## THE EFFECT OF REGULATIONS ON THE EFFICIENCY OF BUS AND TAXIS SERVICES IN WINDHOEK

## ASSOC. PROF. EUGENE MADEJSKI Ms. ROSWINDIS AMUSHILA

Ms. LUCIA KULATAU

Polytechnic of Namibia.

Private Bag 13388, 13 Storch Strasse, Windhoek. Namibia.

emadejski@polytechnic.edu.na

00264 61 207 2597

## Title of paper:

The effect of regulations on the efficiency of bus and taxi services in Windhoek.

## **Abstract:**

This project was conducted in order to analyse the effect of regulations on the efficiency of bus and taxi services in Windhoek. As the public transport indeed plays a vital role in the economy, it is important to bring this sector to order and efficiency. Proper regulation of this sector is not only important for the income it generates to a country and its contribution to GDP, but as it has been observed elsewhere, when the transport sector goes on strike due to dissatisfaction in one

area or another, the result is chaos in public and loss of business to general members of the

public. The public transport has great potential to contribute significantly to the country's

economy and it plays a vital role for the government (Ministry of Works and Transport), in

ensuring good governance which is essential towards achieving efficiency.

In order to successfully carry out this research and critically analyse the public transport system

in Namibia, a qualitative research was conducted. This research was done in a form of face to

face interviews with a sample size of 20, via simple random sampling methods. This method

helped to establish a great understanding of the current situation faced by this sector. Every

element of the stakeholders in the Namibia Transport sector had a chance to be part of this

research, responses were analysed to draw results for the study.

A great deal of work still needs to be done for the public transport sector to improve, in order for

efficiencies to be evident. The outcome of this research indicated that the majority of operators

and users of public transport feel that a regulatory safety and cooperation body, needs to be

established in order to achieve an efficient public transport sector. Therefore, this study has a

opportunity of providing the Namibian government, especially the Ministry of Works and

Transport an chance to review the regulation and operators of the public transport in Namibia, in

order to bring about order through proper regulation and greater awareness. Consistency should

be implemented, in order to cement the regulations for all stakeholders to become more aware.

Four key words (terms): transport; efficiency; policy; Windhoek;

1.1 INTRODUCTION

Transportation in general is the main driver of any given economy. So vital is this sector of the

economy that the cost of living is literally determined by the cost of transportation. The level of

development in any given country is so frequently measured by the standard and cost of transport

and transport infrastructure.

Worldwide, capitals, cities and urban areas are facing increasing environmental, social and

economic challenges caused by inefficient urban transport systems. This results in reduced

accessibility for the urban poor, more traffic congestion, higher road and parking facility costs,

traffic accidents, high consumer costs, a greater energy dependence and pollution emissions in

1

addition to inadequate mobility for non-drivers. Windhoek is growing at a fast pace of approximately 4.3% per year. Within twenty years Windhoek will have to cater for the mobility needs of 1 million residents. A key task for the City of Windhoek and the Government of Namibia is to plan for future transport needs and to cater for the growing population. The challenge of making affordable and efficient public transport accessible to all, is not unique to Namibia, many developing countries are faced with the same dilemma and have made provision for various policies involving various stakeholders in order to develop a well regulated public transport system in their respective countries.

## 1.2 Background of Study

The division of transport policy is responsible for: the formulation and advising of the Minister in matters concerning the transportation policy; the implementation of the recommendations of the white paper on transport policy; the coordination and foreseeing the implementation of economic regulatory policy in all modes of transport. In Namibia, people mostly travel by taxi to and from the central business district as well as between industrial and residential areas at a cost of N\$10.00 per trip. Though this mode of transportation is not cheap, in relation or comparison to others in the region, for example in Botswana where taxi fair is only BWP2.50 per trip which is equivalent of 3.02 Namibian dollars, it remains the only reliable and relatively affordable means of transport for a significant number of Namibians who do not own their own vehicles, but have to commute to and from work using public transport. Long distance buses are mainly used for commuting between small town and cities throughout the country as these towns are several hundred kilometres apart.

Given the importance of transport organisation in a country, these kinds of situations and reports are indeed worrisome. Frequently we see how the bus and truck drivers in South Africa go on strike and the effect is felt way beyond the borders of that country. All over the world, strikes by either trucks or public transport sector, have had significant negative effect on the economy.

## 1.3 Problem Statement

Currently Namibia is faced with the challenge of a seemingly chaotic and improperly regulated public transport system. This results in poor transport service quality and level of safety. Unless the relevant/responsible authorities are able to implement more sustainable and practically efficiency policies, the problem will persist. The researcher will investigate and systematically analyse the problem on hand to ascertain the best practice to achieve a more efficient public transport system.

## 1.4 Objectives and significance of the research

Proper regulation of this sector is not only important for the income it generates to a country and its contribution to GDP, but as we have seen elsewhere, when the transport sector goes on strike due to dissatisfaction in one area or another, the result is chaos in public and loss of business to general members of the public.

This study therefore has a great chance of giving the government, especially the Ministry of Works and Transport an opportunity to review the regulations and operations of public transport in Namibia in order to bring about order through proper regulation. At present the break-away body of the taxi organisation is threatening to go on a nation-wide strike. Should this happen, one can only imagine how much disruption this will have on the economy and the general flow of life of people of all walks of life.

## 1.5 Research Questions:

This paper will explore the following research questions

- 1. What are the parameters of an efficient public transport system (what factors of bus and taxi service make an efficient system work?)
- 2. How does the City of Windhoek or Ministry of Works address these parameters
- 3. How the bus and taxi services are spatially distributed? Are there problems/challenges in the way they are currently distributed?
- 4. What policy options are available to COW and Ministry to improve the situation?
- 5. NABTA as the body that is supposed to control and regulate the operations of taxis, has any control over these public transport operators at all?

## 1.6 Hypotheses

The hypothesis of this study is that the taxi and long distance bus operation services in Namibia are unsafe and poorly regulated.

## 1.7 Limitations of the study

The study is limited to Windhoek due to the fact that it is the capital city of Namibia, where public transport is mostly utilised. The study is limited to the taxi and long-distance bus operations within Namibia as compared to a few regional and international examples.

Accessibility to information in a form of reviewed articles, journals and books is also a limitation to this study as few studies on the effect of regulations on the efficiency of bus and taxi services in Namibian has been done thus far.

