy (South Africa, 1996). Thus, any violation relating thereto may be subject to prosecution in a competent court. The one issue with research ethics and the right to privacy however is the possibility of researchers manipulating the very legal systems that were intended to protect individuals, by claiming the right of access to information. To ensure good ethical behaviour, researchers should always respect individual privacies and adopt a more humane approach rather than invoking legalities in accessing information or in dealing with research participants. Various scholars (Babbie, 1995:448; Miller & Brewer, 2003:95; Flick, Kardorff & Steinke, 2004:334; Terre Blanche et al. 2006:62) agree that good and ethical conduct is critical when conducting research. Likewise, no research participant was made to disclose personal or sensitive data, with the result that all data sourced was through consent.

3.6.3 Informed Consent

Informed consent is a key consideration when selecting individuals as participants in research Miller and Brewer (2003:96) argue that researchers should give clear information prior to the research, to ensure that participants understand what the research entails. Informed consent thus talks to the situation where researchers have to inform prospective participants about what the research entail (David & Sutton, 2004:18). In this research, all participants were informed prior as to what the

research is all about. The information was put in writing and the researcher verbally clarified some of the details prior to conducting interviews. To attest to this last claim, all participants signed a consent form which is attached as Annexure D.

3.6.4 Voluntary Consent

According to Miller and Brewer (2003:96), voluntary consent is a key principle in social research that suggests that participation in research should be by choice. To this effect, all participants in this research were advised of the right to withdraw their participation at any given point and without even having to explain themselves. The details of such information are likewise contained in Annexure D, attached hereto.

3.6.5 Anonymity and Confidentiality

According to Miller and Brewer (2003:97), anonymity and confidentiality are important ethical considerations in research. In this study, the identities of the participants and details of interviews have been hidden and only known to the researcher. The interviews conducted in this study are only referred to by the interview number and accompanying letters that only indicate whether the interview was from the purposive or random sample. The notation for the referencing of the interviews done to inform the research in this study is discussed in the next chapter.

3.6.6 No Harm to Participants

Miller and Brewer (2003:97) further argue that social researchers should never allow physical or mental harm to befall any of the research participants. During the interviews in this research, the researcher ensured that no psychological harm befalls any participants. This is because the interviews were all concluded in a reasonable space of time and were never prolonged to a point of inflicting psychological torture on the participants. Likewise, all participants were interviewed in the safety of their offices and the research disclosed her contact details to all participants, so that they can follow-up on their participation and the research results.

3.6.7 The Academic Community

Unethical research is not only harmful to the research participants, but is also damaging to the reputation of the person conducting the research, as well as to the entire academic or scientific community. Thus, professional courtesy requires that researchers should conduct research in a manner that also protects the integrity of the research fraternity. According to Miller and Brewer (2003:98), the following are the professional guidelines that researchers should adhere to, comply with ethics:

- Research should reveal shortcomings: The honest reporting on the limitations in this chapter attested to ethical way in which this research was conducted. The discussions in this chapter furthermore reported on both the researcher shortcomings and other technical limitations in the research itself.
- Honest Reporting: In this research, all data (literature sources and interview transcripts) were never misrepresented. The fact that the researcher provided contact details to the research participants and that a copy of the research report was made public thus attests to the transparency and honest reporting.
- Personal Bias: In engaging with the data in this research, the researcher refrained from unfairly criticising other researchers based on personal bias.
 Likewise, the researcher in this study also reported freely on her own biases.
- Plagiarism: All sources consulted in this study were either paraphrased or had inferences inductively drawn from them. Likewise, all sources used were duly acknowledged in the in-text referencing. In addition, a declaration of authenticity was signed in this report, to confirm the originality of this report.

The ethical guidelines relating to the academic community that have been outlined in this chapter are also in line with the University of South Africa's Policy on Research Ethics. This policy forbids plagiarism, falsifications and piracies, whilst promoting consent, protection of privacy, anonymity and confidentiality (University of South Africa, 2007:4). The purpose of ethics in social research is thus to protect the professional integrity of researchers, their work, the academic community, and to protect the research participants from harmful practices (Miller & Brewer, 2003:99). Likewise, universities should also provide ethical clearance for academic research (University of South Africa, 2007:4). In this context, ethical clearance (attached hereto as Annexure E) was issued to the researcher by the University of South Africa, were the researcher (Student) is conducting research academic purposes.

3.7 CONCLUSION

Research indeed requires appropriate planning, structuring and reporting on all of the investigations conducted. To achieve this, research requires methodology that is sound. Sound methodology speaks to the selection of a research paradigm that is appropriate for the research question posed. In this context, the research question sought to interrogate what their view and experiences of police personnel in the Tshwane Metropolitan Police Department are, specifically with regard to the implications of the improvements in the road-transport system, on their work. Thus, the study adopted qualitative research as the appropriate methodology. To this end, the study also adopted research methods and techniques that are appropriate for the qualitative methodology. Likewise, the methods and techniques in this study were applied in such a way that all research participants were never placed in harm's way.

4.1 INTRODUCTION

The success of the economy in South Africa depends on the provision of different and efficient public transport options that can convey commuters to different destinations in and out of the country (Lucas, 2011:1320). To ensure that the movement of goods and people across the borders becomes profitable for the economy, South Africa depends on the Cross-Border Road Transport Agency (C-BRTA), which regulates market access (Cross Border Road Transport Agency, 2015). To this end, the C-BRT could not sustain its operations without proper roads.

The construction and proper maintenance of roads is the core responsibility of government at local provincial and national levels. This activity is also intended to facilitate the movement of vessels that transport goods and people. Within the cities, the implementation of the Bus Rapid Transit (BRT) has provided that option by enabling commuters to have choices in terms of which modes of travel to use. The BRT was introduced in cities such as Tshwane, Johannesburg and Cape Town to align the country with global standards. Likewise, roads have equally been improved, to ensure that public transport is supported, whilst the police played a major role in safeguarding buses and commuters, as well as the road infrastructure.

The road-transport developments referred to herein have thus necessitated the explorations done in this study, on the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. These are the same explorations, which have enabled the research to identify the police service delivery bottlenecks in the road-transport system. The same explorations have at the same time uncovered some answers as to how the police can address the security-related challenges in and around the road-transport system in Tshwane, which information is outlined in detail in the next chapter of this research report.

There is no doubt that innovative security approaches to dealing with the improvements in the road and transport infrastructures are enabling factors in improving the quality of lives in South Africa. For most people, secure public transport provides access to the economy and facilitates poverty alleviation (Lucas, 2011:1333). This is because people use public transport to travel to work. Work pays the bills and puts food on the table. For South Africa, access to the economy will go a long way in addressing the inequality caused by apartheid and colonialism.

In order for commuters to optimise the public transport system, the safety thereof should be prioritised. Such prioritisation is normally reflected not only in the strategic objectives of government, but is also reflected in law enforcement strategies. High quality policing services are therefore critical in the creation of safety in road-transport. For the TMPD, ensuring safety in the road-transport system is one of the core institutional functions. This is why the question that informed the research in this study interrogated the implications of the road-transport improvements on the role of police. To explore the question, the study used a qualitative approach. This enabled research participants to give in-depth descriptions on the research problem.

