

# **SOUTHERN AFRICAN SOLUTIONS TO PUBLIC TRANSPORT CHALLENGES**

**C MTIZI**

Department of Logistics, Faculty of Economic and Management Sciences, Stellenbosch University, Private BagX1, Matieland, 7602 Stellenbosch, South Africa, Email: 17540771@sun.ac.za

## **ABSTRACT**

This essay investigates current challenges faced in the Southern African public transport sector and proposes a possible solution to overcome these challenges. Using South Africa and Zimbabwe as case studies, the essay identified shared challenges experienced in both countries for which a universal solution may be adopted. It was found that these challenges could mostly be attributed to government actions. The essay concludes that there is a need for better integration of social outcomes within public transport policy at the strategic tactical and operational levels in Southern Africa. Furthermore, it suggests that technology-driven solutions can be introduced in the public transport realm, amongst other solutions, that entails a universal cashless payment system coupled with GPS technology.

## **1. INTRODUCTION**

Urbanisation over the past 20 years, has been one of the main contributors to the economic growth in Southern Africa. This trend is likely to continue and coupled with rapid population growth, it is projected that over 50% people of the world's population will be living in urban areas (The World Bank., 2000). As a result, the growth of informal settlements in the outskirts of metropolitan areas where land is cheaper means that commuters go through long travel times and experience huge travel costs. Public transport is the primary choice of travel in Southern Africa and is a driver of economic growth. It, therefore, needs to be reliable, affordable, accessible, flexible and safe.

This essay identifies challenges in two Southern African countries- i.e. South Africa and Zimbabwe highlighting problems that transcend economic structures, geographic location, and traffic together with population movement. Solutions are presented for the identified challenges, however, most of them need active government implementation and constant monitoring and evaluation.

## **2. PUBLIC TRANSPORT CHALLENGES IN SOUTH AFRICA**

To understand the state of public transport in South Africa, the National Household Travel Survey (NHTS) is a clear point to start. Conducted in 2014, it assesses the extent to which public transport services are offered and facilities provided and expresses the accompanying cost and affordability for the traveller. The survey reveals that only 30% of households in South Africa own a car with the other 70% depending on taxis, buses, trains and other non-motorised transport modes.

Each of the available modes of public transport has various challenges. According to the NHTS, in 2014, train users (42%) were generally more than satisfied (37%) with train services. Travellers place importance on punctuality of service, levels of crowding, distance from the station and the security of trains (NHTS, 2016). However, Metrorail trains have been marred by the constant lack of structure in terms of schedules. They do provide a timetable on their website, but the trains do not show up, 37.87% of train users claimed it was not available.

There is an abundance of the low capacity vehicles (16 seats), which provide a door-to-door service and flexibility to many travellers. There are more accessible than trains, due to the route and network flexibility (NHTS, 2016). Several taxis operate without licenses, in some cases, they are driven by unlicensed drivers. This has been followed by complaints from travellers, who are affected by the violence associated with this transport mode. Taxi fares alternate due to peak time and weather, and the driving behaviour of most taxi drivers is usually reckless.

Problems with the bus service are largely attributed to infrequent bus service during off-peak hours. Bus services do not cover certain routes leaving travellers with the option to walk or use another form of transport to get to their destination. Buses are a safer option, compared to the other transport modes.

For the average commuter, these challenges translate to longer travel time which has a significant impact on their transport costs. In addition, the availability of travel information for all the modes of transport continues to be a challenge. There is a need for greater regulation in this industry because most issues raised by travellers highlighted the absence of policy and universal guidelines that facilitate information sharing among the different players in the public transport sector.

## **3. PUBLIC TRANSPORT CHALLENGES IN ZIMBABWE**

The economic conditions in Zimbabwe have proven to be the principal challenge to the public transport system. After deregulation of the transport industry, the state-owned bus service provider fleet depleted by 45%, and routes decreased from 450 to 270 (Mbara, 2006). The only buses operational in the country are for long distances between cities and towns and not within. The metro train services have since stopped operating. This has seen a rapid growth in minibus taxis as the primary mode of transportation

Without regulation, the taxis have a monopoly of the public transport sector. There is an inequitable allocation of routes, resulting in an overproduction of transport services in one area, excluding other routes. The fares are not set and fluctuate according to economic conditions, weather and “feelings” of the driver. Overcrowding in the minibus taxis is another problem. Because operators need to make as much profit as possible they overload their vehicles, which results in faster degradation of road infrastructure and accidents.

The absence of government intervention in providing a policy to guide and regulate public transport provision means they have less influence in the management and planning of the public transport sector. This unfortunate situation comes from a lack of capacity in terms of personal resources as well as institutional arrangements at the various levels of authority, in addressing problems facing urban or commuter transport users. Another challenge in the public transport of the country is the payment system. The cash crisis and cash flow problems are leaving people with more electronic money rather than physical. This crisis demands a different ticketing system rather than paying for the taxi.