#### LITERATURE REVIEW

According to the World Bank Organization (n.d), in many developing countries of Africa, Asia and Latin America, bus services were at one time provided by regulated monopolies. In colonial regimes these monopolies were often owned and managed by expatriates as subsidiaries of major suppliers in the colonizing country. In the postcolonial period, they were taken over into national ownership but continued to operate as protected monopolies. In the socialist economies, nationally owned public sector monopolies were also the rule. In both situations-former colony and former socialist economy-the traditional monopolies have now mostly collapsed. In some Latin American countries, they have been replaced by smaller, privately owned companies operating under permissions granted by the municipal authorities. In Africa they have largely been replaced by fragmented small vehicle par transit sector, while Eastern Europe and central Asia, a similar process of decline is at various stages of completion. Only in China- where operations remain in public ownership but are adopting increasingly commercial approaches to business-and in few major cities in India and Eastern Europe do traditional public operations still dominate. Although the details of history vary from country to country, the processes of public transport declines have much in common. In many cases, the Governments have attempted to use the public transport industry as an instrument of social policy by simultaneously constraining fare levels and structures and by guaranteeing favourable wages and working conditions to employees.

The bodies of the Namibian Passenger road transport authorities will be discussed below including the roles they play in regulating this sector in Windhoek:

## 2.1.2 Road Safety Council (RSC)

Namibian Road Safety Council. (2014). The Road Safety Council is a statutory body that was created in 1996 by section 2 of the National Road Safety Act, act 9 of 1972. The Act was made applicable to an independence Namibia by virtue of article140 of the Namibian Constitution. Through semi autonomous, the NRSC operates at an arm's length from government. Its mission and Vision is to ensure the safety of all road users and that all necessary efforts are taken towards preventing traffic deaths and injuries with the view of making Namibia's road network one of the safest in Africa and the World. The other purpose of NRSC is promoting road safety through

research and awareness campaigns. The NRSC concurred with the high traffic fines idea implementation as they were meant as a deterrent and if they were to be reduced, then the whole purpose of deterring and discouraging motorists from committing traffic offences, would be defeated, as motorists would be able to afford the reduced traffic fines.

## 2.1.3 Windhoek Municipality Police Services

According to the City Police (2014). The mandate of Windhoek City Police Service "acronym" WCPS or City Police is derived from Section 43(C) of Police Act, Act 19 of 1990 as amended, its powers are enshrined in the Municipal Police Service Regulations (Regulations No. 2833 of 2002), Declarations of Peace Officers (No 74 of 2003) made in terms of Section 334 of the Criminal Procedure Act, (Act 51 of 1977 as amended and Road Traffic and Transport). The role of the City Police is to complement the Namibian Police in Crime Prevention, Law Enforcement, and Traffic Policing and the Enforcement of By Laws in the City of Windhoek day-to-day operational and administration activities are guided by the Municipal Police Service Regulations and the Memorandum of Understanding signed between the Namibian Police and the City of Windhoek in 2004. The service has full policing power except the power to investigate.

## 2.1.4 Namibian Financial Institutions Supervisory Authority (NAMFISA)

Namibia Financial Institution supervisory Authority is an independent institution established by virtue of Act No. 3 of 2001 to regulate and supervise the non-banking financial sector.

NAMFISA indicated that they are basically the regulator and supervisor of none banking financial institutions, the insurance industry though they also do regulate various institutions including, pension funds and medical aid schemes. The safety and security of the general public must be secure and protected. As a regulator they are also concerned with the escalating car accidents, which also impacts heavily on medical aid schemes and short term insurance schemes. Namibia Financial Institutions Supervisory Authority (1999).

## 2.1.5 The Namibian National Students Organisation (NANSO)

Namibian National Students Organization (2014), says that it is an organisation representing students in the country recognises the importance of the taxi industry, and the employment opportunities it offers to the citizens of the country, and identified a social contract between the students and the taxi industry. Each depending on the other, there is a symbiotic and altruistic relation between the two.

As much as they are concerned about the taxi services they are also concerned with the high taxi fares as students, they are not working as such and they find the taxi fares to be high. They pay the same amount of fares like all other working citizens of Namibia. NANSO sees the need for discussions and a liaison between them and the taxi industry with regards to taxi fares.

## 2.1.6 Namibia Public Passenger Transport Association (NPPTA)

NPPTA is an association that represents the public transport operators in Namibia. NPPTA members have the potential to serve as a resource and mouthpiece for the advancement of Public Passenger Transport in Namibia as well as to the neighbouring countries. NPPTA provides support and mentorship of members and are also adamant in providing professional development of its members. The association's vision is to protect the interest of members, regulate policies and statements of professional conduct of operators, to have a satisfying service provision to the commutes and excellent safe operations without biased customer service.

## 2.1.7 Namibia Bus and Taxi Association (NABTA)

NABTA is a voluntarily association of taxi owner/employers organised to advance the interest of members operator. NABTA is the only association that has been recognised by the government as it has a structure in place. All Africa. (2014).

## 2.2 The role of Public Transport in Namibian Economy

According to the United Nations Development Fund (2012), although Namibia is classified as a middle-income country, the income gap between the rich and poor is one of the most marked in the world. As such, many people cannot afford other more efficient means of transport other than the public transport (taxis and long distances buses). Public transport in this instance hence plays a crucial role or making sure people report to work in time and other engagements.

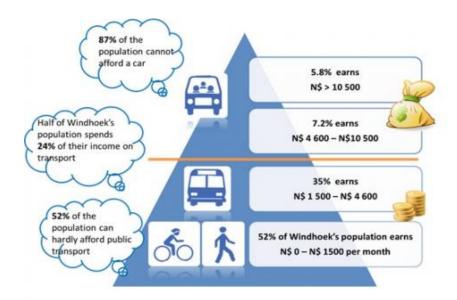


Figure 2a: The current condition of the local economy in terms of costs of transport Source: http://www.movewindhoek.com.na/news/why-do-we-need-re-think-our-transport-system-part-i-poverty-reduction.

As shown, roughly 87% of the populations are considered "low-income earners", who can hardly afford to purchase a car. 52% of the low income earners can also hardly afford public transportation, as it would take up more than half of their monthly income. Thus, in terms of the present economic situation faced by the population, it is evident that non-motorised and public transport is the most affordable modes to 87% of the population. On average, low income earners have to spend 24 % of their disposable income for their mobility needs.