It is common course that research is expected to reveal findings and arrive at some conclusions, this following the collection and analysis of data. This chapter therefore outlines the findings unearthed in this study. The findings are outlined in terms of the categories assigned in relation to the research objectives and in line with the data analysis regime used. This was done to solicit answers to the research question: What are the implications of the road-transport improvements are on the role of the TMPD? In providing answers to the research question, the study used three categories to: (1) described the road-transport improvements in South Africa; (2) explain the role of the TMPD; and (3) to identify factors that hinder the effectiveness of the TMPD. The categories used are the same as the research objectives in this study. Before the discussions on the findings, the chapter will however first provide a brief synopsis of the interviews that were done to inform the research in the study.

4.2 AN OVERVIEW OF THE INTERVIEWS CONDUCTED

The interviews conducted in this study consisted in a purposive and random sample. The purposive sample consisted in 8 research participants, whilst the random sample was 12 participants. Thus, 2 participants from each of the four Tshwane policing precinct (Pretoria, Centurion, Winterveld and Temba) were selected in the purposive sample and 3, each from the same precinct were in the random sample. The total number of participants was 20. Yet, only 15 of the interviews were done, 5 in the purposive sample and 10 in the random sample. This is because the data had become saturated as previously reported. Therefore, Interview 1 to 5 was from the purposive sample, whilst Interview 6 to 15 was those chosen in the random sample. As already mentioned, interviews 1-5 and interviews 12-15 were done one-on-one, whilst interviews 6-11 were done using a focus group. The focus group was done in order to make participants to feel relaxed and not intimidated by the questioning.

4.2.1 The referencing of the interviews

The interviews in this study were referenced as (Interview, 1ps) and (Interview, 6rs). The number that follows the word "Interview" is actually the interview number, whilst the letters "ps" stands for purposive sample and the letters "rs" stands for random sample. The kind of referencing used in this report was designed to maintain anonymity about the identity of the research participants and thus to protect their privacy, in line with the ethical considerations as outlined in the previous chapter.

4.2.3 Categorisation of the data

As reported in the previous chapter, the research in this study used a phenomenographic technique to analyse the interviews and the literature sources used to collect the data. To recap, phenomenographic analysis uses categories of information drawing from the participant's experiences to provide rich description on the phenomenon being studied (Walsh, 2000:19), in the context of this research, the

implications of the road-transport improvements on the role of the TMPD. As already also mentioned in the previous chapter, the categorisation in this research was conducted according to the first three of the research objectives. The objectives are:

- To describe the road-transport improvements in South Africa;
- To explain the role of the Tshwane Metropolitan Police Department;
- To identify the factors that hinders the effectiveness of the TMPD.

The fourth research objective in this study is to make recommendations to the City of Tshwane about possible solutions to the policing challenges caused by improvements on the road-transport improvements. This objective is dealt with in the next chapter of the study, which discusses the conclusions and recommendations in the research. The categorisation of the objectives in this study was thus not only done to help the data analysis process, but was also done to comply with the element of synergy and organised reporting in a research project.

The categorisation process required of the researcher to fully understand the nature of the limitations in the real world in which the collected data was produced (Matlala, 2012:115). The researcher thus opted to do the categorisation manually without the help of computerised analytical softwares that are available in the marked, due to lack of affordability. Likewise, the reason for imposing the research objectives as the assigned categories in this research is that the researcher is a novice and thus not conversant with how to do new categorisations by herself. After all, various scholars (Creswell, 1994:153; Welman & Kruger, 2001:183; van As & van Schalkwyk, 2004:167; Matlala, 2012:112) have strongly argued that qualitative research uses a range of eclectic tactics, with no right or wrong way of analysing the collected data. This next section outlines the assigned categories, thus the findings in this research.

4.3 PRIMARY RESEASECH FINDINGS

Qualitative data indeed uses analytical methods that produce rich descriptions and explanations on the phenomenon being studied (Miles & Huberman, 1994:153). To this effect, using the phenomenographic technique to analyse the data enabled the research to source answers to the research question, drawing from the deliberations of the participants. Phenomenography refers to a data analysis technique which depends on the in-depth or broad accounts given by research participants, on their lived experiences (Richardson, 1999:53). The technique involves detailed descriptions of the accounts by research participants on the phenomenon being studied. Krippendorff (2004:32) argued that qualitative data analysis applies questions to obtain answers and to achieve empirical grounding for the research. The phenomenographic technique in this research was thus also applied through interview questions to solicit the detailed descriptions from the research participants. Following the analysis of the data, the answers obtained from literature and the interviews conducted, thus formed the basis of the findings in this research. This next section outlines the research findings in terms of the assigned categories.

4.3.1 Category 1: The road-transport improvements in South Africa

Literature shows that the road-transport improvements in South Africa can be clustered into two major categories. These are traffic improvements and improvements in public transport. Traffic improvements speaks to the construction of new roads or the improvement and maintenance of existing ones, whilst the improvements in public transport speaks to the introduction of new state of the art vehicles and buses that transport commuters to different destinations in the country. These same improvements are expected to bolster economic growth. The same developments are also expected to curtail poverty and inequality within the country.

Literature further shows that for the Gauteng province in particular, the Gauteng Freeway Improvement Project and the construction of new roads, characterises the improvements, particularly in the road or traffic infrastructure. The improvement of

freeways in Gauteng has however presented challenges for the police. According to the research participants (Interview, 2ps; Interview, 4ps; Interview, 5ps), although the improvements on freeways facilitated traffic flow, this has resulted in some motorists continuing to drive above the speed limits, sometimes leading to fatal road crashes.

The same research participants further claimed that the speeding and lawlessness could have been influenced through the construction of extra lanes on the freeways (Interview, 2ps; Interview, 4ps; Interview, 5ps). To qualify this last assertion, one research participants (Interview, 13rs) explained that it was difficult to chase a suspect motorist because of the extra lanes in the freeway. This is because traffic police have to exceed speed limits during the chase, placing their lives and that of other motorists in danger (Interview, 13rs). And if the chase is for a motorcycle, it becomes even more difficult, because these can manoeuvre through traffic with ease (Interview, 13rs). The same research participant (Interview, 13rs) also pointed out that it becomes difficult to chase after vehicles that have an etag, because these can pass through the toll gate without stopping and TMPD vehicles have to stop to fill a slip before they are allowed passage, which is not ideal during a high speed chase.

There is also strong evidence in the literature to show that the improvements in Gauteng are typified by the building of bridges around freeways and the introduction of an electronic tolling system (etolls) around most of the freeways in the province, to ensure that the improvements are funded, sustainable and promote economic growth. Continuous disputes between government and civil society organisations on the funding model for etolls have however created uncertainty on the future of the etolls in the province and this has had direct implications on the role of police, because etolls caused protests that require police action (Interview, 1ps). The action referred to relates to crowd management and the protection of property and the road infrastructure during protests, all of which require policing resources (Interview, 4ps).

Although literature indicated that crowd management was not even accentuated as one of the core functions of the TMPD, research participants (Interview, 12rs; Interview, 13rs; Interview, 15rs) have outlined that personnel are offered such training by the South African Police Service. The same research

participants (Interview, 12rs; Interview, 13rs; Interview, 14rs; Interview, 15rs) further pointed out that TMPD personnel were provided with a six week crowd management training course, but also alluded to the fact that only a few were taken for training at a time, and that not enough personnel was trained in crowd management tactics.

