

ALLEVIATION OF CONGESTION

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ABSTRACT

This essay explores the causes of traffic congestion in southern Africa and provide solutions to alleviate the problem of traffic congestion thereafter. Throughout conducting research about this essay data was collected from secondary sources such as newspapers, the internet, and articles. Quantitative data was also of great use in gathering information. Traffic congestion on roads is a major problem in many cities across Africa and the southern African region and need implementations on how it can be alleviated. While conducting the research about this essay, focusing on the southern African region recent studies identified the City of Pretoria and East London as the most congested cities in southern Africa.

As such this essay will place its focus more on the most common causes of congestion and use the cases of Pretoria as examples to support the stated causes and there after providing solutions on how to alleviate traffic congestion. However, the solutions given are meant to be adopted in the whole SADC. The essay concludes that alleviating traffic congestion is achievable, and encourages the involvement of city planners in the transportation sector, the collaboration of local governments together with city planners and community members.

1. INTRODUCTION

Traffic congestion can be defined from the objective phenomenon and the subjective experience. In its objective form, traffic congestion is defined as a situation that is caused by an increase in the use of road networks. It is characterized by circumstances such as slower speeds, longer trip times and an increase in the time of vehicle queuing (The Congestion Question, 2019). In its subjective form, traffic congestion can vary depending on an individual's view. An individual can define traffic congestion based on the time it takes him/her to travel from point A to B, while another individual can define it in terms of the volume of vehicles on the roads during trips and another person may define it in relation to how long it takes them to travel from point A to B during specific hours. For example, a lot of people usually disapprove of travelling during rush hours.

Hence, one can refer to traffic congestion as a very long line of vehicles that are unable to move efficiently due to various factors that are occurring on the road. Traffic congestion is a serious matter in question more especially in urban areas in Southern Africa.

According to the TomTom traffic index that was released in 2022 and evaluated 390 cities across 56 countries and 6 continents in the world, Pretoria, one of South Africa's biggest cities was ranked at 147 of the world's most congested cities, making it the most congested city in the city centre in southern Africa. Furthermore, East London was the most congested city in the metro area. The traffic index was measured based on the travel time, fuel costs and CO2 emissions (TomTom, 2022). In the next section the most common causes of traffic congestion in Pretoria and East London are critically review.

2. CAUSES OF CONGESTION

2.1 Population Growth

Population growth is one of the most common causes of traffic congestion in cities. The population of Pretoria increases on a yearly basis. According to macrotrends the most recent population of Pretoria in 2023 is 2,818,000 with an increase of 2,85% from 2022. Urbanization and immigration are some of the contribution factors to the population growth.

A wide range of economic activities take place in the cities are the major triggers of urbanization and immigration as they consist of different industries and sectors that creates opportunities for people. In addition, the city of Pretoria is a home to 4 universities and several colleges which accommodates a large number of students from across the country every year. It is obvious why its population rises every year; people are in search of greener pastures and better tertiary education. An increase in population means an increase in the use of vehicles thus busier roads that will eventually lead to congestion.

2.2 Inadequate Parking Lots

Inadequate parking lots is one of the crucial reasons why the central business districts (CBDs) are facing unfavourable traffic jams. Improper planning of road networks and poorly managed parking facilities is a major reason why vehicle owners resort to park on prohibited spaces on the streets. Some vehicle owners are inconsiderate and often park their cars haphazardly, vehicle owners go to an extend using sidewalks or setbacks as parking lots which creates a serious havoc for pedestrians and other commuters therefore leading to traffic congestion (Shubhankar, 2018).

Insufficient parking lots is one of the major contributors causing traffic congestion in the city of Pretoria. In an article that was released by Rorisang in 2022 stated that main roads within the CBD were heavily congested by taxis which stop mid road to wait and load passengers. Minibus taxis also occupy road reserves which congest the city and frustrate commuters. Considering that Pretoria is by far the most congested city, this emphasises the seriousness of this issue (Kgosana, 2022).

2.3 Poor Road Infrastructure

Road infrastructure is crucial for the productivity of the economy within countries. It is essential for the transportation of goods and services. Road infrastructure may include but is not limited to national, provincial, and municipal roads, bus stops, trucking terminals and railways stations. Poor road infrastructure in southern Africa is of concern. Roads are dilapidated beyond repair, potholes and sink holes are everywhere including on the national roads which worsens traffic congestion. There are inadequate bus stops and railway stations resulting in heavy traffic congestion on commuters as vehicle owners as they try to escape. Bus drivers sometimes stop mid-way the road to pick up passengers leading to inconveniences.