According to the (Namibian Public Passenger Transport Association's view on insufficient taxi ranks, 2013), the current pricing structure, and the way infrastructure is provided is inefficient and unfair due to the fact that it underestimates (or subsidises) travel by motorised (mostly private) vehicles. Currently little attention is given to an appropriate provision of non-motorised and affordable public transport. If we do not change our course in urban and transport planning, this is what is going to happen given the fact that the taxi industry and public transportation are an important sector, as it affects the socio-economic order of the residents of Windhoek and the entire Namibian society either directly or indirectly.

In addition Move Windhoek (2012), says that considering the fast rate at which rural and urban towns are growing and migration in search of better employment opportunities in the city, the demand for reliable transportation is increasing and subsequently the high level of congestion associated with it. Low income households will be affected most by the deteriorating traffic situation since their homes are further away from the town centre and places of employment.

Spending more time and money on transport leaves less for productive activities. This will increase the already worrisome income gap between rich and poor. This situation will deteriorate in the business as usual scenario where travel times of urban poor will be much higher than the once of middle income and high income travellers. Should efficiency be fully achieved by using Public Transport lower income households will save more than one hour per trip and travel with the same speed as an average household by 2032? The operations of public transport is carried out by ordinary men and women who either do not have other means of income or simply want to supplement their incomes from elsewhere. It is therefore a very import means or source of income for many Namibians.

According to Move Windhoek (2012), despite its size, however, the largest concentrations of job opportunities are found in and around the central business district (CBD).

Bardi, Coyle & Novack (2006), add that given the high number of unemployment in Namibia, public transportation has been a getaway to many unemployed Namibians. Apart from being a source of income to many households in the country, public transport contributes significantly to the national economy. For example, in 2001, the United Sates motor carriers employed approximately 1.8 million people and transported 10.51 billion revenue freight ton-miles. This was equivalent to 28percent of the ton miles transported by all modes.

## 2.3 Current economic state and sustainability

Every city has different features that require a highly unique transport system. The City of Windhoek for example is characterised by high density in areas inhabited by the poor, a Central Business District (CBD) area, and peak traffic experienced between 1700 and 1800hrs after shops and businesses close. Vehicle ownership is increasing rapidly in line with per capita economic growth, further exasperating the congestion experienced within the city. Public transport systems would greatly benefit and improve this situation because a single bus or taxi carrying many people typically emits less carbon and uses less fuel per passenger than if more private vehicles were on utilised on the roads on a daily basis.

Move Windhoek (2012), says that public transport systems in Windhoek, however exist only in very limited extend. Provisions for non- motorised transport, an alternative and the second most important means of transport in the northern and central part of Windhoek, are inadequate and disconnected. Private cars and mini buses are used by the majority as opposed to city of Windhoek bus service.

Although a relatively small city population-wise, the road safety situation in Windhoek is alarming and extremely high in comparison with international. The total accident in October 2012 was 486 in the central business district of Windhoek alone as per the Namibian police records. That total translates to more than 16 accidents per day happening in a relatively smaller area of city.

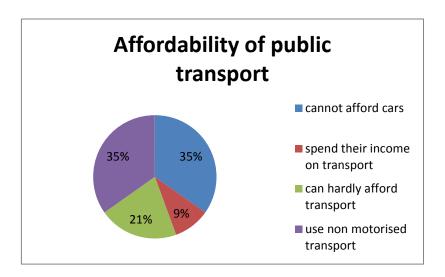


Fig 2.b is an illustration of improved affordability of public transport as economic necessity for many Namibian (<a href="http://www.movewindhoek.com.na">http://www.movewindhoek.com.na</a>)

The current state of public transport is chaotic and not sustainable. Currently the transport industry is disorganised and many taxi and bus owners operate independently (http: <a href="https://www.namibian.com.na">www.namibian.com.na</a>, accessed on 26/03/2014) therefore the government as well the regulatory body should establish a more practical solution.

The current state of the public transport sector is plagued a series of problems and challenges. It has been reported in the Namibian Sun that currently other problems includes perceived high traffic fines, unidentifiable passenger vehicles, poor coordination and communication among the stakeholders, poor route management, driver incompetence and slow adjudication of traffic offences, the report further added that the consultative report observed that many stakeholders do not know about legal instruments, condition and communication channels, while unions lack knowledge on their role and the benefits they can derive from the sector, Move Windhoek (2012).

Transportation problems are not new to mankind and urban areas have always been problematic because of the large concentration of people, and Windhoek is no exception. Being not only the political but also economic capital, Windhoek will continue to grow rapidly. The question to policy makers as well as transport and city planners is how can our current transport system cope

with the increased transport demand? Will Windhoek have traffic jams as many other African cities are experiencing every day? Will we be able to provide safe, affordable and efficient mobility in a liveable urban environment?

Even though only 13% of Windhoek's resident can afford and own cars, private cars are currently the dominating mode of transport in the capital and Namibia in general. How do 87% of residents without cars reach schools, hospitals, markets and other social services Windhoek has to offer? How much of their disposable income is spent on transportation? On the basis of the above, there is a need for a robust public transport services. Taxi and municipal buses carry many people to work but is the services accessible, affordable and safe enough?

In most cases there are complaints of abuse of power in these operations. The lack of regulatory laws pertaining to public transport as well as a harmonised and transparent body that will implement the regulatory laws to ensure efficiency, causes a great deal of friction within the transport industry.

According to the Minister of Works and Transport (2013), "Taxis complain about the ill treatment at the hands of law enforcement whereas the public view taxis as reckless and with no regards for traffic law or their passengers. Buses are often too full and exposed to the congestion leading to passengers arriving too late at work places. This does not match with the requirements of a flexible and modern business environment, it does not match with a modern transport system we should have in Namibian's capital. Many residents would like to use the most affordable non-motorised transport options, such as walking and cycling. However, the lack of non motorised facilities forces them to use unpaved ways along roads or compete for space with motorists."

Public transport data revealed increased opportunity for delays to occur as a result of factors such as poorly allocated taxi ranks and the lack of a proper bus services all extending the waiting period of commuters. This also results in commuters stopping taxis at places which cause a disturbance to the regular flow of traffic, NPPTA (2013).