#### **4. COMMON PUBLIC TRANSPORT CHALLENGES IN SOUTHERN AFRICA**

South Africa and Zimbabwe have different public transport structures resulting in different challenges experienced by travellers in each country. Notwithstanding the differences, the countries in Southern Africa do experience the similar problems. With the use of the two diverse countries, the following challenges are common:

##### **4.1 Infrastructure**

A good transport system depends on a reliable transport infrastructure. Transport infrastructure requires large investments and requires regular maintenance to prevent it from being unsuitable for motorists to use. The high cost of paved road construction tends to limit most major road interventions to the public sector (Porter, 2007). In Southern Africa, especially in Zimbabwe, the road infrastructure has deteriorated at an alarming rate, with the roads becoming narrower and pot holes damaging vehicles and increasing the maintenance cost to road users. There is a disparity between rural and urban transport infrastructure. Road infrastructure in rural areas is not as sophisticated as in urban areas, creating a public transport challenge in those areas. Another challenge infrastructure presents is its availability. For transport modes such as trains, the tracks are already in place and the challenge is managing the trains that running on tracks daily, and minor maintenance of tracks.

##### **4.2 Access in rural areas**

Workers in the primary sector (mining and agriculture) are in remote rural areas as are seasonal workers of certain crops. Rural areas are often overlooked in transport planning which presents a great challenge for passengers in those areas. On the other hand, rural

areas present a spatial problem of people being sparsely situated and the infrequency of their travels. This makes it difficult for a solution to be introduced that satisfies transport providers, government, and passengers. Overlooking rural areas in transport planning is a serious challenge that many Southern African countries face.

The scholar transport issue in rural areas is another challenge within the region. Certain transport operators can be subsidised by the government to transport scholars to and from school because it is usually a single provider, there is no accountability, responsibility or follow up from the government. It brings to light a transport failure related to poor access in rural regions and lack of efficient and reliable public transport in those areas.

### **4.3 Government and Politics**

In Africa, corruption and politics play an immense role in public transport decisions. Nigeria is an example, despite the massive expansion of its inter-urban paved road system during the 1970s and early 1980s oil boom, inadequate construction quality (corrupt road contractors) and failure to maintain roads soon led to severe deterioration (Filani, 1993). Politics influences who is awarded road contracts, resulting in the exclusion of certain areas which do not benefit the contractor, and maintenance for a particular area whilst neglecting others. The decision to improve roads is based on politics rather than merit, making efficient public transport a bigger problem.

The regulation and policies of transport are also politically determined. For example, in South Africa, the African National Congress (ANC), the ruling party, released a National Development Plan with a Vision 2030. If the ruling party were to change, they would bring their own development plan which affects the transport policy. There is no set transport policy that is not affected by political parties or influential people's opinions, which is a challenge to overcome.

In the minibus taxi industry, there are no strict laws or rules to guide their activity, and the with government officials owning taxis, regulation is not prioritised. There are high rates of sexual harassment reported from taxi drivers, reckless driving and traffic crimes committed. Law Enforcement needs to be held more accountable during road blocks so that they can actually enforce the laws. Police officers set up illegal road blocks in order to collect money from road users. The increase in the number of traffic offenders getting off using bribes is another government challenge. Weak enforcement of traffic regulations, vehicle inspection, and driver behaviour and traffic management is a common practise in many African cities (Barret, 2008).

Financial resource allocation is another government related challenge of public transport. When taxes are collected and government spending increases, there are other sectors that are of importance other than transport. In most instances, more funds are spent on healthcare, housing, and education.

### **4.4 Access to fuel and prices**

Fuel costs and availability is a critical challenge for public transport in Southern Africa. Access to fuel at an affordable price is a crucial factor in transportation and politically very sensitive. Fuel costs commonly account for 10–40 percent of overall vehicle operating costs (Starkey *et al.*, 2001: 37). Fuel is a determinant of the fare paid for the transport service when adjusted it affects the passengers mostly. Fuel levies and taxes, which also affect fuel price, are used for the road maintenance and improvement, connoting the existence of them is a necessity.

#### **4.5 Safety and pollution**

Most forms of transport are ill-maintained and are old, making them a danger to people and the environment. Buses have a speed limit and they operate at low speed for long hours. Minibus operators usually cause noise pollution by the calling and hooting for passengers. Environmental consciousness is something several public transport operators are ignorant about, this is a grave challenge for future public transport in Southern Africa. In addition, transport has emerged as the highest single energy-consuming human activity in most countries. This means transportation needs to pay attention to climate change and take appropriate measures to reduce pollution by investing in alternative fuels.

### **5. VIABLE SOLUTIONS TO CHALLENGES**

To be beneficial to a wide sector of the continent's population, transport planning also requires a detailed understanding of the economic, social and political environments in which transport takes place and interventions are made (Porter, 2007). Solutions are needed for the public transport challenges presented above.

#### **5.1 Intermediate means of transport**

There needs to be extensive planning that increases accessibility and provides an integrated transport system for people in rural areas. People in remote areas require less motorised forms of transport, highlighting the importance of strengthening non-motorised transport. The emphasis on using vehicles such as bicycles can improve access of people in rural areas. Cycling will not require a large investment in infrastructure, with the advantage of being environmentally friendly is an important option to consider. In countries in Africa, like Kenya, there has been a reduction taxes placed on bicycles, this has increased their use (Porter, 2007).