On the flip side, the construction of etolls on Gauteng freeways has also caused motorists to migrate to smaller routes in and around the cities. In the City of Tshwane, motorists usually use smaller routes to avoid paying for etolls in the freeways (Interview, 2ps). This has caused traffic volumes to increase during peak hours, thus causing damages to the road surface and sometimes leading to road accidents and many other traffic violations (Interview, 2ps; Interview, 4ps; Interview, 5ps). Both literature and the research participants (Interview, 3ps; Interview, 4ps; Interview, 5ps) pointed out that the existence of heavy duty vehicles particularly in and around smaller roads, is largely to blame for damages to the surface of the road.

A surprise factor about the etolls particularly around the City of Tshwane is that some motorists do reduce speed when passing under some gumtrees (Interview, 13rs). Other research participants (Interview, 8rs; Interview, 10rs; Interview, 11rs) also observed from monitoring footage that there were vehicles that generally reduced speed when passing under the etoll infrastructure. The participants accorded this kind of behaviour to possible beliefs by motorists that the etoll infrastructure may be fitted with speed prosecution cameras, which was not the case. One participant (Interview, 8rs) however conceded that the speed reductions are useful to curbing the number of road fatalities caused by accidents on the roads.

Like any other citizen of South Africa, the research participants (Interview, 12rs; Interview, 13rs; Interview, 14rs; Interview, 15rs) also highlighted their dissatisfaction with the introduction of the etolls, but emphasised more on compliance with the law albeit dissatisfied. The key emphasis by the research participants was that the funding model is as such that it takes money away from the poor. In fact, one research participant (Interview, 6rs) pointed out that in her personal capacity, she has to pass through many gumtrees and that she is not able to afford driving to work.

Another aspect about the road-transport improvements in Gauteng is that the province has also embarked on the continuous maintenance of the roads by maintaining streetlights, reviving road marks paintings, maintaining traffic lights and replacing damaged road signs (Interview, 2ps; Interview, 4ps; Interview, 5ps). To this effect, literature shows that South Africa invested a R1 trillion in public infrastructure development, from the years 2008 to 2012. Literature however shows that vandalism on the road infrastructure and damages caused by road accidents causes the state to incur huge costs. Some of the damages to the infrastructure relates to the theft of copper cables inside the traffic lights (Interview, 1ps; Interview, 3ps; Interview, 4ps; Interview, 5ps). For the City of Tshwane, expenditure to repair damaged infrastructure means less funding for crime prevention (Interview, 3ps).

Literature also shows that the road-transport improvements in South Africa include the taxi recapitalisation process and the introduction of the Bus Rapid Transport (BRT) in major cities. The taxi recapitalisation process speaks to the replacement of minibus taxis with new and safer fleets (Interview, 1ps), whilst the BRT speaks to the introduction of a bus transit system with dedicated lanes, low gas emissions buses that facilitate quicker transport, as well as promote high mobility and social cohesion (Interview, 1ps; Interview, 2ps; Interview, 3ps; Interview, 4ps; Interview, 5ps). The social cohesion speaks to the introduction of public transport that caters for all races in South Africa, as opposed to the segregated system before 1994 (Interview, 1ps).

As noted in the literature, taxi recapitalisation was intended to stabilise the ill-regulated and informal taxi industry, whilst the BRT was benchmarked on South American cities such as Bogota and Curitiba that have also initiated world-class BRT, essentially positioning the region as a competitive player in the marked, in terms of helping economic activity and growth. According to Walters (2008:105), taxi recapitalisation caused the South African government a substantial R7.7 billion to replace the existing 16 seater taxis with 14 to 18 and new 19 to 35 seaters. Many of the vehicles replaced were un-roadworthy (Interview, 1ps). Of relevance is that before the recapitalisation process, many of the un-roadworthy taxis had to be impounded by the police as these were unsafe to transport passengers (Interview,

3ps). This led to dissatisfaction and protest from the taxi operators and associations, with sometimes violent and fatal ends (Interview, 1ps; Interview, 2ps; Interview, 4ps).

The introduction of the taxi recapitalisation process and BRT particularly in and around the City of Tshwane has also sparked violent protests (Interview, 3ps). As cited in the literature, the violent protests in and around Pretoria, the burning of vehicles in areas such as Mamelodi, the related shootings in many of the areas not province-wide, attest to the challenges in the road-transport improvements in South Africa, usually with huge challenges for the police. The research participants (Interview, 1ps; Interview, 2ps; Interview, 3ps; Interview, 4ps; Interview, 5ps) in the purposive sample were unanimous in stating that although the road-transport improvements are necessary to stimulate economic growth; these do not come without implications for the TMPD, who have to deal with the subsequent problems.

The introduction of the "A re Yeng" (BRT) on the other hand, involved the construction of dedicated lanes for the buses. The introduction according to the participants (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs) took away some lanes in an already congested City of Tshwane. This resulted in traffic congestions that require a lot of TMPD personnel to control (Interview, 6rs). The traffic congestion also affects TMPD officers who have to report on duty and are using the same routes to travel to work (Interview, 10rs). On the same breadth, the taxi recapitalisation also added to challenges on the road.

Another interesting aspect about the BRT in Tshwane is the issue of traffic lights. According to the research participants (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 10rs; Interview, 11rs), traffic lights for the BRT are different from the ones usually used by other motorists. This is because the current set-up of traffic lights uses green to allow vehicles to pass and another form of green to allow BRT buses to pass (Interview, 9rs). This has created confusion and has led to road accidents in some intersection in the city (Interview, 6rs). Also, other city buses are not catered for in BRT lanes and this creates a lot of traffic congestion and a lot of work for TMPD officers (Interview, 12rs; Interview, 13rs; Interview, 14ps; Interview, 15ps).

According to literature sources, the introduction of BRT in particular provided an opportunity for cities not to only facilitate traffic flows, but also provided an opportunity for cities to beautify the environment and enhance images. Figure 6 and Figure 7 in chapter 1 of this study showed the type of BRT bus station in Tshwane, which images enhances the image of the city. Literature however also indicates that the bus stations are also vandalised and commuters are often targets of crimes such as robbery, whilst commuters on board the BRT buses are exposed to pick pockets, assaults and robbery, something that also calls for more innovative approaches to law enforcement in the road-transport (Interview, 2ps; Interview, 4ps; Interview, 5ps).

4.3.2 Category 2: The role of the Tshwane Metropolitan Police Department

Literature shows that The TMPD was established in 4 April 2002. The department was officially launched on the 23rd of February 2002 and amalgamated the traffic and security departments of 13 councils, previously known as Greater Pretoria. The department consisted in more than 2000 police officials and 450 of vehicle to enable them to police a population of 2, 9 million residents in all for regions of the Tshwane metropolitan municipality. The TMPD has to date (2016) grown to about 4000 police personnel (Interview; 7rs) and the functions thereof include traffic policing, by-Law enforcement and crime prevention (Interview, 1ps; Interview, 3ps; Interview, 4ps).

Because of the crime prevention function, the Tshwane Metropolitan Police Department is bound by the Constitution of the Republic of South Africa (Act 108 of 1996), the South African Police Service Act (Act 68 of 1995), the South African Police Service Amendment Act (Act 83 of 1998), the National Crime Prevention Strategy (NCPS) 1996-1999, Tshwane Crime Prevention Strategy of 2002-2007 to cooperate with agencies such as the South African Police Service. The agency is however fully funded by and fall under the direct control of the city (Interview, 1ps).