According to the NPPTA report on insufficient taxi ranks, Windhoek's population is growing rapidly at a rate of 4% and is expected to reach 440000 by 2020, this is an increase of more than 120000 inhabitants from now, a significant portion of this population will be in the outer Windhoek growth areas. In addition, the rapid population expansion in Windhoek's growth areas creates a major challenge for the state to provide the transportation infrastructure and services needed to sustainably support the communities.

In the report to the Parliamentary committee, the Motor Vehicle Fund supported the view of the NPPTA with regards to inadequate taxi ranks. In addition, the MVA also raised the problem of insufficient loading zones and pedestrian crossings adding to the chaotic situation being experienced in Windhoek, involving mostly taxi operators. The pedestrians are equally not spared by motorists especially taxi operators.

The minister of Works and Transport Hon.Erkki Nghimtina applauded the initiative and sees the plan as a powerful tool to improve the livelihood of the residence of the City of Windhoek especially the poor who spend most of their disposable income on transport.

## 2.4 Pricing

Major cities in Africa are growing rapidly. As a consequence, public urban transport has become a central issue, whereupon today's city planners, in addition to problems with congestion and increasing travel time, have to deal with the demand to making transport affordable to everyone, inclusive the urban poor. The urban poor are the people who cannot afford the existing transport fares and hence are forced to walk long distance to work or to school spending several hours of their time for commute. The urban poor form a large percentage in a developing city and hence are necessary to be considered along with the consumer's budget while planning for an affordable urban transport (Source: Public Transport Fares in African Cities, 2005).

The report further stated that Governmental approaches that address the provision of affordable urban transport often start with subsiding the existing public transport system, but its non existence in most developing countries, results in large buses in most cities that can carry more than 50 passengers decreases. The report indicated that a good example of the city where the buses have decreased are Dar es Salaam, Yaoundé, Accra and Freetown, the second factor is also due to altering and unstable or inconsistent subsidies and non-competitive structure of public transport industry.

The price review shows that public bus fares in Africa differ up to twentyfold( that is between the Eritrea,4 US cents and Namibia, 83 US cents) and private collective taxi fares differ tenfold(between Madagascar 10 US cents and Senegal 100 US cents, if the extreme case and exception of Lagos/Nigeria with 150 US cents, is excluded. The difference between these ratios (1:20 and 1:10) may be attributed to a possible influence of subsidies for public institutions. It has been observed in other developing countries such as Indonesia, that state subsidies for urban bus transport may easily reach 50% of the total fares price, if compared with private industry operating the same routes.

The comparison between fares for buses and for collective taxi in the same country reveal that in seven cases taxi were more expensive than buses, in five cases they cost the same and in two cases(Yaoundé and Tunis) collective taxis were cheaper than public buses.

The fares for taxis in Namibia range from N\$10.00 per trip if there is a taxi rank at a destination, to double the fare if there no designated taxis rank at deem-off point. While taxi fares in Namibia are regulated, they still are far higher than the average for most African cities. While the Windhoek taxi fares translate to 1 US\$ at a current exchange rate, the average minibus fare per trip in nine African cities samples US\$ 0.26, which is nearly a quarter of a single trip taxi fare in Windhoek. Even taking into account differences in standard of living between these cities and Windhoek, it still would not fully explain a discrepancy.

In an interview conducted by Selma Iileka of the Namibian sun with January, the taxi fare will be increase is necessary because of the escalating cost of living.

Comparison is made between international best practice in terms of public transport fares and the regional best practice. The international example used was Singapore, where public transport fares are regulated more transparently by the Public Transport Council (PTC) which was set up as in independent body to regulate public transport services at affordable prices, and at the same time ensure the long term viability of public transport operations.

The PTC adopted the "price cap model" in an attempt to regulate public transport fares.

According to the Instituting fare regulation (2009), "The fare adjustment formula used was "CPI+X" where CPI is the change in consumer price index over the preceding year and X was set **ex-ante** for a number of years, taking into consideration inflation rate, wages changes and national productivity gains. X was intended to compensate the operators for net cost increase (after considering wages and productivity) beyond inflation."

When designing the fare regulation, it is imperative to pursue an acceptable approach, with political support and inputs from relevant stakeholders.

The challenge with this price cap model was determining the appropriate price index and the level of productivity extraction. The PTC investigated the cost structure for public transport operators and found that human capital cost was the largest component, constituting about half of their total operating costs. The other half was made up of maintenance, fuel costs, depreciation and other expenses. Therefore wage changes were considered separately in the price index while

the other cost items were accounted for using of the CPI. The separation was aimed at improving the responsiveness of the fare adjustment formula to CPI and wage changes.

"The price index used, as shown below mimics this cost structure:

Prince Index = 0.5 ( $\triangle$  CPI) + 0.5  $\triangle$  WI) where CPI (the consumer price index over the preceding year and WI is the change in the wage index, defined as the national average monthly earnings adjusted for any change in the employers contribution to the Governments Central Provident Fund" (Instituting fare regulation, November 2009, Pg 45).

When considering the productivity extraction, the PTC had to balance the need to motivate operators to be productive and simultaneously ensure that commuters benefit from productivity. If the full productivity gains were extracted, the operators would be discouraged from maximising productivity because this would in turn mean lower production costs, and therefore a smaller fare cap. It was therefore decided that the extraction levels would be based on an equal sharing of the operators past average annual gains. For example, between 1997 and 2002 the average productivity gain of operators was about 0.6%. Hence, the extraction was fixed at 0.3% for a period of three years (2005-2007).

Therefore the new fare adjustment formula was set as:

Fare cap= Price Index- 0.3%.