In the case of Pretoria, it experienced 2 sinkholes last year in 2022 on one of its arterial roads, R21 northbound carriageway towards Pretoria after Olifantsfontein. The officials were left with no other choice than to reduce the road to 2 lanes which resulted in congestion during peak hours (Tshikalange, 2022). Dilapidated roads do increase congestion such

that other commuters are forced to take alternative routes while at the same time causing congestion on those roads since they are not designed for higher traffic volumes.

3. SOLUTIONS TO ALLEVIATE CONGESTION.

3.1 Local Governments Should Employ More City/Regional Planners

City planners work to create and implement plans for the development of cities, towns, and small areas. They are guided by land use laws, zoning laws, transportation systems and other infrastructure to help them in the growth of communities. City planners work hand in hand with government officials, developers, and community members to design plans that meets the needs of the community and the environment (Career Explorer, 2023).

The interesting part is that city planners are guided by different environmental factors and legislations. City planners also take part in a wide variety of task throughout the planning process, some of these tasks include conducting research, analysing data, consulting with stakeholders, developing plans and overseeing the extent to which the plans are implemented. Basically, planners also address different challenges faced by urban areas, this includes transportation infrastructure amongst other things thus their role is very important (Career Explorer, 2023).

3.2 Planners Can Encourage Transit-Oriented Development (TODs)

Transit oriented development is a planning paradigm that encourages mixed use neighbourhoods where different types of land uses may be mixed. This may be a combination of stores and apartments that are close to transit stations. TOD take priority into pedestrians' friendly design and public transit, with streets where people can walk to access services rather than using cars. TOD can be very helpful in reducing traffic congestion in urban areas. Although it may sound a little bit difficult to implement, more especially in an already existing city, TOD is doable alongside with the right professionals playing their roles (Marion & Eisenlohr, 2021).

3.3 Encourage the Use of Public Transportation and Exclusive Lanes for Public Transportation

Government officials should encourage the public to use public transportation instead of using their own cars. The first approach to be done by government officials is to collaborate with local bus and taxi companies into providing public transport services that is more affordable than the cost of private vehicles. However, in some countries that have used this approach as a way of reducing congestion, there have been issues to say the public do not prefer using public transportation since it is unreliable. The solution to the unreliability of public transportation is to provide exclusive lanes for buses only which is not open to any private vehicles. Exclusive bus lanes will improve mobility issues in urban areas as buses will not be interrupted by other vehicles and arriving to their destinations in scheduled timesthus being very effective for commuters.

If the approach is successful in cities, it will also attract other commuters to shift from driving to using public transportation. A country amongst others that have used this approach is Seattle, through the combination of public transit improvements and reduction program (Litman, 2021).

3.4 Government Officials Together with Relevant Professions Should Conduct Benchmarks

Benchmarking is a technique of governance that is meant to improve the quality and efficiency of public services. It compares public problems with an ideal form of public action. The comparisons are mainly to improve through the process of learning (Smith, n.d.). Benchmarking is a useful tool to alleviate traffic congestion because it will assess performance objectively, it will identify areas where improvement is needed, and it can also test how the improvement programmes have been successful.

According to the TomTom traffic index, Alsmeer, a city in Netherlands is the world's best city in managing traffic congestion, hence the suggestion that the southern African countries together with other countries from across the world should perform their benchmarks in Alsmeer to learn more about what the city is doing in order to alleviate congestion, proper measures that needs to be put in place and successful traffic management tools that have been used to improve the mobility within the city.

3.5 Track the Progress of Traffic Laws and Regulations

Countries have traffic laws and regulations that have been established to guide road users on how they should conduct themselves while travelling. but what is the extent at which the public is obeying the rules? A country like South Africa for example has legislations such as the National Road Traffic Act, the Department of Transport, and the National Road Safety Act yet the country still experiences issues such as illegal parking's and mid stop of public transportation on roads to pick up passengers.

With the crisis of load shedding in South Africa affecting traffic lights, the department of transport usually deploy traffic officers to assist in managing traffic, but it is only a small fraction of vehicle owners that seem to abide by the rules. Countries at large need to ensure that laws and regulations are being fully implemented and track the extent to which there is progress. Furthermore, individuals who do not follow the rules should receive punishment and fines as stated by the government. If laws are put in place and tracked to see the progress, the SADC region will be one step ahead in solving traffic congestion in its urban areas.

4. CONCLUSION

In conclusion, alleviating traffic congestion is not going to be easy, it is not a one-day job, and it does not come cheaply, but it is doable. The majority of countries are suffering from traffic congestion and if no action and effort are put in place the world at large is going to suffer from the consequences. To alleviate congestion every person needs to play his or her role. City planners need to think of cities as being organic, the local government needs to put laws and make sure that every individual abide by the rules and lastly the public need to work with city planners and the local government. If the solutions provided above are adopted, they will help towards alleviating traffic congestion in Southern Africa and improve traffic resilience.

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