The TMPD is indeed independent from the South African Police Service and their bylaw and crime prevention function also mandates them to safeguard municipality infrastructure. This function also charges the agency with the duty not only to police the road-transport system, but to also provide safety and security to commuters and drivers on-board the BRT buses, motorists and pedestrians, taxi operators and passengers, other road-users such as cyclists and motor cyclists (Interview, 2ps). The one shortfall relating to the functions of the TMPD however is the fact that its personnel only have powers to police only within the limits of the geographical are of the City of Tshwane (Interview, 2ps; Interview, 3ps; Interview, 4ps; Interview, 5ps).

In order to streamline the operations, literature further showed that the Tshwane Metro Police Department is aligned to all the legislative mandates as delegated to local government. The same literature further shows that the Tshwane Metro Police Department has also aligned its law enforcement strategies to the national and provincial priorities, goals and objectives, the Integrated Development Plan (IDP) of the City of Tshwane, the city's long-term strategy and five-year strategic plan, as well as the city's annual Service Delivery Budget Implementation Plan, to improve service delivery. The city's IDP spells out the service delivery perimeters for the Tshwane Metropolitan Police Department. The extra legislative and policy mandates further defines what the service delivery targets are for the department. The regulatory tools for service delivery in the TMPD thus include the white paper on National transport policy; the Moving strategy (1998); The National Land Transport Transition Act (Act 22 of 2000); and the Public Transport Strategy and Action Plan (2007).

Ordinarily, the daily functions of a TMPD police official consist in patrols to safeguard citizens and infrastructure throughout the city, controlling traffic at pressure points during peak hours, the issuing of speed fines, fines on other traffic transgressions, by-law fines for non-compliance, as well as arresting suspects for offences that include disturbing the peace, drunk and driving, theft, vandalism and many other crimes that are brought to the attention of the officers (Interview, 12rs; Interview, 13rs; Interview, 14rs; Interview, 15rs). Also, the daily functions of the TMPD official include spot checks on light and heavy duty vehicles (public or private) for overloading and compliance with the road traffic legislation and with ordinances (Interview, 6rs; Interview, 11rs; Interview, 12rs; Interview, 14rs; Interview, 15rs).

An interesting aspect about the role of the TMPD is that the public views the agency as a panacea for all problems in the community. Research participants (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs) pointed out that members of the community will call the TMPD call center (nodal point) for complaints such as water shortages and electricity blackouts, all of these complaints come without due consideration to the mandate of the Tshwane Metropolitan Police Department as a police agency and resource availability issues.

4.3.3 Category 3: Factors that hinder the effectiveness of the TMPD

Literature also shows that one of the biggest challenges facing the Tshwane Metropolitan Police Department is that the agency has limited investigative powers. For policing in road-transport, the limited investigative capacity forces the TMPD to transfer dockets on crimes such as vandalism on bus stations and shootings on BRT buses to the SAPS for further investigations (Interview, 1ps). The TMPD can only investigate road accidents where there are no fatalities and if a person died in the road accident, the matter is referred to the SAPS for investigation (Interview, 4ps).

After making arrests on any offence committed, the TMPD usually hands over suspects to the SAPS. This shortfall is as a result of legislation which seemingly relegates Metropolitan Police Departments that some of their powers are limited. The kind of shortfalls in the legislation have a negative impact on the morale of staff in the TMPD, especially senior officers who sometimes feel that they are made to be inferior to officers in the SAPS (Interview, 5ps). The legislative shortfalls present a number of daunting challenges for the TMPD. Most of the inherent challenges are outlined in literature and these can be abridged as follows:

 The crime prevention mandate of the TMPD is not fully clarified to personnel, particularly in relation to co-ordination with the South African Police Service. For managers in the TMPD, this kind of situation sometimes creates uncertainty that leads to poor operational efficiency, owing to lack of clarity in the chain of command (Interview, 1ps). Fulfilling the enforcement and crime prevention mandates weighs heavily
on the mandate of TMPD, with the results that little attention is paid to
crime prevention (Interview, 3ps).

Below is quote by two of research participants. The quotes confirm where the bulk of the focus is, in terms of the work done and how this weighed on the Tshwane Metropolitan Police Department in terms of how the community perceives the agency' crime prevention efforts. Also, the quotes highlight the tensions that may arise between TMPD and South African Police Service managements over roles, especially during joint crime prevention operations. The following are the quotes:

"by laws has been seen as a bigger portion of our work where we have to enforce the laws on roads and to check the permit of vehicles as well as to ask for drivers licences. Those are the main major things that we normally focus on when we are on the roads. By-laws actually enforce the laws in local levels, to regulate some of the issues pertaining to hawkers and people who sell alcohol without valid licences (Interview, 2ps).

"The department is suffering because the community think we don't do our job as required, we just earn the money without doing proper job" (Interview, 5ps).

Literature (Newham, 2006:2) indeed confirmed that that the Tshwane Metropolitan Police Department personnel (police officials), worked approximately 20,476 hours per month and 43 % of the time is dedicated to traffic policing, whilst 23 per cent is spent on crime investigation and 2 % spent on by-law enforcement, with very little focus on crime prevention efforts to safeguard the City of Tshwane's inhabitants, including its road and public transport infrastructures. This seemingly one-side focus is mainly due to a number of problems. The key issues that inhibit the effectiveness of the TMPD in this context have been described by participants in the following way:

• Training in crime prevention: training of the TMPD focuses mainly on bylaws enforcement and traffic policing. In the entry level, new recruits are trained for 12 months where they have to complete subjects such as The National Land Traffic Act, The National Land Transport Transition Act (Act 22 of 2000): and Law for traffic enforcers. The training focuses more on the issuing of written notices for traffic violations and on how to do arrests, rather than on crime prevention and crowd management tactics (Interview, 5ps; Interview, 10rs; Interview, 15rs).

- Staff shortages: the TMPD also faces staff shortages. As a result, some of the staff members have to actually do double shifts, to keep up with the demands in the work (Interview, 1ps; Interview, 3ps; Interview, 6rs; Interview, 8rs; Interview, 9rs).
- Scarce finances: generally the lack of financial resources inhibits operational
 efforts in MPD's in many municipalities and so the TMPD is no exception
 (Newham, 2006:2). This was also confirmed by the research participant
 (Interview, 1ps; Interview, 4ps; Interview, 5ps) who maintained that one of the
 key problematic issues in enhancing the efficiency of the TMPD was
 continuous talk of budget cuts or austerity measures and lack of finances.
- Lack of crowd management equipment: the TMPD also lacks in resources. A number of research participants claimed that the institution does not have the equipment that the SAPS have. In this context, research participants (Interview, 7rs; Interview, 10rs; Interview, 14rs) pointed out that the TMPD is not issued with equipment such as stun grenades, water cannons and hard vehicles such as NYALA's, especially during crowd management activities. The participant further maintained that that the department does not have enough vehicles and this makes difficult for personnel to perform their daily duties as required by law.
- Lack of firearms: the research participants (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs) in the focus group of the random sample highlighted that some personnel in the TMPD are

not issued firearms and these staff are posted at points without adequate protection.

- Lack of two-way radios: the TMPD generally lacks in two-way radios. This not only puts the lives of staff deployed for foot patrols at risk, but also renders the nodal point ineffective, in terms of dispatching officers to complaints (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs).
- Poor resource allocation: participants (Interview, 2ps; Interview, 4ps; Interview, 11rs; Interview, 12rs) mentioned that there are different types of resources allocated to staff, but this depends on the section per unit and what kind of work the traffic officer is specialising on. The same participants further indicated that other personnel are equipped with sniffing dogs, horses, breathalysers while other traffic officials who are enforcing the law on freeways are equipped with BMW's cars that are fitted with Moving Violation Recorder (MVR) equipment's which can pick up speed of vehicles without putting equipment on the ground and sitting there the whole day. Of note in this regard is that other sections of the TMPD seem not to be getting sufficient resources to do the job in accordance to the specialisation field requirements. The quote below thus attests to the disparity in the allocation of resources.