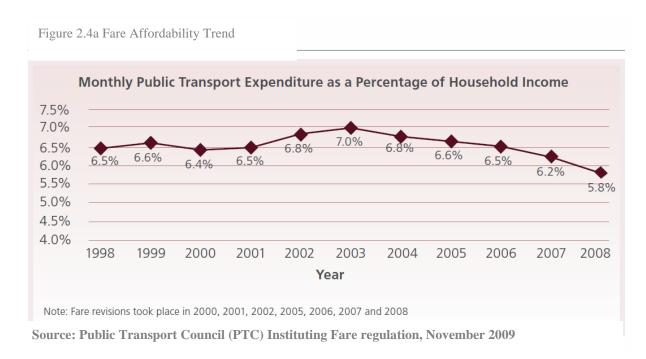
The previous method of relying on cost justification for fare adjustment gave operators little incentive to reduce costs and improve efficiency. The fare cap method described above is a more deterministic approach and the PTC was only mandated to make adjustments to the model in two explicit circumstances:

"When there are adverse economic conditions (in terms of GDP growth and unemployment rate) or "When there is a significant deterioration in the overall affordability of public transport"

Since affordability is one of the key factors to consider when the PTC deliberates when operators apply for fare increase, a more vigorous indicator to track fare affordability was required. This was done by assessing household expenditure on public transport as a percentage of the average monthly household income as well as the average monthly household expenditure on public transport as a proportion of total household expenditure, although this was reviewed for every 5 years, the time gap for such information was too long given that annual fare revision exercise. The PTC established a new public transport fare affordability indicator to allow them to track the affordability trend on an annual basis. The new fare affordability indicator is computed based on

the percentage of household income spent on public transport by a representative household that characterises the average public transport users.

The representative household is constructed using information on the household expenditure and travel patterns collected by the Land Transport Authority (LTA). This indicator is used to track annual changes in public transport expenditure and was validated every 5 years.



In the case of Lesotho, passenger road transport is composed of three types of vehicles: Large and small buses, minibuses and saloon cabs. The bus services cater for long distance routes while the mini buses and cabs services town centres and surrounding villages. Both the minibuses and cab services are dominated by local entrepreneurs. There is a significant amount of competition between these segments because a large number of them are entrepreneurs who operate as sole proprietors. The only state owned transport is the Lesotho Freight and Bus Services Corporation (LFBSC). One of the main mandates of the corporation is to provide public transport to the underserved areas of the countries. The major roads connecting town centres are mostly gravel roads, therefore buses are considered as the main mode of transport across Lesotho. Most private operators opts for paved routes

In Lesotho the body madated to regulate prices is the Road Transport Board (RTB) which determines the prices based on a notional cost of vehicle operating cost per passenger. Therefore larger vehicles (buses) with high passenger capacity have lower prices than smaller vehicles (cabs and minibuses). The Board determines the prices taking into consideration the basic price

per kilometre; this is the basic price, to this basic price an additional 15% is added to where the route is gravelled and 25% where the route is mountainous.

## 2.5 Safety

Pedestrian and passenger fatalities occur as a result of speed and hence the truism "speed kills". Whereas all public roads in Windhoek have a general speed limit of 60/km/h or 40km/h in some residential areas, a severe lack of facilities for pedestrians and cyclist along these roads and streets make walking and cycling quite unsafe. More so if a consideration of a probability of death rises dramatically as a result of speed over 40km/h.

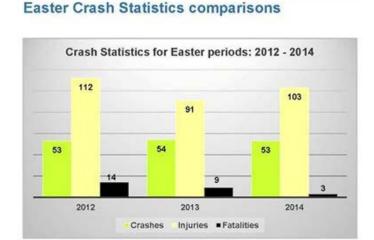
"While the road safety situation in Namibia may not be the worst in the world, at least one person is killed and 16 others injured on our roads, every day", reads the first line of the second paragraph of the foreword by the Chief Executive Officer of the Motor Vehicle Accident Fund (MVA Fund) in the Annual report on Road Crashes and Claims of MVA Fund of 2010.

In the report on public hearings –petition by the Namibian transport and taxi union it was reported that Peter Katjavivi tore in the taxi industry during the hearing saying a lot needs to be done to ensure passenger safety. He further referred to the risks faced by passengers and other, motorists because taxi drivers ignore the rules of the road, such as by stopping illegally at busy intersections or in the middle of the street to pick up customers. According to the Namibian Sun (2013), & Move Windhoek (2012), it has been reported that many people walk on unpaved walkways along many roads. Their travel becomes a dangerous adventure since they are forced to walk in unsafe riverbeds and crossing high-speeds. The report additionally added that the communities became complacent about the regular horror stories in media about children hit and killed while crossing the B1.

There have been several campaigns and plans that Namibia has done and is currently doing as a country in order to tackle the problem of road traffic accident and ensure the safety of the all the road users in the country. Among them is the Xupifa Eemwenyo (Save lives) road safety project, which was established in 2005 with the aim of reducing fatalities, injuries and trauma on Namibian roads and to create road safety awareness amongst Namibian road users. (RTAs) (www.mvafund.com.na). Namibia Road Safety Strategy (NRSS) and Khomas Region Transport Safety Plan, as well as, law enforcement of traffic fines and national drink-driving law (Research on Statistical Analysis of road traffic fatalities in Namibia 2007-2009, November 2012).

According to MVA report, statistics show that the highest number or road accidents involving long distance buses occur during the peak holiday periods in Namibia. During the Easter holiday

period (Figure 2) for the same two year period, the number of crashes remained virtually unchanged but the number of injuries increased. These numbers have however decreased on average from the year 2013 to 2014 during the Cassinga public holiday period where the number of crashes and injuries decreased from 71 to 57 respectively (Figure 1). This may be attributed to the road safety campaigns.



#### Note from 2013 to 2014:

Crashes reduced by: 2% Injuries increased by: 13% Fatalities reduced by: 67%

Figure 2.5b Easter Crash Statistic Comparison. Source: http://www.mvafund.com.na

## 2.6 Regulations

The Windhoek taxi industry is currently regulated by the Ministry of Works and Transport and the City of Windhoek. Representing the taxi industry are the Namibian Bus and Taxi Association (NABTA), the Namibia Transport and Taxi Drivers Union (NTTU), and one that was most recently launched in 2012, the Namibia Public Passenger Transport Association (NPPTA). In view of the importance of taxis in the public transport sector, meetings were held with all key stakeholders (i.e., CoW, MWT and the taxi industry operators/officials) to discuss a Master Plan with a strategic objective of integrating taxis in the new public transport system. As a result of these discussions and negotiations, the following recommendations were proposed:

- i) Medium term options for addressing the interest of the taxi owners might be:
- a) Incentive Schemes, e.g. special credit schemes to replace taxi cars with bigger vehicles (minibuses and buses) and deliver services within the integrated Public Transport (PT) system, e.g. as feeder services

