Understanding Road Safety Risks Among Non-Motorised Vehicles in Nairobi CBD, Kenya

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Background

According to the Kenya National Traffic Safety Authority, an average of 4,000 road deaths is recorded each year, with pedestrians accounting for the highest percentage of fatalities[1]. In Nairobi alone, pedestrians accounted for around 65% of road deaths between 2015 and 2019[2], mainly due to a lack of dedicated infrastructure for non-motorised transport users and reckless behaviour by motorists. However, reports of pedestrian fatalities do not provide insight into fatalities involving pedestrian pushed/pulled non-motorised vehicles (NMVs). These NMVs, commonly referred to as *mkokoteni* or *trolleys* in the Kenyan context, are typically used for first and last-mile freight transport in urban and rural areas of Kenya. Despite their economic and logistical importance, NMVs remain largely invisible in transport data collection and planning. Consequently, even with road safety interventions are planned for NMT modes, the NMVs are excluded. When data records and other road users report on NMVs, they are often blamed for traffic congestion, road safety issues and urban disorder, leading to the implementation of restriction of movement and use within the city.

[1] https://ntsa.go.ke/info-center/road-safety-action-plan
[2] https://cdkn.org/sites/default/files/2022-01/CDKN%20NMT%20Report_updated%20to%20add%20citation%20Jan%202022.pdf

Figure 1 – Non-motorised vehicles moving in traffic in Nairobi, Kenya

Aim

This study assesses the level of vulnerability and road behaviour of non-motorised vehicles in the Nairobi Central Business District (CBD). It also explores the road design features related to pedestrian pushed/pulled vehicle needs to facilitate safe travel and minimise the impact of crashes involving these road users.

Method

This study adopts a qualitative research approach. The methodology included administering questionnaires to NMV operators, holding focus group discussions with them and conducting key informant interviews with city planners, transport authorities, innovators and researchers. Street audits are also carried out in the Nairobi CBD to evaluate infrastructural provisions for this mode of transport. The data was analysed using coded responses on Microsoft Excel 365 to draw conclusions across the thematic focus areas of the safe system approach.

Results

The preliminary results of the study found that non-motorised vehicle (NMV) operators were exposed to high road safety risks, due to a lack of dedicated lanes or road signage. They face strict access regulations enforced by city authorities, which forced them to move alongside motorised traffic despite their vehicles being designed for pedestrian use. Due to their wooden and metallic construction material and design, NMVs are not permitted to use the pavement, as they poses a safety risk to other NMT user. The NMVs lack braking systems, which can result in fatal injuries when travelling uphill or downhill with heavy luggage.

NMV operators also lack reflective and protective gear, exposing them to the risk of fatal injury in the event of a road accident, especially during the dark. Entry-level requirements in the sector are low, with no driving licence or basic road safety training needed prior to joining the industry and manoeuvring the vehicle. Most operators also lack adequate insurance, which leaves them exposed to significant medical expenses that can ultimately force them out of the sector.

Conclusions

The research concludes that acknowledging these operators as an integral part of the urban transport fabric, including the road fatality reporting, would be a vital first step towards meaningful inclusion in infrastructure planning and targeted road safety interventions.

Although broader reforms, such as infrastructure and technological modifications will be needed in the medium- to long-term, immediate actions should include:

- Provision of basic road safety training to the operators using principles of safe systems approach methodologies.
- Standards of operations, such as reflective and protective gear to enhance their visibility on the road.
- Provision of basic insurance coverage for post crash medical expenses that forms steps to rationalise the operation for multi modal planning.
- Organisation opportunties to increace the recognition of the role in economy
- Inform policy change on design of infrastructure and signage that reduces the exposure of NMVs operators to high crash risks.
- A Safe System Approach calls for integrating NMVs into Nairobi's multimodal network through safer street design, clearer regulations, and improved training and protection for operators.