"...certain sections are provided with certain equipment, you will find that only one section lacks the resources but the majority of sections are well equipped and we are able to render the service as required" (Interview, 5ps).

Poor motor vehicle maintenance: according to research participants
(Interview, 3ps; Interview, 5ps; Interview, 9rs; Interview, 13rs), the TMPD
have one service station allocated for the maintenance of all its very few
vehicles and the turn-around time for servicing the vehicle also takes longer.
The following is a quote by one of the participants on the issue of vehicles:

"We have tried to negotiate with the relevant stakeholders to have more service centres for our cars but you know it is still a debate (Interview, 5ps).

• Infrastructure numbers: not all TMPD officers are allocated infrastructure numbers (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs). These numbers are issued so that the system recognises and processes the fines issued in relation to any transgression (Interview, 9rs; Interview, 10rs; Interview, 11rs). As a result, TMPD personnel find themselves powerless to police those transgressions in and around the road and public transport system, which require the issuing of spot fines (Interview, 6rs; Interview, 7rs; Interview, 9rs; Interview, 9rs; Interview, 11rs).

4.4 SECONDARY FINDINGS

As previously stated, explorations of the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department are critical in that they expedite the process of dealing with some of the related service delivery bottlenecks. The explorations in this research therefore not only unearthed findings relating to the primary findings, but also led to other related findings, which are classified as secondary findings. Scholars such as White and Marsh (2006:34) have after all strongly argued that qualitative research is exposed to accidental findings. The accidental findings in this study are thus outlined as the secondary findings.

Although the secondary findings were accidental, they however indirectly speak to the research objectives or the analytical categories in this study. Thus, the secondary findings outlined herein, are also key in providing some of the answers to the research question posed in this study. This is because the kind of aspects unearthed in this set of findings may have an adverse impact on the operational efficiency of the Tshwane Metropolitan Police Department, if not studied and understood, which could lead to poor security services on the road-transport system.

As already cited, high quality safety and security services are imperative in supporting the economic growth facilitated through road-transport improvements in South Africa. To this effect, the TMPD needs to understand all the factors that come into play when roads and transport infrastructure are improved, as well as understand how the related dynamics play out in law enforcement. The following are thus some of the secondary dynamic impact on law enforcement, particularly in relation to issues that inhibit operational efficiency of the TMPD, in policing the road and public transport (road-transport) infrastructures around the City of Tshwane.

- Unfair criticism: according to the research participants (Interview, 6rs; Interview, 7rs; Interview, 9rs; Interview, 9rs; Interview, 11rs), members of the public label TMPD officers who are on duty as arrogant and corrupt on a daily basis, even without evidence to back up the allegations. In fact, some members of the public do not exercise patience with TMPD officers and this happens mostly when fines are issued for offences that range from traffic infringements to by-law contraventions (Interview, 6rs; Interview, 8rs).
- Lack of Discipline: some of the TMPD officers lack discipline since they take bribes, which is a concern for the department and for the country as a whole (Interview, 1, ps; Interview, 3ps; Interview, 4ps; Interview, 5ps; Interview, 6rs; Interview, 7rs; Interview, 9rs; Interview, 9rs; Interview, 11rs).
- Poor remuneration: research participants (Interview, 6rs; Interview, 7rs; Interview, 9rs; Interview, 9rs; Interview, 11rs) highlighted that TMPD officials are not paid enough salaries and that some of their earnings are in fact consumed by the same improvements in road-transport such as the etolls which they have to pay for on their way to work. Likewise, one research participant (Interview, 6rs) indicated that although BRT may be a cheaper option to travel, it is not necessarily accessible to many of the residential areas and this mean that personnel who live in areas where there is no "A re Yeng" buses, have to pay more for transport, which further stretches the low salary earned by the officer. the following quote therefore shows that TMPD officers are of the view that the are paid less, in comparison to other MPD's:

"Yes I agree, no amount of money will be enough for individual to survive but it is good to compare you with other traffic officials and say the government is taking care of me" (Interview, 11rs).

- Transformation: transforming the organisational culture in MPD's from specialist enforcement such as traffic or planning enforcement, to a more generalist community policing approach has been problematic (Newham, 2002:2). To this effect, research participants (Interview, 1ps; Interview, 3ps; Interview, 5ps; Interview, 10rs; Interview, 12rs; Interview, Interview, 15rs). also indicated that the TMPD focused more on traffic enforcement.
- Nepotism: The issue of nepotism seems to be serious matter in the department (Interview, 1ps). As such the participants (Interview, 1ps; Interview, 5ps) were worried about appointment of friends and family.
- Senior appointments and promotions: Senior appointments and promotions in the TMPD are also affected by nepotism (Interview, 1ps).
 However, another issue raised by the research participants (Interview, 6rs; Interview, 7rs; Interview, 8rs; Interview, 9rs; Interview, 10rs; Interview, 11rs).
 is the issue of appointment of senior personnel that are without adequate experience and/or qualifications. The quote below illustrates this very issue:

"....I am not saying I am correct, but I have seen people being promoted just because the person was a Chief Executive Officer somewhere and that does not mean that the person can be a senior superintendent, the person needs to go first in the road and learn how does the department function before a traffic officer can be shifted to another rank" (Interview, 1ps).

Apart from the above stated challenges experienced by personnel, it became clear that the TMPD as an institution is very supportive of its staff. This was evident from the claims made by research participants (Interview, 8rs; Interviews, 14rs; Interview,

15rs), that the institution does offer employee assistance services in the form of psychological counselling and support, to staff who may be exposed to stress or depression as a result of trauma, death of a member, or injuries sustained on duty.

4.5 CONCLUSION

The improvements done on South Africa's road transport have had both positive and negative impacts on the role of the Tshwane Metropolitan Police Department. The positive impacts relate to the traffic flow which is facilitated through the construction of extra lanes on the freeways, the maintenance of existing roads and traffic signs. This has led to less traffic congestions and has made the job of TMPD officers a lot easier. On the other hand, the existing constructions on some BRT site in the City of Tshwane caused traffic congestions and presented huge challenges for TMPD officers. Also, the lack of resources, lack of finances, lack of training in crowd management, staff shortages, lack of transformation, nepotism, poor remuneration, lack of discipline and other administrative challenges continue to inhibit the operational efficiency of the TMPD. This means that the challenges also impact negatively on the TMPD mandate to protect the road-transport system in Tshwane.

5.1 INTRODUCTION

The problem that informed the research in this study is that ever since the improvements in South Africa's road and public transport (road-transport system), little or no research has been advanced to understand the implications thereof, on the role of city police, in this context the Tshwane Metropolitan Police Department. This kind of shortfall implies that the interplay between the law enforcement and road-transport improvements dynamics remains less understood. Such lack of understanding could compromise police service delivery and thus safety and security in the road-transport system within cities, much to the detriment of economic growth.