- b) Tendering feeder lines/zones for the exclusive servicing by a specific taxi owner or a group of taxi owners
- c) Selling shares of newly established PT service companies to the taxi industry
- d) Enabling participation in bus leasing schemes for intercity and intercity operations
- ii) Medium term options for addressing the interest of a part of the taxi drivers might be:
- a) Offer prioritised employment opportunities in the integrated PT system.
- b) Incentive schemes for becoming owner drivers and transforming their business in door-to-door services or integrated in the overall PT system.
- iii) Medium-to-long term options in the overall interest of the society:
- a) Revision of the admission standards, i.e. professionalising the industry and combining the renewal of licenses with specific training measures.
- vi) Medium term options in the overall interest of the society:
- a) Introduction of taximeters for the door-to-door services increases transparency of taxi for the users and allows a clear distinction between PT services on fixed routes and taxi services.
- b) Inclusion of Taxis which are officially integrated into the overall public transport scheme in the fare integration, ticketing and revenue distribution schemes, Move Windhoek (2012). Ultimately the Namibian Sun (2013), says that A new strategy has been developed by the Ministry of Works and Transport to address the main problems with the taxi industry. The Public Passengers Transport Change Model, which was presented at a public hearing of the National Assembly's Standing Committee on Constitutional and Legal Affairs on Monday, aims to improve the image of the industry and its end users. A consultative report, which forms part of the model, identified problems such as a shortage of taxi ranks, unregulated issuance of public transport permits, taxi and bus driver attitudes and unroadworthy vehicles. Other problems included perceived high traffic fines, unidentifiable passenger vehicles, poor coordination and communication among stakeholders, poor route management, driver incompetence and slow adjudication of traffic offences. The directorate of transportation policy and regulation's deputy director, Damien Mabengano, explained the calls for quality of public passenger transport services and the relations between the government, law enforcement agents and transport operators. "The model came about because of many complaints from public transport operators and passengers. "It identifies the root causes of why the public transport industry is marred by rowdiness, conflict of unions, and accidents among many other things. "With the involvement of all relevant stakeholders, it seeks to find challenges and deliver rapid results on the action plans, before any engagement of foreign transport experts," Mabengano said. On Monday, committee member Peter Katjavivi tore into the taxi industry during the hearing, saying a lot needs to be done to ensure passenger safety.

Katjavivi referred to the risks faced by passengers and other motorists because taxi drivers ignore the rules of the road, such as by stopping illegally at busy intersections or in the middle of the street to pick

up customers. Mabengano shared his sentiments, saying there is a need to regulate the industry but only after a problem analysis of the root causes and recommendations has been made. "We have to identify what drove to the phenomena of the industry and where key role players can deliver and maintain services and how transport unions and associations can work together by strictly adhering to their goals and mandate. "We want to deliver solutions to problems and not just enact rules and regulations that will create chaos within the industry," said Mabengano. He added that the consultative report observed that many stakeholders do not know about legal instruments, coordination and communication channels, while unions lack knowledge on their role and the benefits they can derive from the sector. "There is so much blame from operators and their clients as they continue to point fingers at the government while there are entities that are tasked to deliver services which mitigate problems within the sector," Mabengano said.

#### RESEARCH METHODOLOGY

## 3.1 Research Methodology

This chapter presents, describes and justifies the appropriateness of the study's methodology for investigating the effect of regulations on the efficiency of bus and taxi services in Windhoek. There are many different methodologies used in various types of research and the term is usually considered to include research design, data gathering and data analysis (Research methodology, n.d.). In this section we will describe the methodology and the design of the research, including the sampling population, the sampling technique, the data collection instruments that are to be used, how the instruments will be administered, the validity and reliability of the instruments to be used and how the data will be analyzed.

## 3.2 Research design

Research design is useful because they help to guide the method's decisions that researcher will take during their studies and set the logic interpretations at the end of the research study. This study will apply qualitative methods design and no-experimental approach, which is a procedure for collecting, and analyzing quantitative data (Creswell, 2002).

## 3.3 Population

The population of this study was taxi drivers, officials from the ministry of transport and the general public. The population sample of this study was all the stake-holders in the transport business; the owners, the commuters and the regulators of transport operations in Namibia.

Given the importance of the transport sector in any economy, several key stakeholders were considered when studying the current state of Namibian public transport in terms of taxis and long distance buses services.

## **3.3.1 Sample**

The convenience sampling method was used to sample the population for this study. In the convenience sampling method the researcher questions anyone who is available. For this research, a total a sample size of 20 was captures.

## 3.3.2 Data Collection

In order to establish whether allegations that the taxi and long distance transport operations in Namibia is in a state of chaos, data will be collected from the samples mentioned and analysed. The data collection technique this study will employ will be predominantly survey technique to collect data from the respondents (taxi operators, public transport regulators and commuters) Open ended questions will be used for the purpose of collecting the data required. The survey will be carried out in a face-to face interview.

#### 3.3.3 Instruments of Data Collection

The question of instrument for qualitative data collection is both more contentious, and more difficult to summarise, (Punch 2005:52). There is a range of possibilities in data collection instruments for qualitative data. However, in this research, the researcher is most likely to be the primary instrument for data collection and analysis. Qualitative data is mediated through the human instrument, rather than any other.

On the other end we can also use questionnaire, for qualitative survey, where open-ended questions are involved, or the schedule for qualitative interviews, where standardisation across respondents is involved. It is most likely that will develop our own instruments for data collection as opposed to using those already developed.

#### 3.3.4 Approach /Procedures

Appointments and permission will be sort from the respondents; the owners of the chosen transport companies and public transport regulators, i.e. officials from the ministry of transport. In the case of public views, random sampling will be done on the streets of Windhoek.

In case of reviewing newspaper articles about the taxi and long distance bus study, a random selection was used; seeking to find newspaper articles with taxi or long distance bus reports.

## 3.5.5 Data Analysis.

The process of data analysis is an attempt to identify the presence or absence of meaningful themes, common and/divergent ideas, beliefs and practices. (David, 2004:191). The distinction between qualitative data collection and analysis in this case is not so clearly defined as such the processes of data collection and analysis fold into each other. This folding into each other fit well in this research that uses the grounded theory data analysis technique. Grounded theory technique is discovered, developed and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon' (Gray 2009; 502).