#### **5.2 Apolitical transport policies and regulation policy**

The government has the challenge to create an enabling environment and to provide a clear policy framework for the provision and operation of public transport (Mbara, 2006). The main problem is the lack of effective policy implementation, mainly due to a lack of sustainable funding to achieve the ambitious policy objectives; the huge financial demands to replace ageing bus, rail and taxi fleets; a lack of skills to effectively implement and monitor policy initiatives; the complex political and policy relationship between the three

levels of government dealing with public transport (Walters, 2012).

Politics present themselves as a key decision maker for many transport related issues. Governments need to produce transport policies that benefit the people, irrespective of income, race or political affiliations. Insinuating a policy that remains constant irrespective of the ruling political party and party member sentiments. Policies ought to have specific goals and guidelines that transcend modes.

In the minibus taxi industry, stricter guidelines need to be put in place for taxi drivers. There needs to be a taxi driver registry, indicating the licenses (valid licenses), the roadworthiness of the vehicle; drivers should require training in terms of defensive driving and first aid training. With the increase in accidents and floods in Southern Africa, drivers need to be aware of how to save passengers' lives and be accountable to their passengers. The policy should also include GPS devices placed on taxis, to monitor speed, and driving behaviour.

### **5.3 Adequate urban and rural planning**

The local authorities have the responsibility to provide infrastructure and services to residents in urban areas. The location of physical infrastructure such as houses, industries, commercial centres have implications on transport costs. The appropriate land use planning policies that integrate residential and employment places will significantly solve some of the public transport challenges (Mbara, 2006). Transport infrastructure usually follows after development of an area has taken place, instead, developments needs to be along already existing transport infrastructure to reduce the need of huge capital investments required to build transport infrastructure.

### **5.4 Integrated payment option**

The government need to provide a universal form of payment for all modes of transport and only allow passengers to pay cash for emergencies. This reduces the time people spend paying instead of a 'tap and go' mechanism. For a country like Zimbabwe, this would be an appropriate solution considering the current cash crisis, passengers can use a prepaid card which allows them access to public transport.

One innovative solution that might tackle most of the public transport challenges is a travel application. The introduction of a travel application that uses GPS devices on minibus taxis and maps out routes, times and distances of a taxi. This development can possibly facilitate cashless payments, use a scan or card mechanism completely removing conductors in minibus taxis. Another benefit from it would be, it can also keep record of the passengers in a taxi and prevent overloading. This application can notify passengers on the nearest taxi or passengers can take themselves to the nearest route. It can also show the traffic condition, provide routes and the driver is aware if there is a traffic jam or any interferences in the road.

## 6. CONCLUSION

The essay identified the challenges related to public transport and it used two countries in Southern Africa to develop solutions to public transport problems. There is a need for better integration of social outcomes within public transport policy at the strategic tactical and operational levels. Governments need to play a key role in decentralising places of business and make policies that promote an integrated approach to public transport planning within Southern Africa, in order achieve full regional integration. The aim is to establish a sustainable public transport plan that can satisfy short term demand at a reasonable cost without replicating mistakes from developed countries. With access to emerging transport infrastructure and technologies, Southern Africa can become the test-bed and breeding ground for tomorrow's urban transport systems. New mass transit systems can be introduced to replace or work alongside existing services. Cape Town and Johannesburg have been successful in implementing Bus Rapid Transit services that work together with existing public transport services. This shows that it is possible to accommodate a range of transport types to account for all means of public transport services. To conclude this essay, more focus needs to be put into developing mobile public transport applications that will assist commuters, law enforcers, and regulators together with the transport operators in achieving a sustainable public transport service.

## 7. REFERENCES

- Anon., 2000. The World Bank, Entering the 21st Century, Washington DC: The Oxford Press.
- Barret, A. K. a. F., 2008. Stuck in Traffic: Urban Transport in Africa, s.l.: Africa Infrastructure Country Diagnostic.
- Filani, F. M., 1993. Transport and rural development. *Journal of Transport Geography*, 1(4), pp. 248-254.
- Mbara, T. C., 2006. Coping with demand for urban passengers transport in Zimbabwe: Challenges and Options, Harare: University of Zimbabwe.
- National Household Travel Survey 2014. 2016. Statistics South Africa.
- Porter, G., 2007. Transport planning in sub-Saharan Africa. *Progress in Development Studies*, 7(3), p. 251–257.
- Province, G., 2016. Gauteng Province Household Travel Survey 2014, Pretoria: Roads and transport.
- Starkey, P., Ellis, S., Hine, J. and Ternell, A. 2001: Improving rural mobility: options for developing motorised and non-motorised transport in rural Areas. Washington DC: World Bank Technical Paper no. 525.

Walters, J., 2012. Overview of public transport policy developments in South Africa. *Research in Transportation Economics*, pp. 34-45.