The Tshwane Metropolitan Police Department forms part of the public service in South Africa, albeit at a local government level. To this effect, Mkhabela (2007:8) pointed out that poor service delivery in the public service has been identified by the African Peer Review Mechanism (APRM) as one of the issues that South Africa needed to deal with, because it was having a negative impact on good governance. If the Tshwane Metropolitan Police Department is to provide quality services, then one of the key aspects to look into is improving on their offerings, particularly in providing safety and security in road-transport. To achieve this, the agency requires contextualised research to unearth the related problems. This study therefore offers such research to the problems, particularly in terms of how the road-transport improvements dynamics play out in swaying law enforcement in the City of Tshwane.

The roles of the Tshwane Metropolitan Police Department include traffic and by-law enforcement, crime prevention as well as crowd management. These roles are however inhibited by a myriad of challenges which required to be studied in detail. In an attempt to provide solutions to some of the problems, this study made recommendations based on the findings to the City of Tshwane, on how to resolve the road-transport improvements and policing-related problems, faced by the TMPD.

This chapter thus provides a summary of the research findings based on the first three objectives or analytical categories, as well as conclusions and recommendations for best practice on the primary findings. Also, the chapter makes recommendations for further research on both the primary and secondary findings.

5.2 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The purpose of this section is to provide an overview of the research findings as outlined in the previous chapter, as well as to provide conclusions and recommendations for each of the research findings. This section is therefore divided into the three analytical categories in this research, which are also the objectives of the research. The research objectives in this study are intended to operationalise the aim of the research, which aim is intended to explore the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department. Similarly, the aim in this research is intended to answer the question posed in this study. The question in this research interrogated the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department.

5.2.1 Research objective 1: Road-transport improvements in South Africa

The study concludes that road-transport improvements in South Africa can be summarised into two categories. These are traffic improvements and improvements in public transport. Traffic improvements speak to the construction of new roads, as well as the improvement and maintenance of existing ones, including the refurbishment and repair of related infrastructure such as traffic lights, road surface markings and traffic signs. The improvements in public transport on the other hand, speak to the introduction of the BRT and the taxi recapitalisation process. The same improvements are also visible in Gauteng and have impacted on the role of police in different cities throughout the country, with the Tshwane Metropolitan Police Department being one of the agencies equally affected by the same improvements.

There is no doubt that if the road-transport infrastructure can be effectively policed, the related improvements can contribute to economic growth in the City of Tshwane and thus to the national GDP. The road-transport improvements can therefore to some extent alleviate poverty by creating new jobs. The same improvements have however led to challenges in the law enforcement fraternity. For example, the increases in lanes on Gauteng's freeways as part of the province's freeway improvement project have resulted in some motorists exceeding the prescribed speed limits. This has caused road crashes and sometimes with fatal consequences, which incidents require a lot of police resources to properly deal with.

The road-transport improvements have not only facilitated economic growth and enabled the City of Tshwane to beatify its surroundings. The developments have however also precipitated criminality in the City of Tshwane. The criminality comes as a result of the vandalism and copper theft in the road infrastructure, including robberies in BRT bus stops and in the buses. An important conclusion in this regard is that although the City of Tshwane and TMPD are aware of the crimes around road-transport, no studies have been done to understand the relating dynamics.

The developments in road-transport have also caused confusion for some motorists, especially with the traffic lights signals for the BRT and the general traffic light signals. This has also led to traffic crashes and besides the fatal consequences; the crashes have put a lot of strain on the Road Accident Fund (RAF) that has to pay out claims in relation to the accidents on public roads in South Africa. In addition, the resultant crashes have perpetuated poverty in that many of the victims dying, getting seriously injured or disabled from the crashes, are bread winners in families.

Although improvements on South Africa's roads have facilitated traffic flow, the related developments have not made it easy for the Tshwane Metropolitan Police Department. Developments such as the BRT in the City of Tshwane and the etolls have attracted a lot of public criticism and consequently a lot of mass protest action. Such events solicited intervention from the Tshwane Metropolitan Police Department, assisted by the South African Police Service. This required a lot of manpower and resources to deal with the consequent crowd management situations.

Based on the findings in this research, the City of Tshwane therefore needs to commission further research to study the dynamics relating to law enforcement and the road-transport dynamics. At the same time, it is recommended that the city include as part of its awareness campaigns on road safety, information on how the traffic signals work, particularly for the BRT and for motorists in general. Such feat could be achieved by also including information on these signals in the learner driver training manual. To achieve all of this, the City of Tshwane will however also have to make such recommendations to the national transport authority, so that such critical information can be articulated from the national, to the provincial and to local levels.

To attain effectiveness in the policing of road-transport in Tshwane, the researcher recommends that the TMPD should first establish a specialised unit dedicated to crime prevention. Such unit should specifically focus on visible patrols in and around the BRT bus stations, man the buses, as well as safeguard the road or traffic infrastructure. In addition, the unit should generate operational plans that show what the approach will be, in terms of policing the road-transport system, as well as show what the key deliverables of personnel are. Likewise, the TMPD should also expedite processes in terms of the training of its personnel in crowd management tactics. In fact, the same unit that is recommended to effectively police the road-transport in the city could also be responsible for crowd management in Tshwane.

5.2.2 Research objective 2: The role of the TMPD

The functions of the Tshwane Metropolitan Police Department (TMPD) include traffic policing, by-Law enforcement, crime prevention, limited crime investigation and crowd management. These functions are supported through the Constitution of the Republic of South Africa (Act 108 of 1996), the South African Police Service Act (Act 68 of 1995), the South African Police Service Amendment Act (Act 83 of 1998), as well as the National Crime Prevention Strategy (NCPS) 1996-1999, the Tshwane Crime Prevention Strategy of 2002-2007. The greater part of TMPD functions however involves traffic and by-law policing. By-law policing mostly involves safeguarding municipal infrastructure, which includes BRT and road infrastructure.

Although the TMPD is independent, it does cooperate with agencies such as the South African Police Service in crime prevention and crowd management functions. The TMPD is fully funded by the City of Tshwane. Thus, the agency has to align its strategies to the national and provincial priorities, goals and objectives, the Integrated Development Plan (IDP) of the City of Tshwane, the city's long-term strategy and five-year strategic plan, as well as the city's annual Service Delivery Budget Implementation Plan, in order to legitimise it's operations and to improve the delivery of services to the public, particularly in terms of policing the road-transport system. To this effect, the agency is supported through the White Paper on National Transport Policy; the Moving Strategy (1998); the National Land Transport Transition Act (Act 22 of 2000); and the Public Transport Strategy and Action Plan (2007).

The functions of the TMPD consist in patrols to safeguard citizens and infrastructure throughout the city, controlling traffic at pressure points during peak hours, the issuing of speed fines, fines on other traffic transgressions, by-law fines for non-compliance, arresting suspects for offences that include disturbing malicious damage to property and many other crimes that are brought to the attention of the officers, as well as doing spot checks on light and heavy duty vehicles (public or private) for overloading and compliance with the road traffic laws and ordinances.

From the myriad repeat of activities described, it can be concluded that the Tshwane Metropolitan Police Department is structured into different units that specialise in each of the functions. Therefore, the TMPD dispatches essential services to the public in a streamlined fashion. This is evident in the calls made by the public to the TMPD nodal point. Most of the calls however relate to issues that are beyond the jurisdiction of the TMPD. Of importance is that such phone calls affirm the faith that members of the community in the City of Tshwane have in the TMPD and its staff.