### 3.3.6 Data entry and storage

Most if not all qualitative research involves recording or transcribing result as text. Interviews observations notes, memoirs etc all have to be transcribed into a word processing document. Equally this study will carry the same approach and the data put into text will then be analysed using appropriate computer programme. The researchers used interviews as a method as a data collection technique. The researchers visited the Rhino Park bus terminal, the Monte Christo bus terminal as well as the Rocky Crest taxi rank to conduct interviews at random. Interviewees included taxi drivers, taxi owners as well passengers. A total of 20 people were interviewed.

## 3.4 Validity and reliability of the Study

Equally important, the research findings should be highly reliable and valid. Reliability is the extent to which the procedure produced similar results under constant conditions on all occasions. To ensure reliability of result in this study, valid responses from the interviews were immediately recorded as the interviews were conducted.

#### DATA ANALYSIS

This chapter will elaborate on the responses to the research questions as well as how the data was analysed and presented.

Data presentation analysis was made using analytical tools such as pie charts and bar graphs.

## 4.1 Classification and Characteristics of Respondents

The respondents were classified according to groups such as taxi drivers, taxi owners, domestic workers, students as well passengers of both buses and taxis in general.

## 4.2 Data Analysis

#### **Question 1**

What are the parameters of an efficient public transport system (what factors of bus and taxi service make an efficient system work?)

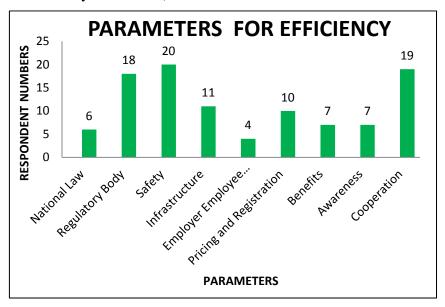


Figure 4.3a Parameters for efficiency.

A total number of 20 respondents felt that safety both for the drivers as well as the passengers and cooperation were the most important parameters to consider for an efficient public transport sector. A recognised regulatory body that assist all the members equally can also enhance the efficiency of the industry.

The parameters based on the responses are ranked from the interviewees from highest to lowest; 20 respondents felt that safety was most important; cooperation was next in line with 19 responses, followed by a recognized regulatory body with 18 responses. 11 respondents considered infrastructure to be a very positive contributing parameter, 10 respondents indicated that pricing and registration was also important while benefits and awareness both obtained 7 responses. Ranking behind was national law and lastly pricing and employer-employee relationship with 6 and 4 responses respectively.

## **Question 2**

2.1 How does the City of Windhoek or Ministry of Works address these parameters?

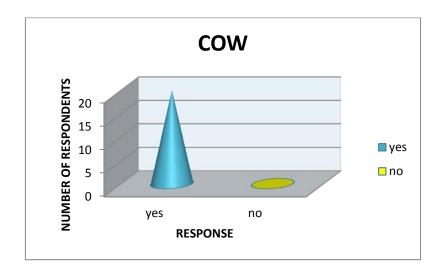


Figure 4.3b Response to whether or not COW is addressing the problem

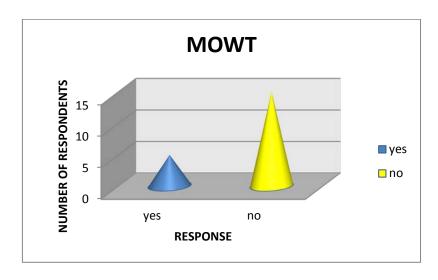


Figure 4.3c: Response to whether or not MOWT is addressing the problem

All of the respondents felt that the COW was addressing the issue of law and order in the public transport sector in order to improve efficiency, while 75% of the respondents felt that the MOWT was not actively addressing inefficiency in this sector.

## **Question 3**

3a) how the bus and taxi services are spatially distributed?

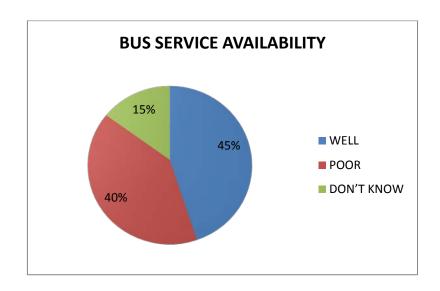


Figure 3.3d: Response to whether bus services is readily available



Figure 3.3e: Response to whether taxi services is readily available.

3b) Are there problems/challenges in the way they are currently distributed?

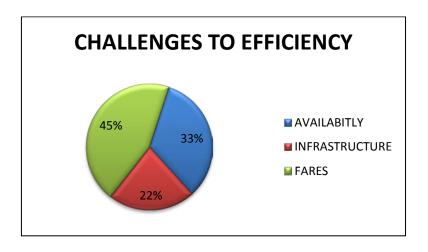


Figure 3.3f: Response to challenges to an efficient public transport sector

**3a)** The 45% of respondents felt that bus services were well distributed whereas 40% felt that the services where poorly distributed while the remaining 15% were doubtful about the spatial distribution of bus services.

Over 90% of respondents considered taxi services to be well distributed and only 5 % considered these services were poorly distributed.

**3b)** The challenge of availability of bus and taxi services in affluent areas was considered to be the greatest challenge for an efficient public transport system by 45% of respondents due to the fact that most of the people who utilise these services are mostly domestic workers who do not own their own transport. 33% of the respondents felt that insufficient infrastructure such as taxi ranks and bus terminal were a challenge to efficiency in the sector. Finally 22% of respondents considered unregulated bus and taxi fares a challenging factor in achieving efficiency, especially considering the fact that there are very few taxi ranks in the affluent areas resulting in taxi drivers charging exorbitant fares.

# Question 4 What policy options are available to COW and Ministry to improve the situation?

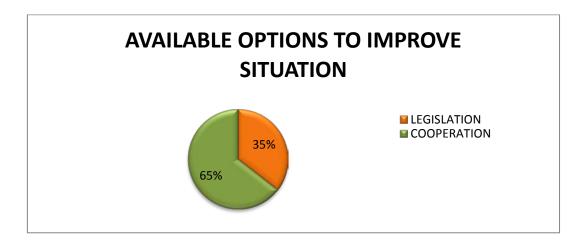


Figure 4.3: Response to the availability of policies to improve the current situation.

The 65% of the respondents felt that there was a greater need for cooperation between all stakeholders within the industry which subsequently would result in a more efficient public transport sector, this cooperation includes the recognised body to create awareness amongst the operators, owners as well as the ordinary passenger with regards to the rules and regulations needed in order to achieve smooth operations within the sector. Only 35% believed legislations would improve the state of affairs immensely.