To further ensure that policing continues to be an effective and essential service to the community in Tshwane, the TMPD could add to their websites, information on their success and that of individual staff members. Such information could be in the form of statistics on arrests by their members, the number and amount in terms of fines issued and the number of traffic accidents (with no human fatalities) successfully investigated. Also, the TMPD website could add a bit of information on, or have a link that will direct users to the Road Accident Fund website, Cross Border Road Transport Agency (C-BRTA) website, South Africa National Roads Agency Limited (SANRAL) website, as well as the Road Traffic Management Cooperation (RTMC) website. This will facilitate a one stop shop for motorists and road users who may want to access information relating to road usage and accident claims. Similarly, facilitating such connectivity will further enhance the image of both the City of Tshwane and the TMPD as leaders in providing high quality services to the public.

5.2.3 Research objective 3: Factors inhibiting the effectiveness of the TMPD

Although the findings show that the Tshwane Metropolitan Police Department provides essential services to the public, the institution remain constrained. In summary, the challenges include: lack of clarity in their crime prevention mandate; limited investigative powers; balancing the enforcement and crime prevention mandates; training; staff shortages; resource problems; as well as administrative challenges. To deal with the problems requires strong management and leadership. The legislative framework in South Africa is as such that it enables the National Commissioner of the SAPS to also confer crime prevention and crowd management powers to the metropolitan police departments.

Some of the challenges highlighted, for example lack of clarity in terms of the crime prevention mandate and limited investigative powers requires intervention by law makers. This study will thus not make any further recommendations on these issues. This is because the issues can be debated at a national level and will therefore require parliamentary processes. Such processes are beyond the jurisdiction of the City of Tshwane, the Tshwane Metropolitan Police Department, as well as beyond the scope of the research conducted to inform this particular study. However, the study concludes and recommends on other relating issues as follows:

- Balancing the enforcement and crime prevention: the research findings confirmed that the bulk of the focus in terms of the work done by the TMPD is on traffic and by-law enforcement, rather than on crime prevention. This underscores the lack of training and conscientisation of TMPD managers and other personnel in crime prevention. To address the challenge requires further training in crime prevention and operational planning. To this end, TMPD management could negotiate with the SAPS to offer such training to staff. The SAPS does offer such training to its members on a continuous basis. However, in addition to training, TMPD management should also re-align the institutional strategic plan so that it emphasises more on the balance between enforcement and crime prevention. However, one aspect that should not be overlooked in such planning is the issue of overburdening staff with work. This can be addressed through changing duty rosters, re-designing working hours, as well as setting daily targets and/or outputs. Literature has indicated that TMPD officials worked approximately 20,476 a month, with 43 % of the time dedicated to traffic policing, 23 % to crime investigation, 2 % to by-law enforcement and very little focus on crime prevention. Such imbalances may have had negative impacts on the effective policing of road-transport in the City of Tshwane and will require strong management and leadership to remedy. Similarly, such time distribution will also need to be scrutinised by management of the Tshwane Metropolitan Police Department.
- Training crowd management: training of the TMPD focuses mainly on by-laws and traffic policing. Because the agency is often confronted with crowd management situations, it is imperative that personnel receive adequate training to deal with such situations. Staff from the TMPD does receive training in crowd management and the training takes 6 weeks and is offered by the SAPS. However, not many of the officers are trained and the process is somewhat slow. This is because only handful officers are sent for training at a time. The process shows that TMPD management need to start taking crowd management seriously and emphasise to staff that crowd management is one of their core functions. Therefore, management needs to take the lead in terms of expediting such training.

- Staff shortages: there is no doubt that the staff shortage in the TMPD puts a strain on personnel who sometimes have to work longer than usual hours. This is particularly not a good practice and this is because working longer hours could result in fatigue, stress, depression and eventually high absenteeism rates in the workplace. To address the issue, management will in this case also have to re-design duty rosters, give time off where it is due, and incentivize excellence through monetary/ non-monetary rewards, in addition to engaging in employee wellness activities such as giving staff time off for sporting activities as well as arranging for staff counselling.
- Scarce finances: the issue of scarce finances is a national problem and is beyond the scope of the TMPD. As such, TMPD management can only ensure that effective measures are in place to manage whatever budget is allocated to the agency. In this context, TMPD management should ensure that the allocated budget is aligned to the institutional strategic objectives and that the money is allocated in a balanced fashion to cater for by-law enforcement, traffic policing, crime prevention and crowd management in an optimal way. To this effect, management needs to ensure that people hired to deal with finances have adequate expertise.
- referred to include crowd management equipment such as armoured vehicles, water cannons, shields, batons; crowd control gear; firearms (including shotguns); pepper sprays (maize); as well as two-way radios. The lack of firearms in particular, put the lives of officers at risk and needs to be dealt with immediately, as a matter of priority. The lack of resources for an essential service such as the TMPD in fact suggests poor financial, poor procurement and poor resource management processes. To deal with the issue will require of management to investigate these last mentioned processes. The TMPD could benefit from enlisting the services of external service providers, to assist them with business process reengineering in the highlighted aspects, as a matter of recommendation.

- Poor motor vehicle maintenance: Motor vehicles are an indispensable resource in the work done by TMPD officers. The poor maintenance of vehicle in the TMPD renders officers redundant as they cannot move from point-to-point, to assist members of the public or attend to road-transport emergencies. To address the issue, this research recommends that the servicing of vehicle be outsourced to private companies. This will not only stimulate the economy by bolstering private businesses, but will also free personnel stationed at service stations to continue with other work.
- Infrastructure numbers: it was clear from the research findings that not all TMPD officers are allocated infrastructure numbers. These numbers are issued so that the system recognises and processes the fines issued in relation to traffic and by-law transgression. Without infrastructure numbers personnel cannot issue fines. This defeats the purpose of being effective as a metropolitan police officer and thus impacts negatively on the productivity of individual officers who are affected, as well as on the operational efficiency of the TMPD. In recommendation, TMPD management need to expedite the allocation of infrastructure numbers to staff. This can be achieved by sourcing Information Technology (IT) specialists to deal with the challenges that may have caused the delays.

5.3 RECOMMENDATIONS FOR FURTHER RESEARCH

As already stated in this report, explorations on the implications of the road-transport improvements on the role of the Tshwane Metropolitan Police Department are critical in expediting service delivery bottlenecks. The removal of the bottlenecks can be best dealt with through the adoption and implementation of the recommendations made based on the findings in this study. Some of the research findings included secondary findings, which have not been thoroughly explored in this study. This was because the aspects were discovered accidentally. Although the aspects did not form part of the scope in the research, they were nonetheless found to have an indirect impact on the role and operational efficiency of the TMPD, in terms of the function to police the road-transport system. These aspects relate to the unfair

criticism of personnel by the public; lack of discipline; poor remuneration; lack of transformation; nepotism; promotions; as well as misdirected senior appointments.

To deal with the issues, this study recommends the following

- Unfair criticism: TMPD management needs to commission a study to
 investigate police-community relations, particularly in Tshwane and in the
 context of their institution. This study should cover among other things, the
 development of a tailor made communication strategy that is suited to address
 police-community interaction particularly between the TMPD and community.
- Lack of Discipline: the level of discipline in the TMPD also needs to be researched in order to identify the underlying problematic issues.
- Poor remuneration: the City of Tshwane needs to also convene a panel to re-look at the salaries of personnel in the TMPD.
- Transformation: the city also needs to further commission a panel of experts
 to look into transformation in the TMPD, to see how best the agency can align
 its strategic objectives to strike a balance between community policing, crime
 prevention, by-law enforcement and traffic policing, this in order to re-position
 the agency as a competitive player in the law enforcement fraternity.
- Nepotism, senior appointments and promotions: The issue of nepotism seems to be serious matter in the department. It is thus recommended that senior management appoint a panel preferably situated at a Mayoral level, to investigate the issue of promotions and jobs for friends and relatives. Also, such panel should investigate the level of experience and do qualifications vetting in all senior appointment, as well as promotion of candidates. Such exercise is necessary if the agency is to boost the morale of staff, which could contribute to high productivity and efficiency in the policing of road-transport.