## **5.1 Summary of Findings**

The outcome of this research indicated that the majority of operators and users of public transport feels that a regulatory body, safety and cooperation needs to be prioritised in order to achieve an efficient public transport sector. While national law, employee-employer relationship needed to be explored as well. There is a distinct feeling among the passengers, taxi owners and taxi and bus drivers that the Ministry of works as the custodian of the policies is not effectively implementing the policies considered to be a guiding principle for efficiency in the Public transport sector.

The bus services are not as widespread as taxi services; this is due to the fact that there are insufficient bus terminals in the affluent areas.

Contravening of the Act 74 of 1977-Act 31 is prevalent, section (f) which stipulates that any person who is a holder of the permit, who makes it available to any other person to undertake road transportation is not authorised by the Act and therefore the person is quilt of an offence. A lot of permits are being hired out and rented.

#### **5.2 Conclusion**

It is a clear fact that the public transport industry is in a chaotic state of affairs, It is also a well know fact that there is a lack of legislation to guide the industry. The following observation has been established during the research project. That there are too many organisations that would like to manage or lead the Public transport industry and that creates a lot of disorder.

That management of public transport sector is not likely due to some of the unregistered taxi/buses that are currently in operation. The current recognised body is not effective and as a result passengers have no clue where to find the buses or taxis to certain destinations. Drivers are not properly trained in either defensive driving or customer care. There are no adequate infrastructures for example bus stops with shelter is its raining and they are not sufficient especially at the affluent areas. There are no strict measures pertaining to the condition attached to the drivers' license for example. The drivers are screened adequately; they are also not educated on the importance of the law. Owing to the fact that there are loopholes in the systems a lot of reckless driving as well disobedience of the law is common in the public transport industry.

It is important for the Ministry of Works and Transport (MOW) to take c steps in order to bring efficiency in the public transport sector. This should be done by means of implementing the

necessary policies. The authors found the recommendation which has been submitted to the cabinet by the Parliament Standing Committee, April 2014 to be appropriate. That it is essential that, the public transport industry should be set up in such way that is convenient and easily accessible to the members of the public and near the communities. The taxi recapitalisation Programme envisages the introduction of safety requirements for new taxi vehicles, scraping of existing outdated vehicles, and effective regulation of the taxi industry, effective law enforcement in respect of public transport and the empowerment of the taxi industry.

Road users are required to adhere to the Laws of the country and thus in executing their duty the bus and taxi drivers, in commuting customers must adhere to these laws. Taxi owners and their drivers must have road safety awareness campaigns to educate the public as to demarcated loading and offloading zones. The MOW must start with deregistration of all taxi licenses. The Ministry must issue each new owner with a license disk to be displayed on the vehicle operated under that licence and the name of the owner must appear therein. The authors further agree with the recommendation submitted to the cabinet by the Parliamentary Standing committee that it is essential that, the public transport industry should be set up in such way that is convenient and easily accessible to the members of the public and near the communities. The taxi recapitalisation Programme envisages the introduction of safety requirements for new taxi vehicles, scraping of existing outdated vehicles, and effective regulation of the taxi industry, effective law enforcement in respect of public transport and the empowerment of the taxi industry. The consultative report which formed part of the model, identified problems such as shortage of taxi ranks unregulated issuance of public permits, taxi and bus driver attitudes, loading and drop off zones and vehicles that are not roadworthy.

The main problem raised in the report is that people apply for five to ten permits and once they are given, they rent permits out to owners of unregistered taxis, at exorbitant fees and therefore the Ministry is calling for the issuing of public transport permits to be decentralised and be subjected to renewal at a stipulated dates. It was also recommended by the Ministry that all permits be recalled in order to start on a clean slate.

The authors recommend that there be better employment conditions and making sure that all stakeholders are properly represented and their health, safety and welfare are protected as well as to put in place good code of conduct to regulate the industry as well as register buses and taxis.

### **REFERENCES**

Creswell, J.(2002) Research design: Qualitative, Quantitative and Mix methods approaches. (2<sup>nd</sup> Ed) Easterby-Smith.M, Thorpe, R & Lowe, A.(2002) Management research: an introduction.(6<sup>th</sup> ed)Sage-London.

Babbie E., & Mouton Johann (2012). The Practice of Social Research. Oxford University Press. Cape Town South Africa.

Bardi E.J., Coyle J.J. & Novack A. R.(2006). Management of Transportation. Thomson/West United States of America.

David, M. & Sutton, D., C. (2004). Social Research. The Basics. The Alden Press, Oxford, UK.

Gray D. E. (2009). *Doing Research in the Real World*. Cornwall, Great Britain T.J. International Ltd

Punch F.K. (2005). (2<sup>nd</sup>.ed) *Developing Effective Research Proposals*. SAGE Publications London, United Kingdom.

http://www.ministry of Work and Transport.gov.na. Retrieved on the 2013/02/13.

http://www.movewindhoek.com.na. Retrieved on the 19/09/2013.

http://www.namibiansun.com.taxi-operation, accessed on 05/09/2013).

Competition issues in the transport Sector in Lesotho, Chabeli J.Ramolise, 2011

Minister Erkki Nghimtina, foreword by minister of Works and transport, 02 September 2013.

http: www.namibiasun.com.na/transport/to be regulated, accessed on 13 June 2013).

Instituting fare regulation, Looi Teik & Tan Kim Hong, Journey, November 2009.

NPPTA"s view on insufficient taxi ranks, 4, November 2013.

Public Transport Fares in African Cities, 2005

Research project on statistical analysis of road traffic fatalities in Namibia from 2007-2009, November 2012.

http://siteresources.worldbank.org/INTURBANTRANSPORT/Resources/chapter7.pdf accessed on 27/06/2014

http:www.namfisa.com.na,accessed on 17/05/2014.

Research Methodology. Retrieved from http://science.blurtit.com/23704/what-is-research-methodology

http://www.nrsc.org.na, accessed on 08/05/2014

http://www.citypolice.org.na, accessed on 07/05/2014

www.namibian.com.na, accessed on 26/03/2014

http://sun.com.na/transport/public-transport-sector-be-regulated.59139, accessed on 2 July 2014.