5.4 CONCLUSION

Apart from the challenges experienced, it is clear that the Tshwane Metropolitan Police Department supports its staff. This was evident from the findings that showed that the agency does offer employee assistance services in the form of psychological counselling and support, to staff that may be exposed to situations that may render them unproductive or incapable of discharging their duties. However, if the TMPD is to function optimally in providing safety and security services in the road-transport system, the many factors that inhibit the agency's effectiveness will have to be dealt with. This will thus require concerted effort from both city officials and strong management and leadership from the Tshwane Metropolitan Police Department.

ANNEXURE A: INTERVIEW SCHEDULE

THE IMPLICATIONS OF IMPROVEMENT ON ROAD-TRANSPORT FOR THE TSHWANE METROPOLITAN POLICE DEPARTMENT

QUESTIONS FOR MANAGERS

- 1. Can you explain in detail, what the role of the TMPD's is?
- 2. What type of training is given to TMPD officials at entry level and in-service?
- 3. Are there any challenges with the training given and if so, what are the challenges?
- 4. What resources are allocated to TMPD staff (police), to enable them to perform their daily duties or functions?
- 5. What are the resource-specific challenges in the TMPD?
- 6. How has improvements, specifically on the road-transport infrastructure (freeways, e-tolls, A re Yeng) impacted on the role of the TMPD?
- 7. What improvements pose more of a challenge and why?
- 8. What are the processes followed by the city in planning for safety around road-transport infrastructure?
- 9. What is the involvement of the TMPD in such processes?

QUESTIONS FOR PATROL OFFICERS

- 1. What does your daily duties as a TMPD official entail?
- 2. What type of training have you received to enable you to do your job?
- 3. What type of support do you get from the TMPD, to enable you to perform more effectively in your job?
- 4. What type of challenges are you experiencing in carrying out your daily duties?
- 5. What challenges have you encountered in your job, following the improvements in road-transport, improvements such as the freeway improvements, the e-tolls, the introduction of Rea Vaya and its stations including in any other road around Tshwane?
- 6. How has these improvements impacted on your role as a police official?
- 7. What intervention has the employer put in place, to help you to overcome the challenges?

ANNEXURE B: EDITING CERTIFICATE

To Whom it May Concern

Editorial Services for Ms. B.T Mabaso

ANNEXURE C: PERMISSION TO CONDUCT RESEARCH



B Mabaso 337 Veale Street Brooklyn House Office 00-014 2015-01-09

Tshwane Metropolitan Police Headquarters Director of road policing in Tshwane Attention to deputy chief: Jenny Malan 118 Church Street Pretoria 0002

RE: PERMISSION TO CONDUCT RESEARCH: B MABASO Sir/Madam

- Permission is hereby requested to conduct research in the Tshwane Metropolitan Police Department
- 2 I am a Master's student at the University of South Africa (UNISA), where I am also employed and am conducting research titled: "The Implications of Improvements on Road-Transport for the Tshwane Metropolitan Police Department"
- 3 The research is in fulfillment of the Mtech: Policing Degree
- Attached herewith, is a copy of my research proposal which outlines details of why, where and how the research will be conducted

Issues on the ethical considerations in the research are also outlined in the attached proposal

Beauty Mabaso

mabasbt@unisa.ac za

Contact: 012 433 9447/ 071 363 3379

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METRO POLICE 2015 -01-2 7

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METRO POLISIE

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Open Rubric

ANNEXURE D: CONSENT FORM

STUDY TITLE: THE IMPLICATIONS OF IMPROVEMENTS ON ROAD-

TRANSPORT FOR THE TSHWANE METROPOLITAN POLICE

DEPARTMENT

M-TECH: POLICING: UNIVERSITY OF SOUTH AFRICA

RESEARCHER: Beauty Thabisile Mabaso

1. RESEARCH PURPOSE: the aim of the research is to explore the implications

of the road-transport improvements on the role of the Tshwane Metropolitan

Police Department.

2. RESEARCH RISKS: I understand that my participation in this research may

have an emotional effect on myself and may create some anxiety and fatigue.

In which case, I also understand that I am entitled to communicate my anxiety

and fatigue to the researcher, who is bound by research ethics to facilitate

immediate and reasonable relief as required.

3. RESEARCH PROCEDURE: I am aware that the interview may take some

time and as estimated by the researcher I may be involved for anytime

between thirty minutes and as hour hereby agree thereto.

4. VOLUNTARY CONSENT: I know that my participation in this research is

completely voluntary.

5. OPTION TO WITHDRAW: I know that I have the right to withdraw at any time

and such withdrawal will not be used against me in any manner.

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6.	OPPORTUNITY TO ASK QUESTIONS: if I have any questions about	this
	research, I know I can ask the researcher to clarify any aspects of	the
	research and that I may reach her on 012 433 9447 or 071 363 3379.	

7.	PRIVACY AND CONFIDENTIALITY: I have been assured by the researcher	
	that the contents of this consent form that my identity will not be revealed	
	while the researcher is being conducted or when it is published.	

RESPONDENT'S SIGNATURE:	DATE:	
RESEARCHER'S SIGNATURE:	DATE:	



COLLEGE OF LAW RESEARCH ETHICS REVIEW COMMITTEE

Date: 2015-05-15

Reference: ST 24

Applicant: BT Mabaso

Dear B T Mabaso

DECISION: ETHICS APPROVAL

Name	B T Mabaso
Proposal	THE IMPLEMENTATION OF IMPROVEMENTS ON ROAD TRANSPORT FOR THE TSWANE METROPOLITAN POLICE DEPARTMENT
Qualification	MTech MTech

Thank you for the application for research ethics clearance by the College of Law Research Ethics Review Committee for the above mentioned research. Final approval is granted.

The application was reviewed in compliance with the Unisa Policy on Research Ethics

The proposed research may now commence with the proviso that

1. The researcher will ensure that the research project adheres to the values and principles expressed in the Unisa Policy on Research Ethics which can be found at the following website:

http://www.unisa.ac.za/cmsys/staff/contents/departments/res_policies/docs/Policy_ Research%20Ethics_rev%20app%20Council_22.06.2012.pdf

 Any adverse circumstances arising in the undertaking of the research project that is relevant to the ethicality of the study, as well as changes in the methodology, should be communicated in writing to the College of Law Ethical Review Committee.





An amended application could be requested if there are substantial changes from the existing proposal, especially if those changes affect any of the study-related risks for the research participants

3. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study.

Note:

The reference number (top right corner of this communique) should be clearly indicated on all forms of communication (e.g. Webmail, E-mail messages, letters) with the intended research participants, as well as with the URERC.

Kind regards

DR B HAEFERE

CHAIR PERSON: RESEARCH ETHICS

REVIEW COMMITTEE COLLEGE OF LAW

PROF R SONGCA EXECUTIVE DEAN: COLLEGE OF LAW

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